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FOREWORD

This is intended to be a "practical" book. It is filled with examples and case studies that illustrate ways that carefully planned and implemented communication interventions have produced positive results. It is also filled with ideas from people who have experienced the challenges of communicating effectively in development programs. We are indebted to them and I am pleased to provide their ideas – frequently in their own words – to the readers of this book, and provide web links to their works. In spinning all of these valuable resources together I have added my own insights based on almost four decades of communication and development experience in countries ranging from Guatemala to Western Samoa, with many other stops in Asia, Africa and Latin America.

As the 21st century rolled out, communication in relation to development became more prominent in the international community. Efforts to reach the Millennium Development Goals sharpened our attention on communication with many asking how the new information and communication technologies could accelerate progress toward the Goals.

In 2003 we saw Part 1 of the World Summit on the Information Society in Geneva; and in 2005 there was Part 2 of WSIS in Tunis. In 2006, the World Bank, the Communication Initiative, and the UN's Food and Agriculture Organization organized the World Congress on Communication for Development in Rome – hosted there by the Ministry of Foreign Affairs of the Government of Italy.

The World Congress adopted a description of communication for development that serves as a good framework for the material that appears in Advocacy and Interventions:

Communication for Development . . .
Is, first and foremost, about people and the process needed to facilitate their sharing of knowledge and perceptions in order to effect positive developmental change - media and technology are tools to this end, but not ends in themselves.

Is based on dialogue, which is necessary to promote stakeholders' participation. Such participation is needed in order to understand stakeholder perceptions, perspectives, values, attitudes and practices so they can be incorporated into the design and implementation of development initiatives.

Follows the two-way, horizontal model and not the traditional one-way, vertical model of Sender-Message-Channel-Receiver and increasingly makes use of emerging many-to-many forms of communication made possible through new technologies. Even when used along more unidirectional models (e.g., campaigns), communication needs to facilitate the understanding and taking into account of people's perceptions, priorities and knowledge.

Gives voice to those most affected by the development issue(s) at stake, allowing them to participate directly in defining and implementing solutions and identifying development directions.

Recognizes that reality is largely socially constructed. The implications are that there can be different realities (or different perceptions of the same reality) for the same situation according to specific groups' perceptions and needs. Thus the role of development and by extension communication is not to "impose" the correct reality, but rather to foster dialogue to facilitate mutual understanding among different perspectives. Communication for development therefore, respects and works with the different social, religious and cultural foundations of the people, communities and nations engaged in development processes.

Is contextual. There is no universal formula capable of addressing all situations and therefore it should be applied according to the cultural, social and economic context.

Uses a number of tools, techniques, media and methods to facilitate mutual understanding, define and bridge differences of perceptions, and take action towards change, according to the particular needs of the development initiative. These tools and techniques should be used in an integrated way and are most effective when used at the beginning of development initiatives.
Advocacy and Interventions provides a rather optimistic view as to what a well-organized systematic communication effort can contribute to development. For those who might ask "does it really work," I defer to Bill Smith, Executive Vice President at the Academy for Educational Development in Washington, who addressed this question in an Internet discussion.

The fact is: to ask "does communication work?" is the same as asking "does surgery work?" What's the answer?

Surgery works – but not to design houses.
Communication works but not to change complex behavior by itself.
Surgery does not always work – sometimes patients die.
Communication does not always work – sometimes programs fail.

When a particular surgical intervention fails we do not ask – "does surgery work?", but rather "what went wrong." There are usually three answers:
- patient was too far along – no one could have saved him
- surgery was not the right intervention
- the surgeon screwed up.

When a communication intervention fails we have the same three answers:
- problem was too complex for communication alone
- communication was the wrong thing to do
- the program was a mess, which in our case usually means:
  - not enough exposure -wrong audience
  - wrong message -wrong channels
  - poor or no research -not enough time to show effect
  - evaluation strategy too blunt to catch the change

When surgeons are asked to perform surgery in the dark, on a cement floor, using screw drivers for instruments they don't usually call that surgery – that's murder.

When we are asked to change the complex behavior of millions of men and women and are given budgets of thousands of dollars instead of millions; when we are told we can't talk about sex openly on the media; cut off from working with young adults explicitly about sex; told there is not time to do adequate market research – we say "well OK I guess I'll call that a communication campaign, but I know we could do better."

When we ask for adequate resources, we are not whining; we are reflecting the lessons learned about how important light, and surgical tools, and a decent working position is for a surgeon – we are reflecting our work as professionals rather than pretending we are alchemists. I don't think it is fair to be critical of communication folks who say "we need more money"– we do a lot more if they want effects!

It might be more helpful to find examples of programs that have worked and show how much they did cost – so we could begin to develop a bottom line for what responsible communication [interventions] need. We do this for vaccines – no sensible public health doc is going to promise effective immunization if we deny them a cold chain….

This is not the ramblings of tired old advocate – but of a social scientist deeply skeptical about communication who would like to see our field move forward and not be anchored to the same old tired questions. We fail so often in communications – we need to get better – but lord knows we have also succeeded and we have learned much....

Tell those decision makers that they have never yet invested in anything in development that was a "sure thing" – not the dams in Brazil, nor the poisoned wells in Bangladesh, nor the one time immunization campaigns that exhausted health systems – not the bare foot doctor – nor community mobilization – nor community action. None of those interventions work for sure – nor all the time – nor have proven very good investments.
Here among ourselves on this [Internet] list we can do more than try to answer foolish questions. If there are less experienced donors signed on [to this list] then let them listen to intelligent discussion of real issues so they can grow in understanding the demands of modern communication science. Let's move on to build a solid science base for a wonderful community of exceptionally committed and creative individuals.

We hope Advocacy and Interventions helps us move on. But first some explanations. Advocacy and Interventions is less profound a book than those of others who write about development and communication theory. The book simply reflects what has been and is happening in this field in the field – and provides some practical and field-tested methods for using communication strategically and effectively in development initiatives. Included are the wisdom and experience of many who have worked in on communication and development. Because some readers will obtain this book via the Internet, pictures and graphics has been kept to a minimum to avoid a lengthy downloading process. Those who might find it more convenient to have Advocacy and Interventions on a CD are invited to contact the author. The text provides many links to excellent and free on-line materials (including videos) that can be downloaded to supplement this book. Many of these on-line items will provide raw material that readers can use to generate their own insights and plans as they apply communication to such humanitarian challenges as extreme poverty, agricultural development, and the Millennium Development Goals.

R.D.C.
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ABOUT THE AUTHOR

Royal Colle has been a member of the Cornell University faculty for more than 40 years, 10 of which were as Chair of the Communication Department. He has lived and worked abroad in countries ranging from India and Indonesia to Singapore and Guatemala. Colle has served as a consultant for a variety of international organizations including the World Bank, WHO, FAO, the UN, UNFPA, UNESCO, USAID, DFID (U.K.) and the Ford Foundation. His work has focused on the design of communication strategies especially in agriculture and health, the innovative uses of information technology for development, and institution building related to communication. He continues to teach, write and work on projects such as university-supported teleteachers in Vietnam, India, and Africa. He is International Professor Emeritus at Cornell where he earned a PhD in Sociology. He can be contacted at Communication Department, Kennedy Hall, Cornell University, Ithaca, New York USA 14853. E-mail: rdc4@cornell.edu
Chapter 1
INTRODUCTION TO DEVELOPMENT COMMUNICATION

I. SOME PERSPECTIVES ON DEVELOPMENT COMMUNICATION

Communication is a vital partner in initiatives that involve voluntary behavior change. The two words "voluntary" and "behavior" are very important in understanding what unfolds in the pages that follow. Where behavior is forced, communication may be necessary for reminding people of the rules or in training them to carry out the behavior. However, most of the effort we put into development initiatives involves people's voluntary actions. In this context — and used broadly — the word behavior covers a wide variety of phenomena, ranging from believing something will improve a family's welfare to using a condom, or adopting (or avoiding) biotechnology-developed seed varieties. Where people have options to change their ways of life, communication becomes important in informing, persuading, listening, educating, training, learning, data gathering and in managing change. Thus, we emphasize the idea that development communication is "strategic communication." This approach has been applied to efforts to combat the HIV/AIDS problem:

Strategic communication is a promising response to the HIV/AIDS epidemic that has been vastly underutilized to date. The systematic nature of strategic communication contrasts sharply with the ad hoc practice of designing an occasional poster or radio spot for a given cause. It combines a series of elements — extensive use of data, careful planning, stakeholder participation, creativity, high quality programming, and linkages to other program elements and levels, among other — that stimulate positive and measurable behavior change among the intended audience.¹

We begin abruptly at the 21st century (although we will go decades back in later parts of these Readings) and look at some of the applications of communication in today's world. A good place to start is at the G8 nations and the Millennium Development Goals. First, we review the Millennium Development Goals (MDGs).

The international community initially identified seven MDGs (now there are eight) that are at the heart of the fight against poverty and the struggle to create opportunity, prosperity, health, safety and empowerment for all the world's people, especially the poorest and traditionally marginalized groups. The eight MDGs are:²

1. Reduce the proportion of people living in extreme poverty by half between 1990 and 2015.
2. Enroll all children in primary school by 2015.
5. Reduce maternal mortality ratios by three-quarters between 1990 and 2015.
6. Combat HIV/AIDS, malaria, and other diseases, halting and reversing their levels by 2015.
7. Implement national strategies for sustainable development by 2005 so as to reverse the loss of environmental resources by 2015.
8. Develop a global partnership for development.

Goal 8 includes within it the task of making more widely available the benefits of information and communication technologies — in cooperation with the private sector. In addition to the Goals, there are more specific, quantified targets for the year 2015. For example, in relation to Goal 1, there are two targets: (1) Halve, between 1990 and 2015, the proportion of people whose income is less than one dollar a day; (2) Cut in half, between 1990 and 2015, the proportion of people who suffer from hunger.³ Some countries have incorporated the MDGs into national policies. For example, many nations have prepared Poverty Reduction Strategy Papers (PRSPs) that are "roadmaps" those countries expect to use for reaching the goal of reducing extreme poverty.⁴

³ See a complete list of the goals, targets and indicators at: http://unstats.un.org/unsd/mi/mi_goals.asp.
Emergence of communication as a development tool

For decades it has seemed imperative and challenging to get decision-makers to incorporate a communication component — and funding — into agricultural, health or other development programs. To some extent reluctance exists today as governments reduce the amount of funding they provide for agricultural extension and debate the relative demands for clinics and roads and those for computers and broadband connectivity. However, while this struggle has not yet been completely won, there are significant signs that communication is more consistently being factored into development initiatives. It appears that the enormous advances made during the past two decades in digital technology including the high visibility of cell phones, portable computers, and other devices have aroused more acceptance of information and communication as important partners in development initiatives. A quick tour around the international community supports this position. In 2005, the Economic Commission for Africa released a document Benchmarking the Plan of Action of the World Summit on the Information Society (WSIS) in which it addressed the information and communication infrastructure as an essential foundation for the Information Society — and explored the enabling environment for a various elements making up the e-World (such as e-Government and e-Health).

In mid-2000, the eight major industrial nations (the G8) acknowledged that information and communication technology (ICT) “is one of the most potent forces in shaping the twenty-first century [and] its revolutionary impact affects the way people live, learn and work, and the way government interacts with civil society.” Emerging from the discussion was the Okinawa Charter on the Global Information Society. Its framers announced that “this Charter represents a call to all, in both the public and private sectors, to bridge the international information and knowledge divide.” The Charter also renewed a commitment of the G8 nations “to the principle of inclusion: everyone everywhere should be enabled to participate in and no one should be excluded from the benefits of the global information society.” The G8 launched a major effort to strengthen all nations’ potential to be part of this Information Age starting with a Digital Opportunity Task Force. The DOT noted the relationship between high priority international development goals (such as the MDGs) and communication and emphasized that “Harnessing the power of information and communication technologies (ICT) can contribute substantially to realizing every one of these goals; either directly (e.g. through greater availability of health and reproductive information, training of medical personnel and teachers, giving opportunity and voice to women, expanding access to education and training) or indirectly (through creating new economic opportunities that lift individuals, communities and nations out of poverty.) Creating digital opportunities is not something that happens after addressing the “core” development challenges; it is a key component of addressing those challenges in the 21st century. The report detailed four major thrusts for concerted international action:

1. Foster Policy, Regulatory and Network Readiness – through establishing and supporting both developing country and emerging economy National eStrategies including eGovernment, and universal participation in new international policy and technical issues raised by ICT and the Internet.

2. Improve Connectivity Increasing Access and Lowering Costs – through establishing and supporting a range of targeted interventions as well as dedicated initiatives for the ICT inclusion of the Least Developed Countries.

3. Build Human Capacity – through a range of targeted training, education, knowledge creation and sharing initiatives, as well as promote ICT for healthcare and in support against HIV/AIDS and other infectious and communicable diseases.

4. Encourage Participation in Global eCommerce and other eNetworks – through enterprise and entrepreneurship for sustainable economic development, including poverty alleviation, and promote national and international effort to support the creation of local content and applications.

It should be clear at this point that a major catalyst for incorporating communication in development strategies are the newer information technologies, including computers, data banks, and networks. Another effort prompted by the G8 Okinawa meeting was a report by the Digital Opportunity Initiative (DOI). The title of the report is Creating a Development Dynamic, From Digital Divide to Digital Opportunities

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6 Note that there is often an inference that ICTs are the new digital technologies. In our approach, we broaden the term “ICT” to include such information technologies as radio, video and print media. One of the interesting dynamics of the ICT environment is that some of these media/technologies are converging, a point we will explore further in Chapter 6.
...
### 2.1.1 The Unique Characteristics of ICT

ICT can be a powerful enabler of development goals because its unique characteristics dramatically improve communication and the exchange of information to strengthen and create new economic and social networks:

- **ICT is pervasive and cross-cutting.** ICT can be applied to the full range of human activity from personal use to business and government. It is multifunctional and flexible, allowing for tailored solutions — based on personalization and localization — to meet diverse needs.
- **ICT is a key enabler in the creation of networks and thus allows those with access to benefit from exponentially increasing returns as usage increases (i.e. network externalities).**
- **ICT fosters the dissemination of information and knowledge by separating content from its physical location.** This flow of information is largely impervious to geographic boundaries — allowing remote communities to become integrated into global networks and making information, knowledge and culture accessible, in theory, to anyone.
- **The "digital" and "virtual" nature of many ICT products and services allows for zero or declining marginal costs.** Replication of content is virtually free regardless of its volume, and marginal costs for distribution and communication are near zero. As a result, ICT can radically reduce transaction costs.
- **ICT’s power to store, retrieve, sort, filter, distribute and share information seamlessly can lead to substantial efficiency gains in production, distribution and markets.** ICT streamlines supply and production chains and makes many business processes and transactions leaner and more effective.
- **The increase in efficiency and subsequent reduction of costs brought about by ICT is leading to the creation of new products, services and distribution channels within traditional industries, as well as innovative business models and whole new industries.** Intangible assets like intellectual capital are increasingly becoming the key source of value. With the required initial investment being just a fraction of what was required in the more physical-asset intensive industrial economy, barriers to entry are significantly lowered, and competition increased.
- **ICT facilitates disintermediation,** as it makes it possible for users to acquire products and services directly from the original provider, reducing the need for intermediaries. This cannot only be a considerable source of efficiency, but has in fact been one of the factors leading to the creation of so-called "markets of one," leveraging ICT’s potential to cater to the needs or preferences of users and consumers on an individual basis.
- **ICT is global.** Through the creation and expansion of networks, ICT can transcend cultural and linguistic barriers by providing individuals and groups the ability to live and work anywhere, allowing local communities to become part of the global network economy without regard to nationality, and challenging current policy, legal and regulatory structures within and between nations.

These characteristics suggest that ICT has the potential, if conceived as a means and not an end in itself, to be a powerful enabler of development. However, the fact that ICT can, in theory, assist development efforts does not mean that it will necessarily do so. In order for ICT to positively foster development goals, it must be employed effectively.

### 2.1.2 From Promise to Action: Evidence and Potential

In fact, there is already ample evidence that a focused, micro-level application of ICT can contribute to individual development goals, including health, education, economic opportunity, empowerment and participation, and protection of the environment (this evidence is reviewed in Section 2.2).

Even more importantly, emerging evidence from country case studies suggests that ICT can play a more profound and far-reaching role in development than simply through interventions focused on specific development objectives. Five case studies are reviewed in Section 2.3, which draws on these and other case studies detailed in the appendices and leads, in Section 2.4, to some conclusions about how national ICT strategies can contribute to improved development outcomes. These findings, at both the micro and national level, highlight the need for a framework that can
help guide stakeholders in developing and implementing strategies that take advantage of the potential of ICT to accelerate social and economic development. The DOI provides such a framework [in Section 3 of the full document] around which ICT initiatives can be implemented strategically to ignite, accelerate and sustain a network of positive effects — or a “sustainable development dynamic.”

The two types of interventions discussed here — those aimed at development goals and those aimed more broadly at developing a national ICT strategy — are complementary and can both contribute to accelerating a “development dynamic.”

2.2 ICT For Specific Development Goals

This section reviews the experience of efforts to apply ICT in five key areas identified by the UN Millennium Summit as development imperatives: health, education, economic opportunity, empowerment and participation, and environment.

2.2.1 ICT for Health

Some of the most promising and clearly demonstrated applications for ICT in development are in the improvement of health care delivery. Experience to date suggests there is a number of specific ways ICT can be applied to achieve better health outcomes.

ICT is being used in many developing countries and communities to facilitate remote consultation, diagnosis and treatment. In Gambia, for example, nurses in remote villages use digital cameras to download images of symptoms onto a PC and transfer them to nearby towns for examination by doctors. The same model is being applied to facilitate collaboration among physicians themselves. When an expert opinion is required, doctors in rural towns in Gambia send the images captured by the nurses to specialists in the United Kingdom for advice. The principle of ICT-facilitated collaboration extends to medical research also. This is illustrated in West Africa, where malaria researchers use a network of satellites and ground stations to submit data for clinical trials conducted at tropical disease research facilities in London and Geneva.

Health workers in developing countries are accessing relevant medical training through ICT-enabled delivery mechanisms. Several new malaria Internet sites for health professionals include innovative ‘teach and test’ self-assessment chapters. In addition, centralized data repositories connected to ICT networks enable remote healthcare professionals to keep abreast of the rapidly evolving stock of medical knowledge. In Bangladesh, for example, the local MEDINET system provides access to hundreds of medical journals via email for less than US$1.50 per month.

When applied to disease prevention and epidemic response efforts, ICT can provide considerable benefits and capabilities. Public broadcast media such as radio and television have a long history of effectively facilitating the dissemination of public health messages and disease prevention techniques in developing countries. The Internet also can be utilized to improve disease prevention by enabling more effective monitoring and response mechanisms. For example, across Sub-Saharan Africa, the Internet is used to monitor daily cases of meningitis and to help coordinate mass vaccination programs when threshold levels are reached.

A number of countries, such as Estonia and Costa Rica, have invested in ICT to improve the administrative efficiency of their public health systems and ICT can also be applied to improving the efficiency of medical facility administration through, for example, the streamlining of medical procurement or the creation of patient record databases.

Satellife’s HealthNet

Application Model:

HealthNet is a system of local telecommunications sites used to provide low cost access to healthcare information in developing countries through a link to basic email. Users—mainly physicians and medical workers—connect to the network through local telephone nodes to access services such as physician collaborations, medical databases, consultation and referral scheduling, epidemic alerts, medical libraries, email and shared research reporting.
Advocacy And Interventions by Royal C. Colle

databases. HealthNet is provided by a non-profit organization, SatelLife, with assistance from local and international donors.

Illustrative Impact:
HealthNet is used by 19,500 health care workers in more than 150 countries worldwide. The development impact of HealthNet has been most prevalent in Africa, where the model has contributed to increased rural and urban connectivity, capability building among the user community, increased demand for IT services, and in some cases, commercially viable IT service enterprises. For example:

- Surgeons from Mozambique, Tanzania and Uganda use HealthNet to consult on patient treatments and learn new reconstructive surgery techniques;
- In Zambia, healthcare workers who once traveled 700 kilometers each week to collect data for clinical trials now use HealthNet to send this information via email;
- Physicians in Ethiopia use HealthNet to schedule consultations, making it unnecessary for ill patients to travel long distances with no guarantee of seeing a physician;
- Health workers in Democratic Republic of Congo use HealthNet to report progress on treating trypanosomiasis to public health organizations in the north of the country; and
- In Gambia, malaria researchers use HealthNet to submit data to European medical schools for clinical trials.

Many physicians in developing countries rely on HealthNet as their sole source of information on the treatment of AIDS and tropical diseases, essential drugs, pediatrics and public health promotion.

Challenges:
Although HealthNet has made a real contribution, important challenges remain. Implementations in Africa have not always delivered the hoped-for level of success due to a number of factors, including: a lack of reliable and affordable telecommunications and power infrastructure; the failure and high cost of local Internet service providers (ISPs); unfavorable regulatory, licensing and taxation regimes; insufficient grant sustainability; poor organizational design; and user dissatisfaction with low bandwidth and delayed response.

Sources: www.healthnet.org; HealthNet management interviews and project reports (2000); ITU (1999).

2.2.2 ICT for Education

Across a range of educational applications, ICT is being harnessed to improve the efficiency, accessibility and quality of the learning process in developing countries.

One of the most clearly demonstrated applications is distance education. Distance education has been a particularly successful model in developing countries where affordability and geography have been real barriers to access. The six largest distance-learning universities in the world are located in developing countries: Turkey, Indonesia, China, India, Thailand and Korea—all of which offer expanding virtual campuses. To date, distance learning has mainly been applied to tertiary education where the motivation and commitment of students is high. In the case of primary and secondary education, ICT has been found to significantly enhance the learning process by enabling increased access to knowledge and more collaborative and interactive learning techniques, but is not an effective substitute for close personal supervision from teachers or parents. In Chile, for example, the Enlaces Project wired 50 percent of the primary schools, enabling teachers within the schools to improve the quality of the curriculum and allowing students from different schools to conduct collaborative projects.

The development of scientific research networks on a worldwide basis, usually over the Internet, is also helping to empower indigenous research and development programs in developing countries. Virtual research groups—composed of interconnected specialists in different parts of the world—allow databases to be shared, conferences to be organized, papers to be circulated and
discussed, and collaborative research and reporting to be undertaken. A proliferation of such collaboration is occurring on both a North-South and South-South basis. The African Virtual University, for example, provides online communication tools such as chat rooms, email, bulletin boards and home pages to encourage shared research efforts among both academics and students.

Another rapidly growing area of ICT-mediated learning is in the delivery of technical and vocational training. Because ICT can facilitate sophisticated and customized performance simulation at low marginal cost, many organizations and vocational training facilities are employing ICT to train workers in an array of functional areas—from healthcare to IT services—even to train teachers themselves. For example, Cisco’s Networking Academy Program provides a 280-hour technical training course over the Internet. This course trains workers in developing countries in designing, building, and maintaining computer networks, enabling students to obtain jobs in the local IT industry.

ICT-enabled solutions also present significant opportunities for enhancing the efficiency and effectiveness of education administration. Through the use of ICT data repositories and networks, curricula can be developed collaboratively, educational materials can be procured more cost effectively, staff and student time can be scheduled more efficiently, and individual student performance can be monitored more closely. In Southern Africa, Educor, a private conglomerate of education institutions, uses ICT networks to facilitate collaborative curriculum development among educators across its schools—improving the quality of the curriculum and avoiding duplication of effort.

**University of South Africa (UNISA)**

**Application Model:**

UNISA is the oldest and largest university in South Africa and one of the largest distance-learning institutions in the world. UNISA has internationally-recognized certificate, diploma and degree courses up to doctoral level across six faculties: Arts, Economics and Management Sciences, Law, Science, Education and Theology, and Religious Studies. In addition to on-campus instruction, UNISA provides educational programs via Internet and online classrooms, video and audio lectures and correspondence instruction. Students can also access UNISA’s well-equipped library over the Internet.

**Illustrative Impact:** UNISA’s distance learning programs provide education to over 120,000 students per annum, mostly from Africa and other developing countries.

- The distance education programs are less expensive (80 percent less) than those of residential universities.
- The programs allow students to obtain higher education at their own pace while they work to support their families.
- UNISA encourages gender equality by providing women with educational and employment opportunities: 56 percent of UNISA students and 51 percent of staff are women.
- The organization provides professional employment opportunities within South Africa: there are 3,000 staff members including academic, administration and support staff.

**Challenges:**

While UNISA has a key strength in the quality and relevance of its educational content, a number of key challenges must be overcome before it can achieve critical scale with its online offering. Chief among these is securing the skills and capabilities required to develop and maintain a rich and broad program of educational content. The development of applications to deliver content to a broader and more diverse audience is also a priority.

Source: [www.unisa.co.za](http://www.unisa.co.za).

**2.2.3 ICT for Economic Opportunity**

ICT can contribute to income generation and poverty reduction. It enables people and enterprises
to capture economic opportunities by increasing process efficiency, promoting participation in expanded economic networks, and creating opportunities for employment.

There are a number of ways ICT is enhancing rural productivity. ICT enables solution sharing between local people and communities, providing access to practical information on small business accounting, weather trends and farming best practices, for example. Timely access to market information via communications networks also helps farmers make astute decisions about what crops to plant and where to sell their produce and buy inputs. In Chile, for example, an Internet network among farmer organizations has dramatically increased farmers' incomes by providing information about crop status, weather, global market prices and training. ICT is also providing unprecedented access to rural finance. The financial and information service network provided by Pride Africa offers micro-finance opportunities for local people and small enterprises that previously had no access to flexible financing due to rigid banking regulations and the information monopolies of government and large businesses.

ICT enables improved business process efficiency and productivity. Businesses can reduce operational costs by decreasing material, procurement and transaction costs, resulting in lower prices for intermediate and finished goods, and they can also use more and better information to improve the value of their output. Utilities Afrique Exchange, for example, provides an e-trading platform to utilities companies in Africa and helps both sellers and buyers simplify their procurement processes and reduce costs. In another example, a number of companies in developing countries are using the Global Technology Network, provided by the US Agency for International Development (USAID), to find comparable small and medium-sized US companies to share business solutions that satisfy their existing technological needs.

ICT facilitates global connectivity, resulting in new ways of creating and delivering products and services on a global scale. New business models and market configurations enabled by ICT, including business process outsourcing, value chain integration and disintermediation, provide developing countries with access to new markets and new sources of competitive advantage from which to drive income growth. Through PEOPLink's global artisans trading exchange, for example, local craftspeople in developing countries are increasing their incomes not only through access to new markets, but also because the wholesaling intermediaries for their produce have effectively been removed. Local craftspeople can now receive up to 95 percent of the selling price for their produce where previously they received only 10 percent. Viatru is a similar initiative offering indigenous peoples opportunities to globally market their traditional crafts and farm products.

ICT can contribute to better employment opportunities in developing countries both through improved labor market facilitation and direct employment. Using electronic job marketplaces, employers and employees can match labor skills and availability to satisfy their demands. For example, TARAhaat, a portal designed to serve villages in rural India, provides job opportunity information on local web sites in local languages. In addition, the establishment of local telecenters in countries such as Bangladesh, India and Senegal has created direct employment for thousands of local women and men.

### Village Pay Phones, Bangladesh

**Application Model:**

Village Pay Phones is an initiative of the Grameen Bank aimed at reducing poverty through the economic empowerment of women in rural Bangladesh. The Grameen Group manages the entire phone system, operating the GSM network and loaning money to village women to purchase GSM cellular phones. Phone owners rent the phones out to village farmers and other community members for a fee and also provide messaging and incoming call services.

**Illustrative Impact:**

- Phones have been placed in 1,100 villages. The 6–7 year goal is to serve 500,000 subscribers, including 68,000 phones dedicated to serving rural areas.
- Village Phones have increased incomes and savings accumulation among phone owners, mostly women.
• Phone users, mainly local farmers, have increased their productivity through access to market information, weather reports and pest and disaster alerts.
• Farmers in phone villages receive up to 10 percent higher prices for farm products and improved security of supply for inputs.
• A significant portion of phone owners' profits have been spent on paying for improved education and health services for their families.
• The phone service has also contributed to improvements in disaster response, crime rates and livestock mortality through better access to public services.

Challenges:
While Village Pay Phones is a model for community development, the Grameen network is not integrated with the national fixed line network. This is due to telecommunications regulation in the country which, to a large extent, is being challenged by the rapid expansion of Grameen Phone. The wireless technology chosen by Grameen, based on well-known international standards, is expensive and not optimal for rural areas. Service quality has been inconsistent among phone owners and may have a negative impact on customer satisfaction.


2.2.4 ICT for Empowerment and Participation

ICT can contribute to fostering empowerment and participation and making government processes more efficient and transparent by encouraging communication and information-sharing among people and organizations, and within government.

Using ICT, governments can improve the quality and responsiveness of the services they provide to their citizens as well as expand the reach and accessibility of services and public infrastructure. This is facilitated by e-government applications that provide services and information to citizens over the Internet and other communication networks. In the Indian state of Madhya Pradesh, the government is introducing an experimental intranet computer network for government services and local information. This allows citizens to have faster and more transparent access to government services. For example, farmers can get copies of land titles for 10 cents that previously cost as much as US$100 from corrupt officials. Andhra Pradesh in India has also launched Internet-enabled integrated service centers providing access to different types of government services.

ICT connects individuals and local communities with information and resources beyond their geographic boundaries, encouraging information dissemination, information exchange and communication. Citizens are encouraged to participate in the democratic process through ICT mechanisms such as electronic forums and bulletin boards, which enable participation in public discussions. This is especially relevant for marginalized communities and groups such as women, youth and ethnic minorities: they can share and exchange information of mutual interest, strengthen their collective power and shape their own development solutions. A women's group in Mexico City, for example, used email to ask sympathizers in California to do research on the textile factory where they worked. When the women's jobs were threatened, they came to management armed with information on the company, its profits and its ownership to negotiate better conditions and more secure tenure.

Organizations in developing countries also find it increasingly feasible to participate in information-sharing that strengthens governance and collective power, allowing them to influence political and institutional decision-making processes. Trade unions, for example, have used the Internet as a campaigning tool to organize labor globally in the fight against exploitation. Global networks played a crucial role in helping unionized Guatemalan workers to join with other union
groups and lobby governments and multilaterals to gain recognition and wage increases from Pepsi-Cola in the mid-1990s.

2.2.5 ICT for the Environment

ICT can make a valuable contribution to sustainable environmental management by improving monitoring and response systems, facilitating environmental activism and enabling more efficient resource use.

Scarcity of relevant and reliable information has always been a substantial obstacle to more effective environmental management. Used to collect, process and disseminate information, ICT enables a better understanding of issues such as climate change and biodiversity and helps to monitor ecological conditions so that prevention and mitigation measures can be activated. SIDSNet, for example, provides a medium for sharing information and good practices among the forty-three Small Island Developing States (SIDS) on common issues such as biodiversity, climate change, coastal and marine management and energy sources. In Nepal, computer imaging has been used to build a land resource database for the Arun River basin. This has generated the first ever basin-wide map of land use indicating forest degradation hotspots. The database, together with simulation models, was crucial to designing and implementing the land management program for the area.

ICT is also being deployed extensively to monitor and respond to environmental disasters in developing countries. This is demonstrated in Mexico, where fire emergency services are using satellite images to direct response teams to critical areas resulting in significant reductions in casualties and property loss.

SANGONet

Application Model:
SANGONet is an electronic information and communications network for development and human rights workers in Southern Africa. It provides relevant information to people working on development issues by allowing them to communicate with each other on its web site (www.sn.apc.org/sangonet), and by building capacity in electronic communications within non-governmental, community-based, government and private sector organizations. SANGONet's priorities include open government, ICT, education, health, economy, labor, women, human rights and the environment. SANGONet is a member of the non-profit Association for Progressive Communications (APC).

Illustrative Impact:
• SANGONet empowers people and organizations to make decisions based on relevant information.
• NGOs and other organizations can communicate more efficiently and effectively using email software and services provided by SANGONet.
• NGOs, especially small to medium-sized organizations which face a lack of ICT skills, are taking advantage of SANGONet's low cost support services and training programs to improve their internal capabilities and operations.

Challenges:
The lack of reliable and affordable telecommunications and power infrastructure is still a barrier to encouraging widespread utilization of SANGONet's functions. In addition, although people and organizations can effectively use ICT to improve their information exchange and communications, strong leadership and management capabilities are required to translate information into coordinated action. Source: www.sn.apc.org/sangonet.

The power of ICT as an information and networking medium can also enable citizens to act as environmental enforcement agents, alerting decision makers to compliance infringements and leveraging the power of ICT to reach and influence public opinion. In Indonesia, officials discouraged by weak enforcement of water pollution standards created a public access database
for rating the degree of factory compliance. Citizen groups have used the ratings to pressure under-performing factories. Within the first 15 months of activism, one-third of non-complying factories had met regulations.

ICT applications can be used to reduce the consumption of energy, water and other essential natural resources through *more efficient agriculture and industrial procedures*. For example, precision agriculture techniques using GIS and GPS systems can facilitate weather and soil monitoring, crop forecasting and the ability to optimize farm return on investment ensuring more efficient use of scarce resources.

In the future, ICT may also play an important role in the *fight against pollution*—not only by providing more useful metrics and information, but also by enabling population decentralization and large-scale telecommuting.

### Global Forest Watch (GFW)

**Application Model:**

Global Forest Watch is an international network of more than 90 local forest groups linked by the Internet. It aims to slow forest degradation around the world as well as infuse transparency and accountability into the industry. The initiative was started by the World Resources Institute in 1997 to give the general public a clearer picture of the threats to the world’s forests. GFW uses a combination of satellite imagery, Geographic Information Systems (GIS), mapping software, the Internet and on-the-ground observation to record forest coverage and condition, including where and how forest product companies are cutting. GFW compares the activity to forest leases to identify illegal cutting. These maps are posted on the Internet, naming specific companies that fail to comply with environmental policies and agreements.

**Illustrative Impact:**

GFW is ensuring fair and objective scrutiny of the practices of forest product companies. The group is already operating in 8 countries, and plans to cover 25 countries within a few years. It has negotiated agreements with IKEA, Home Depot, Loews and other major forest product retailers that constitute 40 percent of the North American market. The retailers have pledged to source only from sustainably-managed forests and forest companies and have agreed to use GFW’s expanding database to guide their buying. GFW also provides governments, local communities, consumers and activists with information about what is happening to the forests, enabling the promotion and establishment of successful forest management practices. Results in a few countries demonstrate that GFW can produce information that is not obtainable by satellite systems and exceeds that currently available to governments and United Nations agencies.

**Challenges:**

*Key challenges* for GFW are: limited Internet access among concerned groups who have information to contribute and are also target information recipients; and securing political support and sponsorship among governments, industry groups, and NGOs in new geographic markets. If success in the North American market is any indication, this challenge is not insurmountable.

Sources: [www.igc.org](http://www.igc.org); [www.globalforestwatch.org](http://www.globalforestwatch.org).

### 2.6 Lessons Learned from Specific Interventions

The analysis of ICT initiatives targeting key development imperatives suggests that, while individual ICT interventions can have a positive impact on social and economic development outcomes, many initiatives experience barriers to scalability and sustainability under current conditions. The following is a synthesis of the common lessons found among initiatives that have thus far exhibited a substantial and sustainable development impact.

1. **Initiatives should be explicit about their development goals and how they will directly impact the target population.** Initiatives that clearly identify development goals within the needs
and context of the target population are more likely to develop effective operating models and deliver tangible results. For example, one of Grameen Phone's explicit goals is to have a significant impact on poverty through the economic empowerment of women in Bangladesh. PEOPLink has clearly determined its role of helping talented artisans in developing countries to market their products directly to buyers on the Internet, cutting out the middleman.

2. **Initiatives should be driven by user demands, identified and realized through direct participation and ownership.** Experience from many initiatives, such as Pride Africa in providing micro-finance, and the African Virtual University in meeting demands for skilled and knowledgeable workers, demonstrates the importance of designing initiatives to be demand-driven and locally-owned. Technology imposed on a community of users who have not independently identified a need for it is unlikely to flourish. SANGONet in Southern Africa experiences high rates of local use because local people and NGOs, who are interested in development and human rights, participate in shaping the service to meet their own needs.

3. **ICT solutions should be "built to last."** Initiatives that are planned and managed using a business model are likely to be more sustainable and have a more substantial impact. Initiatives need to include mechanisms for growth and replication into their operating models from the outset, so as to offer scalable and sustainable solutions. SatelLife established a business model for HealthNet to deliver email and electronic information resources for better health and medical services. The model provides for training both end users to effectively use the system and technical staff to manage and operate the system so that local operations can be sustainable. On the other hand, some Digital Villages in South Africa have not been successful because operations did not include components such as a solid business plan, a cost recovery system, a marketing strategy, or emphasis on local community services to make the initiatives sustainable.

4. **Initiatives should be sensitive to local conditions and limitations.** Technology employed should be affordable, physically accessible, easy to use and maintain, and flexible enough to accommodate user demands for new services. Similarly, initiatives demonstrating a capacity to embrace adaptive and flexible solutions are more likely to be sustainable. For example, PEOPLink provides CatGen software, which enables local artisans to easily capture and transmit digital images of products over the Internet with minimal training and in conditions of poor connectivity. The solution is feasible due to the existence of public access points such as cybercafés and telecenters.

5. **The interests of key stakeholders must be broadly aligned with each other and with the goals of the intervention.** Identifying or engineering "win-win" situations is critical to securing lasting commitment from all necessary parties, including participation from the local community, private enterprises, non-government organizations, multi-laterals and governments. Strong public and private institutional support and leadership is required to maintain commitment and alignment from all parties. This requires clear vision and direction, defined roles and responsibilities for all partners, adequate funding, sufficient technical and administrative means, and integration with existing local institutions. As an example, in the Madhya Pradesh State Initiative in India, roles and interests among stakeholders are well coordinated: government is responsible for content, farmers own their computers, and educated local citizens operate the information services. In another example, NIIT, a leading software service and education provider in India, formed a partnership with state governments and private sector companies to provide student loans promoting the Internet and computer-based education. All partners have defined roles and well-aligned interests in the initiative.

6. **Initiatives with the most impact have approached development problems in a holistic and coordinated way, not only through the provision of ICT.** HealthNet, for example, has focused on infrastructure and connectivity by providing low cost access, and also on building human capacity through training of both users and technical operators, transferring enterprise capability including management and operation skills, and creating effective partnerships with both local organizations and medical institutions in developed countries. While the Grameen Phone initiative faces a scalability challenge because of its technology choice and the telecommunications policy environment, a similar initiative undertaken by the TeNet Group in India uses more adaptable...
technology and works within national telecommunications policy guidelines to overcome this challenge. The Indian initiative has chosen a multi-point wireless technology that is more functional for rural areas (with greater transmission range), integrates easily with the national system, and meets regulatory standards.

These examples suggest that ICT interventions focusing on development goals must address a variety of interrelated dimensions to secure an enduring impact. The limited scope and scale of many of the initiatives described through Section 2.2 has prevented them from achieving even greater impact since, as stand-alone initiatives, it is difficult for them to address the policy and infrastructure issues necessary to ensure their success. While grassroots entrepreneurial activity is to be universally encouraged, the potential impact of these ICT interventions would be far greater had they been conceived as part of a comprehensive national ICT strategy for development imperatives. Pursuing ICT interventions in this manner would enable the creation of synergies that standalone initiatives cannot achieve by themselves.

In fact, successful initiatives have not only effectively coordinated efforts in different areas; they have leveraged the synergies created by the complementarity of aligned ICT interventions. These successful initiatives can provide useful lessons on how to better coordinate national "ICT for development" strategies. [A section devoted to the analysis of how ICT has been leveraged in different countries is not reproduced here.]

**Specific Interventions: Evidence of Impact**

The following case studies provide more detailed evidence of the impact ICT-enabled initiatives can have on social and economic development. [Specific initiatives listed in the Appendix to this chapter are organized into five development application areas: health, education, economic opportunity, empowerment and participation, and environment (see also Section 2.2).] The case studies, contributed by the World Resources Institute (WRI), demonstrate how micro-level interventions can impact and are influenced by the components of a wider “development dynamic.” [See also Section 3 in the webpage version].

**Case 1 Scaling Micro-finance: Pride Africa**

Hundreds of millions of people lack access to the formal financial sector. As a result, they cannot save, borrow, buy homes, or grow their businesses—a significant social and economic cost to the communities and countries in which they live. Pride Africa is the largest micro-finance institution in East Africa and is addressing this challenge in an innovative way. The organization has lending operations in five countries, a client base of 100,000, and reaches some of the poorest of the poor. Pride Africa's average loan size is US$125, and these loans finance everything from trading operations to production of foodstuffs to manufacturing of clothing.

**Business Model.** Pride Africa is designed as a franchise model built around proprietary software systems, uniform processes, and extensive training to achieve pan-regional economies of scale that allow for rapid, cost-effective expansion. The software provides loan tracking, financial projections, and branch office management information. Its use has significantly streamlined the organization's internal transactions, both reducing costs and demonstrating an approach to improving the fundamental inefficiencies of the micro-finance industry. Software tools, telecommunications links, and other ICT technologies are even more central to Pride Africa's strategy for the future. Pride Africa is negotiating relationships with commercial banks and intends to link micro-businesses to the formal financial sector by playing a crucial intermediary role—aggregating loans and savings, and providing consolidated loan tracking, accounting, credit referencing, and credit/debit card processing. In effect, Pride Africa will serve as a buffer between large commercial banks and thousands of small clients, and offer a range of financial services currently not available to micro-enterprises, particularly in poor communities. The intended result is greatly increased capital for micro-lending and rapid expansion in the number of branches and clients served, multiplying the development effects of micro-finance. The software that will make this intermediary role possible is presently being piloted in Kenya.
**Infrastructure.** Most of Pride Africa branches are located where its clients are—in poor, semi-urban neighborhoods. Linking these branches through an ICT network to facilitate daily loan operations, software upgrades, and staff training is now possible only via satellite. Pride Africa's plans for ICT infrastructure to play a more important role in the future, since it will be essential to link its branch network to commercial banks, enable non-financial business services, and make possible expansion into rural communities. At present, however, the lack of ICT infrastructure in East Africa is a significant barrier to these ambitions.

**Human Capacity.** Pride Africa's success to date has been the result of a meticulously trained staff. Attrition rates are very low and some franchises boast credit officer productivity rates among the highest in the micro-finance industry. Pride Africa has drawn on the depth of talent in its franchise network to staff expansion and new franchise creation. However, Pride Africa faces a significant human capacity bottleneck—a shortage of local professionals with ICT skills. Its current solution, outsourcing, has slowed development of the software critical to its expansion plans.

**Policy.** Pride Africa in particular and micro-finance institutions (MFIs) in general operate under a tenuous financial regulatory status. They are treated as NGOs rather than as financial entities, even though some manage millions of dollars for their clients. Since accepting deposits is illegal for non-bank institutions in East Africa, MFIs accept "compulsory" or "non-voluntary" monies labeled as loan insurance funds. These irregularities are overlooked by national governments, who are generally supportive of MFIs since they are virtually the only available means of meeting the financial needs of the majority of their populations. Telecommunications companies and Internet service providers, on the other hand, are still highly regulated in most of East Africa, with the result that connectivity costs are high and access is limited. This is a significant barrier for Pride Africa and any other business wishing to link branches or customers via an ICT network.

**Enterprise.** Pride Africa's operations have been highly subsidized by soft funds and low-interest loans provided by international multilateral donors. Commercial or venture finance has not been available. This has limited expansion of the franchise network, since it is dependent on donor funding. Lack of more flexible funding has been a significant constraint on the technology development critical to Pride Africa's business strategy; some technology projects have been put on indefinite hold. Nonetheless, in the past year almost all country operations have reached financial sustainability and subsidized funds are being phased out of balance sheets.

**Content and Applications.** Pride Africa's plans to create local content are embodied in Drumnet, the information exchange and internal market that it hopes will eventually link its clients. Drumnet would permit clients to share experience, pool their buying power to seek lower costs, and eliminate middlemen in client-to-client business transactions. Development of Drumnet has been put on hold because of lack of flexible financing, shortages of local ICT talent, and infrastructure barriers.

**Key Lessons.** Micro-finance is a proven but under-utilized development tool. Pride Africa's case shows the potential for ICT-based strategies to bring micro-finance to scale by increasing efficiency, enabling access to commercial finance for rapid expansion, and mediating between banks and micro-enterprise to the benefit of both. Pride Africa's ability to realize its business goals will depend not only on clarification of the financial policy ambiguities surrounding micro-finance, but also on access to finance for technology development and elimination of the barriers facing East Africa's ICT sector in general—restrictive policy environment, critical shortage of local ICT talent, and inadequate infrastructure.

**Case 2 Rural Connectivity: Grameen Village Pay Phones**

In Bangladesh, 97 percent of homes and virtually all rural villages lack a telephone, making the country one of the least wired in the world. This lack of connectivity has contributed to the underdevelopment of the country and the impoverishment of individual Bangladeshis. To address this problem, Grameen Telecommunications, a wholly-owned non-profit organization to provide phone services in rural areas as an income-generating activity for members of Grameen Bank, and Grameen Phone Ltd., a for-profit entity that in 1996 bid on and won a national GSM cellular license. Grameen Phone
has since become the country’s dominant mobile carrier, providing services in urban areas and along the major railway routes via a network of cellular towers linked by fiber-optic cable.

**Business Model.** Grameen Telecommunications has the explicit goal of helping Grameen Bank’s members shift from relatively low-yield traditional ventures, like animal husbandry, into the technology sector by creating micro-enterprises that can both generate individual income and provide whole villages with connectivity. Grameen Telecommunications uses Grameen Phone's advanced GSM technology in stationary village phones owned and operated by local entrepreneurs. These entrepreneurs purchase the phones with money borrowed from Grameen Bank and sell phone services to customers by the call. Rates are generally twice the wholesale rate charged by Grameen Phone plus taxes and airtime fees. An average of 70 customers a month uses each phone. This shared-access business model concentrates demand and creates relatively high cash flow, even in poor villages, enabling operators to make regular loan payments and still turn a profit. Repayment rates to Grameen Bank are 90-95 percent.

Rural telephones are also very profitable for Grameen Phone, bringing in revenues per phone of US$93 a month in March 2001, twice as much as Grameen Phone's urban mobile phones. However, rural phones represent less than 2 percent of the phones used on Grameen Phone’s network and bring in only 8 percent of the company’s total revenue, the company's profitability still depending on its urban business.

**Infrastructure.** Grameen Telecom's original goal was to have a phone in every one of Bangladesh's 65,000 villages by 2000, but only 4,543 village phones were in service as of March 2001. The primary constraint has been a distorted telecommunications market controlled by a monopolistic government provider, BTTB. Because BTTB has been unwilling to increase its interconnect capacity, despite Grameen Phone's offer to pay for the upgrading, Grameen Phone and other mobile companies have been unable to connect additional phones to the national switched network and instead have had to offer primarily mobile-to-mobile phone services. This infrastructure barrier has also limited expansion of the rural phone network.

A second constraint is Grameen Phone’s use of cellular technology for fixed phone centers, a choice that is neither efficient nor probably competitive over the long term. GSM, used throughout much of Europe and Asia, is far more expensive than fixed wireless local loop (WLL) systems used by Grameen Telecom's competitors, Sheba and BRTA. While GSM towers can provide service within 5 kilometers, WLL towers provide coverage within 50 kilometers. Moreover, WLL provides better bandwidth for data transmission at a lower cost.

**Human Capacity.** The development of a cadre of entrepreneurs, nurtured by Grameen Bank, has been key to the success of the village phone. After the Bank approves financing of a phone, Grameen Telecommunications buys a cellular phone subscription on behalf of the entrepreneur and provides the connection, necessary hardware, and training to operate it. Grameen Telecommunications also tracks trends in phone use and identifies operators who are having difficulty marketing or collecting payments for the service.

The village phone network also yields important secondary benefits to the women who live in the villages that they serve. Because 95 percent of operators are female and the phones are in their homes, women who might otherwise have had very limited access to a phone feel comfortable using one. There is also some evidence that, because the phones are so important for whole villages, having female operators has helped to enhance the status of women in the communities where they work.

**Policy.** Bangladesh’s telecommunications regulatory regime is both antiquated and anti-competitive. One consequence has been BTTB’s ability to maintain control over the switched network without expanding its capacity, even in the face of high demand. Scarcity forces Bangladeshis to pay large sums to BTTB officials in order to obtain phone service. BTTB’s control of the network is likely to become an even more significant market disadvantage to Grameen Phone and other mobile operators when BTTB launches its own GSM mobile network this year.

**Enterprise.** Grameen Telecom's village phone venture, as structured in Bangladesh, would not be feasible without access to the credit and bill collection services provided by Grameen Bank and the
infrastructure and urban network provided by Grameen Phone. Village phones would be far less successful if Grameen Phone were not able to discount by 50 percent the rate charged to Grameen Telecommunications for a phone call, an underlying subsidy made possible by a transfer of profits from the more profitable urban part of the business to the rural sector. This is a significant advantage unavailable to rural-only competitors BRTA and Sheba.

**Content and Applications.** Demand for telephone services in rural Bangladesh remains high despite relatively limited marketing and no overt content development by Grameen Telecommunications or Grameen Phone. In large measure, this is because the village phones offer tremendous economic value to the users, who would otherwise have to spend hours or days traveling to other towns to make a phone call. According to one study, the average consumer savings for a phone call from a village to Dhaka ranges from 2.6 percent to 9.8 percent of the user's mean monthly household income.

Bangladesh is also a labor-exporting country with many rural people working overseas. As a result, one of the most important functions of the village phone is to facilitate remittances from relatives. Local business people and farmers also use the phone to reduce costs, get better prices for their products, and plan shipments to reduce spoilage of perishable products.

**Key Lessons.** Were it not for policy and infrastructure barriers, Grameen Telecom's village phones might already serve all of Bangladesh's 65,000 rural villages. The high revenues generated by the shared-access business model suggest the effectiveness of market drivers for such approaches. And as a development-centered ICT strategy, the village phone program promises broad benefits, including enhanced productivity and social welfare, and new sources of rural income.

Nonetheless, the Grameen Telecommunications business model relies on subsidies from urban cellular users, on financing and other support from Grameen Bank, and on GSM cellular technology that is less than optimal for sparsely populated rural areas, fixed phone centers, and data transmission. The wireless local loop technologies used by Grameen Telecom's rural competitors or wireless multi-point distribution technologies — already being deployed by the TeNeT group and their partners in rural India — promise lower costs and higher data bandwidths. Under favorable policy environments, such rural networks, combined with shared access strategies that concentrate demand and generate efficient usage, may well enable profitable, market-driven approaches to providing connectivity and infrastructure in rural areas.

**Case 3 Community-Based Content: Infocentros Telecenter Model**

Telephones are scarce in El Salvador. Individual computer ownership is even scarcer — fewer than 2 PCs per 100 inhabitants — and dial-up Internet costs are still relatively high. As a result, less than one percent of the population now uses the Internet. Changing this situation is the mission of the *Infocentros* Association (IA), a newly-created non-profit organized and run like a business. Its goal is to provide 2 million Salvadorians — one third of the population — with access to the Internet within 2 years through a chain of 100 telecenters. But connectivity is just the infrastructure — the Infocentros strategy is to build an "infrastructure" of local content as well, in order to transform El Salvador's culture into an information society.

**Business Model.** Although formally a non-profit, *Infocentros* is headed by a CEO and will build, operate, and franchise telecenters throughout El Salvador. The IA business strategy is built around franchising: of the 100 telecenters planned by the end of 2002, only 10 will be operated by IA itself as regional “mother” centers. Franchises will cost about US$80,000 and are expected to be profitable within 27 months. IA will launch each center and set up operations properly before handing it over to the franchise partner. Franchise revenues will be re-invested in additional centers and new services. Telecenters will typically have 30 computers and include open access areas and training or on-line conferencing areas.

*Infocentros* will also provide or catalyze the creation of local content, computer training services, and e-commerce infrastructure, in order to make Internet access an effective development tool. It is this content, such as courseware or other businesses built around computers and Internet access that is central to the IA business model. Relevant local content generates usage and additional revenue sources for telecenters, as well as significant social benefits for the country. Courseware
generated in one telecenter, such as a currently popular course on how to rebuild earthquake-damaged houses, can be offered in all others as well; its value increasing as the Infocentros network expands. In addition, Infocentros is developing strategic alliances with groups that can benefit from information technology, such as hospitals and local governments.

**Human Capacity.** Because of the focus on local content and training, human capacity development is a major outcome of the Infocentros approach. At the telecenter level, Infocentros trains its own rapidly-growing staff and offers one-to-one assistance to customers unfamiliar with computers or the Internet. Through alliances with government and business, IA also seeks to teach a large segment of the population how to use information technology to increase skills, create jobs and raise incomes, and overcome social problems. For example, in partnership with the Education Ministry, Infocentros is negotiating an 8-hour Internet training course for all Salvadorian high school students. IA is also developing financial applications for small and micro-businesses and other applications for farmers, doctors, and government officials. IA plans to offer free web page hosting for the 470,000 small businesses that, in El Salvador, constitute 99 percent of private enterprises.

**Infrastructure.** A significant obstacle to Internet use in El Salvador is the high cost of bandwidth. Although Infocentros has been able to negotiate discounted rates, connections remain expensive. If Infocentros can use its market power to lower the cost of Internet access, it could gain a strong competitive advantage over private cybercafés.

**Policy.** Infocentros has benefited from the government's 10-year, interest-free loan, and from alliances with specific government ministries. In addition, IA has benefited from a number of policy initiatives aimed at liberalizing the country's economy. El Salvador’s deregulation of the telecommunications sector and resulting competition, for example, has helped to reduce Internet access costs. Banking deregulation and privatization have also strengthened the investment capacity of entrepreneurs, which is likely to help the financing of IA franchises. Still further legislative and regulatory action will be required if the Infocentros plan to make its telecenters function as e-commerce ordering and payment sites is to succeed.

Uncertainty about the legality of Internet telephony has kept Infocentros from offering this potentially valuable service. However, IA’s telecenters do not prohibit the use of applications like Net2Phone, and during the January earthquake, they offered Salvadorians free Internet calls to notify relatives in the United States. But Infocentros has chosen not to publicize the technology or to challenge the telecommunications companies who provide its Internet connections by seeking legal authority to offer the service. In so doing, it is foregoing a potentially lucrative market, since many Salvadorians live overseas.

**Enterprise.** The Infocentros business model, with its rapid deployment of franchises to reach scale, enables the enterprise to negotiate favorable contracts for equipment and services from a wide range of vendors. IA has been very entrepreneurial, negotiating deals with private companies to offer discounted Internet access to groups of employees or clients, and forging agreements with several government agencies to create e-government portals. To increase telecenter usage during evenings and weekends, partnerships are being developed with schools and small businesses that wish to offer computer and Internet training to their students, faculty, and staff. To extend Internet access throughout El Salvador and reduce the need for physical plants, IA is planning to create virtual telecenters located within existing institutions, such as medical centers and central courthouses. And to help perpetuate its entrepreneurial spirit, IA maintains a 3-person new business development group charged with assessing new opportunities quickly. Nonetheless, long-term profitability is not assured. As many Internet startups have found, building market share and creating content can be costly. Currently, 90 percent of IA telecenter users are paying discounted student rates.

Infocentros assists its franchisees by supplying initial management support, training, technical assistance, network marketing, and other services to help ensure that telecenters remain profitable. It also uses an enterprise-wide Intranet to share new business ideas across the telecenter network and to compare the monthly performance of each telecenter, providing strong incentives for telecenter managers.
Content and Applications. Community-based content is what sets Infocentros apart. One of its founders believes this approach gives IA a competitive advantage over US-style Internet access providers in Latin America. IA is building a new digital production center to create audio-visual content for education and professional training courseware that can be broadcast over the Internet. It is also developing a B2B e-commerce portal for small and micro-entrepreneurs, and a suite of business applications designed to help these business owners manage their finances and investments, and provide billing-services only at telecenters.

Key Lessons. Infocentros is an example of a development-centered ICT strategy based on a unique partnership between government and civil society. It draws on 10 years of accumulated experience in telecenter operation and franchising, and substantial financial and other support from El Salvador's government.

Infocentros is a start-up enterprise, but it appears to be meeting or exceeding its targets. Its business model gains efficiencies by aggregating users in telecenters, providing shared access to computers and bandwidth, generating additional revenues from local content, and aggressive franchising. As a result, it seems capable of reaching scale and providing widespread Internet access and the related social benefits that its creators intend. The generation of valuable content and training of customers to use information technology—for their own education, to obtain government services, to grow their businesses, or to communicate more effectively—will be critical to the initiative's social and business success.

[The web page text offers seven case studies of national ICT approaches including those for Brazil, Costa Rica, Estonia, India, Malaysia, South Africa, and Tanzania.]

The FAO perspective on development and communication

The Food and Agriculture Organization, a specialized agency of the UN, has been active in exploring and testing ways of systematically using communication in development programs. In 1989, the organization developed some useful suggestions that helped define development communication. They appear in the following text from an FAO document. In Chapter 3, you will discover more details about FAO's experiences in the field that provided the basis for some of these perspectives.

THE IDEA BEHIND DEVELOPMENT COMMUNICATION

Development communication rests on the premise that successful rural development calls for the conscious and active participation of the intended beneficiaries at every stage of the development process; for in the final analysis, rural development cannot take place without changes in attitudes and behaviour among the people concerned.

To this end, Development Communication is the planned and systematic use of communication through interpersonal channels, and audio-visual and mass media:

- to collect and exchange information among all those concerned in planning a development initiative, with the aim of reaching a consensus on the development problems being faced and the options for their solution.
- to mobilize people for development action, and to assist in solving problems and misunderstandings that may arise during project implementation.
- to enhance the pedagogical and communication skills of development agents (at all levels) so that they may dialogue more effectively with their audiences.
- and last but, by no means least, to apply communication technology to training and extension programs, particularly at the grassroots level, in order to improve their quality and impact.

What are the problems that development communication can help to overcome?

1. Problems of designing projects that take properly into account the perceptions and capacities of the intended beneficiaries.

Development communication can help to ensure that the design and action plan of a development project take into account the attitudes, perceived needs and capacities of the people which the project is trying to

help. Many projects have failed in the past because assumptions were made about the willingness and capacity of rural people to absorb new technology and development infrastructures into their way of living and working. Abandoned irrigation schemes and settlement programs, broken down equipment, and the slow adoption of improved crop varieties are examples that bear witness to this failure to bring about attitudinal and behavioral change.

As an adjunct and complement to the usual situation analysis that is done for project formulation, development communication helps to identify attitudes, felt needs, capacities, and constraints to the adoption of change. And through the dialogue and consultation process it employs, it naturally elicits the participation of the intended beneficiaries of a development action.

2. Problems of mobilizing rural people for development action and ensuring an information flow among all concerned with a development initiative.

If a rural development project has been planned with its beneficiaries, their participation and mobilization are almost certain to follow quite naturally. However, in any event, communication support during project implementation keeps people informed, helps to mobilize them, and to stimulate the more conservative to action. This is especially so when communication (in the form of audio-visual presentations, for example) is used to spread knowledge of successful development action taken by some communities and individuals to other communities and individuals that have not yet mobilized.

Furthermore, even the best project – designed with its beneficiaries – cannot be rigid. As it progresses, there will be need to review and refine its activities and introduce changes of emphasis. A good communication system can keep a dialogue open among those involved in a development project, thereby addressing problems as they arise. Such an ongoing information flow can also help to ensure coordination and proper orchestration of inputs and services to a development initiative.

Development communication spreads information about successful development experience as a stimulus to others, keeps a dialogue open among all concerned in a development project, and helps to smooth project implementation.

3. Problems of improving the reach and impact of rural training programs

Training at the grassroots level has become a major priority in recent years. At the same time, communication technology has been improving and becoming ever cheaper and easier to use in rural areas. Audio-visual media make it possible to:

- help overcome the barriers of illiteracy and incomprehension (by conveying ideas and practices in an audio and visual form);
- illustrate new ideas and techniques more effectively than by word-of-mouth alone, and thus improve the impact of extension and training;
- compress time (a whole crop cycle can be shown in a short presentation);
- compress space (events and practices in distant locations can be transferred to other places where they can be useful testimonials);
- standardize technical information (by creating audio-visual materials that illustrate the best available advice to farmers and having these materials used throughout the extension and farmer training chain, thereby ensuring that the technical information will not become distorted during its passage from its source to the smallest and most remote farmer).

Development communication applied to training and extension in rural areas increases their effectiveness and reach, and ensures that the best available technical information is standardized....

**What types of development initiatives require communication inputs?**

Any development initiative that depends for its success on rural people modifying their attitudes and behavior and working with new knowledge and skills will normally benefit from communication support. So also will projects that have a multi-disciplinary nature, that is to say those which involve a number of subject-matter ministries and authorities, and which are therefore inherently difficult to manage. Communication can provide the linkages that will ensure coordinated management.

**Are development communication activities always planned as part of a development project?**

Not necessarily. There are also development communication projects per se. This is the case when, for example, assistance is being provided for institution building such as creating or strengthening an agricultural or rural development communication unit, or providing assistance to rural broadcasting. Such institutions can often provide communication support to a number of agricultural and rural development projects in a country.
What are the overall considerations when planning communication inputs?

Successful development communication calls for a well-defined strategy, systematic planning, and rigorous management. Experience has shown all too clearly that ad hoc communication inputs such as the provision of some audio-visual equipment, or the stand-alone production of some audio-visual or printed material has seldom made any measurable impact. It has also become clear that communication activities require a certain critical mass – of resources, intensity, and duration – if they are to realize their full potential in mobilizing people for development action and become self-sustaining in this role. This explains the minimal results when symbolic attention has been paid to development communication by including of some token equipment and expertise in the project.

A communication plan should be tailored to the particular conditions being faced. There are so many variables of a human, cultural and physical nature that a communication plan that worked for irrigation development in an arid zone of one country cannot effectively be transferred in toto to another country. For even if the principles remain the same, the details will almost certainly call for differences.

Who should plan communication inputs?

Communication planning is a specialized field and calls for people who know communication processes and technology, and understand development issues and conditions in developing countries.

Development communication planners can often be made available by international development agencies, either from among their own staffs or by calling in consultants.

Communication planners may also be found locally in developing countries. There are increasing numbers of universities and institutions that are becoming involved in development communication and can provide expertise. Many NGOs in developing countries also have communication expertise that can be called upon.

The two-part World Summit on the Information Society (Geneva 2003; Tunis 2005) and the World Congress on Development Communication (Rome 2006) signaled that development communication is definitely on the international agenda. The Congress, whose organizers included the World Bank and FAO, attempted to demonstrate that development communication is an essential tool for meeting today’s most pressing development challenges and therefore should be more fully integrated in development policy and practices.

II. THREADS OF DEVELOPMENT COMMUNICATION

In the remaining parts of this chapter we concentrate on how development communication has evolved over the last half century. We will trace seven threads that have contributed to that fabric we call “development communication.” As we explore communication in the real life context of agricultural, health, nutrition and community development we skirt the many excellent discussions by theorists and academicians who present a more abstract picture of this evolution. A valuable resource for studying the great thinkers related to development communication and some of the important documents that punctuate this history, readers may wish to see the thousand page volume Communication for Social Change Anthology edited by A. Gumucio-Dagron and T. Tufte. The editors have compiled excerpts from more than 150 authors, spanning the last 80 years of important literature that provides the intellectual base of development communication. Some of these excerpts appeared originally in languages other than English and therefore provide a dimension of this history that has not heretofore been readily available.

Government officials, academics, practitioners and others working in the development field may have different perceptions of what the defining characteristics of development communication are. Early in its history, some spoke of it as “development support communication” suggesting that the communication function was a sub-component of various development sectors such as education, health, nutrition, and agriculture. Today some would argue that development communication itself should be a sector.

The suggestion has also been made that development communication is interpersonal and participatory communication, and that mass communication is largely unrelated to development communication. Others would argue that a “development communication” approach dominated by face-to-face communication has inherent limitations if one measure of success is widespread change of

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behavior in short periods of time, a goal that might be highly appropriate in some circumstances. While news can travel fast, face-to-face transmission of information may not always be the most efficient or effective method. So framing the discussion as mediated communication versus face-to-face communication is probably not the best approach. After weighing empirical data and considering the conventional wisdom about the effectiveness of communication channels, Robert Hornik concludes:

Both data and complementary arguments suggest that the allocation of resources among channels should reflect not only relative effects but also reach, cost, managerial feasibility, and sustainability. In many contexts those considerations will lead away from an emphasis on interpersonal channels and toward increasing reliance on mass media channels. So long as the truism – media for awareness, field agents for practice change – is accepted, and so long as communication planners fail to admit the difficulty of organizing and sustaining such agent networks, communication programs are unlikely to succeed as motivators of behavior change.11

A group of communication professionals, including representatives from the UN Specialized Agencies and academics who met periodically during the past decade as a Roundtable on Development Communication, concluded that its domain is best described by the phrase "communication and development." This suggests that both mediated and non-mediated forms of communication are relevant to development. This compromise is especially useful with the growing importance of development of the new information and communication technologies – led by computers, the Internet and the World Wide Web – which cannot easily be classified exclusively as mass or interpersonal communication. Later we will read about the audio cassette as a communication medium, showing that it had characteristics of mass communication and interpersonal communication (see Chapter 6) as do Internet blogs today and such Internet phenomena as "MyFace" and other personal posting sites.

When one looks at development communication as communication-and-development there are important anecdotal examples of successes in this field. Some of these have been documented on the Communication Initiative web page (www.comminit.com). Examples include:

1. **Capital Doctor – Uganda** - A call-in radio show that reaches a general audience of 5 million, physically covering approximately 75% of the population, and 65% of these are believed to be outside of Kampala. As of March 1998, 2,200 questions had been answered on-air. 70% of respondents at an STD clinic had listened to Capital Doctor. 91% of reported condom users were listeners to the programme, 71% of those who reported to ‘always’ use condoms were listeners. Those who listened to Capital Doctor were more likely than non-listeners to use condoms. [http://www.comminit.com/id01-7of99/sld-485.html](http://www.comminit.com/id01-7of99/sld-485.html)

2. **Sanjeevani – Nepal** - Attitudinal changes occurred due to this TV drama on child health issues and gender equality in education. 57.6% of respondents said that they learnt that female education is of primary importance for the development of the community. 22.5% learnt that health education is necessary, 12.5% learnt that there should be no gender discrimination and that daughters and sons should have equal rights. 5.8% learnt that knowledge should be shared with others in the community. [http://www.comminit.com/idmay15/sld-2307.html](http://www.comminit.com/idmay15/sld-2307.html)

3. **Mass Media Family Planning – Turkey** - A national multi-media project. 10% of married women visited a clinic as a result of the programme, 20% said they intended to. Modern contraceptive use increased from 38.6 to 42.8%. IUD use increased from 16 - 22%, condom use decreased by 2%, oral contraceptive decreased by 3%, withdrawal method decreased by 3%. [http://www.comminit.com/idmay15/sld-2296.html](http://www.comminit.com/idmay15/sld-2296.html)

4. **Measles Communication Programme – Philippines** - A national multi-media project. Proportion of fully vaccinated children of ages 12-23 months increased from 54% to 65%. Average number of vaccinations that a child under 2 years received increased from 4.32 to 5.10. 64% of mothers who knew of the campaign had their children immunized, 42% of mothers who did not have the knowledge of the campaign had their children vaccinated. [http://www.comminit.com/idmay15/sld-2293.html](http://www.comminit.com/idmay15/sld-2293.html)

5. **Accessing Mass Media on Reproductive Behavior – Africa:**
   NAMIBIA: 61% of married women regularly exposed to radio, TV and print media are currently using contraception; compared with 25% exposed to 2 of those media, 20% exposed to 1 of the media and 12% exposed to no media.

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KENYA: 53% of rural married women regularly exposed to radio, TV and print media are currently using contraception; compared with 42% exposed to 2 of those media, 33% exposed to 1 of the media and 22% exposed to no media.

ZAMBIA: 15% of married women with no education regularly exposed to radio and TV are currently using contraception compared with 9% exposed to 1 of those media and 7 per cent exposed to no media.

BURKINA FASO: All women regularly exposed to radio, television and print media desire a mean number of children of 3.7; compared with 4.2 for women having regular exposure to 2 of those media, 5.7 for 1 of the media, and 6.3 for no exposure to any media.

GHANA: Rural women regularly exposed to radio, television and print media desire a mean number of children of 3.9; compared with 4.2 for women having regular exposure to 2 of those media, 4.6 for 1 of the media, and 5.3 for no exposure to any media.

(6) Social Marketing of Vitamin A in West Sumatra (Indonesia) – Daily consumption of dark green leafy vegetables increased: 19% to 32% among pregnant mothers; 14% to 33% among nursing mothers; 10% to 21% among 5-12 month olds; 17% to 27% among 13-60 month olds.

(7) Music Project – Nigeria - Included the production and commercial launch of 2 family planning songs, 6 TV PSAs and 6 radio PSAs. Respondents who were highly exposed to the campaign were 3 times more likely to communicate with their spouses about family planning, 5 times more likely to have positive family planning attitudes, and almost twice as likely to use family planning when compared to those who were unexposed. Rural respondents with high exposure were 7 times more likely to have positive family planning attitudes when compared to those who were unexposed. http://www.comminit.com/idmay15/sld-2358.html

It is clear that communication has become an important aspect of development initiatives in health, nutrition, agriculture, family planning, education, and government. Note how, in the English language, words have emerged like e-Government, e-Health, e-Learning and e-Commerce. We now turn to an exploration of seven threads that have gone into the make-up of this communication-and-development fabric (which we will take the liberty of calling development communication).

THE UNDP THREAD AND ERSKINE CHILDERS: DEVCOM PIONEERS

Among the earliest pioneers in the field we are calling development communication was a United Nations unit called the Development Support Communications Service (DSCS) which operated under the aegis of the United Nations Development Programme (UNDP). DSCS was based in Bangkok (although its successor organization, the Development Training and Communication Planning Programme, shifted to Manila). It was in DSCS where the ideas began to come together to form a distinctly new approach to communication as part of development interventions, and Erskine Childers was the key person in the UNDP operation.

Childers died in August 1996 leaving behind him almost 30 years of service to the United Nations; 22 as a UN staff member and seven more with the World Federation of UN Organisations. He dedicated effort, energy, enthusiasm and his life to the ideals of the UN. Many knew him best for the pioneering work he did in advocating communication as an integral component of development projects. While Childers wrote no books directly related to development communication like those of Lerner, Schramm, Rogers and others prominent in the field, he wrote the papers and made the presentations that foreshadowed some of the concepts, principles and methods that have emerged in the past several decades. Silvia Balit, former FAO communication official, summed it up well: "He was not only the founding father of development support communication, but also a true master and an example for us all." An example of this is the paper he and his wife Mallica Vajrathan directed at UN organizations in 1968 titled Development Support Communication for Project Support. Because of its historical importance in defining the nature and characteristics of development communication, we have reproduced it below. The paper was not published but it and related papers were widely circulated among UN people, academic circles, and others welcoming a systematic approach to the application of communication principles to development issues.

Perhaps the strength of his leadership in development communication is demonstrated best in Childers' own words. In Sharing Knowledge, FAO's video program on communication for sustainable development, Childers said:

If you want development to be rooted in the human beings who have to become the agents of it as well as the beneficiaries, who will alone decide on the kind of development they can sustain after the foreign
aid has gone away, then you have got to communicate with them, you have got to enable them to communicate with each other and back to the planners in the capital city. You have got to communicate the techniques that they need in order that they will decide on their own development. If you do not do that you will continue to have weak or failing development programmes. It's as simple as that.

Childers spent his early career as a writer, doing scripts for radio and television, especially on topics related to international affairs and the United Nations. Former UNICEF communication specialist Jack Ling says that Childers was a conceptualizer and a prolific writer who should be 'fully recognized' for his pioneering role in development communication.

Between 1967 and 1975, Childers was based in Bangkok where, with Mallica Vajrathan and others, he developed the ideas and processes that became development support communication. From his post as Director of the UNDP/UNICEF Regional Development Support Communication Service (Asia-Pacific), he urged the UN Specialized Agencies and national governments to put more resources into communication, for, as he wrote in 1968, "No innovation, however brilliantly designed and set down in a project Plan of Operations, becomes development until it has been communicated."

One side of Childers' character was reflected by Brian Urquhart, who worked with Childers toward the welfare and reform of the United Nations. Urquhart wrote in *The Independent* soon after Childers' death: "His biting humor and his strong opinions were splendidly stimulating to those he worked with."

Many of us who had the opportunity to interact with Childers’ during the past decade on the Development Communication Roundtable would echo those observations, remembering the challenges he issued and the wisdom he provided in these discussions. One Roundtable member and long-time UNFPA communication expert, O.J. Sikes, says:

Erskine was a true champion of the people. He didn't invent the concept of participation, but he and Mallica breathed life into it. He drew global attention to the importance of women's rights. Today, these concepts, unpopular when he first espoused them in the 1960s, have become widely perceived as keys to development.

Urquhart well sums up this side of Childers' character:

He was, by nature and by inheritance, a champion of the oppressed and the less fortunate. He stood up for the developing countries and their peoples. He fought for their place on the international scene and for the programmes and activities that would help them attain it.

Childers and Vajrathan wrote Development Support Communications for Project Support in June 1968 while they were at DSCS in Bangkok. It was one of a collection of papers Childers was to write in the next few years advocating communication as a vital component of development planning. A major value of this piece is that it reflects lessons he and his wife learned from the field. Strikingly, with only an update of the technology mentioned, the paper is as important and relevant today as it was four decades ago. For example, the authors anticipated D. C. Korten and N.T Uphoff's call for bureaucratic reorientation in fostering participatory rural development, the importance of communication planning and strategy, and the imperative found in social marketing to start with a firm foundation of social science research and analysis. Many of the measures he proposed have found their ways into the practices of some UN agencies.

Although the paper was principally addressed to the UN family in 1968, it deserves and can serve a much wider audience today. A wide range of other organizations have been active in development projects, driven by priorities such as the MDGs and the need for marginal people to become part of the socio-economic mainstream. In mid-2006, the Bill and Melinda Gates Foundation committed up to US$30 million to support projects that would help small farmers in sub-Saharan Africa and South Asia interact with more effectively with national, regional, and global food supply chains. The Gates' grants were open to government entities and non-governmental bodies. Likewise bi-national development agencies such as those of the USA, Canada, the UK, Germany, Denmark, Sweden hundreds of large and small NGO are working on the kinds of issues Childers addressed. So Childers' insights have value for them all.

Childers and Vajrathan begin their paper by noting a variety of circumstances in development that call for systematic communication support, such as the following:

- "the need for far greater involvement of the local people in the project"

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• “confusion among farmers arising from conflicting and inaccurate information”
• [Because of] “resistance from the public due to traditional attitudes and suspicion of authority it has proven difficult to convince key officials in other departments of the success of the pilot projects and the need to budget for its expansion”
• “a widespread popular view that these [communication] occupations are of inferior status compared to white-collar jobs.”

We shift now to the text of the paper.

For the past ten years and more, references like those set down [above] have been appearing with increasing frequency in project reports from developing countries assisted by the UN-Family; or the difficulties epitomised in such phrases have been the coinage of countless discussions among UN development personnel. Each type of obstacle to project implementation encompassed by such familiar phrases is an obstacle of communication. It would be hopelessly optimistic to state that greater attention to the use of communication techniques in development projects would eliminate these recurring reports altogether. But it can be no exaggeration on the accumulated evidence to state that perhaps no other instrument in the development process has been so grossly neglected. There are, of course, UN-assisted projects in which there is no need for special, supporting information and communications work. But when these and a few other limited categories of projects are set apart, it must be said that virtually all others contain a very large element of communication. They are, after all, planned efforts to introduce and diffuse innovations among communities or cadres – and to do so intensively and economically in order to telescope time-spans of growth and change that would otherwise encompass entire generations, with limited funds.

No innovation, however brilliantly designed and set down in a project Plan of Operations [PlanOps], becomes development until it has been communicated. No input or construction of material resources for development can be successful unless and until the innovations – the new techniques and surrounding changed attitudes which people will need to use those resources – have been communicated to them.

Once thus stated, the point appears to be crushingly obvious. Yet it has not been obvious in project formulation. Every project of the kind under discussion here carries a number of built-in assumptions or requirements for its success. When one or more agencies of the UN-Family assists in the design and construction of a material input - for example, a hydroelectric dam, or complex of irrigation canals - the objective is not to build a dam or canals. It is to provide new material resources which people, as rapidly as possible after physical completion, can begin to use and benefit from. The project PlanOps may be strictly for the design and construction; the terms of reference may not in any way call for UN-Family effort to ensure the diffusion of the necessary accompanying innovations to use the input. Yet even in such cases, and even assuming that it could be argued that we should not seek to ensure that others – i.e. national authorities – will plan and phase in the diffusion of these innovations, even so, we are involved in communications.

From the moment a stranger appears in someone’s field bearing government authority, a theodolite, and some stakes, and drives the stakes into that ground, a long chain-reaction of communication has been launched. It begins with the first villager who sees the stake, wonders about it, speculates with a neighbour, begins asking questions that ripple out to a rapidly increasing community of profoundly concerned people. Is "Government" going to take their land? Will they get any compensation? Is it something to do with water? will an ancestral burial ground be flooded? Is the new water for the landlord, or for us? When will "it" happen? The Agricultural Extension Officer has been telling us to start a cooperative. Is it worth it now? "They" want us to build a new school house: will we be here, on our land, in five years' time; and if not, why put energy into a new school?

The engineers who drew up the design and specifications, the time schedule and materials-logistics for this UN-assisted project were not asked – and should not have been asked – to contemplate such immediate consequences from the first act of construction. But was anyone else asked to contemplate, to draw up an accompanying information plan — a plan for purposive support communications both to explain “the stake” and all that would follow to the surrounding community, in time, and to begin the diffusion of needed innovations among them in time?

In another entire category of projects, communication is their very raison d'etre: planned efforts to diffuse innovations among the largest possible number of ordinary people, or by training new cadres – both in historically very short periods of time. The whole web of health, agricultural, vocational and other training,
adult and out-of-school education, and in-school education development projects falls within this definition.
All of these projects consist, first and foremost, of bodies of new information or techniques, in the hands of
a relatively small number of UN and counterpart personnel, that are to be communicated to people who
need them. The fundamental premise of all this assistance is that innovations can be introduced and that
people will adopt them through special and accelerated effort – rather than leaving the process to "several
generations of wider and better schooling," etc.

Yet the corollary of this premise in all such development work is, surely, that special and accelerative
means of diffusing the innovations will be needed – every possible means that can be devised. Many,
indeed most, of the innovations have been designed from experience in more developed societies. In those
societies, no self-respecting planner of a training programme for a cadre of people automatically more
capable of absorbing a given innovation would dream of ignoring, say, the question of advance-planning of
suitable films / slides / charts and other aids to the communication process. Yet, the plain fact is that to date,
we in the UN-Family have been engaged again and again in the exercise of launching training projects for
diffusion of breathtakingly "big" innovations to people far less ready to absorb them, with only the most
rudimentary aids to the communication process. To put this neglect in a nutshell: the developing countries
are now strewn with cine and slide projectors supplied by UN and bilateral aid agencies – but with miserably
few films or slides remotely relevant to the intended audiences. As in so many respects, the "nuts and bolts"
have been furnished, but not the innovations that can make them usable.

One crucial time-factor in the communication process of development has already been mentioned – that
we are trying to telescope the time-span of innovation and change from a matter of generations to a matter
of years. Within this, there is a second vital time-factor – the actual phasing of a project. Whether the
project-audience is a whole community or selected trainee-cadres, the innovations to be diffused are
supposed to be phased over a period of perhaps five years, at most, either absolutely or per diffusion-cycle.
The nature of a great many such projects leaves no margin for delay in any of the logistics. Experts are
phased in by project years; newly-trained cadres from one year are supposed to begin their
innovation-diffusion the next; a new irrigation canal is filled with water at a date when the surrounding
farmers are supposed to be ready to begin using it, first for one new kind of cultivation, then for a second
crop, and so on.

By the nature of what all such development projects are trying to achieve, therefore, there can be no more
margin for delay in the communications-logistics than in any other, nowadays automatically, programmed
element of the PlanOps. Yet this very day, all over the developing regions, there are irrigation canals filled
with water and not yet being used; experts and instructors for Phase-Year X of projects who can only begin
to discover what communications aids they ought to have when their phase is nearly ended; and newly
trained cadres of project-implementation personnel going out to their diffusion-points with no more to help
them than the (quite unsuitable) texts and charts they acquired in their courses. The authors of this paper
witness these problems every day of the year, in every sector of development now under UN (as other)
external assistance.

In short, a great many UN-assisted projects contain, as a very precondition of efficient and effective use of
the investment mode, information or communications "components" that ought to be advance-planned as
carefully as all the other, now automatic logistics. The PlanOps of such projects should specify such a
component, itemising the resources that will be required; when they will be needed relative to project
phases; who will provide the resources, as between UN and Government; what kinds of information
materials (they may range from flip-cards and flannel graphs to films in the relevant language); and of
course, the already familiar item, what communication equipment is to be supplied.

The range of Development Support Communications in which project planners and then field executors
ought to be concerned is very wide – far, far wider than is covered by considering what are called 'the mass
media' in the western region. Media of Development Support Communications must be seen to include,
potentially, every channel along which bodies of needed new information and ideas can be transmitted to
the particular project audience. The hierarchies of government personnel in the functional or development
ministries themselves are vital media. So may be a simple traditional village fair; a traditional midwife; a folk
performance that may contain a potential for adaptation to a development innovation, far more powerful
than a loudspeaker address by a technician from the city.

The technique of communication that may be vital in a given project need not be costly or require
complicated modern equipment. We have seen communication obstacles – visibly vitiating an entire
development-aid investment – that are as simple as public health education personnel not knowing how to
speak to an audience. They have been well trained in the content of the health innovations they are
supposed to diffuse to the people: they know the technology perfectly but they simply do not know how to
address audiences of thirty or forty village women.

It is equally important for project planners and for the new teams of specialists in Development Support
Communications which the UN-Family desperately needs to realise that the "project-audience" for a given
act of communications support varies enormously. It is by no means only "the people" en masse, whether
on a national or district scale. Nor is it only the actual trainees in training projects. Echelons of government
personnel who are, or who ought to be, involved in project implementation, may also need purposive,
planned support communication for a variety of reasons. The moment we get away from thinking in purely
Western terms, of "mass media" (publishing, radio, film, television, etc.), and consider the total network of
communication that needs to be activated for a development project, the point becomes obvious. The
network will certainly include the mass media: the infrastructures of such mass communications need to be
developed as rapidly as possible and used for Development Support even while being expanded with UN
assistance or encouragement. But in this kind of communication, for example, it may be far more important
for a given project to reach, motivate, and orient a precisely defined echelon of civil servants as a first phase
of communications; then to devise communications programmes and materials addressed to "the people."

It will be apparent from the above that for professionals in Development Support Communications, 'media'
or channels are also audience. While this is in reality true for information-communication anywhere, the
traditional concepts and practices of Western mass communications tend to create a distinction that may
have helped produce the terrible neglect of this element in development work.

It is also an axiom of this work that every act of development support communication, and the materials
selected and produced for it, have to be tailored very carefully to the intended audience. Development is the
deliberate introduction of a (relatively) massive disturbance in the lives, attitudes, work patterns, and
socio-economic relationships of given groups of people – a disturbance deliberately telescoped, too, into
unusually short periods of time. Precisely what and how much, and how quickly, and on what mental and
material-incentive premises workers can ask a defined group of human beings to do is the very essence of
the entire process. Consider a dairy farming film presenting electric milking machines to farmers who do not
have them and have not the remotest prospect of having them. Yet the communication act of screening
such a film for those farmers could involve the act of "asking" them to contemplate electric milking as an
innovation. In a real case, the farmers were in fact profoundly angry about this film: they felt they were being
insulted and humiliated. Development came to an angry halt at that moment.

Certain fundamental premises of development support communications follow from this. "Know your
audience", a concept familiar in Western commercial advertising and public relations, but less so in the
Press or Broadcasting or Films, is a first precept of this development work. The need to know the "stretch
potential" or the innovation-absorption capacity of given groups of people within any one phase of a project,
is absolutely vital. In a great many cases, above all for support communications directly addressed to whole
communities, prior socio-economic research and field testing of assumptions is very important indeed.

Another crucial premise is that development support communications programmes and aids (i.e. a film, or
poster, or radio broadcast) should propose only those innovations that are feasible for the audience in terms
of their present actual resources (and those that a project may be injecting). Having said this, it needs
hardly to be mentioned that information-communication materials made on the other side of the world, in
industrialised countries for those countries depicting totally alien people doing totally alien things within
alien cultures and at wholly fantastic economic and technological levels, are not only of little relevance –
they may, as in the dairy film case, be counter-innovatory. And it follows inexorably from this that UN-Family
development projects need to have communication support materials made afresh, indigenously or within
comparable situations in other (and culturally acceptable) developing countries. This is not an absolute rule:
there are certain kinds of materials, on certain subjects, that can be usefully imported from advanced-
technology countries; and films and other materials from such countries may be extremely useful at later
phases of a project. But it may be stated as an excellent general rule of thumb that the early acts of
innovation-communications in UN-assisted development projects ought to be with materials depicting the
innovation in the country concerned, carried out by fellow-countrymen.
Types of Development Support Communications

A broad assembly of the experience of development in the field indicates many categories of repeatedly needed support communication efforts. The following outline list is not presented in order of priority nor of action, nor are all these types of communication necessarily needed for every project. The priorities, the chronology of communication efforts within a project's timespan, and the combinations of programmes will vary with each project.

1. Broad public motivation

Every UN project is attempted, with national counterpart, in a general "reservoir" of public attitudes towards development in general, or the particular sector involved. The UN-Family should automatically seek to assist in and encourage development support communication programmes that will motivate the public more effectively. In sectoral terms, a project may be launched at a time when, by sheer coincidence, public attention to that sector of development may be low – the national information media may never, nor not for several years, have presented the need for development in the sector concerned. It is often true that the first support communications requirement for project implementation is simply (not necessarily easily) to "get people thinking about" the sector concerned.

2. Motivation-orientation of project implementers

To date, it has almost invariably been assumed in project planning and implementation that if a given national ministry has requested the project and signed a PlanOps, all civil servants concerned will implement it automatically. Once so stated, the assumption is obviously nonsense: yet the neglect of support communications for national project-implementing personnel amounts to such an assumption. We should assess every project to determine what help – by idea and/or material aid – the national authorities may need to ensure that the relevant echelons of civil servants, from capital city outwards, are properly informed and motivated about the project. In very many cases, all that presently happens is that one more flood of crudely stenciled paper is distributed through the echelons, plus such word-of-mouth briefing as the specialists within the department may be able to provide.

In our experience, for projects of any size in investment, in geographical scope, and in project-community, one of the earliest needs may be a complete information-communications programme designed for these levels – quite possibly an orientation-motivation film for government personnel; a pamphlet; a basic PlanOps chart; perhaps a radio or TV programme. UN-Family field personnel presently have to spend grossly wasteful amounts of time simply trying to ensure that even a small number of over-burdened, under-paid civil servants know even the elementary facts about a project – who is running it; what the chain of command and trouble-shooting is; where supplies come from; what the roles of possibly two or three UN agencies are; what needs to be accomplished in Year One, and then and only then in Year Two, and so on. All of this is development support communications for project implementation. At present, we leave the whole crucial process, in the overwhelming majority of projects, to the word-of-mouth and formal-correspondence efforts of a tiny handful of UN project field officers who do have a few other things to do as well.

3. Specific elite and government-level information

There are other often absolutely vital kinds of support locations at these levels – without proper attention to which, as the authors have witnessed in countless instances, an entire project runs into trouble. Among many, we would cite here:

Inter-departmental awareness of a given project and of its needs now and in the phased future is immensely important. More and more UN-assisted projects are bi- or multi-sectoral, requiring for their very functioning the coordination of several ministries at national and field levels. This simply does not happen because it is stipulated in a PlanOps. It happens only as a result of consistent, advance-planned, purposive communication – inevitably requiring special materials in one or more media. It is almost in the nature of sectorally organised government authorities everywhere not to coordinate. The idea that lack of coordination occurs only in developing countries is among many myths. But in efficient and cost-effective project implementation, it is in such countries that we and they can least afford uncoordinated effort. UN field personnel talk themselves hoarse on this subject day after day because, to date, we have furnished them with nothing except their voices and formal-correspondence office capacity to try to communicate this need of inter-departmental coordination.
Motivation for expansion and follow-up is another problem that is sheer communication in development. Project Implementation at elite and government-service levels. It follows from the above needs and actions, but it ought to be planned in advance. At certain fairly precise dates in the forward "history" of a project, decision-makers and financial controllers in Government have to authorise further steps without which the original project-investment may become largely nonsense. More counterpart personnel must be authorised, budget-allocated, and recruited and trained; Government has to take over [technical assistance] costs; physical and human resource investments of other kinds have to be implemented by Government. All of this may have been foreseen and set down in the PlanOps. That does not mean that it will happen when it should happen. Once again, the first requirement is communication to the relevant decision-makers (and decision-influencers, even outside Government, through press and other media) of the approaching needed actions, and of the progress of the project that justifies those actions.

Anyone in the UN-Family who has worked in development in the field will be all too familiar with this problem and how, invariably too late because it was never advance-planned, the need is perceived for some decent press reporting on the project – a set of good slides, at the least, that can be used by the fully committed government officers to persuade and convince their key associates to authorise the necessary budget in time. It is [characteristic] of this problem, like so many others in development support communications, that the people who need to be reached cannot be physically brought to a place where the purpose and progress of the project can be seen by them with their own eyes. The project has to be brought to them – again, an exercise in planned communications using modern techniques and materials.

4. Project cadre-training communication needs

The project-field where perhaps the greatest awareness of the role of planned, purposive support communications has been evident is, of course, in training. But here again, as (by now) literally thousands of UN-recruited training instructors and their counterparts could relate, we can perceive neglect in quality and quantity that is far, far more serious for training in developing countries than in industrialised ones. We have referred earlier, in the introduction, to this special phenomenon of the diffusion of innovations in developing countries inherently needing more systematic exploitation of modern techniques of communication than in the countries from which the innovations derive. Our instructors are in need of every conceivable kind of aid - films, slides, better charts and other printed aids – designed for their trainees. Many UN-recruited instructors have experience in making audio-visual aids: but all too often we learn of such personnel imploring headquarters, from their field posts, for possibly quite minute extra sums of money to finance production of better teaching aids – and of months passing during which the very training course itself expires before authorisation is given, if it is given at all.

We believe that it can be stated categorically that no training project should be formulated without, there and then, its locally-attuned training-aids component having been assessed, budgeted, and production-planned. This will in many cases (as with virtually every other element of this new [approach] of Development Support Communications) require prior survey and appraisal in the project-country concerned by experts in communication techniques. Only by such local assessment can any realistic appraisal be made of the extent to which the national media can produce the aids needed in time and the extent to which the UN agency concerned will have to supplement national-resources. Such prior survey will cost money (less if the experts already stationed at regional level to serve all such project-appraisal and implementation needs). But any clinical assessment of the effectiveness of existing training projects will quickly show that the aid-investment in them has in very many cases been vitiated by neglect of this element. We believe it is entirely legitimate to assert that in training, as in all other kinds of projects under discussion in this paper, the time has come for decision to invest in communication in order to save UN assistance funds.

Communication support for training projects embraces many needs beyond the actual aids in the class of demonstration site. Among these we would mention trainee recruitment: without planned communication, no training project can possibly select the best candidates from the optimum number and level of applicants drawn from the geographical base actually envisaged for the project. We and our national partners repeatedly face the element of urbanisation in this field – the problem of training people who will stay (or at least are more likely to stay) in rural areas or at least provincial towns. Formulation of training projects should include a planned programme, worked out with Government in advance, for the widest possible dissemination of the opportunities offered.
Occupation-status improvement is another widespread need in such projects, and is again a problem of communication. More especially in ex-colonial countries, generally throughout developing regions, the status-image of needed occupations by no means conforms to known manpower requirements. The topsy-turvy ratio of doctors to nurses in countries where nursing is frowned upon for girls is a well-known example. We know of a vocational training scheme that is finding it extremely difficult to recruit trainees for carpentry because wood-working has become a lesser-status occupation. A planned and country-tailored communications programme may not, by itself, resolve these very complex problems.

What is quite certain is that nothing else will even begin to apply the effort to resolve them, for in most such cases it is not economic incentive that is missing; if the job opportunity were known and the social stigma were removed or lessened, potential recruits would learn that the pay or reward was superior to their otherwise likely income. In whatever project, a problem of the social status of a given occupation is, in part if not in whole, a problem of communications....

5. Applied research dissemination

Another and widespread example of the factor immediately above-referred may be seen in the case of the numerous UN-assisted institutes for applied research in a given development sector. The PlanOps may have been only for the establishment and development of the institute itself, with the implicit assumption that Government (and educational establishments) would separately see to the dissemination of the practical technology produced in the Institute. In some cases, such institutes do carry a project-element of industrial-use dissemination but not, for example, extension-dissemination.

The field observations of the authors of this paper compel two suggestions about such projects. At the very least, the UN-Family should plan to ensure that the work of the institute and the innovations it develops be made generally known to the public and elite through a communications document (film, brochure, as may be judged best) that can also be used in schools and colleges.

At the most, we are bound to put forward the question whether, in the appraisal of all requests for such institute projects, the Family ought not to adopt the standard discipline and criterion-question to Government: "Precisely how will the technology to be developed be disseminated for urgent practical use for development?" If once this question is asked as an automatic exercise, we believe that in many cases the judgment and the shaping of the project itself may alter. Accumulating practical experience indicates that it is from many such institutes themselves that the best chain of innovation-diffusion (possibly the very organisation and cadre-training of extension personnel, for example) will flow, if so planned and agreed. At the least, we believe that experience shows that it is in the early life of such institute projects, before the UN element is phased out, that concrete programming of innovation-diffusion located somewhere in very close nexus with the institute should begin. It is extremely likely that if the whole UN investment is to be maximally effective, the UN agency concerned should be prepared to assist in this innovation-diffusion as well.

In all such cases it will be obvious by now that the same kind of advance-researched, advance-planned Support Communications Programme should be built into the project PlanOps as an outright component – the experts' permanent counterpart personnel, the materials to be produced, and the appropriate share of financing needed. Institutes are ivory towers without planned communications.

6. Close Project-Support Communications:

Finally, in this necessarily broad summary of types of support needs, there is what we call "close-support" work for projects of all kinds. In virtually all UN-assisted projects under discussion here, there are fairly specific "project-communities" and implementing cadres. A project may be nation-wide in scope, but it usually has defined sectors, and often operates either phased by expansion-phase or in one specific district or region entirely (i.e., a dam, a river-valley development, etc.). Assuming that the communications work at Government- services level is in hand, and that there are broad national awareness and receptivity, the project still needs very considerable close-in communications support.

At this as at other levels, we and our partners in national development service have scarcely begun to use the potential of planned, project-attuned communications techniques. At very little extra cost per project-year, we could be helping to equip each such project with a properly researched and phased schedule of information-communication aids, first, to prepare the project-community for the very "arrival" of the project (for example, that matter of the "surveyors" stakes); second, to explain to the people what the project seeks to achieve for them, in their terms of reference at that time, and to answer both the easily anticipated questions they will have and (by proper prior socio-economic research) the deeper worries...
which the project-disturbance will unleash; third, to motivate the people to participate for reasons that are tangible to them, and to demonstrate to them what resources of their own they can bring to bear on the effort; fourth, in careful phasing with the actual forward history of the project, to introduce to the community the specific innovations – in production, work methods, environment-exploitation and management, hygiene, whatever the sector – their adoption of which can alone make the project successful.

It needs to be heavily emphasised that, at present, the over-all picture of project implementation at this level is extremely deficient in the above methods and in communication aids that are fashioned from them.

**National Capability for Development Support Communications**

It is, of course, fundamental in UN-Family project policy that we do not, and could not, ourselves and alone undertake development support communications in member-countries. But against the overall neglect of these instruments to date, and the size of the problem even strictly in terms of UN-assisted projects, the present capabilities of national media should not be overestimated. Very much more could usefully be done to provide support communications from existing national resources, given an effective communications discipline in project appraisal and formulation. But we should be under no illusions whatever as to the magnitude of extra, external assistance that ought to be brought to bear as well.

A detailed, country-by-country study of the present role and capability of national media in what we mean by Development Support Communications is quite beyond the scope of this paper. From the aggregate experience of the authors in the several regions, however, we believe that we can make a number of legitimate general observations.

1. **Project level support.** In the majority of countries receiving UN development assistance, the national authorities are constantly seeking to create a broad climate of opinion in support of development to motivate the people to participate in and contribute to economic and social progress. We have cited this kind of broad, national motivation as very important even for project implementation. But the "even" is crucial. Broad, national support communication does not by itself provide support communication at project-implementation level; it may even lose its impact if not complemented by project-level support.

   A man can be generally motivated for just so long, and just so far – and then he needs help that is tangible to him in his particular area, for his particular occupation and need, and feasible within his particular resources. A "Grow More Food Campaign," conducted across the length and breadth of a nation becomes real only when farmers in specific crop and climate and soil areas then receive the inputs and innovations they need.

   We must emphasise as crucial to the entire subject of this paper that this is one of the hidden "flaws" in much of the work done by national authorities today in the field of development support communications. Again and again, in discussion with our national counterparts in development – whether in planning commissions or functional ministries, or even in formation media themselves – we find a lack of understanding of the distinction we have drawn above. The development process is intimate, local and particularistic at the point of action, which is the point of project implementation. This is now widely recognised in respect of all the other logistics of projects. It is by no means yet recognised in respect of support communications, as we shall illustrate further.

2. **Reaching villages.** Among national officials who actually administer development programmes, including those receiving UN assistance, there is not only the universal tendency to neglect the power of communications techniques. Again and again, in discussion with our national counterparts in development – whether in planning commissions or functional ministries, or even information media themselves – we find a lack of understanding of the distinction we have drawn above. The development process is intimate, local and particularistic at the point of action, which is the point of project implementation. This is now widely recognised in respect of all the other logistics of projects. It is by no means yet recognised in respect of support communications, as we shall illustrate further.

   This view is in no way unique to the civil services of developing countries, but the reality behind the view is far more severe in them. The senior civil servant in the capital city has a picture of a nation-wide network of "outlets to the people" in serried echelons below him. Those "outlets" are in fact underpaid and often over-worked junior officers, usually reluctant to be working in rural or lower-status areas; operating in poor working conditions and with indifferent transport; and showered with unending and often barely legible stenciled directives about one programme and administrative problem after another.

   We have studied the lines of communication of merely basic, factual information about new development projects down through these networks in many different sectors. The usual picture is that the information about the new project forms only one small element in that week's routine administrative problems, to be transmitted further down the hierarchy towards "the people." By the time transmission has experienced heat...
or cold, rain or dust, vehicle breakdowns or rotten overnight accommodation; and by the time the lower field echelons have coped with all the other merely routine administrative data, the new project has lost a good deal of its capital-city glory. When the news then has to be filtered through local community leadership – for example, through the village elders or council chairman, also beset by his level of “red tape” – the new project may be lucky to enjoy two minutes of attention en passant. Not least of the problems is that from the first moment of word-of-mouth communication, inaccuracies and omissions of vital facts that may affect community response are all too common.

3. Development communication specialists. The assumption described above – that there are built-in communications for development in a country's civil service – combines in many places with a lack of awareness that modern communications techniques can be instruments of development. The view is still prevalent among many decision-makers and budget controllers that media like radio, films, and television are "consumer amenities that must wait for adequate economic growth" – not instruments that can virtually contribute to growth. With relatively few exceptions, what we may call the technical information arms of national governments are the cinderellas [beneficiaries] of budgeting – both as to expansion and as to annual operating funds.

Apart from the deficiencies in basic infrastructure and equipment that this view perpetuates, it also produces poor morale and often indifferent calibre among government information personnel. In any country where there is any kind of private or commercial communications industry – radio, TV, feature films, privately owned newspapers – the result is that the best talent seeks the highest pay outside of Government. By definition, this talent is almost entirely lost to communications for development. The process is, of course, a vicious circle. Poorly paid and second-level information personnel, working with meagre budgets, are not very likely to stimulate new interest and respect for their development roles among decision-makers and purse-controllers in Government.

4. Skills for development communication. These factors mesh, in turn, with another very powerful influence currently working against the kind of development support communications we have described as so urgently needed. Existing national information personnel are still overwhelmingly urban, middle-class (or above), and Western-oriented in their concepts of communication. We discern a whole series of practical consequences that flow from this:

a. The dominant assumption is that the job is one of disseminating "news" and/or "publicity"; and usually in Press terms, since most information people have either come from the Press world to Government or have received journalism training that has remained print-oriented. Production of information material is widely based on the concepts of the duplicated release "for the Press," as often as not with photographs of a Minister or other high dignitary. The same approach still dominates in radio and in newsreel styles of film for cinemas and/or television.

Again, there is a vicious circle. This is what most national information personnel do and are seen to do; this is what most national authorities think they are paid to do; this is what they are consequently expected to go on doing if they want next year's budget This is all the information workers have the incentive, or often the equipment, or the time, to do. It is not at all uncommon, for example, to find a film unit with only two cameramen expected to produce up to 20 newsreel-style "documentaries on development" per year, along with a weekly newsreel proper.

b. Urban (or urbanised) themselves, working in cities, under the constant administrative influence and pressure of like people, and working in a technology that is infused with the inevitably urban outlook of Western society where it originated, these national information practitioners inevitably tend to produce for urban audiences. Running through all their work is the inchoate feeling that "the people who count" must see their production, and the people who count are also in the cities. It is, for example, extremely significant that, with very rare exceptions, the film equipment of national information media is almost entirely at 35 mm dimension. The films produced have as their first objective screening in cinemas – overwhelmingly urban in countries where the overwhelming majority of the population (the people needing to be involved in development) are rural.

c. Further consequences flow from all this. The "news release" orientation makes the content of materials very broad and generalised. The dominant notion of "national propaganda" – of needing to speak to an entire nation in a given document – has the same effect. But since the people producing the material have little real or deep contact with the overwhelming, rural majority of the nation, the generalisation becomes, in
fact, urban. If a film is produced with a cinema audience in mind, it has to be very short if on a "non-entertainment" subject. If the audience in the cinemas is predominantly urban, it has to speak to them in the first instance. If the producers are not only urban but middle-class oriented, their depiction even of rural life will tend to be fleeting and somewhat romanticised, even if quite possibly infused with genuine and patriotic motives of sympathy for the rural poor.

Anyone who has the opportunity frequently to view films made in such conditions – in fact, to view the films that might not be considered those available nationally for "development support" – will be struck by these tendencies. Both visually and in narration the film "goes out to" the rural areas – from a city, of course. Yet again, the villages of developing countries are filled with born, natural actors for purposes of development support communications. It is, however, very common indeed to find a film producer transporting out to a village from the city an entire cast of actors and actresses to play not "features" but documentary roles.

d. Development Support Communications, we have stated earlier as a categorical premise, must be carefully audience-attuned; it requires quite scrupulous, and optimally researched attention to the socio-economic and socio-psychological environment of the people to whom it must speak, and to their level of absorptive capacity for innovations. The "Western" training, or Westernised social background and continuing technological orientation of information personnel is almost bound to militate against this perspective and this creative priority.

A journalist turned government information officer who has this kind of "Western" background is trained to report "facts": not to try to motivate readers, change their attitudes, encourage them to adopt new techniques – indeed any such practices are traditionally frowned upon, and said to be the thin edge of the wedge towards [national mind control]. Yet the skilled practice of Development Support Communications calls for unceasing attention to how to reach, interest, and very purposively motivate and inform people.

A documentary film producer with a "Western" orientation sees his craft as at its best when he is "expressing himself" on film and sound – his own response to a situation or subject .... We would be the first to insist that artistry and imaginative use of the film medium remains vital in Development Support Communications. But we would also insist that the very last desideratum is the self-expression of the producer or director in the usual "Western" sense. It is in no way encouraging – in terms of the massive needs we have been describing – to ask film-makers in developing countries what they would most like to produce, and to receive quite invariably descriptions of film ideas suitable for the audience-equivalent in their countries of avant-garde enthusiasts in Paris, London, New York and Montreal.

e. Scrupulous authenticity of detail and carefully thought out choice of accurate technical information are further requirements of Development Support Communications. It needs little elaboration that the great majority of present information workers, in whatever medium, have not had any training enabling them to translate development technology effectively into their media. Nor are they given the time or the sheer morale to have the very considerable patience that such detailed communications work requires. The reader who has had practical experience in educational television or radio, including the production of scientific or technical programmes, will appreciate these problems most readily. A film is being made about farming and requires shots of a particular kind of seed and its cultivation. That is so written in the script, with a location prescribed thirty miles outside the city. But the film unit is tired; it is underpaid; it is thoroughly over-worked; and there is a college demonstration plot almost inside the city. The shot is taken there. The villagers to whom the film is screened can spot the fake at once. The utility of the film has been almost destroyed.

Among the countless examples of such problems known to us, we can discern a further cause which is the present very wide "communications gap" between national information personnel and the functional development implementers. Just as inside the UN-Family programme and technical personnel have not always taken Public Information Officers very seriously, so too there is this attitude within national ministries and related development agencies. The development technicians often take the view that information people are largely nuisances and inaccurate, "never available when we do need them and bothering us when we don’t", or "preoccupied with taking pictures of politicians." Again the causation in a vicious circle is apparent. To date, no one has asked, encouraged, and equipped such information workers to reach that level of professional expertise in development support that would make development technicians regard them as serious co-professionals with skills badly needed to help programmes.

f. If the above factors militate strongly against any great optimism about national capability for support communication in project-implementation, we believe we must recognise certain other very practical
problems. A key one is quite simply the size of the technical resources available within a given country receiving UN development assistance. In our experience, the existing equipment and potentially usable talent is very heavily taxed in producing what we have called broad, national development support materials, most especially in the medium of the film. In countries where there are governmental film units (and there are not in many countries), they are hard pressed to complete their annual quota of films required by different ministries, plus the inevitable emergency demands (a head of State visiting; a disaster; a war). As we have described, most of these films are very broad in content and can contribute to project implementation only in general climate-of-opinion improvement.

A further common difficulty is that the equipment and personnel resources that we need for project-level support communications are very severely diffused and dissipated within government structures. In many countries, there has been a historical tendency for each functional ministry to create its own Information or Public Relations Division – but for it to be starved of just that extra input of funds that might make it really viable. In the usual way within human authority-structures, if a central information service is then created, it may never quite get the resources it needs because the functional ministries are reluctant to support it at the expense of their own Public Information. For UN-Family project implementation, which so often proceeds through specific sectoral ministries, this is a further difficulty.

Conclusions from the Above Appraisal

In the foregoing survey of national capabilities for this kind of communication work, we have been as realistic as our practical experience, now over many years and encompassing all regions, compels us to be. But we must emphasise that a great many of the problems we have described within national levels could be overcome – some quite quickly, others over a forward period of planned assistance. Broadly, there are four categories of need in improving the national resources available for Development Support Communications as earlier defined:

1. **Expansion and improvement of communication infrastructures** is an obvious need in many countries and has, of course, been the subject of great attention by UNESCO and ITU in particular. While stressing the need for this kind of assistance to continue and increase, we would add that there will be many instances where proper advance appraisal of the support communications needs of a given UN-Family project would suggest a specific assistance input of equipment and possibly short-term on-job training personnel. This has been done, generally and to date, only in terms of supplying such basic items as cine-projectors, slide-projectors, darkroom gear and tape recorders. In specific instances, for projects with a large and relatively long-term communications element, we can envisage far more comprehensive inputs (and, as explained earlier, far more cost effective since a cine-projector without anything to project on it is not very useful).

2. **Orientation of national authorities towards DSC** is a second surely vital need, even for the effective implementation simply of UN-assisted projects (and we are assuming throughout this paper that we are also collectively concerned with helping to make all development more effective). From our own concrete experience, we cannot over-emphasise the importance of outside, UN-Family assistance in this respect....

3. **Training or retraining of national information personnel** in all the media in Development Support Communications is desperately needed in almost every country. What is required is nothing less than the development of a whole new discipline and professional expertise in this kind of information work with status, standards, methodology, and rational use of resources.

4. **Application of system and resources by the UN-Family** to this new instrument of Development Support Communications will be essential, in each region, if we are to begin to move towards better project implementation. Within the UN-Family we must create a body of professional expertise in these particular communications techniques, a counterpart to the (obviously numerically much larger) national resources cited earlier. We must stress that nothing in our experience in this work gives any grounds for believing that the hundreds of specific, project-tailored support communication components at this moment missing from UN-assisted projects will be supplied by national resources alone. A major UN assistance effort is required....

Methods and Systems for UN Development Support Communications Aid

It may be best to outline our UN-Family needs by describing what ought to happen over a sample UN-assisted development project. For breadth of illustration let us suppose the project in question to be one with a large and comprehensive communications component encompassing many of the categories
described earlier in this paper. Obviously, for projects with less communications complexities, there may not be need for all of the elements cited in this example. But the need of the specific approach will be there regardless.

1. At the stage of appraisal of a project request, it will automatically be examined for its support communications requirement. At the relevant Headquarters, this standard practice will be instituted by Programme chiefs. They should be able to draw on the resident advice of one Information Officer who has begun to specialise in Development Support Communications. In the region in which the requesting country is situated, the project papers will be studied by a staff member of the Development Support Communications Service based in that region, and already familiar with support communications problems and available national resources in the country concerned.

It is quite essential to work from regional level in this field, and if we in the UN-Family are serious about this enormous neglected gap in the development process, we will as rapidly as possible develop this kind of DSC Service for each major region.

2. Research in the "project community" will be indicated and carried out, as necessary, before final project formulation. The first "act" of communication in a development project is in fact such research in the community of human beings among whom the innovations are to be diffused. The socio-economic information a DSC specialist needs about the community (or cadres to be formed) is also, in our opinion, essential to the proper formulation of the entire project. We know of very many cases of poorly formulated projects where, simply by having conducted DSC community research in advance of formulation, the project would quite certainly have been better designed and in some cases saved from virtual fiasco.

Properly staffed regional DSC Services for the UN-Family will include on their strengths one specialist in social science research as it relates to development and the diffusion of innovations to work with national social scientists.

Depending on the size, the overall complexity, and the communications complexity of the project, DSC Service staff would make a field appraisal from their regional base, in the country concerned, in order to tailor their recommendations for the DSC component as closely as possible. In many such cases, staff would probably make the field survey together with the overall project consultant mission or other appraiser for the agency involved. At the earliest practicable stage, DSC staff would work with counterparts in the country concerned so that the communications component was planned from the outset as closely with the country's information specialists as with its project-sector specialists.

3. From the above appraisal and survey, a complete and detailed communications component would be evolved and negotiated with the national authorities and included in the PlanOps. This component would fully specify and stipulate responsibilities within the Government's various information media for the production or co-production of a detailed schedule of support communications materials (publication, lecture audio-visual aids, slides, films, radio and/or TV programmes, etc.). The materials would be specified, and planned relative to project phases and to communications media within the project infrastructure as well as the mass media. Due care would be given to support communications aids for project-cadre training and to the aids those cadres would in turn need for diffusion of the innovations involved.

Having negotiated the best possible use of available national resources for the DSC programme required, the component in the PlanOps would further specify what assistance the UN would provide – which would vary from ancillary funds and some basic equipment, possibly to the complete shooting of a given complex film or films, and it would include short-term or resident communications experts, with on-job training counterparts as necessary. "Second-phase" inputs of foreign made communications materials, for example, slides or films, or publications that would be useful at later stages would also be specified.

The DSC component in the PlanOps would be properly budgeted for, stipulating UN and counterpart contributions, project phase by phase....

4. The regional UN-Family DSC Service, working with the appropriate UN Resident Representative and Agency Chief of Mission, and the agreed national counterparts, would then follow through on implementation of the project's DSC component. Advisory and production resources, based in the regional DSC Service would be brought to bear as planned – one of the Service's film units, for example, might have to assist with preparation of the scheduled film for a given project phase. By proper advance planning of all such DSC components, production resources based outside the region would be used to help the Service...
and the project where national resources would not be adequate.

5. It may be of interest, here, to mention that we envisage that feedback on a project to Headquarters and for donor countries should also be serviced through the same regional base. We are in fact engaged, in Asia, on what we call "double yield" operations, in which, for example, the still photography, sound recordings, and film footage prepared for direct project-support use are also used for this reportage function. In many instances, support communications materials prepared for implementations of one project in one country can be of great value in another similarly placed country. One of the further responsibilities of the regional DSC Services would be to watch for such opportunities of "intra-project support communications" – and indeed to plan in advance for them against the known schedule of such types of projects.

The above thumbnail sketch of a new system and approach for this aspect of UN development assistance clearly presupposes UN-Family collective effort. We are openly envisaging a Development Support Communications Service – in Asia to begin with – to which specialised agencies will allocate resident communication specialists to appraise, plan, and follow up on DSC components in their projects in the region. By this approach, we would build up a highly professional group of communications experts, each doubly specialist in a given sector of development, and serving the various Agencies accordingly.

Many ideas in the papers of Childers and Vajrathan have relevance to us today – both inside and outside the UN family – but several especially stand out. First, there was the emphasis on planning. The authors noted the need to give communication support to civil servants, change agents, and to rural communities, and that these communication efforts needed to be orchestrated. Second, they stressed the importance of research, especially for matching communication materials to communities. "This may require," they said, "organized socio-economic research harnessing [practical, development-oriented] social scientists to assemble data about attitudes, motivational factors, etc." And third, Childers and Vajrathan emphasized the difference between publicity and development support communication. Worth noting is their emphatic plea for "the mobilization of properly trained communication personnel." In the paper, they also stress the need to consider an array of populations beyond the peasant for development communication attention, for example, persons in an organization’s hierarchy.

With the foundation laid by Childers and Vajrathan, we now touch the other main threads of four decades of development communication, promising more detailed examination in future chapters.

2. THE EXTENSION THREAD

Extension as a development communication approach

The extension approach to development was used before either the concepts "development" or "development communication" appeared in the language of many of us. Perhaps the extreme example includes the hieroglyphs on Egyptian columns giving advice on how to avoid crop damage and loss of life from the flooding of the Nile. Along with the establishment of agricultural societies and agricultural schools in Europe in the early 1800s, “itinerant agriculturalists” emerged to give farmers information, advice and encouragement. This was predominantly a private sector initiative. The potato blight in Europe in 1845 led to the first “official” extension system. The British Viceroy to Ireland, the Earl of Clarendon, wrote a letter to the Royal Agricultural Improvement Society of Ireland urging the Society to appoint itinerant lecturers to travel around to the peasant population, which relied heavily on potatoes in their diet, to show them how to improve their cultivation and to grow other nutritious crops. “Lord Carendon’s practical instructors” were funded partly by landowners and charitable donations, but half from government-controlled funds. (Jones & Garforth, pp: 5-6).

In contemporary times, extension refers to the process of linking researchers (or other producers of knowledge and innovations) with potential users of research results. The idea has appeared prominently (though not exclusively) in the United States Land-Grant University system where the Smith-Lever Act of 1914 combined national, state and local governments with agricultural colleges and universities for the establishment of the Cooperative Extension Service. It historically has placed great emphasis on extending research-based recommendations and skills to rural families, with the ultimate goal of their adopting the practices and the new technology. Thus extension has often been associated with the phrase “transfer of

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technology" – from the experts to the users.\textsuperscript{14} For example, when agricultural researchers breed a new high yielding variety seed, extension's role is to get farmers to adopt the seed and to train farmers in the appropriate agricultural techniques. Similarly, following researchers' discoveries in food preservation, the extension staff helps families adopt the new ways to preserve food.

Extension has long been a major strategy for information and technology transfer in development activities. It is estimated that the World Bank has provided more than US$3 billion in direct support for extension, more than all other international donors combined.\textsuperscript{15} The U.S. system was "exported" to India in the second half of the 20\textsuperscript{th} century largely through a U.S. Agency for International Development project that helped established agricultural universities in most of India's states. Likewise, the World Bank and national governments have put large amounts of money into establishing "training and visit" (T&V) extension systems throughout the Third World. T&V has attempted to streamline the traditional extension system through three kinds of concentration: (1) concentrating on a few "contact farmers" in a service area, (2) concentrating on agriculture matters exclusively; and (3) concentrating on only a few practices during each regular visit by the village extension worker. Primarily because of World Bank support, T&V extension blossomed between 1975 and 1998, but has lost favor since.\textsuperscript{16} (We will examine the Training and Visit system more closely in Chapter 2.) In the contemporary USA, the scope of extension has broadened both the kinds of subjects covered and the clientele served: Cornell University's extension program in New York City is not rural at all. Some of it focuses on urban gardens. Extension people associated with Cornell are involved in water quality, small business enterprise training, and environmental issues. However, the conventional idea of extension exists widely around the world. In India, for example, it is estimated that there are approximately 90,000 extension workers in the public sector, and officially their principal responsibility is agricultural development and technology transfer.

A dominant assumption in the extension approach has been that individuals will adopt new practices and technology "if only they understand what is advocated and know how to carry it out."\textsuperscript{17} For some 60 years, diffusion and adoption of innovations have been central concepts in the transfer of technology. Evolving out of research related to the adoption of corn varieties in the 1940s, the concepts have been applied to a wide range of innovations, from family planning to farming methods. According to the late Everett Rogers, "No other field of behavior science research represents more effort by more scholars in more disciplines in more nations [than diffusion research]."\textsuperscript{18} Although Professor Rogers and others dealing with diffusion have modified the concept to reflect new research and insights, there has always been in it the idea that innovations diffuse from early adopters through intermediaries to end-users. Note that "diffusion of innovation" was not intended as a strategy for adoption and behavior change, but as a description and explanation of the process. The extension and diffusion concepts are linked by their mutual association with "change agents."

To some extent, the attention to diffusion was driven by what has been called "the modernization paradigm." Some scholars, writers and policy-makers believed that development depended substantially on modernization and the transfer of technology. The communication model that dominated development initiatives was a top-down, centralized, one way pattern from government and technology experts to a mass audience. Wilbur Schramm captured the spirit in one of his major works Mass Media and National Development (1964): "The amount of information available and the wideness of its distribution is a key factor in the speed and smoothness of development....It may well be that mass communication is about to play a large part in the greatest revolution of all time." Intellectuals argued with this approach to development and this was reflected in a major article written in the mid-1970s by Rogers called "The Passing of the Dominant Paradigm." (See Chapter 2 in this book.) There Rogers suggested that a more appropriate description (and prescription) should show the integration of mass and traditional media along with interpersonal communication, in a more "participatory" and bottom-up model. Our own experience in the field suggests,
however, that the dominant paradigm never did pass, and that it is very much alive today. As we shall see in Chapter 6, the new information technologies such as the worldwide web have reinforced some aspects of the top-down, centralized model while opening up the possibilities for grassroots initiatives. The popular communication technique called Entertainment-Education (see Chapter 9) is significantly a top-down approach, although it is not inherently top-down.

Recently some agencies, practitioners and scholars have moved away from the traditional extension approach to technology transfer by reconceptualizing the relationship between change agents (such as extension workers and health educators) and their target populations. This re-examination of the “top-down” flow of information and technology from researchers to farmers and families includes raising issues such as:

1. Are the farmers' perceptions of their needs the same as those presumed by the researcher or the change agent?
2. Are the researcher's results appropriate for the farmers' needs?
3. Does the farmer have knowledge that would be useful to the researcher?
4. How should researchers' and farmers' agendas be set?
5. And whose reality counts?19

In some places re-evaluating extension is accelerating because in its conventional form, it has been a very labor intensive and a very expensive system. It is labor-intensive because the dominant pattern of interaction is person-to-person. We recently compiled a list of various other concerns about extension, and although most came from analysis of India’s experience, our discussions with persons from other countries suggest that these issues arise in extension in many places. These issues include:

1. **Direction of information flow.** Information is supplied from the "top" (scientists and officials) to the "bottom" (farmers); and from the center to the field. There is little “feed-forward” or feed-back.20
2. **Relevance of information.** Information often is not relevant because scientists/researchers do not or cannot respond to farmers' technology needs. The extension system is driven by the assumption that relevant technical knowledge is available.
3. **Character of agricultural information.** The messages tend to be narrowly suited to production of a few particular commodities rather than to the issue of farmers' profitability which may come through mixed agricultural systems — for example, multiple cropping.
4. **Overall character of extension information.** Extension packages concentrate on technical and production aspects of agriculture ignoring the "whole" farmer who is likely to have other important concerns such as his and his family’s health and education.
5. **Clientele.** Extension efforts ignore particular agricultural populations such as women, tribals, operators of very small holdings, and non-landed agricultural workers.
6. **Control of the system.** Managers and scientists control the agenda of the research and extension system to the exclusion of being farmer-centered.
7. **Methods used to reach farmers.** Emphasis is often on face-to-face contact, with relatively little attempt to integrate communication media and distance learning into the process.
8. **Cost of system.** Especially where extension is dominated by the Training and Visit (T&V) approach that was strongly advocated by the World Bank, a labor-intensive face-to-face contact system is very costly to sustain.
9. **Lack of results.** While there is evidence of better management in some extension operations as a result of T & V, evidence of consistent success of extension programs in increasing agricultural productivity is elusive.
10. **Inadequately trained extension agents.** Extension personnel tend to be trained in technical areas but have not been effectively trained in communication.

20 *Feed-forward* refers to a process in which information obtained from populations shapes or influences the information that is subsequently directed to the population. *Feed-back* is the response farmers (or others) give after receiving information.
11. Incentives for extension personnel. Extension agents (“village extension workers” — VEWs) are generally poorly paid and are given few incentives to perform at the level expected by the system. “Professionalization” has sometimes removed the VEW from providing input supplies (an income producing activity), and, consequently, from status and earning power.

12. Evaluation and monitoring of extension. Better training, planning and computerization are necessary to effect better monitoring.

13. Extension funding. Extension is under-funded, and that results in unfilled extension lines which results in inadequate coverage of farm populations.

14. Linkage to research. The link itself is weak, and, where it exists at all, the relationship tends to be dominated by scientists. Their higher status results in putting their priorities first which may not reflect the needs in the field.

Extension systems have been adjusting to some of these criticisms, including the privatization of some extension organizations and the use of new information and communication technologies to increase efficiency and impact.

3. THE COMMUNITY PARTICIPATION THREAD

The idea of participation as an important and explicit approach in development communication stretches back to the late 1940s (as we shall see in the Puerto Rico case study later in this section). Though quite popular today in intellectual circles, practitioners sometimes consider the concept to be “fuzzy.” However, the fuzziness can get less fuzzy in field applications. For example, it has been FAO, at least among the Special Agencies of the UN, that has been the most active in pushing the concept into field practice. FAO suggests that:

As an adjunct and complement to the usual situation analysis that is done for project formulation, development communication helps to identify attitudes, felt needs, capacities, and constraints to the adoption of change. And through the dialogue and consultation process it employs, it naturally elicits the participation of the intended beneficiaries of a development action.

FAO’s approach emphatically inserts the idea of community participation into the development communication arena. In a component of the PRODERITH project in Mexico, one of FAO’s most successful participation-oriented projects, the FAO approach could be described as follows:

Any development programme should be a complete and integrated response to the peasants’ situation....An integrated development programme could not be put into practice without the participation of the peasants in the process of identifying and analysing their problems, planning and implementing actions to resolve them, and monitoring and evaluating the results.21

The following description of the PRODERITH project conveys a picture of how the project employed the participation approach. Note the way "top-down" was juxtaposed with participation.

FAO’s PRODERITH PROJECT IN MEXICO
Snapshot
The charismatic old man, with his white hair and white beard, sat cross-legged in front of a video camera for hours on end. He held forth about the past, about the Revolution, about the greatness of Mayan culture and about life today. He deplored the decline of such Mayan traditions as the family vegetable plot, explained how he cultivated his own maize, and complained that today’s young people did not even know how to do that properly. He accused the young of abandoning all that had been good in Mayan culture; they would sell eggs to buy cigarettes and soft drinks, and so it was no wonder that diets today were worse than they were in his youth, and so on.

Scores of people sat in attentive silence in the villages as these tapes were played back. In the evening, under a tree, the words in Mayan flowed from the screen, and the old man’s eloquent voice and emphatic gestures spread their spell. For many, it was the first time they had ever heard anyone talk about the practical values of their culture. It was also the first time they had seen a peasant like themselves on

“television”, and talking their own language. Frequently they asked that the tapes be repeated again and again.

The desired effect was achieved: the people began to take stock of their situation and think seriously about their values. Thus, the ground was prepared for when PRODERITH began to discuss development proposals. There is also a good example of the communication system helping to create participation. In one project area the technicians had proposed a drainage plan to cure the regular flooding that occurred in a particular place. A peasant thought that the plan would not work because, in his opinion, the technicians were wrong in their analysis of the cause of the flooding. The peasant was video-recorded as he explained his reasons, scratching a diagram in the soil with a stick to illustrate his point. This tape was shown to the technicians. They studied the situation again, and they found that the peasant had been right...

DESCRIPTION

The Programme of Integrated Rural Development in the Tropical Wetlands (PRODERITH) had two distinct phases: from 1978 to 1984, and from 1986 to 1995. From its inception PRODERITH received full technical support from FAO and loans from the World Bank. Institutionally, it depended initially on Mexico’s SARH, but this evolved during the following years, as government institutions suffered political and administrative changes. The objective of PRODERITH Phase I was to increase agricultural production in the tropics, improve the living standards of poor farmers and conserve natural resources. The activities included building roads, soil conservation, credit and social participation of peasants. Ultimately, community participation became the overall goal and although a Rural Communication System was created within the project, the PRODERITH acronym actually became a synonym for the communication and, in particular, video activities.

The overall development strategies can be encapsulated as follows: First, it was to be a learning process by generating practical field experiences extreme enough to be later replicated on a larger scale; secondly, it aimed to achieve active participation of all involved, peasants as well as project staff; and thirdly, it was meant to foster coordination between the various institutions involved in rural development at the community level.

The initial rural universe of the pilot experience included 3,500 peasant families on 54,000 hectares of land in three separate project areas. For the second phase these figures were largely increased, which may have had a negative impact on the quality of results.

Training with video as a tool was the main activity conducted at the community level. In the years 1978-84, close to 345 videos were produced, along with supporting printed material. Cameras were available in the project areas, but the editing was centralised at the project headquarters in Cuernavaca. Initially 3/4-inch U-Matic video equipment was utilised for recording and editing, but later in the 1980s new technologies were adopted, including the use of computers for animation.

The economic crisis in Mexico during the 1980s led to structural adjustment programmes that affected government development projects, including PRODERITH which lost up to 70 percent of its qualified field staff. Thus when the second phase started in 1986, it had bigger ambitions but fewer resources to deal with the increased problems that the economic crisis had brought to rural areas.

An untimely effort to decentralise and gradually give more power to the peasant organisations followed; five regional communication units were established in San Luis Potosí, Yucatan (two) and Chiapas (two). Under these, new local communication units (LCUs) were created, as well as communication committees made of local people. The LCUs were equipped with a loudspeaker system complete with cassette recorders and amplifiers, plus a covered area for meetings and video screenings.

The rural communication system absorbed 2.2 percent of the total cost of PRODERITH which is in fact not negligible considering that the added investment for the two phases was US$292 million. Out of the US$5 million utilised by the communication system, 1/5 was spent on equipment. The average cost of producing a 15-minute video programme was estimated at between US$3,000 and US$5,500.

BACKGROUND & CONTEXT

Mexico’s policy in agricultural development during several decades was dominated by the goal of expanding irrigation in its arid areas. Nevertheless, during the 1960s the need to increase food production and the high cost of continuing focus on the development of irrigation projects lead to granting more attention to the potential of tropical wetlands and rain-fed areas which make up 75 percent of cultivated land, particularly in the coastal plains.
The first major attempt of switching to the new strategy resulted in a big failure to accomplish the ultimate objectives. The Plan Chontalpa initiative was successful in installing infrastructure in a vast area in the State of Tabasco, providing credit and technical assistance to farmers, but failed to conquer community participation. It was totally a top-down intervention for which there was no prior consultation with the beneficiaries. The peasants never identified with the project and never did use or maintain the infrastructure properly.

Given the importance of the tropical wetlands (23 percent of total area) for the future of Mexican agriculture, the government decided to continue developing the new policy in spite of the Plan Chontalpa failure. This time the strategy would call for a communication process to ensure active participation of the local people, and in doing so would ensure that proposals would be appropriate to the situation and agreed to by the communities.

A period of research took place in 1977, during which a video camera was used to help peasants analyse their situation and problems, to record meetings and use playback throughout the process of discussing future plans. Video proved to be an excellent tool for motivating peasants and bringing them into the planning process. As a result, a specific project was designed, with an important communication component, and specifically, with video as the centrepiece of the communication strategy. That is how PRODERITH came to life in 1978.

ASPECTS OF SOCIAL CHANGE
During the two phases of PRODERITH more than 700 training videos and accompanying printed materials were produced, and no less than 80,000 people participated in the training sessions. These had no doubt great impact on the daily lives of peasants, as the topics covered farming, fishing, livestock, health, nutrition, environment, water, community organisation and every other possible topic related to the needs of rural population. At its peak of productivity in 1981, the communication team was able to produce one hundred videos in one year.

Peasants often show difficulty in articulating their views of their reality, and they seldom share with outsiders their individual perceptions. PRODERITH has contributed to rural development by enabling the articulation of the collective perception within the community, on the local situation, its problems and options for improving it. The video methodology prompted internal debate about history, culture and future perspectives of the communities involved in the communication process.

In a broader perspective, PRODERITH is an example of communication becoming instrumental to move forward a major rural development programme. It shows how communication at its best can be fully integrated if the need has been identified from the inception of the programme. The Rural Communication System developed by PRODERITH was uniquely imaginative and effective, according to FAO assessment.

MEDIA & METHODS
As many rural development reports will assert, improved knowledge and skills in all areas of rural life are the key for better productivity and better standards of living. To meet these needs PRODERITHs Rural Communication System adopted an approach based on video with supporting printed materials, the whole forming so-called pedagogical packages. A package covers a subject broken down into a series of videos, each one constituting a single lesson of the course.

A printed guide for the technicians who will be using the material provides them with additional information on the subject and how best to use the package.

The methodology was primarily based on field units, small teams of technicians and promotores (development or extension workers) who worked at the community level. They used video to promote discussions on issues relevant to the community, and to facilitate the participatory process of developing a Local Development Plan that would enable PRODERITH to take concrete steps. The video method was also used for the training of project staff and to complement reports and evaluations.

CONSTRAINTS
The very high cost of the experience makes it very difficult to serve as an example for replication. The programme could only be sustained with the constant flow of cash borrowed from the World Bank, and could only happen in a large borrower-country such as Mexico.

For the same reason, the decentralisation process and, moreover, prospects of transferring the experience to the community was an unrealistic and untimely move. Furthermore the initial project had based its structure on a highly centralised structure and was very heavy on technical and specialised staff.
During PRODERITH I, which was the first phase, no real attempt was made to transfer control of the communication system to the communities, or at least to decentralise it. During PRODERITH II, the phase of crisis, the decentralisation could only mean an attempt to decentralise the cost and responsibility of the crisis on the shoulders of the communities. It could not work on a large scale. The attempt at decentralisation was too late to be accomplished.

The institutional changes in a country that is so marked every six years by political revamping also affected PRODERITH being a government agency it was not spared at all. The five existing regional communication units that resulted from decentralisation were facing an uncertain future by the end of 1995; their chances of survival without proper funding were, at the least, very bleak....

The preceding case study was drawn from Making Waves, published by The Rockefeller Foundation, New York and edited by Alphonso Gumucio-Dagron. It was downloaded from The Communication Initiative web page http://www.comminit.com/materials/materials/materials-919.htm. The Communication Initiative web pages are valuable for their wide range of documents on development and communication, and the links it provides to some of the major agencies operating in this field. FAO, of course, was not the first or only organization to promote participation of local people in development communication activities. During more than three decades beginning in the late 1940s, Puerto Rico’s Division of Community Education was a significant pioneer in applying the participation concept systematically to development programs. The story has been largely overlooked in the literature on community participation, but one episode, in the box below, helps explain the Division’s approach.22

PARTICIPATION IN PUERTO RICO’S DEVELOPMENT
Building a bridge or people?
In the late 1940s there was a river near the community of Barranquitas in Puerto Rico. Torrential rains and flash floods roaring down from the mountain threatened the lives of several persons attempting to cross through the river. A schoolboy had once been swept downstream and narrowly escaped drowning or being battered on the rocks. As a result, if it looked like rain, mothers would not let their children go to school because they would have to cross the treacherous stream. For the same reason, when weather threatened, men of some 60 families stayed at home and lost wages. For decades, the people affected had asked, unsuccessfully, for the government to do something.

The Division of Community Education, created by Luis Munoz Marin, Puerto Rico’s first popularly elected governor, agreed to help but not in the conventional “we’ll do it for you” way. The Division selected a respected man in the district and trained him as a Group Organizer. He began to discuss community problems with the people and to share with them simply-written booklets on life in Puerto Rico, on health, on new ways of doing things – but not specifically on building a bridge across an unpredictable stream.

For months he visited homes, showed films, and distributed posters and booklets. In December 1950, a group of neighbors raised the question as to why a government would spend a lot of money on movies, but nothing on helping provide people safe passage across the river. Between January and July 1951, the Group Organizer discussed a staggering idea with the people: they might do it themselves. And they did. They collected a small amount of money, recruited volunteers, arranged for donations of materials, and in 22 days had a bridge. At the official opening, it wasn’t a government official who made the principal speech; it was the boy who had been swept down the river. There was another outcome. The Division made a short documentary film called El Puente (The Bridge) and it was shot on location using the community’s people – not professional actors – as the cast.

Others have also been active in suggesting new approaches to the style of development communication. The late Paulo Freire gained international prominence with his 1968 manuscript Pedagogy of the Oppressed with its emphasis on community participation and a bottom-up scenario for development.23 In the mid-1990s the World Bank established a policy of building participation into programs where it was appropriate.24 Nevertheless, participation as an operational principle diffused quite slowly through ministries

22 Adapted from E. P. Hanson, Puerto Rico, Land of Wonders, Alfred Knopf, New York, 1960, pp. 265-280. We will return to some background of the Division of Community Education in Chapter 3.


and major development initiatives. However, by the turn of the 21st century the Rockefeller Foundation was able to publish the *Making Waves, Stories of Participatory Communication for Social Change*. Collected with its "50 experiments in empowering people – to seize control of their own life stories and begin to change their circumstances of poverty, discrimination and exclusion" (from the Foreword, p. 1).

4. THE HEALTH COMMUNICATION AND POPULATION IEC THREAD

The significance of IEC

Along with agricultural development, population issues have had a large influence in the evolution of development communication. The acronym IEC – Information, Education and Communication – has achieved greatest prominence in programs designed to influence knowledge, motivation and behavior related to contraception and family planning. The United Nations Fund for Population Affairs (UNFPA) was among the first to use the term IEC when in 1969 it used the label for its communication activities. National governments, NGOs, multi-national agencies, and the private sector have conducted many studies and interventions in which communication and population issues have been central components. These programs, through their successes and failures, have enriched development communication through their practically-oriented explorations in message design, media use, incentives and other aspects of communication whose implications extend beyond population issues.

Specifically, IEC referred most frequently to the use of information, education and communication to promote adoption of contraceptives or other practices to limit births.

Many will remember that the terms “birth control” and “family planning” frequently were used in regard to concerns about rapidly increasing populations. The challenge for communicators in public and private sector organizations was quite unambiguous: how can we most effectively persuade people (particularly women) to adopt new birth control methods? The traditional approach to IEC campaigns and community mobilization used information to try to influence people’s contraceptive behavior according to policies generated by governments and population authorities.

Changes affecting IEC

A variety of issues have influenced the IEC approach during recent decades. Among them have been concerns about gender equality and the conditions of women and children. These sometimes became linked with human rights issues. Population issues also were linked to other societal concerns, including the AIDS situation, infertile couples, and to development in general. Along with these issues was the introduction of different approaches to reaching populations including social mobilization, social marketing, advocacy, and interventions emphasizing participation and empowerment. Woven into these approaches were the questions: whom should communication programs reach and (as Robert Chambers rhetorically suggested) “whose reality counts”? Within many agencies, the emphasis began shifting from agency-dictated goals to goals jointly determined by the agency (or government) and the broader health-related needs of the people.

Among the most dramatic social changes related to population are recent fertility data. In the developed nations, the fertility rate has fallen from 2.8 to 1.5 or lower since the 1950s. In the less developed nations, the rate has fallen from about 6 to under 3. This has led to the prediction of a scenario in which the world population may stabilize in 40 years at 7.7 billion, and decline thereafter. In 1998, for the first time in history, the number of persons over 60 years of age in a country (Italy) exceeded the number of children under 20. These kinds of changes have posed unique challenges for communication strategists. For example, Singapore officials have felt it necessary to promote marriage and family building.

One of the most important chronological points in the changes taking place in IEC was “Cairo.” In 1994, the International Conference on Population and Development (ICPD) held in Cairo, Egypt helped broaden the scope of population programs. At the core is the concept of “reproductive health” (RH).

The ICPD defined reproductive health as a state of physical, mental and social well-being and not merely the absence of disease or infirmity in all matters relating to the reproductive system. Reproductive health therefore implies that people are able to have a satisfying and safe sex life and that they have the capability to reproduce and the freedom to decide if, when and how often to do so.25

Thus, reproductive health is at least concerned with: family planning, prevention of maternal and newborn deaths and disabilities, prevention and management of sexually transmitted disease and AIDS,

harmful traditional practices such as female genital mutilation (FGM), rape, domestic violence, forced prostitution and human trafficking, infertility, malnutrition and anaemia, osteoporosis, uterine prolapse, reproductive tract infections and cancers.

The new definition of “population programs” has a potentially profound influence on how one approaches IEC. The Programme of Action of ICPD reflects the convergence of many issues that have significance for a communication agenda. Obviously the task for communicators associated with reproductive health programs is substantially broader than originally perceived in IEC, including, once again, the question as to who the stakeholders are. For example, the challenge of reaching men has also broadened. Earlier, men were targets largely in the context of condom use; now men are being targeted because of their “often dominant roles in decisions crucial to women’s reproductive health.”

This brings us to the process called advocacy which has become a key concept in developing reproductive health communication strategies and in other development communication contexts. The primary aim of advocacy, says Jan Servaes, is fostering public policies that support the solution of an issue or problem. The stakeholders for advocacy include political, religious and community leaders as well as a wide range of institutions. With the declaration of the Millennium Development Goals and subsequent worry about progress toward the Goals, various partnerships have mounted advocacy campaigns to promote more aggressive action. Advocacy has become a key part of the activities of the Johns Hopkins University’s Center for Communication Programs. The Hopkins people have built an “A-Frame” symbol representing a model of advocacy that includes a six-step process – Analysis, Strategy, Mobilization, Action, Evaluation, and Continuity.

Phyllis Piotrow, former head of the Center, says that:

For reproductive health advocacy a vital need is giving voice to the silent majority that supports these programs, even in the face of sometimes vocal minority opposition. Policy-makers will support reproductive health programs adequately only if they feel a groundswell of demand from the grassroots. And grassroots organizations can demand this effectively only by making advocacy a top priority.


The key to the A framework numbered components appears in the following box.

1. Analysis - The first step in effective advocacy, starting with accurate information and in-depth understanding of the problem, the people involved, the policies, the implementation or non-implementation of those policies, the organisations, and the channels of access to influential people and decision-makers.
2. Strategy - The strategy phase builds on the analysis phase to direct, plan, and focus on specific goals and to position the advocacy effort with clear paths to achieve those goals and objectives.

28 “A” is for Advocacy, online at: http://www.jhuccp.org/pr/advocacy/article.stm.
3. Mobilization - Events, activities, messages, and materials must be designed with your objectives, audiences, partnerships and resources clearly in mind.
4. Action - Keeping all partners together and persisting in making the case are both essential to carrying out advocacy.
5. Evaluation - a team needs to measure regularly and objectively what has been accomplished and what remains to be done.

We digress briefly from the family planning discussion to elaborate more on advocacy. We referred earlier to the Poverty Reduction Strategy Papers (PRSP). A document published by the World Bank and the Department for International Development of the British Government specifically addresses in its Foreword the need for advocacy in promoting programs to reduce poverty.29

Although only five years old now [2005], the Poverty Reduction Strategy (PRS) approach has become established as the country-level framework for the attainment of the Millennium Development Goals (MDGs). Two of the six principles of the approach are particularly important: country ownership and the participation of broad segments of the political community in strategy formulation, implementation and monitoring....

The document asks rhetorically why it is important that political leaders and policymakers be involved. In short, the answer is that "development is best done with people, not to people. The authors also point out that engaging people in constructive dialogue over policy options "is an effective way of managing public opinion and securing public success." They offer policymakers "four important forms of support." These are listed as case studies, best practice guidance, structural impediments to participation, and a list of sources for information and guidance. The advocacy element in this case – to move the bureaucracy – becomes most obvious in the conclusion of the Foreword:

Senior policymakers in countries implementing Poverty Reduction Strategies, as well as donor organisations, are urged to read and reflect on the lessons reported in this study. And to pass the work on to technical staff responsible for the implementation of Poverty Reduction Strategies around the world.

Piotrow and her colleagues at Johns Hopkins suggest that future decades will see continuing rapid demographic, political and technological change that will require family planning and reproductive health communication programs to adapt to a variety of dynamic situations. These include:

• changing audiences
• changing channels of communication
• changing behavioral science theory and research
• changing values and mandates
• changing organizational structures
• changing political environments and resources. 30

It is clear that RH and the related social and cultural issues demand a substantially more sophisticated and comprehensive approach to communication than occurred in earlier IEC practices.

5. THE SOCIAL MARKETING THREAD

Social marketing is a process that assumes that what has made McDonald’s and Coca-Cola world class successes can also have a dramatic impact on the problems of high blood pressure, AIDS, child mortality in developing nations, and other circumstances related to patterns of behavior.31 In a web page devoted to social marketing (www.social-marketing.com) Nedra Kline Weinreich says:

Social marketing was "born" as a discipline in the 1970s, when Philip Kotler and Gerald Zaltman realized that the same marketing principles that were being used to sell products to consumers could be used to "sell" ideas, attitudes and behaviors. Kotler and Andreasen define social marketing as "differing from other areas of marketing only with respect to the objectives of the marketer and his or her organization. [Emphasis added.] Social marketing seeks to influence social behaviors not to benefit the marketer, but to benefit the target audience and the general society." This technique has been used extensively in international health programs, especially for contraceptives and oral rehydration therapy (ORT), and is being used with more frequency in the United States for such diverse topics as drug abuse, heart disease and organ donation.

Social marketing has greatly influenced the way communication and information are incorporated into development programs. For example, it has increased our sensitivity to the needs for research prior to developing and sending messages, and it has shifted emphasis from the needs of the social change agent to the needs and perspectives of the beneficiary groups. Some aspects of "strategic communication" that we mentioned at the beginning of this chapter probably owe a debt to those who have advanced the social marketing model. However, it is important to stress here (as we do again in Chapter 5) that social marketing is not synonymous with communication nor is it a kind of communication. Both commercial and social marketing includes four basic Ps: product, placement, price and promotion. It is in promotion where one finds the communication piece.

One of the important contributions of social marketing is its emphasis on the need to link communication to other components of an intervention program, such as availability of supplies and clinics, costs (time, money, effort) of changing a behavior, etc. Social marketing recognizes that communication must usually be linked with other actions to bring about behavioral change which is its fundamental objective. Social marketing has accumulated various detractors, some of whom equate social marketing with commercial marketing, and especially with the perceived excesses of commercial marketing. When one moves beyond the negative images associated with commercial marketing, the benefits of the approach as a means for effecting behavioral change become clearer.

The following excerpt by Alan Andreasen is based on lessons learned in a major USAID child health program that drew on social marketing, anthropology, and instructional design in shaping a child survival strategy. While the communication element stands out quite prominently in Andreasen's comments, it is essential to remember that communication is usually one component of an intervention that applies a social marketing approach.

**COMMUNICATION IN SOCIAL MARKETING FOR CHILD SURVIVAL**

**Lessons for development communicators**

The crucial importance of audience research and the integration of media, especially interpersonal interactions and community-oriented promotional activities, was borne out by the results of longitudinal studies in [Honduras and The Gambia]. The knowledge gained from these two research sites concerning the complexity of behavior change, the importance of sustained communication efforts in maintaining new behaviors, and the challenge of institutionalizing systematic health (or, any other communication strategy) has guided the expansion of such approaches in other countries.

Building upon their experiences in Honduras and The Gambia, AED and USAID expanded their health communication programs to different settings during the 1980s. The Communication for Child Survival Project, or HEALTHCOM, was designed to improve health practices (for example, diarrhoeal disease control, immunization, child nutrition, maternal health and birth spacing, and control of acute respiratory infections) in selected sites throughout the Third World, and to refine further the practice of social marketing, as well as other development communication strategies. A five-step planning model was articulated, emphasizing the need for communication planners to remain in close contact with potential audiences through a variety of feedback mechanisms. Numerous assessment, planning, pretesting delivery and monitoring strategies were developed for this purpose. The lessons gleaned from the oral rehydration projects in Honduras and The Gambia underscore the importance of comprehensive communications planning to the success of social marketing campaigns.

The results obtained from a wide variety of HEALTHCOM sites in the past decade, as well as from other communication programs, have yielded many other useful lessons for development communicators. These lessons, synthesized from an analysis compiled by the Academy for Educational Development for USAID, are:
Sustained Behavior Change
Communication programs must identify and stress the favorable consequences of any new behavior. Furthermore, such consequences or benefits must be communicated in ways that are sensitive to the audience’s needs and expectations. When the goal is to stimulate consumer demands, program planners must coordinate their efforts with the supply structure to ensure that such demands are not frustrated.

Improved Consumer Research
Research which provides an effective base for planning should focus on consumer attitudes toward perceived problems, as well as the explanation for current practices. While most governments have difficulty affording the in-depth market research conducted by donor-funded projects, communication planners may choose to employ user-friendly rapid assessment techniques and to locate appropriate local partners to conduct necessary consumer research.

Media Selection
The selection of communication channels should be determined according to the results of audience research, rather than perceived assumptions regarding their conventional usefulness. For effective design, communication planners must have knowledge of the channels available, their potential reach, and the intended result of the messages. As changes in communication technology become more prevalent, such as the use of videos and interactive audio-conferencing, the training of production staff and field workers should become more consistent and individualized.

Community Focus
For most people to adopt a new behavior, it must become an accepted cultural norm. For this reason, communication planners must pay attention to the role that communities play in determining and shaping health behaviors. For sustained long-term behavioral change to take place, the involvement of local community groups is often essential. The well-documented influence of community leaders and family members should also be considered through targeted program research and message design.

Narrowing Communication Gaps
Communication programs often produce dramatic initial effects, with subsequent levels of adoption presenting more of a challenge. Potential barriers such as physical access, adequacy of information, exposure to media, conflicting cultural beliefs, or lack of social support systems often stand in the way of behavior change. The success of qualitative research methods such as in-depth interviews and focus group discussions in identifying such barriers has been demonstrated throughout HEALTHCOM sites, with continual analysis of target audience information used to tailor messages and other program elements to specific audience needs.

Structured Interventions
Large scale, intensive communication campaigns which mobilize social and political support are often attractive to planners. However, such campaigns may have several disadvantages. They can often deplete the resources used to deliver important services on a regular basis. More successful are those communication efforts which are fully integrated with the existing structure and are sustainable.

Prevention Message
As communication campaigns stressing health and safety achieve success, increasing emphasis is likely to be placed on preventive behaviors of all kinds. This presents a new set of challenges to communicators, as prevention behaviors are often more complicated and difficult to identify and teach. They often require a greater change in everyday routines, and have no direct, immediate payoff.

Institutional Capacity
The most basic, effective strategy for the institutionalization of development communicators involves training, especially in the areas of formative research, strategy development, message design, and project monitoring. To be successful, however, this training must reach beyond the project counterparts to include groups in national and regional development institutions.

Long-term Planning
Many successful development communication programs have wasted away because of lack of government commitment once donor funding ends. The challenge of political and financial commitment must be met if the programs are to continue. Specific commitments to establishing personnel positions, budgets, and career tracks which will support future communication initiatives are critical. In planning for the long-term, project managers from donor agencies must discuss such issues with senior government officials during the project.
negotiation stage. Decision-makers may be persuaded by program results data which demonstrate the cost effectiveness of communication interventions. This difficult yet essential part of the institutionalization process will allow decision-makers to view communication programs as an investment with tangible payoffs, rather than a continuing drain on the country's strained resources.

The importance of social marketing is reflected in the number of citations (some duplicated) appearing in a Google search. In mid-2006 there were about 239 million items listed in Google related to social marketing. We explore social marketing methods in greater detail in Chapter 5.

6. THE INSTITUTION-BUILDING THREAD.

The first five threads of development communication have dealt largely with various approaches that organizations have used in applying communication to development problems. Woven in and out among these is a thread vital to them all. This is the institution building that has provided developing nations with organizations, skills and facilities to carry out development communication.

Institution building for communication in developing nations has taken different forms. For example, in the late 1960s the Ford Foundation was active in India supporting training and resource development for the nation's family planning campaigns. (The Foundation supported the employment of elephants on whose flanks were painted the family planning logo.) The Ford Foundation also funded the creation of a modern agricultural communication center at what is now the G. B. Pant University of Agriculture and Technology in Uttarakhand (then Uttar Pradesh) state. It was the first university agricultural communication centre in the country. Among its accomplishments was the production of agricultural radio programs for All India Radio, probably the first time that regular broadcasts were produced by personnel outside of AIR facilities. The programs were written and recorded at Pantnagar in Uttar Pradesh, and the tape recordings were transported to the AIR transmitter 40 miles away in Rampur. Two decades later, FAO was to contribute additional funding to elevate the communication center into a Center of Advanced Studies in Agricultural Communication as one of a group of Centers of Excellence at Indian agricultural universities. This institution-building effort – lasting about five years – resulted in faculty training abroad, significant amounts of research by faculty and students, the first Indian doctoral level program in development communication, and a small stream of university-trained women in the communication field. This agricultural university was a pioneer in ICT and food production, and the institution building by the Ford Foundation and FAO continues to have an impact in the 21st century.

In Guatemala in the 1970s, the U. S. Agency for International Development provided assistance that enabled the Government to build two radio stations that were dedicated to supporting agricultural, nutrition, and health activities in rural communities. In Indonesia in the 1980s, the Canadian Government supported efforts to institutionalize special development communication units in most major broadcast stations in the country.

Other international agencies, governments and foundations contributed to largely uncoordinated efforts to build the physical and human resources infrastructure that would allow developing nations to accelerate and broaden the reach and impact of communication media. In 2005, for example, the International Telecommunications Union announced that it was launching an initiative to establish a network of about 100 multipurpose community telecenters (MCTs) in 20 African countries. These would be owned and managed by women in order to bring women more firmly into the Information Society. The Danish, Canadian, Swedish and other governments have also been active in similar kinds of institution building related to communication and development. The Asia Pacific Economic Cooperation (APEC) – through its Digital Opportunity Center in Taiwan and its APEC Educational Foundation in Korea – has taken steps to build ICT capacity in its member "economies."

One of the most ambitious communication institution-building initiatives targets rural villages around the world. As we will see later (Chapter 6) the International Telecommunications Union used the 2005 World Summit on the Information Society in Tunis to promote efforts that would bring telecommunications to the world's 800,000 villages by 2015; India's target was to connect its 600,000 villages to the Information Society by 2007.

The UNESCO role

UNESCO has been one of the most active agencies supporting institution building for development communication. UNESCO's Third Medium Term Plan, adopted in 1989, set as one of its objectives “to
strengthen communication capacities in the developing countries so that they may participate more actively in the communication process.\textsuperscript{32} Although it has worked through other UN organizations such as UNFPA to provide communication training and technology, UNESCO’s major contribution to development communication has been in enhancing the professional infrastructures in developing nations. Long time UNESCO official Alan Hancock explains it this way:

Some of the earliest UNESCO programmes emphasised professional training (initially in film, then in radio and television), following a model of basic training at local and national levels, intermediate skills training at regional levels, and advanced training through overseas attachments and study tours. The tradition is still very strong, although it has been modified over the years by a rising emphasis on community-based media practice, and the use of adapted, or appropriate media technologies (Hancock, p. 62).

UNESCO’s leadership in building and strengthening communication infrastructures got an initial thrust from a 1958 declaration of the UN General Assembly calling “for a ‘program of concrete action’ to build up press, radio broadcasting, film and television facilities in countries in the process of economic and social development.”\textsuperscript{33} In 1962, UNESCO authorized the publication of a study that was designed to help give “practical effect” to the mass media development program that had been urged on all governments. The study \textit{Mass Media and National Development} was conducted by Stanford University’s Wilbur Schramm. It was published by the Stanford University Press although copyrighted by UNESCO.\textsuperscript{34} Schramm built the rationale for using mass media in the development of nations and in development projects. He offered 15 recommendations “to developing nations and their friends and aiders” concerning what they might do about the mass media. It is noteworthy that Schramm included a section in the book on the necessity of communication research in developing nations. A UNESCO statement describing the book calls it “A useful guide to government and industrial planners, economists, educators, mass-media specialists and others concerned with the welfare of people in developing nations.”\textsuperscript{35} Schramm entered the UNESCO picture again when, in 1965, its International Institute for Educational Planning (IIEP) undertook a worldwide research project “to extract useful lessons from the accumulated experience of numerous countries which have been pioneering in the use of new educational media.”\textsuperscript{36} Schramm was drafted to be the project director, with financing to be provided by the U. S. Agency for International Development. The three volumes published by UNESCO included 16 case studies ranging from the use of airborne instructional television (foreshadowing satellite television) in the United States to radio clubs in Niger. A fourth volume contained a summary and conclusions, and, as reflected in its title, the volume served as a Memo to Educational Planners.\textsuperscript{36}

In 1980, after years of international arguments over its mandate, UNESCO created the International Programme for the Development of Communication (IPDC) as its “main operational instrument” for upgrading the communications capacity of developing nations. According to Hancock, more than US$22 million have been committed to 375 projects in more than 80 developing countries. Initially, funding only passed through the governments of developing nations but later IPDC extended support to non-governmental bodies and professional associations.

Examples of UNESCO’s support for building infrastructure in developing nations include the creation of regional training institutes (such as the Asia Pacific Institute for Broadcasting Development in Malaysia and India’s Film and Television Institute in Poona) and backing the creation of news agencies particularly in Africa and Asia. UNESCO’s plan for the early part of its six year medium-term plan (in the 21st century) includes approximately US$25 million worth of projects focusing primarily on the development of news agencies and rural newspapers in Africa, and on radio and communication training in Asia and the Pacific.\textsuperscript{37}

\textsuperscript{34} Stanford University Press,1964.
\textsuperscript{37} Hancock, p. 70.
In its 51st annual meeting in 2007, IPDC decided to finance 74 media development projects in 59 countries. Almost US$2 million was dedicated to projects ranging from 10 pilot community radio stations in the most marginalized regions of India — to strengthening freedom of expression and the professional development of journalists in Liberia. Thirty-one of the projects are in Africa, 18 in Asia and the Pacific, 19 in Latin America and the Caribbean, and five in the Arab States. UNESCO’s interest in local institution-building is demonstrated by its long term support for community radio which began three decades ago with a series of monographs on the topic. An early one was *Community Communications – the Role of Community Media in Development* by Frances Berrigan. UNESCO followed by setting up community radio stations in Africa and Asia during the latter part of the century. Radio broadcasting continues to be a vital player in development. Colin Fraser and Sonia Restrepo Estrada suggest that it is the prime electronic medium of the poor “because it leaps the barriers of isolation and illiteracy, and it is the most affordable electronic medium.” They note that community radio is distinct because it is (1) a non-profit service (2) owned and managed by a particular community (3) aims to serve and benefit that community and (4) it relies mainly on resources of the community.

UNESCO added a new dimension to the community radio movement when in 1998 it contributed US$50,000 to help Sri Lanka’s Kothmale community radio station add an Internet facility to its system, thereby combining a new information technology with traditional community radio. UNESCO provided computer equipment and training while the Sri Lankan Government provided the Internet connectivity. In one application of the system, listeners request information which station staff tries to provide by using the Internet to search for answers and then broadcast them.

The Kothmale project served as a model for a major UNESCO initiative to develop Community Multimedia Centres (CMCs). To assist those who would want to create such centers, UNESCO produced *A Guide to Community Media Centers, How to Get Started and Keep Going*. The Guide indicates that the basic premise of these centers is that “the combination of local radio and ICT access offers an effective gateway to the Information Society for marginalised communities.” UNESCO has expanded its Community Media Centers program to include more than 40 CMCs in more than 15 countries and is scaling up. In Chapter 10 we briefly report on a 2005 evaluation of the CMC initiative.

This accounting of institution-building activities is only meant to illustrate some of the initiatives undertaken during the past half century. There are other actors including governments in Europe that have contributed consistently to the training of media people from developing nations, and, of course, there are developing nations themselves that have been instrumental in building the resources for doing development communication. The Government of India, for example, has been forceful in creating a collection of Indian Institutes of Technology which have been instrumental in providing people and innovations in the field of information technology such as wireless systems for expanding access to telecommunications networks and low cost computers.

Paralleling (or a sub-component of) this thread is a strand that might be labeled ICT. Because of its prominence in the 21st century, we treat it as a separate thread. Of course, you met ICT in the early part of this chapter.

7. THE ICT THREAD

In a 2006 publication from the World Bank, a World Bank team declared that

In the past few decades, information and communication technology (ICT) has transformed the world. Its potential for reducing poverty and fostering growth in developing countries has increased rapidly.... When tailored to needs, ICT has the potential to raise growth in businesses of any size and countries at any stage of development. Related, but even more important, is ICT’s role in reducing poverty and inequality, both within and across countries. Thus it is crucial that ICT move closer to the mainstream of development economics and policies, locally, nationally and globally.40


Information technologies have played a role in development for at least half a century. Rural radio forums, a product of the 1950s, continue today in some countries. Audio and video cassette technology, along with broadcasting, satellites and various audio-visual technologies, became part of the development communication tool kit in the last half of the 20th century. Heavily influencing the communication technology initiatives was an interest in distance learning projects. Very early in this history was Radio Sutatenza which began educational and cultural programming in Colombia in 1947.41 One of the most dramatic events in the half-century was the use of a communication satellite in India to provide television programs to the six most under-developed areas of the country. Although radio and television continue to be important “new technologies” for some parts of the world, computers, the Internet and even iPods are attracting substantial interest of people from policymakers to farmers in developing nations. For example, as early as 1997, Don Richardson suggested that:

The time to act to support Internet knowledge and communication systems in developing countries is now. Today we truly live in a global village, but it is a village with elite information “haves” and many information “have-nots.”...Adopting a proactive strategy and acting to bring the Internet to rural and agricultural communities in developing countries will help enable rural people to face the unprecedented challenges brought by the changing global economy, political changes, environmental degradation and demographic pressures.42

The central and vital role communication and information play in the lives of people was officially recognized by the UN General Assembly in December 1997 when it endorsed a statement on the Universal Access to Basic Communication and Information Services. The statement concluded that the “introduction and use of information and communication technology must become a priority effort of the United Nations in order to secure sustainable human development.” The statement also embraced the objective of establishing “universal access to basic communication and information services for all.”

The World Bank and ICT in the 21st century

In the mid-1960s the World Bank began supporting conventional telecommunications infrastructure development in various countries. In the 1990s, the Bank moved more decisively into ICT matters, including, for example, projects fostering a larger ICT role in education and in increasing the efficiency of government services. In recent years, according to Bank documents, total annual funding for ICT projects and for ICT-related project components averaged more than US$1.5 billion with a heavy concentration in Africa and Latin America. The Bank’s lead unit for this was infoDev, created in 1995 to promote “innovative projects that use ICTs for economic and social development, with special emphasis on the needs of the poor in developing economies.” Averaging approximately US$200,000 each, infoDev has funded more than 200 ICT-related projects in a hundred countries. Two programs of infoDev merit attention here because they are especially relevant to building a supportive environment for ICT development. These are “eReadiness” and “Country Gateways.”

-eReadiness. eReadiness is an assessment of a country’s status regarding several aspects ICT development: its ICT infrastructure, the accessibility of ICT to the population, the suitability of the policy environment for ICT effectiveness, and everyday use of ICT. infoDev became a major funder of countries that wanted to do such assessments. More than 130 assessments have been undertaken (with various funding sources), with repetition as many as six times in some countries. The key actors in doing or supporting eReadiness studies in addition to infoDev are the UNDP, the World Economic Forum (WEF), the International Telecommunications Union, USAID, and the U.K. Department for International Development. More than 15 eReadiness assessment tools have been developed in recent years.44 In late 2001, one key expert observed that there have been many eReadiness assessments but virtually no action.45 Another

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41 See: Radio Sutatenza” in Gumucio-Dagron, Making Waves mentioned earlier in this chapter.
44 These are compared at: http://www.bridges.org/publication/128.
45 Teresa Peters, Chairman of Bridges.org, at the infoDev Symposium 2001 in Washington.
challenge in the eReadiness world is gathering reliable data at the local level and building appropriate programs there.

**Development Gateways.** The Development Gateway is an independent organization originally created by the World Bank. It is now a fixture of the Development Gateway Foundation, a public-private partnership created in December 2001 and whose Board of Directors represents civil society and public and private donors. The Development Gateway is an Internet portal for information on sustainable development and poverty reduction, and is intended to help fill the knowledge and communication needs of government officials and promote government quality and efficiency by providing information on best practices, networks for sharing solutions and experiences, and tools for analysis and problem-solving. Its “search engine” is dedicated to helping public, civil society and private sector people navigate the Internet to find useful information and resources. For one example: officials in a community in a developing nation want to attract investors to the community. They need to advertise the community’s assets and provide legal information and data on infrastructure and the local labor market. The Gateway provides an international “platform” for diffusing this information widely.

When it was first introduced, the Gateway stirred up substantial controversy because some perceived it as a “super-site” and a *gatekeeper* on development information, and some thought its management and control might not be impartial and beneficial to all.

In September 2001, infoDev announced a Country Gateways program and allocated US$1.8 million for fiscal year 2001. It is a partner to the Development Gateway. The Country Gateways are independently owned-and-operated partners of the global Development Gateway. Each gateway is designed to provide country-level information and resources, and promote local content development and knowledge sharing. In some cases, Country Gateways will provide their nation with e-Government, e-Business, and e-Learning, and, overall, contribute to better connectivity and use of ICT. infoDev provided funding for planning of gateways (an average of US$50,000, but up to US$100,000) and also provided funding for some start-up activities. In late 2003, Gateway authorities announced the last round of Planning Grants for Country Gateways. There are now approximately 45 country gateways across the world.46

We have already mentioned telecenters in various parts of this chapter because they have emerged alongside the development of ICTs.47 International organizations have a keen interest in the digital revolution because of three related assumptions. These are:

1. Appropriate information can contribute significantly to development.
2. Information technologies provide an important and potentially economical way for people to access that information.
3. Because many in the world do not have individual access to information technologies, telecenters in the near future are a viable way to link communities with the information and communication technologies.

Besides the various international agencies and national governments that have supported the telecenter movement, the private sector has also seen promise in providing information technology services for the public. However, their interests tend to be in enterprises such as cybercafés whose principal goal is to make a profit. In the development field, we generally consider a telecenter to be a public place where the motive of the telecenter operator is largely to foster community development. Basically, telecenters are shared public facilities that provide telecommunication services to persons who, for various reasons, do not have them available individually. Because of the great diversity of initiatives, making sharp distinctions between cybercafés and telecenters is hazardous; they are part of the same overall ICT movement, and each can learn from the other (and sometimes turn into the other).

Commercially-oriented cybercafés tend to be in the private sector and focus primarily on providing customers with the use of computers, games, and especially connections with the Internet and the Worldwide Web. Their clients tend to be more urban, more educated, and more economically well off than the clients of telecenters. By their nature, at this period of the telecenter movement, telecenters tend to be in the public sector and focus on more isolated people (like villagers), and lower income and less educated people. Typically, telecenters offer a broad range of services related to the needs of the community, some of

which are free or subsidized by external bodies (such as governments or NGOs). These might include: desktop publishing, community newspapers, sales or rental of audio and video recordings, book lending, photocopying, faxing, and telephone services. While both cybercafés and telecenters might offer training in computer use, the telecenter is more likely to offer other kinds of training as well, for example, non-formal education and distance learning in agriculture, health, basic education and other fields. Their reason-for-being is consistent with the idea expressed by the Dot Force report noted above: “Creating digital opportunities is not something that happens after addressing the “core” development challenges; it is a key component of addressing those challenges in the 21st century.”

With this we offer a brief historical note. The idea of a community sharing computer technology emerged in the 1980s with the introduction of the telecottage in Scandinavia. The initial purpose of those telecottages was to fight against marginalization of remote rural places in the emerging “information society.” This was before the Internet. These telecottages provided conventional office facilities and equipment such as copiers, computers, and communication services. In the mid 1990s a new breed of telecottages emerged in Hungary. Supported initially by USAID, these were built around social and economic development and supporting democracy in the newly independent nation. The telecottages focused initially on computers and the Internet – but soon expanding into a wider range of services. Hungarian telecottages were a forerunner of the movement that included multi-purpose telecenters pioneered by the International Telecommunications Union (ITU). At the close of the 20th century, a variety of international organizations were supporting the diffusion and adoption of ICTs and telemcentres. As we have seen, some telecenters have become Community Multimedia Centers, substantially supported by the Swiss Agency for Development and Cooperation.

Cybercafés, however, are potentially relevant to the development communication enterprise. Proenza reminds us that there is much to learn from cybercafés even though they are not development-oriented. The small business cybercafés, he reports, have been expanding very rapidly worldwide. When we disregard cybercafés in the discussion of telecenters, we are ignoring the most replicable and sustainable governance structure known – i.e., the privately-owned business. Telecenters, he asserts, could learn from cybercafés a business-like approach to telecenter management, a key issue in assessing their sustainability. Furthermore, Proenza says, government and NGO-run telecenters that find it difficult to sustain themselves often initially have easy access to funds, and spend more than they can afford on staff and superfluous services. Their motivation to be economical or to run their centers to meet their customers’ needs is feeble.” In contrast, if the owner of a commercial cybercafé is not committed to sustainability through demand-driven entrepreneurship, he will surely fail and others will take over his place. Thus a key lesson for the telecenter movement lies in careful assessment of the market and recognition of the demand-driven principle. Elsewhere we have explored this idea by suggesting that telecenters be viewed as “communication shops.” Ultimately, the sustainability of the telecenter system is likely to depend on this kind entrepreneurship, perhaps in the form of micro-enterprises.

Telecenters might also look at the culture of the cybercafé to see what other features could be adopted by the telecenter. For example, in many places the ambiance of the cybercafé is social and enjoyment: the café aspect is an important attraction for the persons who frequent the places. Computer games are popular. Even while fulfilling their development communication objectives, telecenters will need to be demand-driven, and this may mean mixing some pleasure with the more serious business of the telecenters. Chapter 6 on information and communication technologies explores this issue further.

Despite its commercial and narrow interests, the cybercafés phenomenon is important in the context of telecenters because cybercafés may discover that some development-related services are, in fact, profitable, either directly or indirectly (for example, attracting more traffic).

We also need to note that there are major public sector initiatives around the world that have the

48 A detailed description of the Hungarian experience can be found in F. Proenza "Telecenter Sustainability: Myths and Opportunities," in The Journal of Development Communication, Vol. 12, No. 2 (December 2001). The piece can be found on-line at http://jp.cals.cornell.edu/commdel/jdc-1.cfmt where there are 15 additional articles drawn from a special issue of The Journal of Development Communication dealing with various aspects of the telecenter movement. An excerpt from the Proenza article appears at the end of Chapter 6 in Advocacy & Interventions.

unidimensional look of the cybercafé but without the coffee. We call them Information Access Points (IAP). Some IAPs may be nothing more than a small kiosk in a post office or library. Canada’s Community Access Program that launched approximately 8,000 CAP sites in rural and urban Canada is an example. We spoke with the head of a CAP site that only provided use of computers and connectivity to the Internet in a sparse bare room. It was not until his program changed the name of the site from Community Access Program to a more popular name that included the word “cybercafé” in it that people started to use the place. These kinds of government-sponsored information technology access points that have proliferated throughout Canada and are emerging in places as widespread as Mexico, Peru, Egypt and India are important for the telecenter movement because they already have the public service mandate though with a narrow focus, but potentially they can expand into the broader development areas and services characteristic of telecenters – similar to the adaptation that took place when Hungary reconstructed the telecottage concept. Meanwhile, IAPs serve communities with e-Government and e-Health among their products.

III. SUMMARY

As one examines the trends in such sectors as health, agriculture, nutrition and the environment as well the approaches being used by major donors and stakeholders, there appears to be some convergence of views as to how communication can be used most effectively to promote economic and social development and especially improve the well-being of people who live in various degrees of poverty. The threads we have followed covering the last five decades convey a sense of evolving and blending into a development communication fabric. One can discern in this fabric the following characteristics that can be said to help define what development communication is in this early 21st century.

1. Focus on beneficiaries: Instead of starting with an innovation or a behavior or an organization’s priorities, increasingly communication interventions are emphasizing the individual or family or community as the center of the development process. Childers referred to this as “people-centered” as compared to agency or ministry-centered approaches.
2. Consideration of various stakeholders: In addition to focusing on those who are expected to be the primary targets for change-inducing communication, others are considered as targets because of their influence and their control over essential resources. These range from political and opinion leaders to clinic staffs and those in outreach systems such as the mass media and extension. Even those initiating a program/project may also be considered as stakeholders. Hence the concept of advocacy reflects the importance of looking beyond mass-oriented strategies.
3. Participation: The ideas of “targeting” and “receivers” are modified (but not eliminated) so that interactivity and sharing of power within and among stakeholders’ groups is an operational model guiding communication planning.
4. Emphasis on outcomes: What and how many messages are sent out is less important than what is learned and what is perceived by stakeholders and what changes take place in stakeholders’ behaviors relative to development objectives.
5. Data gathering and analysis: While intuition and creativity continue to be valued these are driven and inspired by systematic data collection and analysis. For example, an early step in a communication plan is to do a situational analysis that includes research on a variety of subjects related to behavioral change and communication resources. In the incubation of telecenters, we have found that doing research on a community’s information needs is vital to a telecenter’s sustainability. Evaluation is a research process that permeates the communication program, with information being collected for pre-testing materials, monitoring progress, and measuring impact and other outcomes.
6. Systematic models: The communication process involves specific and explicit sequential steps including situational analysis (research), planning, pre-testing, implementation and evaluation. The sequence is iterative and dynamic; results of the evaluation are fed back into the situational analysis to register changes in conditions upon which the original planning was based so that adjustments can be made in the next cycle of intervention steps.
7. Strategy: As we noted at the beginning, most development programs deal with voluntary behavior of stakeholders: farmers choose to adopt different varieties of seeds; families choose to change diets or visit health clinics; couples choose to accept or reject family planning. These kinds of situations challenge communication people to design strategies for providing appropriate information, through appropriate

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Evaluation is not a single step; it occurs in various forms throughout the process. To include evaluation in this sequence, it would be more precise to call it summative evaluation.
channels, at appropriate times, for the appropriate people. Thus a quality professionally-driven development communication program is characterized by having a rational means for selecting communication objectives, content, channels and target groups that fit the voluntary nature of the behavior change being proposed. (This is the focus of Chapter 8.)

8. Multi-channel versatility: As the examples in the opening section of this paper and the ICT thread at the end illustrate, development communication is equipped with a broad range of information and communication techniques and technologies with which to attack poverty and underdevelopment. Even in remote regions, modrn information technologies can play a role bringing the e-World to rural people.

It seems appropriate to summarize this introductory chapter with the question Why Communication? Colin Fraser, a person with much good field experience and a pioneer at FAO in development communication, and his co-author Jonathan Villett answer the question, explaining how communication relates to contemporary issues in development.51

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COMMUNICATION – A KEY TO HUMAN DEVELOPMENT

FOREWORD

"People's participation is becoming the central issue of our time," says UNDP in its Human Development Report 1993, to which we add, "and participation requires communication". Development programmes can only realise their full potential if knowledge and technology are shared effectively, and if populations are motivated and committed to achieve success. Unless people themselves are the driving force of their own development, no amount of investment or provision of technology and inputs will bring about any lasting improvements in their living standards.

Communication is central to this task in many ways. For example, it enables planners, when identifying and formulating development programmes, to consult with people in order to take into account their needs, attitudes and traditional knowledge. Only with communication will the project beneficiaries become the principal actors to make development programmes successful.

Helping people at all levels to communicate empowers them to recognise important issues and find common grounds for action, and builds a sense of identity and participation in order to implement their decisions. On top of that, development involves change, new ways of doing things. Will people have the confidence to make a project work? Will they acquire the new knowledge and skills they need? How can barriers of illiteracy be overcome? Communication media and techniques can be powerful tools to advise people about new ideas and methods, to encourage adoption of those ideas and methods, and to improve training overall.

Communication approaches are also invaluable for improved coordination and teamwork to manage development programmes, and to gain institutional support.

We live in a communication age, and the full impact of communication on development is just starting to be seen. Based on the experience of FAO and other agencies, communication for development has reached the stage where it can have a noticeable and rewarding effect on many development programmes.

This booklet not only promotes the concept of development communication but, more important, it also describes how achieving its full potential to support development requires executive decisions by national planners and policy-makers.

Jacques Diouf, Director-General, FAO January 1994, Rome

THE ROLE OF COMMUNICATION

A decisive role can be played by communication in promoting human development in today's new climate of social change. As the world moves towards greater democracy, decentralization and the market economy, conditions are becoming more favourable for people to start steering their own course of change. But it is vital to stimulate their awareness, participation and capabilities. Communication skills and technology are central to this task, but at present are often underutilized. Policies are needed that encourage effective planning and implementation of communication programmes.

51 See [http://www.fao.org/docrep/T1815E/t1815e01.htm](http://www.fao.org/docrep/T1815E/t1815e01.htm). The date of the original publication was 1994.
Chapter 1 | Introduction to Development Communication

The new development context
Major changes and new emphases have appeared on the development scene. Societies are opening to debate and markets to individual initiative; privatisation and entrepreneurship are being encouraged; new technologies are becoming widely available; management of government services is gradually being relocated closer to the users, if not handed over directly to users themselves, in order to cut costs and seek partners more committed to effective implementation. Indeed, a host of structural adjustments are profoundly affecting most aspects of production and human interaction. These structural adjustments make demands, and have direct economic and social effects on people.

Governments of developing countries can no longer fulfill all social and regulatory services by themselves, especially in rural areas. Many economies are overwhelmed by the cost of servicing their foreign debt, and governments are under stringent requirement from international financial institutions to reduce spending. In their quest for greater cost-effectiveness in all their operations, governments must have the active support of, and a greater contribution from, the people. Governments are thus obliged to seek new and perhaps unfamiliar partners, ranging from local leaders to people in a variety of non-governmental organisations. These people are accordingly obliged to shoulder new and perhaps unfamiliar responsibilities.

Furthermore, as we near the end of the century, a number of specific issues have come clearly into focus as being central to socio-economic progress, equity, social stability, to the future of humanity- and perhaps even to its survival.

The environment and its relation to sustainable agricultural development and food production present an enormous challenge. A prime consideration is the proper use and conservation of natural resources. These resources are often degraded at the hands of impoverished rural people who have no immediate alternative for meeting their needs for land on which to grow food, and for fuelwood. Their abuse of forest areas, with the negative consequences of soil erosion and dwindling water resources, will only be halted through new schemes of employment and income generation and through applying conservation techniques. Such solutions, however, will have to be made acceptable to local people, many of whom will need considerable encouragement and training in new skills. The provisions of Agenda 21, which emerged from the UN Conference on the Environment and Development held in Rio de Janeiro (1992), will only become a reality through large-scale changes in attitudes and behaviour in societies worldwide.

Population growth is exerting pressure on natural resources, on food production and on the ability of governments to provide basic services and employment opportunities. Population growth depends on choices made by individuals. Helping people to make more informed choices by raising their awareness of the implications of family size and unwanted pregnancy, and of methods of contraception, requires much more than simply sending out messages. Instead it requires learning, from people and their leaders, how to make such issues socially acceptable and worthy of urgent action. Insight into people’s underlying attitudes are needed before they can be helped to change their views.

Rural poverty continues to increase in many countries, accelerating urban migration and creating intolerable economic and social problems. The solution, of course, lies in the development of rural areas. Most rural communities are characterised by reliance on traditional knowledge and production systems, based strictly on what has worked for survival in the past. This has led to a view that rural communities are resistant to change, even though their traditional wisdom has been hard-won and its reasoning is sound. Planners need to take this into account, as the first step of any planning exercise. For this, and for all rural development activities, communication between local communities and national planners and policy-makers is of vital importance but, unfortunately, in rural areas it is at its weakest.

Malnutrition is both a cause and a consequence of underdevelopment. Recent decades have seen consistent reductions in the daily per caput supply of calories in many countries. The International Conference on Nutrition held in December 1992 drew attention to the fact that more than 780 million people in the world suffer from chronic malnutrition and that, each year, some 13 million children below the age of five die from infectious diseases that can be directly or indirectly attributed to hunger or malnutrition. Nutritional well-being is not just a question of food availability and economics among families, however. It also depends on sufficient knowledge and acceptance of appropriate diets. At the planner’s level, incorporating nutritional concerns into development initiatives for agriculture, food security, forestry, land
use, exports and so forth requires an increased awareness of nutritional priorities since these are not spontaneously identified in such disciplines.

**Women in development** is another priority issue. In many countries, women shoulder most of the work in rural areas. Given the opportunity, women have shown themselves again and again to be highly responsive and responsible when helped to mobilise themselves, build upon available resources and produce sustainable results. Women need to learn additional technical and organisational skills and more women are needed at the centre of decision-making. Specific challenges where communication is vital include helping women's groups to increase their self-determination and to broaden the dialogue between the sexes regarding rights, privileges and responsibilities.

**The common denominators – people and communication.**
The first common theme running through the development issues just outlined is the human factor: the outcome will be based less on scientific and material inputs than on the people involved. For, even if our understanding of the development process is changing, there can be no doubt that its future shape, its pace, sustainability and ultimate direction - for better or worse - will be determined by people, and the level of their awareness, participation and skills. Investment in scientific and material inputs will bear no fruit without a parallel investment in "human capital" - in informing people, opening up avenues by which they may reach consensus for action, and developing the knowledge and skills needed to put material investments to the best use.

Communication is the second common theme in the issues outlined. For if development can be seen as a fabric woven out of the activities of millions of people, communication represents the essential thread that binds them together.

On the one hand, communication as dialogue and debate occurs spontaneously in any time of social change. The increased freedom of expression in recent times has been almost simultaneous with changes in the global political structure.

On the other hand, it is communication as a deliberate intervention to affect social and economic change that holds the most interesting possibilities. A development strategy that uses communication approaches can reveal people's underlying attitudes and traditional wisdom, help people to adapt their views and to acquire new knowledge and skills, and spread new social messages to large audiences.

The planned use of communication techniques, activities and media gives people powerful tools both to experience change and actually to guide it. An intensified exchange of ideas among all sectors of society can lead to the greater involvement of people in a common cause. This is a fundamental requirement for appropriate and sustainable development.

**The rural dilemma**
The primary focus of FAO's work in communication for development lies in rural areas, where the expertise and logistics required to communicate well with rural communities may seem daunting.

Nearly 1 000 million people in developing countries, more than one-third of the adult population, are illiterate. Rural communities are often remote and difficult to reach; they lack the infrastructures and communication systems – such as newspapers, radios, televisions and telephones, as well as meeting rooms, offices and schools – that help townsfolk keep abreast of developments and function effectively as informed participants.

In rural areas, the challenge is to increase the quantity and accessibility of information, to ensure its exchange in appropriate ways, and to elicit more information from rural people themselves in order to guide development planning.

**The communication technology and know-how are available.** We live in a communication era, with rapid expansion in the reach of mass media, and improved techniques for the interpersonal exchange of ideas. The advent of the cheap transistor radio, for example, has brought this medium to remote corners of even the least-developed countries, where a lack of electricity can be overcome by solar-powered transmitters and receivers.

Video provides a good example of the technological advances in the communication field. Little more than a decade ago, video was a bulky and expensive medium. The basic kit for shooting in black and white included a camera and recorder weighing about 30 kg, a power supply, and often an electrical generator for fieldwork.
Total cost: almost US$10,000. Now video can be filmed in vivid color using a "camcorder". A semi-professional unit, including batteries, weighs less than 3 kg, and costs less than US$3 000. The size and price of video equipment drop further every year helping the use of video playback to expand rapidly everywhere, even to villages in remote rural areas.

Preparation of printed materials with type, graphics and photographs, has also been revolutionised. The use of computers for desktop publishing has sharply reduced costs and production time, providing much greater access and versatility.

Traditional and popular media such as folk theatre, dances, puppet shows and popular poetry, as well as rural press linked to literacy programmes, and audiovisual materials, can be highly effective channels for disseminating development information and for stimulating community action.

Much more is now known about the interpersonal communication skills development field workers need in order to function more effectively as agents of change with rural people. These skills include the use of techniques such as focus group discussions, illustrated discussion tools such as flipcharts that have been pretested to be effective for rural viewers, and other media such as video and audiovisuals that can be used to share ideas and cause reflection, or as part of a training methodology involving presentation, discussion and practice. Interpersonal communication skills can improve activities at all levels, enhancing management, teamwork and the morale of personnel.

A look into the future

With such rapid advances in communication technology and know-how, the age of telecommunication for rural development may already be upon us. Solar-powered microwave links for telephone communication, facsimile machines and even satellite links, are increasingly reaching into rural areas of the world, offering the possibility of breaking their traditional isolation for the first time in history.

In fact today the idea is being mooted that telecommunication learning centres could be established in villages of the developing world, with user-friendly computer terminals that would download interactive learning and management information programmes from a central supply, similar to a water or electricity service, with users paying modest charges for the time of actual use. The programmes could be video images, sound and computer-type data. This technology already exists, and the speed with which it is becoming cheaper and more accessible is so rapid that the use of computers in the villages of developing countries may someday be part of a pragmatic strategy to reduce the rural-urban population shift and promote rural development.

Time for communication for development

Whether we come to see village learning centres equipped with a centrally linked computer terminal, or, instead, a more systematic use of traditional media for human development, the use of communication no longer depends on the availability of technology: it depends on the will and decisions of policymakers to exploit its potential. Already communication has been highly exploited for political and commercial aims. Now is the time for communication to be applied to development.

COMMUNICATION IN PRACTICE ...for better planning and programme formulation

Any development programme that regards people as mere recipients, rather than as the actual creators of change and progress, usually fails. Consulting the people and actively involving them in making the decisions that will affect them virtually ensures the programme's success.

In practical terms, effective planning must make a deliberate effort to determine what people want to do, can do and can continue to do in a sustainable way. To find this out, communication techniques go far beyond the simple question-and-answer survey. Meaningful discussion, generated by people trained in interpersonal communication skills, and audiovisual tools, such as video or radio, can help the community to identify its true problems and priorities and where its capabilities and needs lie. This self-analysis can help a community to generate realistic proposals for new development initiatives and stimulates tremendous interest to have these initiatives succeed.

The views of rural people can also guide prospective work plans, preventing them from moving in the wrong direction. For example, agricultural research can be tied directly to what farmers really want and are capable of using. A systematic communication process brings researchers and practitioners together. A policy of communicating with people intensively before a development programme is even drafted, and taking into account their views, capabilities and needs as they see them, is the best insurance a planner can have.
COMMUNICATION IN PRACTICE ...for people’s participation and community mobilisation

The dynamic strategy behind people’s participation and community mobilisation is to release the energy of rural people by building their confidence to make decisions and carry them out as a community in a self-reliant way. and to prove that A. they benefit from such efforts.

Communication activities can help people, even those from different social groups within a community, to share information and exchange ideas in a positive and productive fashion. This dialogue can be enriched by understanding how development issues affect them, discovering what others think in other communities, and seeing what other communities have achieved. These are effective methods to help people to reach a consensus and find common grounds for action, based on their own needs and capabilities.

Dialogue can be initiated and guided by field staff who have good interpersonal communication skills. Discussion tools such as flipcharts, audio-cassettes, slides and even video, can be used to help people visualize and reflect upon their own reality. Rural radio too can be a popular forum where local people do most of the talking about technical and cultural topics. These activities can lead to a serious diagnosis of problems and a search for solutions.

Gaining people’s participation always requires much face-to-face work within the community in order to make a bridge of understanding. Communication skills and media help people to visualize and cross that bridge more swiftly....

ARTISTS FOR A BETTER LIFE: POPULATION COMMUNICATION IN MALAWI

Since 1986 population communication teams working in the Comoros, Burundi, Rwanda, Kenya, Uganda and the Philippines have tried to tap a variety of artistic skills: the beat of drums, the sound of three-string guitars, the rhythm of skiffle bands, the thrill of women’s dance groups, the village clowns, the storytellers, the theatre groups, the puppets. So much tradition, so much inspiration, so many cultural resources close at hand, all firmly woven into the oral web of traditional tales, the home of ancestors, gods, mysteries and witch doctors.

Building on those experiences, a population communication project in Malawi decided to invite grassroots artists; most of them belonging to the very audiences the project was trying to reach, for a week-long workshop: drummers, dancers, musicians, actors, clowns and storytellers thought together, wrought together and laughed together. The result of this dynamic interaction between performers and communication facilitators was the production of a coherent package of songs and dances, stories and plays, village clowneries and drum shows, that use idiom, imagery, rhythm and humour to deal with a variety of population issues and lifestyles.

All productions were then protested and integrated into a multimedia campaign which also used radio, audio cassettes, visuals, drama and print. But it was the talent, creativity, intuition and instinct of the artists which triggered a process of village participation in the rural areas of southern Malawi. The emotional excitement created by the launching of village campaigns gave way to the spontaneous development of traditional songs, dances and popular plays by other village artists.

The Malawi experience, which is still under way, proved the potential of using traditional resources. But this can only be done through a true participatory process, sharing information and knowledge. This process has timidly, but surely, started in Malawi.

COMMUNICATION IN PRACTICE ...for changing life-styles

Rural populations, and women in particular, find it increasingly difficult to cope with rapidly changing social conditions, which often lead to the development of unsettling life-styles. For instance, in societies where marriage and childbearing no longer go together, the social and economic cost of teenage pregnancies weighs heavily on people’s, and the nation’s, resources. In others, rural youth, often from fatherless homes, increasingly rebels against parental poverty. Pressed by peers, teenagers often drop out of school, fall for drugs, or end up in the gangs of city slums.

Communication can focus on the long and sensitive process of changing behaviour and life-styles. Quite recent communication research methodologies make it possible to gain insight into the underlying reasons why people adopt a certain life-style. Once this understanding is acquired, communication approaches can respond in a combination of ways. Mass media can raise awareness and public understanding of the social implications of problems such as adolescent fertility, AIDS or drug abuse. Other communication activities can bring about informed processes of change among the audiences they intend to reach. Interpersonal communication techniques such as peer counselling have the capacity to develop coping mechanisms, self-esteem and images of a better future.
among teenagers, especially if combined with group discussions and other tools which create a dialogue. Social communication activities based, for example, on street and village theatre, and using truly participatory methodologies, can pioneer attitudinal changes at the community level and stimulate nonthreatening environments in which teenagers wish to learn about life.

IN PRAISE OF SHEEP

In Benin in early 1992 a government veterinarian visited a village near the town of Parakou with a number of good ideas to help the community improve its livestock production. Sheep and goats, many sickly and thin, wandered everywhere, stripping the land bare. The veterinarian advised local residents to plant fast-growing fodder crops, build enclosures in which to keep the stock and have the animals vaccinated. The people, however, rejected his ideas immediately and absolutely. They had trust neither in the government official himself, nor in his untraditional ideas.

Not one to give up, the veterinarian managed to have the village - and himself - included in a new communication project. Before long, he had been trained to use better interpersonal communication skills and tools, and the village was soon erupting into lively discussions about his proposals almost every night.

Today in this village one sees large and healthy sheep and goats. Almost every home has an enclosure to keep the animals, and fodder gardens to feed them. Owners sell the sheep for triple the price they obtained before. Many use the profits to buy buffaloes to plough their fields for the first time.

However, the main talk is not about new buffaloes, or ploughs, or the labour saved or even whatever happened to the veterinarian (who moved on to another village); instead it is about marketing, genetic improvement, flock size and feed.

To an outsider, credit for all these improvements in living standards might seem due to the veterinarian or perhaps to the “communication process” itself. Residents would probably disagree — they praise the sheep.

A farmer in Guatemala

Photo by R. D. Colle
Chapter 2
THE DOMINANT PARADIGM:
EXTENSION & DEVELOPMENT COMMUNICATION

According to the Bill and Melinda Gates Foundation, more than 2.5 billion people live on more than 400 million small farms in the developing world. "Their numbers are increasing even while their average farm size is shrinking, and there is every indication that these small farms will have to play a crucial role in any development strategy for sub-Saharan Africa and South Asia over the next half century."¹ At the same time, the Foundation says, the global food retail and agricultural input supply chains are consolidating, creating power imbalances that favor larger farmers. To raise the incomes of rural people and help them work their way out of poverty, strategies are needed that enable the small farming operations to interact more effectively with the national, regional and global supply chains. However, the poorest rural communities face many barriers to their participation in the larger market systems. These include infrastructure deficiencies, inadequate production technology, and convenient and predictable access to markets. More specifically farmers are disadvantaged by poor current price information, lack of storage facilities, inadequate roads, limited understanding of input use, the inability to capture benefits from value-added processes, and lack of bargaining power in commercial relationships. Communication issues are a vital part of the strategies needed to solve some of these problems.

The situation in African agriculture is relevant to the Millennium Development Goals. Practical Action states that Africa is the only region in the world where poverty and hunger are increasing, and if the trend continues, it is the only continent that will fail to meet the international community’s targets to reduce poverty, hunger and disease by 2015.² Practical Action contends that agriculture remains the key to achieving the poverty targets of the MDGs in Africa. It says that nearly 80% of the population in sub-Saharan Africa lives in rural areas and 70% of this population is dependent on food production through farming or livestock keeping for most of their livelihood. Small-scale farming provides most of the food produced in Africa and it provides employment for 60% of working people. However, Practical Action observes that Africa’s agriculture is in crisis and "set to get worse" because of the lack of access to land and resources, the degradation of natural resources, poor access to markets, low investment in agricultural research, insufficient training and extension services, and the lack of private sector services.

This chapter explores various approaches to providing the communication component of the multifaceted resources needed for agricultural and rural development, especially by small-scale farmers. The chapter examines the evolution and changes in agricultural extension and the communication innovations designed to improve farmers’ participation in modern agriculture.

1. THE DIFFUSION MODEL

One of the most important processes in agricultural development is the “transfer of technology” (TOT). Inevitably it is associated with the practice called “top-down.” We sometimes call it "the medical model." It refers to the attempt of an expert source to spread an idea or innovation to potential adopters who are expected to accept what is offered. For example, in the medical model, the doctor gives directions to the patient who is expected to comply. In fact, "non-compliance" to doctors’ directions is serious enough that it is an important area of research in the health field. Similarly, the agricultural researcher typically conveys recommendations about farming-related practices (usually through extension intermediaries) to farmers in a top-down manner. TOT is closely associated with the diffusion

¹ Request for Concept Notes, Raising Incomes of Smallholder Farmers in the Developing World by Building Efficient and Equitable Markets, RFP# GD-Ag-01, Bill and Melinda Gates Foundation.
² “The Crisis in African Agriculture: A More Effective Role for EC Aid” at: http://www.itdg.org/?id=agriculture_aid, Practical Action is a UK charity that was founded in 1966 as ITDG (the Intermediate Technology Development Group) by the economist Dr E. F. Schumacher to prove that his philosophy of ‘Small is Beautiful’ could bring real and sustainable improvements to people’s lives.
process which, in the communication context, refers to how an innovation spreads through a social system. Everett Rogers, now deceased, gave prominence to that term in his classic book *The Diffusion of Innovation*, first published in 1962. As Rogers first used the term, it was a method for analyzing and describing how innovations traveled through a social system; it was not a prescription or a strategy — for promoting development or social change. However, many people — some of whom studied and did research with Rogers — have applied diffusion concepts in planning their field work. Ronny Adhikarya, who worked for the World Bank and FAO, says: "I personally witnessed the widespread applications of diffusion theory in family planning communication programs in 26 countries of Asia, Near East and Eastern Africa" and he acknowledged the influence of diffusion research in his FAO work on strategic extension campaigns.

Jan Servaes has identified the main characteristics of the diffusion of innovation model in the following list:

1. Derived from a worldview of dominance over one's environment, the Western conception of communication is overwhelmingly oriented towards persuasion. Akin to the modernisation paradigm in both theory and ideology, the communication approach is unidirectional, from the informed 'source' to the uninformed 'receiver'.

2. Congruent with the modernisation philosophy, the diffusion and development support communication approaches tend to assign responsibility for the problem of underdevelopment to peoples residing in those societies.

3. Development as modernisation — and communication as one-way persuasion — reached their zenith through the diffusion of innovations, the two-step-flow, and other 'social marketing' strategies of attitude and behaviour change directed at 'underdeveloped' peoples.

4. Mass media play the pre-eminent role in the campaign of development through communication, and early predictions were of great effects. Bi-directional models and strategies such as feedback were added to render the initial message more effective.

5. Mass audiences were 'influenced' with predispositions toward development and social institutions. Such media technology has been taken either as the sole solution, the driving force, or simply a value-free tool in the process of development.

6. Research of the diffusion approach, like the modernisation theory, suffers from an overemphasis on quantitative criteria to the exclusion of social and cultural factors. As a result, the manner in which foreign media hardware and software interact within a cultural context is largely unexplored.

Diffusion, top-down, and TOT are ideas usually associated with the "dominant paradigm." The dominant paradigm was the label given to development following the Second World War. In an influential article written in 1976, Everett Rogers identified the major academic and historical influences on this "old conception" of development. These influences included:

1. the Industrial Revolution that brought rapid economic growth. This growth was seen as development or at least was the "driving engine" of development. Thus the dominant paradigm stressed economic growth through industrialization as the key to development.

2. capital-intensive technology which most developed nations possessed. Because less developed nations had less of it, the implication was that the path to development was to...
introduce technology and they would become relatively more developed. According to Rogers, "When the needed social structures did not always materialize in less developed nations, the fault was accorded to 'traditional' ways of thinking, beliefs and social values."

(3) economic growth and the assumption of the rationality of "man." Central economic planning by national governments (top-down) was widely accepted as a legitimate and reasonable means by which a nation should seek development goals.

(4) quantification of economic factors which put growth first in priorities and qualitative values such as dignity, justice, equality and freedom lower down, perhaps as a result of a trickle-down process.

Rogers summarized the character of the dominant paradigm:

The old paradigm implied that poverty was equivalent to underdevelopment. And the obvious way for less developed countries to develop was for them to become more like the developed countries...Continuing underdevelopment was attributed to "traditional" ways of thinking and acting of the mass of individuals in developing nations. The route to modernization was to transform the people, to impart new values and beliefs.

The tools of modernization (for transferring technology and for transforming people) included the mass media. Apart from the macro-approach to modernization, communication researchers in the 1950s and 1960s linked mass media with personal influence to describe a "two step flow" of influence. This "two step flow" suggests that influence flows first from experts to opinion leaders via the mass media and then through them to others via interpersonal contact. Servaes summarizes by saying: "Mass communication is important in spreading awareness of new possibilities and practices, but at the stage where decisions are being made...personal communication was far more likely to be influential." The common theme in these views of modernization, social change, and communication is that there are senders and receivers, with senders and mass media being the key actors in the prevailing dominant paradigm.

2. BACKGROUND ON EXTENSION

The traditional method of extension is an example of the dominant TOT diffusion method. An extension service extends (delivers) its organization's research results to consumers and helps them adopt the associated practices. For example, in New York State major agricultural research is conducted by Cornell University scientists and its associated research stations. Each county in the State has a County Extension Center that takes scientists' research results and provides them through various means to the agricultural community (individual farmers, commercial growers, marketing organizations and others). The University itself has staff members in various academic departments who are "extension associates" – which means they spend some portion of their time adapting and packaging results so that user-friendly results can be provided directly to consumers, or to them through the county extension offices, radio, television, web pages and other media. Ideally, those extension associates interact with consumers to learn about the kinds of research they need.

In the following section, Gwen Jones and Chris Garforth review the history and development of agricultural extension.

8 E. Katz and P. Lazarsfeld, Personal Influence, The Free Press, New York, 1955. Re-issued by Transaction in 2005. This study in a mid-western USA community has been regarded as "perhaps the most influential book in mass communication research of the postwar era, and...more than any other single work, it solidified what came to be known as the dominant paradigm in the field, which later researchers were compelled either to cast off or build upon." See Transaction, on-line: http://www.transactionpub.com/personal-influence-paper-2005.

9 Gwen E. Jones is Senior Lecturer, Agricultural Extension and Rural Development Department, and Chris Garforth is Senior Lecturer and Head of the Agricultural Extension and Rural Development Department, both at the University of Reading, United Kingdom. This is Chapter 1 of B. E. Swanson, R. P. Bentz, & A. J. Sofranco (eds), Improving Agricultural Extension: A Reference Manual, Rome: Food and Agriculture Organization, 1997, and is re-printed with the permission of the Food and Agriculture Organization. The entire manual is available at: http://www.fao.org/docrep/W5830E/W5830E00.htm.
THE HISTORY, DEVELOPMENT AND FUTURE OF AGRICULTURAL EXTENSION

Agricultural extension work has a venerable, albeit largely unrecorded, history. It is a significant social innovation, an important force in agricultural change, which has been created and recreated, adapted and developed over the centuries. Its evolution extends over nearly four thousand years, although its modern forms are largely a product of the past two centuries. Today, the organizations and personnel engaged in agricultural extension encompass a diverse range of socially sanctioned and legitimate activities which seek to enlarge and improve the abilities of farm people to adopt more appropriate and often new practices and to adjust to changing conditions and societal needs.

The Term "Extension"

The use of the word "extension" derives from an educational development in England during the second half of the nineteenth century. Around 1850, discussions began in the two ancient universities of Oxford and Cambridge about how they could serve the educational needs, near to their homes, of the rapidly growing populations in the industrial, urban area. It was not until 1867 that a first practical attempt was made in what was designated "university extension," but the activity developed quickly to become a well-established movement before the end of the century. Initially, most of the lectures given were on literary and social topics, but by the 1890s agricultural subjects were being covered by peripatetic lecturers in rural areas (Jones, 1994). The growth and success of this work in Britain influenced the initiation of similar activity elsewhere, especially in the United States. There, in many states, comparable out-of-college lectures were becoming established by the 1890s (True, 1900, 1928). During the first two decades of this century, the extramural work of the land-grant colleges, concerned with serving the needs of farm families, was to expand dramatically and become formally organized; but the use of the term "extension" continued and has persisted as the designation for the work.

The overt use of the notion of "extending" relevant and useful information to the adult population at large, however, predates the university extension movement. Earlier in the nineteenth century, a British politician, Lord Henry Brougham, an influential advocate of formal education for the poor and of mass adult education, founded the Society for the Diffusion of Useful Knowledge in 1826. Its objective was "imparting useful information to all classes of the community, particularly to such as are unable to avail themselves of experienced teachers, or may prefer learning by themselves." The society sought to do this largely through producing low-priced publications and establishing local committees throughout the country "for extending the object of the Society" (Society for the Diffusion of Useful Knowledge 1827). During its twenty years' existence, agricultural topics were well covered in the society's publications....

The Distant Origins

The dissemination of relevant information and advice to farmers, however, has a long if chequered history prior to the emergence of modern forms of agricultural extension in the nineteenth century. The first known example was in Mesopotamia (roughly, present-day Iraq) around 1800 B.C. Archaeologists have unearthed clay tablets of the time on which were inscribed advice on watering crops and getting rid of rats—important for mitigating any potential loss of taxation revenue from farmers (Ahmed, 1982, as quoted in Bne Saad, 1990). Some hieroglyphs on Egyptian columns also gave advice on avoiding crop damage and loss of life from the Nile's floods. An important advance was the beginning of agricultural writings. Though few have survived, the earliest were written during the ancient Greek and Phoenician civilizations, but some of them were adapted by Roman writers. From the second century B.C. to the fourth century A.D., several important Latin texts were written, frequently drawing on practical farming experience, which aimed to help Roman landowners to maintain and improve their estates and their revenues (White, 1970, 1977).

At around the same period in imperial China, early forms of advancing and disseminating agricultural information also began. That landowners and their tenants should improve their production was a matter of concern to the state since, from the sixth century B.C. onwards, it
relied heavily on land taxes for its revenues. The support of relevant agricultural research and the dissemination of information and advice had certainly begun by the late Han Dynasty (25-220 A.D.). The oldest fully surviving Chinese agricultural treatise, *Essential Techniques for the Peasantry*, dating from 535 A.D., aimed to show landowners how to improve their estate management through the advice they gave to their tenants. The Sung and Yuan Dynasties (960-1368) with their firm local government administrations were notable in organizing and promoting agricultural research, extension work, and the teaching of agriculture and sericulture, much facilitated by the invention of woodblock printing, which allowed agricultural treatises and practical handbooks to be widely distributed. Similar activities continued during the succeeding Ming (1368-1644) and Chi'ing (1644-1912) Dynasties, driven not only by the growing population and periodic threats of famine, but also by the state's recognition of the importance of well-coordinated extension work on agricultural recommendations if the most benefit was to be achieved (Perkins, 1969; Elvin, 1973; Bray, 1984; Delman, 1991).

**Necessary Conditions for Agricultural Extension to Evolve**

Apart from the importance of farmers and agriculture in the society and economy concerned, several conditions appear to be necessary for the initiation and organized development of agricultural extension work.

The prime condition is that information has been assembled, systematized, and made available on good or progressive or new agricultural practices suited to a particular environment, and is based on either (or both) the accumulation of experience or findings from research (however rudimentary). Second, this information is used, among other things, to educate professional agriculturists who may further enlarge or refine this body of knowledge or become active promoters and disseminators of it. Third, an appropriate administrative or organizational structure exists by and within which the dissemination activities may be established and conducted. Fourth, there is a legislative or some other official mandate or influential proponent which prescribes or enables that agricultural extension work is desirable and must occur. Fifth, there are invariably a variety of antecedents which have attempted protoforms of agricultural information and advice dissemination. In addition, the incidence of critical situations, such as famine, crop failure, soil exhaustion, or altered economic conditions or relationships, may create an immediate cause for initiating the organization of extension work. All or several of these conditions have been present in the evolution of modern forms of agricultural extension.

**Towards the Modern Era**

The direct antecedents of organized agricultural research and dissemination of its results which occurred in nineteenth century Europe and North America can be traced back to the "renaissance" which began in the fourteenth century.... The earliest known renaissance agricultural text was written in Latin by Pietro de Crescenzi in 1304 and was translated into Italian and French. This became the first book on agriculture to be printed in the mid-fifteenth century. Others soon followed, often based on the old Latin texts or on the collected wisdom of farmers and their families. A well-known example, a compendium of helpful advice in simple verse and a bestseller in Tudor England, was Thomas Tusser's *A hundredth goode pointes of husbandrie*, published in 1557 and expanded in 1573 to five hundred good points with as many on "goode housewiferie" (Tusser, 1580). Less popular, but of greater significance, were Francis Bacon's writings early in the next century based on his observations and scientific experiments on his estate north of London ~ the beginnings of the application of science and scientific method to agriculture (Russell, 1966).

By the mid-eighteenth century, throughout much of Europe, progressive landowners (frequently aristocrats) and their agents and a few similarly minded farmers were being known as "improvers." These, along with some "men of science," were the main proponents of agricultural clubs or societies. At their regular meetings and demonstrations, locally and regionally, landowners and leading farmers exchanged ideas and information and discussed farming improvements. Two main forces underlay the movement. First, many landowners were eager to learn of ways to improve their estates and the production capabilities of their tenants so as to increase the value of their estates and their rental incomes. Secondly,
progress was being made towards modern science and its application to agriculture, especially in agricultural chemistry and plant physiology (Russell, 1966). These societies sought to alter radically the traditional modes of farming by initiating experiments, arranging demonstrations, disseminating information, and advocating the adoption of innovations. It was considered almost a duty by their elite membership to make their initiatives and activities known to "the generality" of farmers through publishing their proceedings and reporting their meetings in newspapers (Hudson, 1972). Although such agricultural societies initially spread slowly...they had become common throughout much of Europe by 1800, and a small number had been established by that year in the young United States and eastern Canada.

It is not possible, here, to enter into detail on the interactions between a growing scientific knowledge of agriculture and its application in practice, the many examples of increasingly widespread agricultural improvement, and the numerous personalities involved in Europe and North America during the century or so after 1750. Reference must, however, be made to one figure whose ideas and activities were of pivotal significance to the developments of the time, and later. This was Philipp Emanuel von Fellenberg (1771-1844), who in 1799 purchased the estate of Wythof, which he renamed Hofwyl, near Bern in Switzerland (Gray, 1952; Guggisberg, 1953). Over the next decade or so, he established agricultural schools at Hofwyl for the children of peasants and of the poor and for the aristocracy and their agents. Although not the first agricultural schools in Europe, those of von Fellenberg became a model for many more which were established before 1850, especially in Denmark, Germany, France, and the United Kingdom, thus assuring a cadre of trained agriculturists.

At Hofwyl, von Fellenberg also established an experimental-cum-model farm to test and develop suitable husbandry practices and technology. He publicised the work at this veritable "educational colony" through a journal and agricultural festivals (shows) at Hofwyl and by welcoming a large number of visitors from all over Europe and maintaining a voluminous correspondence with these and others. Many of his visitors became active proselytes of his methods, recognizing their practical value in disseminating useful information on agriculture – and other topics. One such notable visitor was Lord Henry Brougham, referred to earlier, who became the main publicist of von Fellenberg's work in Britain and whose Society for the Diffusion of Useful Knowledge was an early form of organized "extension."

By the 1820s, most of the elements for creating modern forms of agricultural extension were in being, although each was to develop considerably during the nineteenth century. A crucial missing element, however, was an effective means by which the "generality" of farmers could be directly given information, advice, and encouragement. This required itinerant agriculturists who could meet farmers in their home localities, give instructional talks and demonstrations, advocate superior or new practices, and have discussions with the farmers. The notion of "itinerancy" was not new: since late medieval times, tradesmen and proto-professional men had travelled through rural areas to serve their clients. The first examples of itinerant agricultural lecturers-cum-instructors were in parts of New England and New York in the 1820s (True, 1928) and in France, where a first migratory agricultural teacher was appointed in the Gironde in 1837, followed by nine more in various areas of the country in succeeding years (Boulet n.d.). During the 1840s, further sporadic developments also occurred in the United States, particularly in New York, Ohio, and Maryland (True, 1928), while in Württemberg, in southwest Germany, a pasture specialist (Wiesenbaumeister) together with a staff of eighteen technicians was employed by the state agricultural society to advise farmers, landowners, and town administrations on land drainage, irrigation, and improved pasture management (CLVS, 1845).

In Europe, agricultural science was evolving rapidly by the 1840s, with notable strides being made in Germany by Justus von Liebig at Giessen, and with the establishment of agricultural experiments at Rothamsted in England in 1843 by John Bennet Lawes and Henry Gilbert. Agricultural societies and their shows were flourishing. Numerous publications and periodicals were aimed at farmers. Agricultural schools, if not commonplace, had been established in most European countries. Thus a small minority of younger landowners and farmers had received a formal education in their calling, while purposely trained agriculturists...
were available to be engaged as estate agents or teachers. Many of the more progressive landowners employed agents to travel around their estates to urge improved methods on their tenants. The main element necessary to create modern agricultural extension services was for legitimate authorities to establish the necessary organizations and the germ of this had already been present in France, Germany, and the United States.

The Birth of Modern Agricultural Extension Services

The first agricultural extension service of a modern kind came into existence as the result of a crisis and the initiative of the occupant of a high office of authority. The crisis was the outbreak of potato blight in Europe in 1845. In Ireland its effects were particularly severe because the predominantly peasant population relied on potatoes in their diet, and "the potato famine" persisted until 1851. The new British viceroy appointed to Ireland in 1847, the Earl of Clarendon, soon after his arrival in Dublin wrote a letter (Jones, 1982) to the president of the Royal Agricultural Improvement Society of Ireland (founded in 1841), which acted as the central society for numerous local agricultural societies. This letter, no less than an official directive, urged the society to appoint itinerant lecturers to travel around the most distressed districts to inform and show small farmers, in simple terms, how to improve their cultivation and how to grow nutritious root crops other than potatoes. "Lord Clarendon's practical instructors in husbandry," as they became known, were centrally appointed, deployed, and paid and reported weekly to the society in Dublin, with some local control of their activities being exercised by the major landowners in their areas. Over the four years of its existence, the scheme was funded to about half its total cost by landowners and charitable donations, with the remainder coming from government-controlled funds (Jones, 1979, 1981).

The potato famine also led to consideration being given in Württemberg to employing itinerant farm advisers, but the proposal failed to gain approval (R. Buhler, personal communication). However, from the mid-1850s, first in Württemberg, Hesse, and western Prussia, itinerant agricultural teachers (Wanderlehrer) began to be appointed under the auspices of central agricultural societies. After some ten years, the system grew rapidly, influenced in part by the crisis among vine growers resulting from the devastation caused by phylloxera aphid infestations, and became formalized (Jones, 1981). Normally, the Wanderlehrer spent the summer half of the year travelling around their districts giving talks, demonstrations, and advice to farmers; during the remainder of the year, they taught farmers' sons at winter agricultural schools. Although officially they were part of the activities of the agricultural associations, their work was in all cases supported heavily by state funds, and their advice was free to farmers. When the system was adopted in the kingdom of Bavaria in 1896, it was as an integral part of the state civil service; the extension workers were grandly titled Royal Agricultural Teachers (Königliche Landwirtschaftslehrer) (Maier-Bode, 1910).

By the close of the nineteenth century, agricultural extension systems modelled to a considerable extent on the German Wanderlehrer had spread [from Denmark to Russia]....The growth of agricultural education and extension work in continental Europe was to have a strong impact on the emergence of comparable activity in the United Kingdom. An official commission on technical education in the early 1880s included a detailed review of the European developments (Jenkins, 1884). At the end of the decade, a cluster of enactments, which established county-based local government, created a board of agriculture, promoted technical (including agricultural) education, and allocated funds for the purpose, enabled agricultural extension work to be initiated. It was to be part of the services provided by the local government authorities. They either employed their own agricultural officer or more commonly sponsored lectures and traveling schools on agriculture (especially dairying) as part of the university extension system. This meant drawing on the staffs of the agricultural departments which were being created in new institutions of higher education. Government funds were available to support these activities, but funding also had to be provided by the local county authorities (Jones, 1994). By the turn of the century, such work existed throughout Great Britain....

Many visitors and several official delegations from North America to Europe, particularly from the mid-nineteenth century onwards, reported back on the progress in agricultural research
and education, including the itinerant teachers. In the United States and eastern Canada, agricultural societies had become common during the first half of the century and, usually supported by their state or provincial legislatures, some had at times sponsored itinerant lecturers in agriculture. However, two other developments after 1850 were of more significance to the evolution of agricultural extension in the United States. First was the Morrill Act of 1862, signed by President Lincoln during the Civil War, which was seminal in the creation of state colleges "of agriculture and the mechanic arts" in the northern United States; its land-grant provisions enabled the states to establish and fund their colleges. Second was the beginning at about the same time of the farmers' institute movement. These institutes organized one- or two-day (and later longer) meetings, which became popular after 1860, arranged by and for farmers.

Both developments had been widely discussed during the previous decade, and their growth over the next half century was closely interwoven. The visiting speakers at the institutes were largely professors at the state colleges of agriculture, and both depended on the formal support of their state legislatures and of farmers, especially through their agricultural societies (True, 1895, 1928; Kile, 1921). Over the next forty years, these activities were influenced also by the university extension movement in Britain and the growing interest in adult self-improvement (inspired, for example, by the Chautauqua adult education institution in New York State). By 1890, when the second Morrill Act granted federal funds for the establishment of agricultural colleges in the remainder of the United States, the farmers' institutes had spread throughout and become a national institution with federal support and supervision, further stimulated by the formal establishment of experimental work at the state colleges of agriculture under the 1887 Hatch Act. A comparable development of farmers' institutes began in Ontario, Canada, in 1885. These were financially supported by the provincial legislature and spread rapidly with lecturers mainly from the Ontario Agricultural College at Guelph (founded in 1874). A Somewhat similar system began in Prince Edward Island (Province of Ontario, 1900; Blackburn & Vist, 1984).

Thus, by the end of the last century, a system of agricultural extension work had become well established in a large part of North America. In the United States, the colleges and their leading professors, including several notable proponents of more practical extension work, progressively took over the initiation and organization of the activity. This culminated in 1914 with the passage of the Smith-Lever Act, establishing the Cooperative Extension Service – a tripartite cooperation of federal, state, and local county governments, with the state college as the extension agency -- in order to aid in diffusing among the people of the United States useful and practical information on subjects relating to agriculture and home economics, and to encourage the application of the same.

In the Southern Hemisphere, extension work also became established along the wide coastal belts of southern and eastern Australia. Several agricultural ("show") societies were formed in the second half of the nineteenth century, although their effect was slight, but as the state administrations became more organized, departments of agriculture were established in the 1870s and 1880s with the aim of developing the potential of their territories. They recognized the importance of agricultural education, influenced by British, Irish, and some American examples whose activities were widely reported in the Australian press. Before the end of the century, under specific state legislation, the departments of agriculture had established agricultural colleges and experimental work in Victoria, South Australia, New South Wales, and Queensland (Black, 1976). Associated with this development was the official appointment in these states of the first itinerant agricultural instructors in the late 1880s. At the same time, because of the potential importance of milk products, traveling dairy schools were begun, while state exhibitions, especially the Centennial Exhibition in Melbourne in 1888, showed what was possible and gave considerable impetus to farming improvements. The few "government experts," some from the United Kingdom or the United States, grew in number during the 1890s and the first decade of this century, developing the range of the extension work. Its impact and that of the agricultural colleges in their early years was probably slight, but the basis had been laid for further development (Logan, 1984).
Agricultural extension work had also started before 1900 in Japan. Following the Meiji Restoration in 1868, new administrative structures and various modernizing policies were adopted. Two agricultural colleges were established in the mid-1870s, staffed by Western (mainly European) teachers. At these colleges and government farms, experimental work was conducted and new practices were tested and developed. At the same time, agricultural fairs and exhibitions were begun, and progressive Japanese farmers gave talks and demonstrations at them. These led to the development of many agricultural societies from 1881 onwards, a "movement" formalized by legislation in 1899. In 1885, the government also initiated, at national and prefectural levels, a system of appointing experienced farmers as itinerant agricultural lecturers (because the Western "experts" knew little about rice husbandry). Supported by the work at government experiment stations, established from 1893, these farmers formed the basis of agricultural extension work. This activity, including the establishment of demonstration farms, was allocated in 1903 to the numerous agricultural societies which, with state funds, appointed agricultural technicians. In 1910, the 1899 law was strengthened; thereafter, farmers were required to belong to a village agricultural society which was linked to a national network and hierarchy of societies, and farmers were compelled to adopt the technical guidance and recommendations of the societies' extension workers – what became known as "forced extension" (Tajima, 1991; Ministry of Agriculture, 1993).

The development and organization of agricultural extension work was not entirely confined to temperate countries. In a variety of ways, it had also begun in tropical areas, especially in colonial territories. The European colonial powers looked to their overseas territories as a source of tropical agricultural products. Despite a long connection with some of the colonial areas, the Europeans remained largely ignorant of many tropical agricultural plants. The solution was to establish experimental and demonstration "botanical gardens." The earliest was opened in 1821 at Peradeniya, Sri Lanka (Ceylon), and two others were established in the country later in the nineteenth century. Smaller ones were also created in several Caribbean islands and some West African territories. During the early years of this century, some of these developed considerably, although others were short-lived. Those which succeeded provided important sources of agricultural knowledge and innovation and formed the basis for an interest in agricultural societies and agricultural instruction. Some attempts were also undertaken to improve "native agriculture." This was often associated with the creation, as part of the administration, of departments of agriculture and the appointment of professional agriculturists as directors of agriculture.

A central department of agriculture was established in India after the 1866 Orissa famine, and the government of India soon after resolved to establish departments in each province. However, it was 1905 before a central government directive ordered every province to appoint a fulltime director of agriculture who should organize agricultural research and demonstration farms with staff who could advise farmers (Mook, 1982). The first British colony to appoint a director of agriculture was Zanzibar in 1896. Of more significance, however, was the creation in 1898 of the Imperial Department of Agriculture for the West Indies, with headquarters in Barbados. Before 1914, such departments of agriculture had been created in several African and Southeast Asian territories, as well as in several Caribbean islands (Masefield, 1950). In Sri Lanka, a few agricultural instructors had been appointed about 1880 to work alongside government agents. When in 1904 the Ceylon Agricultural Society was formed to promote experimental work, it also began an agricultural extension service with the objective of reaching native cultivators (Arasasingham, 1981). Along with school gardens (Willis, 1922), the extension workers were considered an effective way of demonstrating improved cultivation practices to villagers. Similar developments also occurred in the Caribbean.

In most tropical African territories, the European interaction with native agriculture was minimal before 1914. The "scramble for Africa" had been mainly in the late nineteenth century, and the young departments of agriculture, where they existed, were largely involved in administrative duties. Before 1914, however, agricultural instruction was given in most government-assisted schools and at four agricultural stations in Ghana (the Gold Coast)
(Lucas, 1913). In addition, missionaries often undertook agricultural education, with
demonstration and improvement activities, alongside their religious work. The church farms
(fermes-chapelles) begun in 1895 by Jesuits in the then Belgian Congo (de Failly, 1970) were
copied by missionaries of other persuasions in many other areas.

**Modern Agricultural Extension**

In the early years of this century, extension services were in their formative stage; they were
relatively small in scale and limited in the scope of their work and contact with farmers, and
their organization was often somewhat haphazard even though based on legislation. They
were organized predominantly either by central or local governments, or by agricultural
colleges, usually in close association with experiment stations, or by farmers’ organizations
(especially religious and charitable) involved in agricultural and rural development.

As agricultural extension organizations have grown and changed, they have invariably
become more bureaucratic with distinct hierarchical structures. The work of dispersed
extension workers had to be administered and controlled so that one or more levels of inter-
mediary structure (for example, district, region) have been created between the field-level
agents and their headquarters. Thus the management of extension activities has become a
major preoccupation, and many organizations have been open to the criticism of being top
heavy and top-down in their approach. However, with funding derived largely from national
revenues (or international donors), senior managers have necessarily had to account for and
justify their organization’s activities. This has been equally pronounced in the North as in the
South where, after colonial territories gained their independence, extension work has
commonly been reinvented and staffed by nationals under the aegis of their new
administrations (usually ministries of agriculture).

During the past quarter century, the work of extension services has often become more
diversified. In the less developed countries, the main focus remains on agricultural (mainly
food) production, but there has been a growing recognition of the need to reach, influence,
and benefit the multitudes of small, resource-poor farmers. Strong efforts have been made in
this direction, notably through the training and visit system. Among the commercial farmers of
the North, a major problem has become surplus production, with farmers facing economic and
policy pressures to restrict it. Associated with intensive production methods, many issues and
problems regarding environmental deterioration and livestock welfare have also arisen. Thus
these have become important aspects of extension work, particularly socioeconomic guidance
which focuses both on means by which farmers might maintain their income levels from their
resources (for example, introduction of novel crops or livestock and involvement in various
rural enterprises) and on the ways of assuring the longer term welfare of farmers and their
families. Agricultural extension services are thus adding a strong social dimension to their
activities.

Agricultural extension has now become recognised as an essential mechanism for delivering
information and advice as an "input" into modern farming. Since commercial farmers can
derive direct financial benefits from these inputs, there is a trend towards the privatization of
the extension organizations, often as parastatal or quasi-governmental agencies, with farmers
being required to pay for services which they had previously received free of charge. This
trend is strong in the North, and there are examples of it beginning in the South. The pace of
change in the organization, functions, strategies, and approaches of agricultural extension is
clearly accelerating.
The Future
The need for agricultural and rural information and advisory services is likely to intensify in the foreseeable future. In much of the world, agriculture faces the challenge of keeping pace with rapidly increasing population with few reserves of potentially cultivable land. Farmers will have to become more efficient and specialized. From government perspectives, whatever priority is given to production, extension will remain a key policy tool for promoting ecologically and socially sustainable farming practices.

Some of the most promising recent developments in extension methodology have occurred where the key agenda is environmental or is concerned with equity, for example in the need for the joint management of forests by professionals and local forest users and in integrated pest management. A consistent theme running through the innovative approaches being used, such as participatory rural appraisal (Chambers, 1993), is a fundamental change in what are the respective roles of extension agent and clients. The agent is no longer seen as the expert who has all the useful information and technical solutions; the clients’ own knowledge and ingenuity, individually and collectively, are recognized as a major resource; solutions to local problems are to be developed in partnership between agent and clients. Since the scale at which extension support is required is thus often larger than the individual farm, extension workers need new skills of negotiation, conflict resolution, and the nurturing of emerging community organizations (Garforth, 1993; Smith, 1994).

The future is also likely to witness a reversal of recent trends towards bureaucratization within hierarchical extension services and a reduction in their levels of public funding. Moreover, a rapid increase can be expected in the use of information technology in support of extension. The forces for change in these areas (see Rivera & Gustafson, 1991) will come from four main directions.

• Economic and Policy Climate
With the collapse during the past decade of socialist forms of economic organization, the (dominant) role of the public sector in national economies has become questionable, with a strengthening trend to reduce levels of public spending. Thus government extension services and those which are largely publicly financed are, and will continue to be, under pressure to become more efficient, to reduce their expenditure and staff, and to pass on (some of) the costs of provision to their clients who directly benefit financially. This is particularly the case in countries where the farm population forms a small minority and agricultural production is in surplus. The case is weaker, but not absent, in less developed countries where farming households form a high proportion of the total population and where increasing food production is still important. Thus charging clients for services is likely to become more widespread, while governments will find it attractive to contract out the operation of services to the private or the voluntary sector.

• Social Context in Rural Areas
In the future, rural populations will undoubtedly be progressively better educated, while their exposure to the mass media will continue to reduce their isolation and detachment from information, ideas, and an awareness of their situation within a national and international context. However, this exposure will not reduce the need for extension. Rather, given the changing demands on agricultural producers from population growth, increasing urbanization, legislative changes, and market requirements, the more knowledgeable farming population will require different kinds of extension services. Social and economic trends within rural areas will therefore necessitate more highly trained, specialized, and technically competent workers, who also know where to obtain relevant information and problem solutions and various provision and organizational forms (Moris, 1991; Hayward, 1990) to replace monolithic government extension agencies. These agencies will need to recognize and serve different types of clients defined not in terms of “adopter categories” but of access to markets, degree of commercialization, and relative dependence on agriculture for family income and welfare.

• Systems Knowledge
A recognition of the locale-specific nature of farming systems and the agricultural information systems which support them is an important source of the pressure towards the
debureaucratization and devolution of extension services. This recognition also implies that extension workers and farmers be jointly involved in the verification and adaptation of new technology, and thus that the extension workers respect farmers as experimenters, developers, and adapters of technology and devote more energy on communication within their local areas. The devolution of extension services to become local organizations is a reasonable corollary of this. Developments in mass media technology, already apparent over a decade ago (Garforth, 1986), will continue to support this localization of extension effort.

**Information Technology**

The continuing rapid development of telecommunications and computer-based information technology (IT) is probably the biggest factor for change in extension, one which will facilitate and reinforce other changes. There are many possibilities for the potential applications of the technology in agricultural extension (FAO, 1993; Zijp, 1994). It will bring new information services to rural areas over which farmers, as users, will have much greater control than over current information channels. Even if every farmer does not have a computer terminal, these could become readily available at local information resource centres, with computers carrying expert systems to help farmers to make decisions. However, it will not make extension workers redundant. Rather, they will be able to concentrate on tasks and services where human interaction is essential—in helping farmers individually and in small groups to diagnose problems, to interpret data, and to apply their meaning (Leeuwis, 1993).

The future will call for more able, more independent, more client-oriented extension workers. The emphasis will be on the quality of interaction between agent and client rather than on the movement of "messages" through a hierarchical system. Flexibility and adaptability will be seen as virtues rather than aberrations. Paradoxically, these trends will bring us full circle to the early manifestations of modern extension in Europe. The itinerant agricultural teachers, unencumbered by large bureaucracies and tall hierarchies, will find their modern counterparts in the computer-carrying extension workers who are at ease helping farmers to identify the information they need in order to realize the potential of their farming operations. Looking back, we can regard the period from 1970 to 1995 as a necessary but expensive stage in the evolution of extension systems, after which extension agents were able to settle down to their main task—bringing together the expertise of farmers and the best available scientific knowledge to develop farms and local agricultural economies.

[References have not been included in this version nor for the following piece. These are available in the original document: http://www.fao.org/docrep/W5830E/W5830E00.htm.]

The conventional public-supported extension systems that emerged widely in developing nations in the 20th century accumulated a variety of characteristics that compromised their effectiveness and influenced a decline in governmental support. While not evident in all agricultural extension systems, the following flaws have occurred frequently enough to warrant attention.

- **Dilution of effort:** Because they have been perceived as being familiar with the communities where they work, extension agents have been assigned tasks outside of agricultural concerns. These included tax collecting, census taking, and political work.
- **Irregular contact with farmers:** For various reasons such as funding, transportation and motivation of extension personnel, farmers could not rely on consistent and predictable contact with extension agents.
- **Selective contact:** Probably for social reasons, travel difficulty, government policy, and personal preference, extension agents were more likely to reach the better off farms rather than subsistence farms.
- **Limited reach:** Time limitations and a large farmer population restricted agents' outreach to many farmers.
- **Contact style:** Agents were the experts, therefore the farmers should follow.
- **Relation to extension:** Researchers were the experts, therefore extension agents should follow.
• **Top-down model**: The nature of the professional contacts among the key actors kindled a flow of information from the experts “down” to the farmers.

• **Relevance**: Because researchers had their own agendas and seldom had access to farmers’ concerns, the information and training failed to meet the farm families needs.

• **Ambiguity in goals**: The extension agent was confronted with the issues of high productivity and farmers’ welfare which were not always consonant.

• **Inadequate agent training**: Training frequently focused on subject matter rather than the communication aspects of the extension agent role.

• **Insufficient institutional support**: Governments tended to reduce their extension budgets because of competing demands for funds and the uncertainty of significant benefit from extension. Extension agents were not paid well, and to increase their income, they sometimes depended on selling inputs to farmers.\(^{10}\)

A variety of factors have prompted different approaches to reaching farmers. Some, such as the Training and Visit System (T & V), reorganized the bureaucracy and style of the extension service while others provide substitutes for the conventional government extension models. As we shall see in the next article the Training and Visit System attempted to correct some of the deficiencies of the conventional extension system. It focused on (1) concentrating farmer training on a few “contact” farmers who were expected to share the information and training with other farmers (but without any incentive to do so); (2) concentrating the training on only agricultural topics; and (3) concentrating during an extension visit on the two or three issues that were sufficient for the immediate planting needs. The principal advocate and financial supporter was the World Bank, with secondary roles played by FAO and the International Fund for Agricultural Development. In 2006, a World Bank Policy Research Working Paper prepared by Bank employees reviewed the history of T & V and reported on its lack of sustainability and "ultimate abandonment" after 25 years of application in about 50 countries in Asia and Africa. The document, “The Rise and Fall of Training and Visit Extension: An Asian Mini-drama with an African Epilogue,” concluded that T & V was largely unsustainable because of the staff-intensive high recurrent cost structure.\(^{11}\) The basic Benor and Harrison model also failed to take advantage of media such as radio which was contributing significantly to other contemporary extension efforts including those of Masagana 99 in the Philippines.\(^{12}\) (Masagana 99 was instrumental in moving the Philippines from rice importing to self-sufficiency in rice by farmers’ adopting high yielding rice cultivation technology. It included extensive use of radio broadcasts for short timely announcements and training, and a variety of printed materials including a document —referred to as “the Bible”— that showed the 16 step process of rice production.)

The World Bank report on T & V indicates that donor advocates of the system expected nations that adopted T & V to build its costs into their mainstream budgeting. However, those nations' lack of conviction over the success of the approach at the farm level and competition for government resources resulted in those governments' unwillingness to continue their investment in the system. Contributing to the end was a report by the World Bank's own Operations Evaluation Department that suggested that evaluation studies of T & V were flawed and that T & V was "unlikely to be the most appropriate approach for improving extension in many African countries."\(^{13}\) It was time to look at other options.

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\(^{11}\) Anderson, Feder, & Ganguly, 2006. Although the authors were Bank staff members, the report carries the note that "the findings, interpretations, and conclusions expressed in the paper are entirely those of the authors [and] do not necessarily represent the view of the World Bank, its Executive Directors, or the countries they represent."


\(^{13}\) Quoted in Anderson, Feder, & Ganguly, 2006, p. 21.
Reduced government financial support for extension has created a vacuum into which the private sector has sometimes moved. The private sector is motivated by its interest in selling inputs to farmers and contracting for farmers’ products. Radio and television broadcasting and the on-rush of digital technologies have also influenced strategies for transferring technology to farmers. Another factor influencing extension practices is the recognition of alternatives to the top-down relationships among farmers, extension agents and agricultural researchers. In the following selection, Uwe Jens Nagel explores some of these alternatives.14

**ALTERNATIVE APPROACHES TO ORGANIZING EXTENSION**

...[E]xtension services must be judged against their proper goals. The one universal yardstick, however, is their service function to the rural communities. Extension which is not in touch with and does not significantly contribute to improving the life situation of its clientele has lost its legitimization.

**Extension Goals**

Goals lead the actions of individuals, groups, and organizations. While pointing towards a future state, they are influenced if not determined by past experiences. They reflect the interests of their stakeholders and differ, therefore, according to specific life situations, power positions, and development philosophies. The prominent features of a system, such as its organizational structure, the choice of clientele, its operational design, and the methods used, are directly influenced by its set of goals and must be evaluated in terms of their contribution to goal achievement.

Main actors within the extension system are the members of rural communities, extension and other development personnel, researchers, and staff of commercial or public service and support organizations. Empirical evidence shows a variety of forms in which interaction among these groups is institutions. The variety of forms suggests a similar variety of goals, and either could be used to classify extension approaches. In practice, however, one finds an almost inseparable mixture of goals inhibiting a clear-cut classification. It seems more appropriate, then, to use a broader category, namely, selectivity with regard to clientele, and treat the respective goals as a continuum. The two end points of this continuum would be marked as technology transfer and human resource development, suggesting either a rather narrow technical or a broader socioeconomic view of development.

**Technology Transfer**

Until the end of the eighteenth century, farming techniques developed gradually and steadily over centuries with few qualitative leaps. Colonialism and imperial expansion introduced innovations – the spread of maize, tobacco, potatoes are striking examples – but experimentation and dissemination of knowledge were basically at the local farm level. The rise of agricultural sciences has induced dramatic changes in this respect. Increasingly, new technology has been created outside the actual farming sector by public sector research organizations. More recently, private firms in industrialized economies find agricultural technology research and development a highly profitable business.

For decades the research-extension-farmer linkage, especially in developing countries, was based on a rather simple model. In order to achieve development, "modern" research results had to be transferred to the "traditional" farmer, and extension seemed to be the appropriate means to do so. The general faith in science and the commitment to modernization led to discrediting indigenous knowledge. Although this view is still held by many administrators, researchers, and extension agents, it is now being seriously questioned. Farming systems

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14Uwe Jens Nagel is a Professor of Agricultural Extension and Communication Science, Faculty of Agriculture and Horticulture, Humboldt-Universität of Berlin, Germany. This is Chapter 2 of B. E. Swanson, R. P. Bentz, & A. J. Sofranco (eds.) *Improving Agricultural Extension: A Reference Manual*, Rome: Food and Agriculture Organization, 1997, and is reprinted here with the permission of the Food and Agriculture Organization. See the full manual at [http://www.fao.org/docrep/W5830E/W5830E00.htm](http://www.fao.org/docrep/W5830E/W5830E00.htm).
research and the "rediscovery" of farmers' knowledge (Chambers, Pacey, & Thrupp, 1989) have shown that "improved technology is a package of inputs and practices that usually comes from many sources" (UNDP, 1991, p. 2). The reexamination of the conventional view on agricultural knowledge cannot, however, result in questioning the important role of research as the source of new technology. For developing countries, one observes that the accelerated growth and spread of problems--such as the degradation of marginal land--surpass the problem-solving capacities of the local population. What is called for is a setting of new priorities and the building of knowledge systems based on problem solving rather than on information transfer.

**Human Resource Development**

The concept of human resource development is much broader than that of technology transfer, though both are closely interrelated. Increasing complexity not only of technology but also of the life situation of farmers even in remote areas demands new skills. With the help of these skills, rural women and men "acquire a better insight into the network of problems and recognize the alternative solutions available" (Albrecht et al., 1989, p. 34). Traditionally, teaching the basic skills of literacy and numeracy has not been an extension activity. The limited success of literacy programmes in poor countries has drawn attention to nonformal education in which extension has an important part to play (Coombs and Ahmed, 1974). Whereas in most cases this would require a coordinated effort of different organizations of which extension is but one, human resource development may also be regarded as a genuine extension content.

Extension may substitute over a certain period activities such as vocational education that are not yet in place, but more important will be the teaching of managerial and organizational skills that will enable farmers to increasingly solve their own problems. Human resource development thus aims at what may be called "critical competence." Extension clients know what to ask for, they can evaluate the appropriateness of technical information, they are responsible decision makers. Persons with this qualification exist in every rural community, and they will be the ones who actively seek further assistance. One important task of any extension system will therefore be to extend human resource development to underprivileged groups with less access to formal or vocational education--women farmers, rural youth, and generally small farmers in remote areas.

**Alternative Ways of Organizing Extension**

The goals of extension may vary, as was shown, within the overall system as well as between different extension organizations. In addition, specific objectives may sometimes contradict each other. While smaller systems may come close to pursuing a consistent set of objectives or reconciling conflicting interests, large scale organizations must work on a compromise basis. In this respect, Axinn's principal observation is of particular importance: "The success of an agricultural extension programme tends to be directly related to the extent to which its approach fits the programme goals for which it was established" (Axinn, 1988, p. 135).

The alternatives to organizing extension demand choices on various levels:

- Public versus private
- Government versus non-government
- Top-down (bureaucratic) versus bottom-up (participatory)
- Profit versus nonprofit
- Free versus cost-recovery
- General versus sector
- Multipurpose versus single purpose
- Technology driven versus need oriented.

In practice, extension organizations everywhere pursue the overall goals of technology transfer and human resource development, though the emphasis will differ. Within each organization there is a mix of objectives, and within countries there is often a mix of organizational patterns. When presenting an overview on the most important patterns, we will be using a well-established terminology (Axinn, 1988; UNDP, 1991), though the grouping is
different. We will differentiate between approaches that, at least in principle, target all persons in rural areas engaged in farming and those that purposely select clientele according to specific criteria.

**General Clientele Approaches**

*Ministry-Based General Extension.* Shortly before or after independence, organizing agricultural extension work under the wings of the ministry of agriculture seemed to be an ideal solution for many African and Asian governments. All options for reaching large numbers of clients and serving their needs in terms of quality information and assistance appeared to be open. The original colonial model combined research and extension within the same organization. All important aspects of small-holder agriculture—plant production, animal husbandry, home economics—could be attended to as the ministry established respective sections under its jurisdiction. The fact that the ministerial hierarchy followed the country's territorial subdivision allowed the systematic expansion of the system "down" to the village. The generalist nature of field extension staff functions corresponded to the set of problems faced by noncommercial growers. To cater to specific needs—in terms of technology or in terms of target groups—specialists could be employed. Thus clientele included in principle all persons engaged in agriculture. Commercial service and support organizations lacking, village-level extension staff could be expected to supplement information by rendering services necessary to apply it productively. A uniform and nationwide organizational pattern seemed to facilitate information flow—including the infusion of expatriate expertise—and corrective measures whenever weaknesses were identified. Public interest was to guide goal setting, programme formulation, and the implementation of fieldwork.

A review of the last thirty years of extension work in Africa and Asia shows that reality is quite far.... The reasons for failure are complex and manifold and cannot be reduced simply to incompetence or the ill-will of national governments. One reason is the contradictory nature of goals. Public interest implies serving farmers and the urban population, securing subsistence production and promoting cash crops for export, reaching the masses of rural households and serving the needs of specific groups, extending assistance to high-potential and disadvantaged producers. In short, priorities will have to be set, and these are all too often pro urban in terms of price policy, favouring innovative individuals within the modern sector, neglecting poorer strata, and forgetting about women farmers.

In many ways, the hierarchical and highly bureaucratic way in which the services are organized hampers a full realization of their potential. Priority setting for research is rarely based on extension field evaluations because the system does not foster critical upward communication. The way in which technical (and other) knowledge is transformed into field messages frequently leads to distorted and outdated information.

In the eyes of the ministry, extension has never been a purely educational activity. This is a legitimate view as long as the different functions to be performed by extension personnel are compatible and basically client oriented (such as helping to organize input supply). Non-educational activities may include anything from statistical data collection to attending to foreign visitors. Incompatible with and clearly detrimental to regular extension work are such activities as supervising credit repayment, policing disease control measures, organizing "voluntary" community work, and electioneering.

Ministry-based extension has been unable to reach a majority of its potential clientele for economic, socio-psychological, and technical reasons. Even dramatic quantitative increases in personnel—more staff closer to the farmer—have not produced manageable client-to-agent ratios. In recent years, the trend has even been negative. Financial constraints have produced a strong pressure to reduce staff, and the field level has been hit hardest. Those remaining have little if any material resources left to maintain mobility.

In addition, many extension workers select the more responsive section of their clientele. They may have to fulfill production plans, they may want to improve job satisfaction or status, or they may simply be prejudiced against certain target groups. Lastly, extension often has little to offer in terms of messages to large sections of the rural population. Adequate and location-
specific answers to a farmer’s problem are often not available because it has not been a research concern or the solution has simply not reached the field. Today’s situation is aggravated by two additional aspects which refer to the internal structure of the service: management problems and lack of control from below. Ministry extension employs thousands of persons working under a wide variety of circumstances. Decision making and management are highly centralized and formalized. Extension fieldwork, on the other hand, demands location-specific, flexible, and often quick decisions and actions. Managing the “invisible” man or woman (Chambers, 1974) must be highly ineffective as long as he or she is expected to receive and execute orders.

All these problems are well known, and criticism has come both from within and outside the ministry. What has been lacking is organized feedback from clientele. Farmers may show their discontent by refusing to cooperate with extension, but they have virtually no way of influencing institutional reforms.

**Training and Visit Extension (T & V).** In the strict sense of the word, T & V is not a separate approach but one way to organize ministry-based extension. The controversial debate on the merits of T & V tends to obscure the fact that it was originally meant to solve some very specific problems of conventional extension services.

Benor and Harrison’s original paper – one of the most influential extension publications ever--critically evaluates the ministry-based extension system of the 1970s (Benor & Harrison, 1977, pp. 6-9). They found:

- An inadequate internal organizational structure
- Inefficiency of extension personnel
- Inappropriateness or irrelevance of extension content
- Dilution of extension impact

Whichever impact is reached serves “only a few favored farmers in favored areas rather than the bulk of the farming community” (p. 9). When first being introduced, T & V seemed to be strikingly original and promising because it combined a set of rather convincing simple elements in a plausible way. Rather than trying to reach all farmers directly and thus preprogramming constant failure, the system concentrates on contact farmers expected to pass information on to fellow farmers with similar problems. To ensure regular field contacts, facilitate supervision and communication, and set clear and attainable objectives, fixed visits at regular intervals are prescribed. Similarly, regular sessions for extension workers to receive training and discuss administrative matters are held. Thus costly refresher courses are avoided, knowledge may be enhanced step-by-step, and up-to-date information can be fed into the system.

In addition, T & V operates under the assumption that its extension workers are exclusively engaged in educational activities and that a unified extension service exists. Agricultural research must not only be effective but also work in close collaboration with extension. Both external and internal evaluations are to be used to constantly modify and adapt the system to changing conditions.

Simple as the prescriptions seemed, implementation proved to be difficult. First, the contact farmer concept--implying a two-step flow of information from the extension worker to the contact farmer and from there to other farmers – has frequently failed. Extension workers have been blamed for “wrong selection,” but the root of the problem lies within the purely technical philosophy of T & V. Other aspects such as communication skills, leadership, and organizational capacities are neglected. In practice, T&V has been a top-down approach leaving little possibility for participation and initiative, both for farmers and village extension workers. Too little emphasis has been put on critical feedback based on self-evaluation. As a result, rigidity rather than flexibility characterizes local fieldwork.

Secondly, Benor’s fear that extension services may “rapidly run out of anything to extend” (Benor & Harrison, 1977, p. 8) characterizes many T & V field situations. The standardized messages passed on are often of little relevance to local conditions. Once T&V was extended to less favoured regions, it soon became clear that technology of the green revolution type...
showing quick and visible results is not available. Still, training sessions were held and visits made according to schedule, leaving behind disinterested farmers and demotivated extension workers.

The limited success of T&V in its present form as a nationwide extension system should not discredit the quality and appropriateness of many of its elements. Applied less rigidly and combined with the tools of human resource development as well as with the concept of participation, these elements may constitute a valuable base for reforming extension organizations, large or small (Nagel et al., 1992).

**The Integrated (Project) Approach.** Integrated approaches aim at influencing the entire rural development process. Extension is only one though often crucial element in this strategy which targets the entire population in a given area but emphasizes work with disadvantaged groups. Integrated approaches are generally implemented in the form of large-scale and foreign-funded projects aiming at alleviating mass poverty in rural areas on the basis of "a simultaneous improvement in the utilization of natural resources and of human potential" (Rauch, 1993, p. 6). Measures to promote production are coupled with a strong emphasis on self-help. The underlying concept is typically multi-sectoral.

Evaluations of more than a decade of integrated rural development (IRD) projects have revealed serious shortcomings in reaching the goal of mass poverty alleviation (IBRD, 1987; BMZ, 1990). Sizeable numbers of the poor were not reached by project activities, nor were positive effects consolidated on a sustainable basis. Project deficiencies were in part management related and very often due to a serious under-estimation of the great complexity of multi-sectoral programmes with ambitious goals. The disregard of the target group principle and of due consideration for framework conditions (economic and institutional) played an even more important role, as did the lack of compatible technical solutions.

Recent efforts to improve regional rural development (RRD) projects and enhance chances for a broad and sustainable impact (Rauch, 1993) are relevant for all general approaches. The key concept is the availability of locally adapted solutions established on a common basis. This requires not only participatory technology identification, test, and dissemination, but also an active role by the change agency in mediating between different institutions involved and their interests. A particular emphasis is laid on dealing with adverse framework conditions, explicitly taking them into account and attempting to influence them in favour of clients. Finally, in order to achieve these improvements, new efforts must be made to specify and operationalize (extension) objectives and concepts (sustainability, participation, gender-specific target-group approach, and poverty alleviation).

**University-Based Extension.** While the Cooperative Extension Service (CES) of the United States is still the only system in which the main extension function remains within the university, some developing countries, notably India, have integrated educational institutions into practical extension work. Within the United States of America, state universities have traditionally cooperated with local counties and the U.S. Department of Agriculture in doing extension besides education and research. Within the last 130 years, extension goals of the land-grant colleges have shifted from practical education to technology transfer and, more recently, to a much broader concept of human resource development.

With the emergence of strong private and other public sector research and development organizations and dramatic changes within the agricultural production sector, CES is facing new challenges with regard to coordination and cooperation. Apart from its traditional roles, networking will become a primary role (Bennet, 1990, p. 16). In this model, industry as well as intermediate and end users of knowledge become part of the extension system.

While in most countries, the main contribution of educational institutions to extension will be the training of qualified, dedicated, and responsible personnel, some Indian agricultural universities have come close to the U.S. model without taking over the full load of extension work. In the field, they have taken over functions which are only inadequately performed by the ministry, thus supporting general extension work. Remarkable features are direct assessment of clients’ needs, user-oriented research, quality training for state personnel, and...
a strong linkage between academic education and field practice. Models vary from state to state. The Punjab Agricultural University (PAU) has its own multidisciplinary extension team in each district engaged in adaptive research, training, and consultancy. Backed up by extension specialists on campus, they are transmitters and receivers of experiences from researchers, farmers, and state extension workers. At PAU, a unique system of processing these experiences is practised. Regular workshops are held which unite university and department staff from research and extension together with outstanding farmers. New findings and feedback are presented, evaluated, and published as a "Package of Practices" to be used by all extension staff for the next season (Nagel, 1980).

In the Philippines, which works with ministry-operated extension, university field contacts have been combined with practical development work. The University of the Philippines at Los Baños (UPLB) has its own "social laboratory" in rural areas. Transfer of ideas is not limited to production technology, but includes the testing of communication strategies as well as helping farmers to organize themselves. Experiences are channelled back into UPLB teaching and research (Axinn, 1988, p. 102-103).

**Animation Rurale.** For a historically rather short period, the concept of Animation Rurale (AR) gained importance in francophone African countries such as Senegal, Ivory Coast, and Madagascar (de Wilde, 1967, p. 391-414; Joerges, 1967). Though the original approach is no longer pursued, some of its elements are now being reintroduced into rural development programmes. Animation Rurale was an answer to the authoritarian and often repressive nature of intervention before independence. Developed originally by the French Institut de Recherches et d'Application des Méthodes de Développement (IRAM), it shows many parallels to the Brazilian experiments of Paolo Freire.

Integration of rural areas into the national system was to be achieved by initiating a dialogue between rural communities (collectivités) and the state. In a dialectical way, increasing competence of villagers to express their own needs was to liberate them from colonial dependence. In order to initiate and perpetuate this process, AR relied on a large number of voluntary collaborators, so-called animateurs. Selected by the villagers themselves these animateurs had to be experienced and well-respected farmers but not traditional leaders. Training, supervision, and support of animateurs were organized by the Ministry of Rural Development. Their task was to initiate discussions within the community on local needs and objectives, thus empowering rural people for a dialogue with the state. At the same time they were to "interpret" government plans to the villagers and acquaint them with services available. The long-term perspective was a replacement of traditional institutions and the creation of "development cells" able to negotiate contracts with the state bureaucracy.

Sülzer and Payr (1990, p. 34) maintain that AR "did not fail as a philosophy of extension ... [although] ... it did not achieve a large-scale breakthrough on a national level." Lack of sustainable impact was due to internal as well as external factors. The objectives of AR were extremely difficult to operationalize and, as a result, the role of animateurs remained unclear. In addition, lack of rewards and selection mistakes contributed to the fact that many animateurs soon lost interest in their work. Farmers, as it turned out, were more interested in receiving qualified technical assistance, and even if animateurs had successfully initiated village projects, it was the "technicians" who reaped the benefits. Lastly, it is highly questionable whether the administration was seriously committed to creating a system which would curtail its own power. What has remained is the philosophy of empowerment and many of the practical experiences. Many NGOs use the ideas of Animation Rurale often without realizing their roots. The present discussion on participatory extension shows its lasting influence.

**Extension to Selected Clientele**

**Commodity Based Extension.** Next to the ministry-operated general approach, commodity-based extension run by government, parastatals, or private firms is the most frequent extension organization. Clients may be dispersed over a large area or closely connected, as in the case of large, centrally operated irrigation projects. Commodity-based extension is the predominant feature in many francophone countries of Africa (Schulz, 1973), but is also strong
in other countries with commercial or export crops.

The original rationale was the generation of revenue as well as the assured supply of tropical products for the colonial powers. Today, goals are still clearly and intentionally production and profit oriented. All aspects of producing and marketing a particular crop are vertically integrated, spanning the whole range from research, advice, and material support given to farmers, to organizing marketing and even exports. Proponents of the approach argue that, by infusing modern technologies and monetary incentives into traditional farming, a cumulative chain of effects is triggered, thus contributing to overall development.

Advantages in terms of organizing the extension function seem obvious. One generally works with well-tested technologies. Objectives and targets can be clearly defined and the organizational structure kept simple. The focus on only one or two crops facilitates training of extension workers who are agents of the society or board concerned. Control of agents and farmers is easy because they are judged in terms of defined targets.

A closer look at these advantages reveals that they are largely defined from the perspective of the commodity organization. This poses no problem as long as organizational and clients' goals are identical, as was the case for coffee, tea, or sisal boards in the private plantation sector. For small farmers, the situation may be quite different. The rigidity of the system leaves little room for incorporating farmers' needs. The border between control and coercion is often crossed, for example, when farmers are forced to plant commercial crops at the expense of traditional subsistence crops. Extension workers are regarded as successful once they have brought farmers to producing "what and how" the organization wants. The obvious advantage of guaranteed marketing does not automatically entail security for the agricultural producer. Farmers cannot react quickly to price fluctuations, and in some cases quality standards are arbitrarily set in order to increase personal or organizational profits. Many governments have used the approach to excessively extract revenue by dictating low farm-gate prices.

Strengths as well as limitations of the commodity approach lie in its narrow focus. It is useful in terms of technology transfer but leaves out important public interest issues (such as environmental protection), as well as target groups (such as noncommercial producers). A successful combination of general and commodity-based extension at the national level, as practised in East Africa, demands clear policy goals and highly efficient management.

Extension as a Commercial Service. Commercial extension is a rather recent phenomenon and typical of either industrialized forms of agriculture or the most modem sector of an otherwise traditional agriculture. It may be either part of the sales strategy of input supply firms or a specialized consultancy service demanded by an agricultural producer. In both cases, the goal of the organization or the individual is profit earning, which in turn is tied very closely to customer satisfaction. Most directly this is the case for private consultants who will be retired only if their clients feel that expenses made have been profitable. Large input supply firms or rural banks that use their own extension workers as sales personnel must also have a long-term perspective with regard to the competitiveness of their products and services. Negative effects of incorrect application or use will be attributed to the product itself. The clients of commercial extension will also be profit oriented. Their objective is the optimal utilization of purchased inputs or contracted expertise.

The emergence of commercial extension has influenced the debate on who should bear the costs of extension. With escalating budget deficits, the idea of extension as a free public service is no longer being generally accepted. It is argued that those who can afford it should actually pay for advisory services. In the case of commercial input suppliers, the solution is very simple: the costs of extension are included in the product price, as are the costs for research or advertisement. Private consultancy, on the other hand, is costly and affordable only to either large-scale or highly specialized producers.

As a general trend, one observes that public extension in industrialized countries has been under pressure to introduce cost sharing or altogether commercialize advisory work. An approach which combines commercial and public elements is at present being introduced in
some of the eastern states of Germany. For example, the Ministry of Agriculture in Brandenburg subsidizes consultancies once they have actually taken place. Farmers have the option either to organize themselves in "extension rings" and employ their own extension workers or to choose an extension consultant who is officially accredited by the ministry once he or she organizes at least twenty clients in an "extension association." In both cases, up to 80 per cent of extension costs within a certain limit are reimbursed to the farmer.

Privatization and cost sharing are propagated in the name of greater effectiveness and efficiency, but are largely motivated by financial constraints. It is obvious that the private sector will be active only in case of reasonable returns, and they will not be concerned with public interest issues:

Because of the selective participation of the private sector, the provision of public good types of information will have to remain a public sector responsibility...public and non-profit organizations...will have to work together to satisfy the needs of those in "orphan" areas. (Umali & Schwartz, 1994)

Client-Based and Client-Controlled Extension. One way of dealing with the shortcomings of large extension systems has been to localize extension and utilize the self-help potential of rural groups. Often organized by outsiders, these decentralized approaches are in a better position to serve the needs of specific target groups, notably those in disadvantaged positions. Close contact with their clients and intimate knowledge of their life situations are essential for the planning of problem-oriented extension activities. Local personalities are identified who take over leader functions once the external (non-governmental) organization withdraws. The principles of these organizations (awareness, empowerment, participation, self-help) are close to the philosophy of Animation Rurale without the national dimension.

The impact of client-based approaches must be seen on two levels. Directly, they provide benefits to their clients. The diversity and large number of small projects forbid a general statement on their effectiveness in terms of human resource development. It appears, however, that their weakness lies more in the technical field (UNDP, 1991, p. 22). Besides, they can reach only a very limited number of people. Apart from this, they perform an important role as organizational innovators. They have proved that participation can work in practice and that many farmers are highly competent partners in technology development. Government extension services have been forced to rethink their top-down approach, to accept human resource development as an equally important extension goal, and to address the problems of rural women.

A rather unique approach has been practised in Taiwan, where a large share of extension work is done through farmers’ associations (Lionberger & Chang, 1970; Axinn & Thorat, 1972). Organized at provincial, county, and township levels, membership totaled 90 per cent of Taiwanese farmers. Extension education is done by agents employed by the farmers’ associations at the township level and financed largely by the farmers themselves. Unlike the small self-help groups discussed above, there are strong and institutionalized linkages with research and other services. The overall extension policy is defined by the government. On the other hand, the clientele is quite different: farms are highly modernized and extension advice is demand driven.

Present and Future Role of Extension Staff

Person-to-person communication has traditionally been the most important form of information transfer. Print media as well as radio and television were of a supplementary nature because they frequently lacked a target group or location specificity and information was not up-to-date. Revolutionary changes in communication technology have dramatically increased the speed and quality of information transfer and changed the role of extension workers in industrialized countries. Electronic communications systems may in part replace personal visits, and one of the major tasks of any agent will be to link her or his clients with other suppliers of information.

Notwithstanding the fact that their use is not restricted to industrialized countries, the fascination with modern communication means tends to obscure the fact that most extension
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personnel – 90 per cent of which are located in developing countries (FAO, 1990) – are working under extremely difficult and disadvantageous conditions. In fact, little has changed during the last two decades to remedy the basic ills, and the field agent is still the weakest link within the system.

There is a wide discrepancy between organizational goals and the potential of even well-trained and dedicated field staff. Early Indian community development activities covered close to fifty areas (from reclamation of wasteland to improved rural housing on a self-help basis), all to be administered by the local village-level worker (Dube, 1958, p. 19-21). Fieldwork in most developing countries is characterized by conditions that foster low morale: lack of mobility, virtually no equipment, and extremely low salaries. For many extension workers, tapping additional income sources is a question of physical survival. Quality performance is further impeded by low educational qualifications and lack of advancement possibilities (Swanson, Farmer, & Bahal, 1990, p. 55-64).

While working conditions of extension personnel have deteriorated, expectations with regard to their role are increasing. They are no longer to be simply transmitters of technical knowledge. They are to practise participatory methods, recognize and respect gender issues, identify indigenous needs and problem solutions, and serve as a link to the world outside the village, to name but a few of the present topics. The emerging role is closer to that of a "socioeconomic community worker" (Blackburn & Flaherty, 1994, p. 16) than a technical expert, but their training is insufficient for either.

The situation sketched above is well known and documented. The sheer dimension of the problem surpasses, however, the capacities of poorer countries, notably in Africa. Foreign-funded projects have addressed the issue in a piecemeal fashion and have often drained non-project areas of personnel. Staff reductions on a national level have not even secured the status quo. Neither approach has solved the basic dilemma: insufficiency of material and human resources to reach universally accepted societal goals. Having to count on their own resources for extension, many countries will not be in a position to implement technology transfer, much less the more demanding strategy of human resource development. Regardless of specific extension approaches, there is no alternative to a strong international commitment to strengthening and revitalizing extension personnel resources.

3. INNOVATIONS IN AGRICULTURAL EXTENSION

The one-way, expert-to-receiver, mass media driven model of communication for development paralleled the prevailing top-down extension model. Governments made decisions about development priorities and needed action these were implemented through government programs that attempted to inform and persuade a mass audience of receivers. Rogers suggests that by the 1970s it was becoming more widely accepted that social-structural restraints on development were often unyielding to the indirect influences of the media or even more to more direct intervention. Furthermore, while mass media saturation was correlated with development, there was evidence that when individuals who had adopted new crop varieties or family planning were questioned, they seldom cited media as what influenced them. Furthermore, the media seldom carried agricultural content. Examples also began appearing of "self-development" wherein some type of local community group played a major role in development. These grass-roots groups were mothers’ clubs (Korea), farmers' associations (Taiwan), radio listening clubs (Tanzania) and work brigades (China). These groups took primary responsibility for what type of development was most needed in their communities, for planning how to deal with the needs, for identifying government or other resources; and for implementing appropriate activities. In these kinds of circumstances, the role of government development agencies is mainly to communicate answers to the groups' search for technical information and appropriate innovations. Governments and change agencies may use the mass media to provide communities with background information about their expressed needs and innovations that may meet those needs. In several of these projects the mass media were also used to motivate groups, for example, by publicly applauding their accomplishments and providing examples to other communities.
As mentioned earlier in this chapter, a more pro-active role for the mass media appeared in the Masagana 99 campaign in the Philippines in which some 500,000 farmers participated. The project used radio broadcasting for a variety of tasks including motivation, training and alerting farmers when irrigation canals were opening. The following case study from Russia shows how the Ministry of Agriculture carried out a seven year multi-media program to improve the decision-making of emerging public and private rural enterprises and institutions during Russia’s transition from a centralized planning system to a market economy.  

### RURAL INFORMATION AND KNOWLEDGE SYSTEM IN RUSSIA

#### I. Background

**Context** The information and knowledge system in virtually all sectors and access during the Soviet period was strictly state controlled and was essentially designed to meet the requirements of centralized planning. Very little information sourcing, message development, or media packaging took place at the local level. Requirements for meeting agricultural production quotas were channeled to Moscow where information packages and norms, based on a central assessment of local needs were developed and transmitted from the center directly to the state and collective farms. The information was disseminated primarily via dense print publications, radio, TV, public campaigns, exhibitions and fairs, and to some extent through a computer network to areas with functioning telecommunication systems. The types of information and knowledge which the state and collective farms, private farmers, kitchen gardeners, agro-processing industries, input suppliers, marketing institutions and others engaged in agriculture could obtain were restricted and opportunities for exchange with the rest of the world were extremely limited and tightly controlled. There were very few avenues for cross checking the information received. In-house, well trained technical specialists addressed a variety of crop and livestock related problems and served as the main providers of knowledge. This was supplemented by research and field applications through a very large network of a variety of agricultural research institutes and experiment stations. Most of the research results were introduced through directives. Linkages between education, research, extension and end-users were weak and in some areas non-existent. However, the importance placed on education and training of all Soviet citizens resulted in a highly literate population to serve the needs of a socialist economy. The centralized information and knowledge system was primarily aimed at meeting production targets in the plan with little or no importance placed on economic or environmental sustainability of farming systems and development of agro-industries.

**The opportunity** The structural reforms initiated by the Russian Government in December 1991 following the break-up of the Soviet Union – to make the transition from a centralized planning system to a market oriented system – created a great opportunity to lay the basis for a new type of rural information and knowledge system for the reformers and rest of the world. ICT was used in the broadest possible sense – as consisting of a range of tools that build the human network, increase public awareness, and provide access to information and knowledge for the use of the people – which included printed materials, telephones, radio, television, video, audio, and computer network. Given the complexity and the huge need, effective use was made of all available ICT tools which were working and those offering promise. Improved performance of the agricultural and the rural sector was one of the most important elements to stabilize the Russian economy and accelerate the ongoing structural transformation in the country. The World Bank supported Agricultural Reform Implementation Support (ARIS) Project (World Bank, 1994) was designed to support the proposed land

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15 The case study was prepared by S. Janakiram, who is Champion, ICT for Rural Development, Sustainable Agricultural Systems, Knowledge and Institutions Thematic Group at The World Bank in Washington, D.C. The findings, interpretations, and conclusions of this case study are those of Janakiram and should not be attributed to the World Bank, its management, its Board of Directors or the countries they represent.
reforms and assist in the transformation of the agricultural sector from a centralized system to a fair and competitive market oriented system. This consisted of the creation and strengthening of the most critical support services needed to accelerate the implementation of on-going and future agricultural reforms, build analytical capacity to identify, appraise, and implement agricultural and private sector agribusiness projects and to demonstrate the role that private sector could play in promoting efficiency in the agro-industrial sector (principally wholesale markets and seed processing facilities). During the project preparation in 1993-94, given the macroeconomic imbalances in Russia, inefficient farm structures, lack of competitive markets and a well-functioning credit system, and the continuing legacy of state controlled information system to meet centralized planning requirements, the liberalization of the agricultural sector which was initiated failed to stem declines in agricultural sector profitability. The problems of access to market and technical information, the lack of awareness by those engaged in agriculture of how to function in a market economy were especially serious for the various types of emerging private farming structures. The project was implemented over a period of seven years – from its approval in June 1994 to its closing in June 2001. One of the main achievements of the ARIS project was in the creation of a rural information and knowledge system – carried out through the implementation of a variety of activities in the farmer information and advisory services and market information components of the ARIS project. This is the subject of this case study.

II. Description of the case study: Objective
The main objective was to enable the free flow of information and knowledge to improve decision making of different types of emerging public and private rural enterprises, communities and institutions during the transition from a centralized planning system to a market economy.

Main elements of the approach taken The approach taken to achieve this broad objective was a modular concept using Multi-media to develop and disseminate Multi-disciplinary information and knowledge from Multiple sources to Multiple users with built-in user needs assessment and feedback mechanisms – in short the Four M modular approach for rural information and knowledge system. (See Figure 1 at the end of this article). The multi-users were the newly emerging farm structures of various types, public and private institutions, communities, agro-industries, departments of agriculture; multi-sources were the local and international agricultural research institutes, universities and academies, input suppliers, producer organizations, agricultural departments, foreign and local data banks, etc. Multi-media consisted of print, TV, video, computer network, exhibitions, fairs, etc. Multi-disciplinary consisted of laws and regulations, status and changes of reforms in various sectors, finance, economics, accounting, marketing, relevant technologies, environment, etc. This modular approach was designed to support an evolving, pluralistic knowledge-based rural extension system (Alex, Zijp, Byerlee, 2002 and Rivera, W. 2001) consisting of the following elements:

- **accelerates the transition process** - recognizing the importance of diverse information and knowledge user needs
- **where information and knowledge are transferred** in an educational and training manner rather than through directives;
- **increasing importance of non-farm activities** to supplement farm incomes especially for the emerging small private farmer;
- **creation of strong linkages** among education, research, and various forms of farming systems;
- **evolution of diversified service providers** consisting of contractual arrangements, public-private sector partnerships involving NGO’s, producer organizations, association of private farmers, water user associations, etc. (World Bank, 1990);
- **creation of a decentralized and localized extension program management and delivery** where all forms of media from traditional to modern will play a role;
- **provides opportunities for creation of fee based rural extension services** based on willingness and ability to pay of the end-users;
- **sustainability depends on continued, but declining, public support** over time;
works in coordination with other providers of rural information and knowledge – such as health, education, micro and small enterprise credit, environment, eco-tourism, etc.

**Implementation Steps**  The implementation of the four M modular approach consisted of the following four steps:

**Step One:** Participatory diagnostic information needs assessment: The first step was to assess the end-user's information and knowledge needs. A wide range of end-users were used as the target group which consisted of all types of restructured farms and those in process: individual farmers, agro-processing enterprises; household gardeners, department of agriculture, etc. A variety of participatory processes directly involving the various end-users to define and prioritize their information needs were used to assess both the demand and nature of information, local problems, constraints, and the expectations of the various users from the information system. The information needs and demand are rapidly increasing, changing and becoming complex – influenced by recent progress in land reforms, increasing number of urban and rural household “kitchen gardens”, former farm workers to become part time and full time farmers, etc.

**Step Two:** Development of multi-disciplinary information: The second step is the development of client and media specific multi-disciplinary information packages from a variety of sources. Given the large number of scientific and research institutes in the Russian Federation, only those which addressed the information and knowledge needs of the end-users and which were in great demand were selected to develop the information packages. Some of the sources used were the Russian Academy of Agricultural Sciences, selected regional scientific research institutes, Timirayazev Agricultural Academy, and selected technical and management institutes. The specialized information was translated into everyday terms familiar to each target audience and presented in a format that was easy to understand and had practical value. Training was provided to enhance the skills for appropriate selection of media and for packaging appropriate information. During the early period of the project implementation, emphasis was placed on the development of very basic information packages, such as: (i) principles of farm management in a market oriented economy; (ii) essentials of farm business planning; (iii) appropriate cost effective farm technologies; (iv) current and proposed land reforms; (v) market information on crops, livestock, fruits and vegetables. The most important design criteria used for the development of the basic farmer information packages is simplicity, both in comprehension and language in order for it to be effective and useful. For example, due to the lack of appropriate terminology of some critical Western concepts of business and economics in the Russian language, new terms which could be easily be understood especially by the emerging private farmers had to be created.

**Step Three:** Dissemination using multi-media: This step consisted of dissemination of farmer information using a variety of information and communication technology applications such as television, video, radio, print, and computer network. In addition, traditional channels of information dissemination were also used such as the annual St. Petersburg agricultural exhibition where various agricultural technologies, farm products, and innovations are displayed and promoted. Training was included for the staff of the farmer information and advisory services in the preparation of farm messages and information packages for suitable types of media for dissemination. Information addressing general concerns was disseminated to national media outlets, which involved the coordinated development of video/TV, radio, print and computer based information products in order to respond effectively to the particular needs identified. The Ministry of Agriculture’s press video center was modernized to serve as a coordinating central unit for message development and dissemination of a variety of topics ranging from agricultural reforms to bringing the best practices in various types of agricultural technologies from around the world to the different types of farming structures and agro-industrial enterprises in the main agriculture regions of the country. The agricultural computer network was modernized at the raion, oblast and federal levels and the design was based on the following criteria: (i) ease of use; (ii) best available contemporary technology; (iii) ease of expansion and reconfiguration; (iv) security of high value data; (v) effective use of available communication bandwidth; and (vi) integration with existing international and domestic
services. Due to the lack of telephones and mainlines – especially in the rural areas – and poor transmission quality, alternative communication channels such as radio telephone, diskettes were used.

**Step four:** Feed back mechanism: This step consisted of a feedback mechanism to incorporate the changing information and knowledge needs of the various end-users. Frequently occurring changes were in the areas of agricultural reforms, liberalization measures, price and subsidy policies, and the problems faced by the emerging private farmers and enterprises.

**Investment**  The total investment and operating cost incurred between the period 1995 and 2000 for the creation of this information and knowledge system was US$32 million – of which $21 million was financed by the World Bank and the remainder $11 million by the Government of the Russian Federation. The major cost categories were:

- Hardware consisting of digital video equipment, servers, computers, printers, modems, radio and television broadcasting equipment, accessories, etc.;
- Software related to operating systems, database management, etc.,
- Training in various aspects of information technology, development and dissemination of information – which included both in country training and foreign training.

**Project Outcomes** After a slow start of about two years of project approval, following are some of the main project outcomes which resulted from the implementation of the project between the period 1995 – 2001:

- Beginnings of attitudinal changes and new ways of doing business. Increased awareness among users to make informed business decisions and a better understanding of the risks and rewards of a market economy is happening in some of the participating regions;
- Farmer information and advisory services (FIAS): This is operational in 27 oblasts and 148 raions across the Russian Federation with over 750 specialists trained in the provision of advisory services. The Ministry of Agriculture – at the federal and oblast levels – continue to support the development, dissemination and training of staff for the provision of a variety of information and knowledge to a wide range of farming structures; and, most important, provide almost all the operating expenses from the federal and oblast budgets. Several non-project funded FIAS activities are also organized and funded by about 35 additional oblasts that were unable to participate in the ARIS project because of their inability to demonstrate sufficient creditworthiness to the Ministry of Finance.
- Training: Training of extension specialists was carried out in two training centers – the Federal Training Center in Moscow’s Timiryazev Agricultural Academy and the Inter-Regional Training Center of the Non-Black Soil Area of Russia, based at the Academy for Management and Agribusiness in Leningrad region. A new curriculum in the Timiryazev Agricultural Academy on agricultural extension and re-training of agricultural professionals to suit a market-oriented economy was introduced, which is expanding each year. The basic task of the Centers is to train specialists – consultants for the federal and regional level as well as trainer, consultants who in turn provide training courses for farmers and rural enterprises.
- A modern press video center in the Ministry of Agriculture using a variety of media to disseminate multi-disciplinary subjects on agriculture and related topics to regions, institutions, farm producers, etc., of which, according to international experts from the Agricultural Communicators in Education, “the capability matches or exceeds that found in most agricultural communication/extension systems anywhere in the world. Examples of finished work demonstrate outstanding technical quality and creativity, including educational video, segments shared with the national weekly agricultural TV program, and materials prepared for the daily national radio program”. The Center carries out a number of programming modes, such as (i) a daily broadcast program “own land in Radio Russia” and by commercial broadcasting station “Free Russia” covering 90% of Russia’s territory and a majority of CIS countries. Based on listener feedback, considerable interest is in the practical aspects of daily life – where to get farm inputs, how to store farm products, plant protection, etc.; (ii) production of video-films from different parts of the world on various aspects of agricultural production, marketing, business, privatization, etc. that are disseminated to all the regions in
the Russian Federation; (iii) production and transmission by Russian TV of the Rural News program which is carried by regional state TV and broadcasting companies.

- Establishment of a distributed computing ARIS network which is fully operational in 30 oblasts and more than 300 raions across the Russian Federation providing agriculture and market information and website (http://www.aris.ru) with sections on price information, markets, and agriculture information the most frequently visited; and it is among the top three state institution web sites among all the economic sectors in the Russian Federation. It is used by over 2000 contacts daily. The market information provides weekly and bi-weekly producer, wholesale and retail prices on up to 150 agricultural products by grades and quality and on input prices such as seeds, agricultural machinery, spare parts, fuel, fertilizer, chemicals, pesticides, etc. These prices are disseminated through the Internet, the ARIS web site, the mass media and on information boards in the Department of Agriculture. The Ministry of Agriculture computer center is also responsible for the creation and updating of agricultural databases and development of application software for use by FIAS specialists.

**Measurement of impact** Quantification of impact of information and knowledge services and their role to accelerate reforms in the agricultural sector will continue to pose difficulties – due to lack of reliable data and applicable tools. The most significant impact of the approach taken was the creation of irreversible mechanisms to permit the free flow of information and knowledge and its access to potentially large segments of the urban and rural population. How this increased exposure to a wide range of choices has changed the mental attitudes and brought new ways of doing business and improvements in living standards that can only be observed over a long period of time. The institutional development part of the project – essential for supporting and making effective use of the ICT applications – has had positive impacts. Enterprises provided with FIAS and MIS services have become increasingly aware of the management issues faced by agricultural enterprises and have consistently refined the content and widened the range of software and business planning services provided. Significant analytical capacity has been built into agricultural administrations at the federal and regional levels.

Econometric studies were also carried out which showed that the market information system led to a substantial reduction in the variation of prices of the ten major products covered by MIS within the participating regions. It also resulted in a 20 percent reduction in price variation across the participating regions (World Bank, 2002). Historically, during the Soviet times, the prices were set by the state, remained artificially stable, and production quotas established; and following the price liberalization initiated by the reforms, wide fluctuations in prices of almost all agricultural inputs and inputs were occurring over extended periods of time. This showed the importance of simultaneous development of an information system which provides relevant and timely information along with the reforms in complex transition economies.

**Lessons learned**

- Multi-stakeholder Involvement. It is important to involve as many public and private institutions as possible for information development and dissemination, such as the various departments in the Ministry of Agriculture, universities, research institutions, non-governmental organizations, local community organizations, public and private media organizations, etc.

- Locally relevant content and adapted to local conditions. Build on the local culture, customs and media and develop locally relevant content in local language – incorporate local mechanisms into information and knowledge transfer project activities; such as annual agricultural exhibitions/fairs; harvest festivals; Local TV and radio programs; local newspapers, periodicals, magazines; etc.

- Carefully designed technical specifications. Incorporate flexibility and scalability in technology hardware. Hardware and software standards that are incorporated into information network design and communication should be internationally-accepted, such as: distributed computing environment, open software, effective use of available communication facilities, and bandwidth.

- Sustainability and financing. Expect limited cost recovery, i.e., recovering partial operating
costs. Provide information as a free public good, especially in transition economies.

- Provide adequate operations support for day to day operations – such as office supplies, communication expenses, local transport, and performance-based incentives for project staff.

**Other activities** The revolution in information and communication technologies, removal of restrictions of information flows and exchange of information and knowledge with the rest of the world have created significant opportunities for many institutions in the public and private sector to enter the “information and knowledge market”. During the last few years, a large number of information and knowledge providers have been established.

**Replicability** Given the modular nature of the approach taken, it lends itself to the design of the least cost and most appropriate information development and dissemination mechanism which would address user needs especially of the rural population – ranging from traditional and tested radio, print and television dissemination mechanisms to modern high technologies using high speed computers and the Internet. This could be replicated in other transition and developing market economies.

**Scalability** The creation of technological infrastructure and skilled personnel, and development of education and training institutions provides opportunities for the expansion of the ARIS network for the development of distance learning programs for rural population, faculty and students, public officials engaged in agriculture, etc. building on the information infrastructure, knowledge and skilled manpower; initiating E-government, E-commerce, and E-community links, etc.

**Conclusion** A framework has been established to incorporate the key elements for a well functioning, pluralistic rural information and knowledge based system in the Russian Federation which is based on the effective use of a variety of ICT applications at the national, regional and local levels and combined with supporting institutional development. Further progress and the degree to which several other key elements required for success are incorporated would depend on the speed at which: (a) the transition towards the development of a fair and competitive economy takes place in all factors of agricultural production, distribution channels and marketing mechanisms, and (b) democratic structures for local and national governance are created through participatory processes. A number of initiatives being undertaken with varying degrees of support from local and national institutions in the Government, private sector, local and international NGO’s, bilateral and multi-lateral institutions offer promise – to enable all types of farming and non-farming structures and consumers in rural and urban areas to make informed choices and business decisions, and to take advantage of the opportunities created by a market economy over a period of time.

**References:**

Media for carrying out extension work can run from the very simple to the complex. The newspaper *The Indian Express* tells of a case where an agricultural university used a wall in a public place to report its research findings to farmers. The Junagadh Agricultural University put 175 slogans on a 2 km long wall for farmers to read. These slogans were “extracts” of research done by scientists, and cover such topics as biotechnology, greenhouses, aromatic plants, what pesticides to use, how to save crops during droughts, how to grow flowers for the marketplace, and how to get the best market prices for their agricultural produce. The slogans are written in simple Gujarati so that a farmer with a basic education can read them. A university official noted that they conduct village meetings, shows and other events to create awareness, “but this is the simplest, cheapest and most effective way to do so.”

For contrasting situations, we next turn to two cases in which information and communication technologies play a significant role in reshaping the character of agricultural extension. In the first case study we go to Africa and see another case of how modern information and communication technologies are affecting traditional extension systems. The author is Joseph Kiplanag’at of the University of Zululand. This was the keynote paper at a conference at Wageningen in September 2003. The theme of the conference was "ICTs – 16 See [http://www.indianexpress.com/print.php?content_id=64855](http://www.indianexpress.com/print.php?content_id=64855) for *The Indian Express* story of February 17, 2005.
Transforming Agricultural Extension. The title of the paper is: "Does agricultural extension have a new beginning because of ICTs? Reflections on experience in sub-Saharan Africa." Kiplanag'at takes many of the issues addressed thus far in this chapter and puts them in the reality of African agricultural development. He reports in detail how the pre-digital ICTs play a role in extension in Africa today and how newly emerging telecenters also contribute. He concludes with a plan of action. The case study previews Chapter 6 which explores the roles of ICTs in development communication.

**AGRICULTURAL EXTENSION IN SUB-SAHARAN AFRICA**

The majority of sub-Saharan African countries rely heavily on the agricultural sector as the mainstream for economic growth, employment creation and foreign exchange generation. In most of these countries, the agricultural sector employs about 70%, of the labour force, accounts for 25% of their Gross Domestic Product (GDP) and 60% of their export earning (Economic Commission for Africa 1998:1, Aina 1998:96, and Adimorah 1995:154). The sector is also the major contributor to national food security and a stimulant to the growth of off-farm employment.

In the past decade a number of sub-Saharan African countries experienced a slow agricultural development. Since then, the sector has not grown as fast as the population. Decline to agricultural development is attributed to a number of constraints that include inappropriate national agricultural policies, lack of adequate information provision, low adoption of agricultural technologies, and ineffective institutional frameworks. Inadequate provision of relevant, reliable and comprehensive information support to all stake holders in agricultural production has been identified as the major constraint (CTA2002:1, Economic Commission for Africa 1998:1). There is need to develop an effective and efficient agricultural knowledge and information system that provides relevant information at all levels to all actors in agricultural production cycle. Such a system Would also connect the rural areas to the rest of the world.

Seventy per cent of the population in sub-Saharan Africa live in the rural areas and oil agriculture for their livelihoods. Poverty, geographical isolation and being poorly served by agricultural workers, education, health, transport, communication and other services characterise the rural environment in most of these countries (Kiplangat 2001:82). Information needs of rural communities are embedded in the hierarchy of their activities. For rural communities to fulfill their respective roles, they require information, inter alia. Oil supply of inputs, new technologies, early warning systems (drought, pests, and diseases), credit, market prices and their competitors (Munya 2000:10). Although the traditional media and Information and Communication Technologies (ICTs) have played a role in diffusing information to rural communities, they have much more potential to assist in improving their lives. There is need therefore to connect research, extension networks with rural communities in order to provide access to much-needed knowledge, technology and services in an effort to bridge the information gap. Rural information systems must involve rural communities and local content is of prime importance.

**1.1 Agricultural extension services and systems**

Extension workers occupy a strategic position in agricultural production cycle. They are responsible for simplifying research information and delivering it to farmers in an effective and easy way to understand and providing feedback mechanism to researchers on problems faced by farmers (Tollefson 2002:5). They act as a bridge between researchers and farmers hence providing a two-way communication flow between researchers and farmers (Anholt & Willem 2.002:4).

In sub-Saharan African countries agricultural extension service is still largely the responsibility of the government through the ministry of agriculture and the national agricultural extension division in each country. In recent years mar1y countries have experienced decentralization of government structures and privatization of agricultural extension services which has increased the number of actors in the agricultural innovation process. The multitude of actors requires effective and efficient information flows and communication between all levels. The linear information flows that dominated the traditional model of technology transfer from formal
research system to the farmers by way of government-owned extension system are being replaced by pluralistic information flows between farmers as the demanders of service, and various providers of these services.

The pluralistic information flows between farmers and providers of agricultural information often experience weak linkages. These have affected communication of agricultural information, consequently causing major “bottlenecks” in national agricultural technology systems and limiting their effectiveness in contributing to agricultural development (Crowder and Anderson 1996:1). In some of the countries, research and extension are often compartmentalised in separate institutions, or even ministries, and have a history of functional specialization, which hampers the establishment of linkages. In many cases therefore, just as extension is often not well linked with knowledge bases, research is equally oblivious to the needs of farmers. Research has generally fielded better-educated staff and has tended to treat extension staff as inferiors rather than equals in a multiple-faceted process. Extension, research and other stakeholders need to adopt a farmer centred-management approach in disseminating agricultural information. While extension and research have unique and different needs, their destinies are closely intertwined.

There is need for integration of researchers, extension workers, educators, input suppliers and farmers in agricultural innovation process (Crowder and Anderson 1996). The common denominator among the participants is joining in agricultural knowledge and information system that draws on both modern science and farmer's indigenous knowledge. This would improve a two-way communication flow of agricultural information and avoid the traditional "trickle down" flows of information from research to extension and from extension to farmers. This approach would shift attention to feedback and upward communication from farmers and to facilitate research-extension/farmer interaction. The agricultural researchers would then be kept constantly aware of the technical, social, and economic problems encountered by the extension agents in their contacts with farmers. The time lag between research findings and their adoption can also be reduced.

The ultimate goal of a good linkage between research, extension, farmers, and other actors is for purposes of effective flow, of agricultural information. An extensive review, of literature about agricultural development shows that there is a direct relationship between research and utilization of research findings (Ojiambo 1995, Kaniki 1995). Without close link and feedback from the field, research becomes excessively academic and unrelated to farmers real problems.

The linkage and information flows between different actors in agricultural production can be enhanced through the use of Information and Communication Technologies (ICTs). This paper has adopted the definition by Heeks (1999:2) who defined ICTs as electronic means of capturing, processing, storing, and communicating information.... There is need to identify appropriate ICTs that meet the needs and aspirations of different actors in the agricultural sector. This is because the actors have different kinds of information needs and communication problems, and their level of access to ICTs also varies.

It should be noted that sub-Saharan African countries are not homogeneous in nature. Though there are some common factors, each country encounters unique social-economic problems and different level of infrastructure development (Adeya 2001). There is need therefore to evaluate and identify ICTs that are appropriate to a given situation in each of the countries.

1.2 Potential role of ICTs in communication of agricultural information

Conventional communication channels that include the radio, video and television have been used successfully in Africa to communicate agricultural information, but these have been monologue and have not allowed for much interaction with users. Investment in new ICTs such as the Internet and email can complement conventional delivery systems. Several initiatives are now being undertaken to see how conventional communication channels can be integrated with new ICTs in communication of agricultural information. Some of these initiatives will be reported at this workshop.
While ICTs allow sub-Saharan African countries to participate more fully in the global economy, the danger is that countries that fail to use the technology to their advantage will fall further behind countries that do widening the gap between richer and poorer nations (Marcos 1997:124, Zongo 2001:6). ICTs represent a window of opportunity for these countries to progress from a situation of ‘zero’ or limited technology to widespread adoption of sophisticated technologies, without going through the stages of technological adaptation and learning experienced in developed countries. In Africa this optimistic view is promoted by the African Information Society Initiative (AISI), which, in 1996, proposed a 15-year program to provide connectivity and electro access to information for all citizens of Africa. The program is to be achieved through partnership arrangements between national governments and a wide range of international development organizations. It recognizes that ICTs can bring wide ranging efficiency gains through free-flow of information, improved delivery of public services and development of indigenous resource capacity (Zongo 2001:5, Pigato 2001:6).

Subsequently, many countries in Africa have started the design and implementation of their national information and communication infrastructure. Several ICTs-related projects are taking place in most African countries and are initiated by international development agencies such as IDRC, World Bank, USAID, ITU (Jensen 1998:3 1999, Zongo 2001:18).

Adam and Wood (1999:307) in their research on impacts of ICTs in Sub-Saharan Africa, established among others, the under-utilisation of existing technology due to lack of awareness, underdeveloped legal framework for information sharing, infrastructure problems, poor connectivity to global networks, maintenance problems, weak research and development and high taxes. There is need for sub-Saharan African countries to overcome the challenges if they have to harness meaningful digital dividends. Some of the areas to be addressed include policies related to universal access and connectivity, frequency management and monitoring, technology standards, Internet and broadcasting and regional integration policies (Zongo 2001:11:14). Achievements of these initiatives will very much depend on concerted efforts by governments, the private sector and the donor community.

Despite persisting problems of access, connectivity, literacy, content, and costs, ICTs have presented a new dimension to agriculture. They have enabled effective and efficient transfer and access to scientific, technical and market information which were previously difficult and often expensive to obtain (Aina 1998:97). ICTs offer tremendous capabilities to the agricultural sector in terms of vast information storage, fast and inexpensive communication channels, links between different media, easy and enjoyable use at comparatively low and steadily declining costs (Zijp in Kiplang’at 1999:117). These capabilities can facilitate the flow of agricultural information among agricultural researchers, extension workers and farmers. ICTs have the potential of ensuring that knowledge and information on important technologies and practices reaches the farmer (Godake 2001:85, Munyua 2000:1).

The second part of this paper provides an assessment of the state-of-the art and use of ICTs in sub-Saharan African countries. The paper draws examples from case studies of Kenya and South Africa. While the level of agricultural development and diffusion of ICTs is relatively better in South Africa, Kenya provides a picture of the majority of sub-Saharan African countries. Kenya like other sub-Saharan African countries lacks a robust telecommunication system comparable to South Africa. The two countries have also adopted variety of ICTs models in providing agricultural information to rural communities. While Kenya uses mostly the radio, television and video, South Africa uses an integrated approach of telecentres, Multi-Purpose Community Centres (MPCCs) and Citizen Post Office (CPOs). Examples from other sub-Saharan African countries are also discussed.

2.0 Case study one Agricultural extension services and systems in Kenya
Agricultural extension services were introduced in Kenya by the colonial farmers around 1910. The public sector for many decades (1950s to 1980s) was the major player in the provision of extension services in the country (Kenya Republic 2001:1). These services were very effective in assisting the majority of small-scale farmers in improving their agricultural production. Over the last decade, extension services started experiencing some challenges due to socio-economic changes and agricultural sector reforms taking place in the country. The division
was blamed for non-performance and lack of accessibility, and confidence in extension workers. The budgetary allocation to the service was also declining. The traditional methods of service delivery were no longer sustainable and change was inevitable. There was a need to address these issues and the Kenya Government appointed a task force to look into the problems and recommend appropriate action (Kenya Republic 2001:ix). The task force recommended among other items the enactment of a national agricultural extension policy.

In December 2001, the government came up with a National Agricultural Extension Policy (NAEP) (Kenya Republic 2001:1). The policy was prepared to guide and harmonize management and delivery of extension service in the country and accommodate the impending changes. The policy supports the development of pluralistic and demand-driven agricultural extension services. It will be used by ministry of agriculture staff, private sector extension providers, Non-Governmental Organizations (NGOs), Community Based Organizations (CBOs) and development partners supporting agricultural extension in the country.

Although the private sector is also providing extension services in Kenya, agricultural extension service is still largely the responsibility of the ministry of agriculture through the national agricultural extension division. The division coordinates all extension activities in the public agricultural sector. The current National Development Plan 2002-2008 (p. 38), outline the government position in encouraging greater community and private sector participation. Private agricultural extension services are provided by:

1. Religious organizations such as the Catholic Diocese and the World Vision
2. NGO’s, and private companies such as [brewery, tobacco and sugar companies.
3. Parastatal Organizations, such as: the Kenya Tea Development Authority (KTDA), the Kerio-Valley Authority, the Lake Basin Authority, the Coffee Board of Kenya.

Most of the extension workers in Kenya are based in the rural areas where communication infrastructure is poor. This impedes their accessibility to constant supply of relevant and timely information on various issues relating to their work. For example, they require information on the best cropping methods, for specific soils and given crops. They need information about different types of livestock, planning demonstrations and field days, and advisory information on farming seasons. They must also keep themselves up-to-date on ICTs tools and services that could have major impact on the economics of farming. The Kenya government through the ministry of agriculture has instituted measures to enable agricultural extension workers access information.

2.1 Provision of agricultural information to extension workers

Agricultural information is provided through various formal and informal channels and sources which include the mass media, electronic and printed media, interpersonal communication, libraries, and information centres. The choice of the channel or sources of acquiring agricultural information depends on factors such as proximity of the channel or source, perception of channel or source by user and availability of agricultural information sought by the user (Ojiambo 1995:115).

The Kenya government has put in place a variety of agricultural information systems to provide information to all actors in agricultural extension. These include libraries and information centres, use of radio, television, video and electronic sources of information.

2.1.1 Agricultural libraries and information centres

In Kenya, agricultural libraries, and information centres are characterised by the structure of their parent organizations. They can be classified into the following categories:

• International and national research libraries and information centres
• Educational agricultural libraries and information centres
• Administrative agricultural libraries and information centres

While agricultural libraries and information centres play a vital role in acquiring, processing and disseminating agricultural information to extension workers, the majority are concentrated in the capital city Nairobi. Extension workers and other actors based in the rural areas find it difficult to access information from these libraries.
The Kenya government, through the ministry of agriculture has established the Agricultural Information Resource Centre (AIRC) commonly known as the Agricultural Information Centre (AIC) to provide agricultural information for extension service. The centre is the major provider of information to agricultural extension. It is charged with the responsibility of repackaging extension material both in print and electronic form and also through the mass media.

2.1.2 Agricultural Information Resource Centre

The Agricultural Information Centre (AIC) is a division within the Ministry of Agriculture and Rural Development (MoARD). It was established in 1966, as a small unit within the National Agricultural Research Laboratories (NARL). Since then the unit has expanded into one of the most active division within the ministry. Currently, it is located on its own premises at Kabete on the outskirts of the capital city, Nairobi.

The primary role of AIC is to use ICTs and mass media to complement the extension services of the ministry (Kenya, Ministry of Agriculture 2001:1). The objective is to repackag agricultural information through the print and other media to suit the different needs of the farmers, extension workers and other interested parties. Other activities of AIC include provision of training to extension workers to better their extension skills and the management of extension service. The specific objectives of AIC are to:

- Enhance farmers’ ability and increase agricultural output through more effective information and training.
- Improve the skills of the extension workers both in public and the private sector through training and provision of better extension materials.
- Improve the overall quality of agricultural information and training through close collaboration with other development agencies.
- Generate financial resources to support its operations and programmes and to become financially sustainable (Kenya, Ministry of Agriculture 2001:1).

AIC staff are drawn from the ministry of agriculture and have wide experience in agriculture and extension work. The centre is governed by a board of management where the directors are drawn from both the public and private sectors.

For AIC to realise its objectives it has set up various units to provide specific services. The units and their services are briefly discussed below.

2.2.1 The Radio Services Unit

The AIC has a modern radio studio equipped with professional sound recording equipment for both field and studio recording. The unit has four professionally trained radio producers staff with background knowledge in agriculture. The work of the staff entails writing of scripts, designing the programmes, editing the material, translating them into Kiswahili and other vernacular languages, and recording, pre-testing and finally airing them on radio. The unit collaborates with government and private radio and TV stations.

Among the Popular Swahili and English radio programmes produced by the radio unit and aired through the national and private broadcasting radio station include:

- Sikio la Mkulima
- Afya ya mifugo wetu
- Mkulima na mazao
- Nipe habari.
- Tennbea na majira
- Wadudu wa naftaka
- Bei ya mboga na matunda and
- Farmers corner (Atsiaya, 2003)

These programmes have proved very popular to farmers. Extension workers use these programmes for radio listening groups. The programmes have also been translated into vernacular languages and aired through the rural radio. The challenges encountered include among others finding appropriate time to broadcast the programmes, prohibitive production, airtime costs and lack of radio signals especially for rural radio stations (9guya 2001). AIC partners with Kenya Broadcasting Corporation (KBC) to transmit the programmes in the national languages Kiswahili, in the official language English as well as in vernacular languages. Radio programmes can reach 99% of the population. The costs of production and airing of these programmes through the national radio cost up to USS 1350 for English and Kiswahili Programmes while vernacular programmes cost US$50. AIC usually depend on
the good-will of donors in the private sector. Private Christian Rural Radio and TV stations have been established in the country and because of the small area of coverage their charges are usually low. AIC is now collaborating with these private radio and TV stations to reach a wider rural community.

2.2.2 Video services unit
The video unit has five experiences video production crew, consisting of three media production staff, one editor and one cameraman respectively. The unit also has modern recording equipment and editing suites that produce high quality broadcast educational materials for extension workers and farmers. The unit produces three categories of videos namely:
• Documentaries
• Training videos and
• Videos on technical information
The work of staff of the unit include: writing of scripts, identification of location for shooting, making films, editing and finally production of the finished products. The target groups for finished products are extension workers, farmers and researchers. The unit collaborates with the Kenya Agricultural Research Institute (KAKI) and KBC in producing weekly TV programme titled "Mkulima". It also collaborates with an NGO called Regional Reach in distributing and showing agricultural video programmes at the village market centres, where television sets and video machines have been installed. AIC has also installed television sets and video machines in 20 farmers training centres where farmers can view the programmes. This has enhanced farmers' avenues and channels of agricultural information.

Among the popular video programmes are:
• Zero brazing
• Runoff- a foe or a friend
• Safari Njema
• Mazwa sahi
• A school without walls
• A sun will still rise
• Mkulima
• Ufugaji wa ndizi
The last two are weekly TV programmes shown through the national KBC TV station produced in collaboration with KARL.

2.2.3 The Printing and Publications Services Unit
Printing and publication unit undertakes the printing and publication of agricultural extension materials such as agricultural technical handbooks, brochures, leaflets, posters, magazines, and farmers' journal. Printed materials are then distributed among researchers and extension workers who use them to disseminate agricultural information to the farming community.

2.2.4 The Documentation Services Unit
The documentation centre acquires and stores unpublished agricultural documents and publications. These include various reports, conference proceedings, theses and dissertations, journals and articles, statistical and development materials as well as other scientific and technical information on Kenyan agriculture. The centre also keeps CDROM databases and is an inputting centre for International Information System for Agricultural Sciences and Technology (AGRIS) produced by FAO on agricultural information literature worldwide.

2.3 Implications of agricultural knowledge and information systems in the provision of agricultural information for agricultural extension
The foregoing exemplifies the efforts made by the Kenya government in ensuring that there is information flow between and among researchers, extension workers and farmers. Attempt has also been made to adopt the use of the Internet, email and electronic sources in the agricultural sector, albeit the constraints and challenges encountered.

Although the government has established agricultural information systems their impact is still minimal in the rural areas. This is confirmed by a recent study conducted to investigate the diffusion of ICTs in communication of agricultural information among agricultural researchers and extension workers in Kenya. The study found out that majority of extension workers based in the rural areas find it difficult to access information. They are physically isolated from modern communications and other communication facilities. This is more prevalent in Arid and
Other findings indicate that:

- Adopted ICTs were yet to be responsive to the needs of the respondents.
- ICTs were more available to agricultural researchers than extension workers.
- Telephones, radios and mobile phones were available to majority of extension workers as opposed to the Internet, email, electronic journals and CD-ROM.
- Mobile phones were personal and each individual met the costs for airtime credit.
- Compared to agricultural researchers, ICTs were less accessible to the majority of extension workers.
- Though radio, television and video were frequently used in disseminating agricultural information to farmers, they were less accessible to majority of extension workers.
- Extension workers used ICTs to communicate with farmers and fellow colleagues and only a few used them to communicate with agricultural researchers.
- Radios, television and videos were found to be effective for use in demonstration and training of farmers.

- Modern ICTs were used among extension workers and are yet to benefit the poor farmer.
- Despite the costs, respondents found mobile phones to be convenient in communicating with the farmers and often used send message facility (sms) to cut down on costs.
- Majority of extension workers had poor Internet skills and were not computer literate.
- Ninety four per cent needed more training on the use of computers, Internet and electronic sources.
- The majority of extension workers learnt how to use ICTs through self-study.

The benefits and gains of ICTs in the agricultural sector in Kenya can only be realized with the full support of the institutions and organizations concerned. The Kenya government could provide policies and strategies as well as create an enabling environment for ICTs diffusion. Potential of ICTs in extension can only be realised if the issues of physical access, skills development among other constraints can be squarely addressed. The government should improve basic infrastructure such as rural access roads, electricity, water provision, telephone facilities and other services. This would pave way for faster communication of agricultural information. These facilities would also enhance the collection of specified data and information in areas in which extension workers provide service. The extension workers will also be in a position to use ICTs effectively in repackaging and disseminating new agricultural technologies to farmers. These would provide more avenues for dissemination, as no single extension approach can be considered appropriate to address the needs of farmers in different agro-ecological zones. The mobile phone has the potential in communicating short messages and using sms to cut down on costs. Recently Safaricom, a mobile subscriber in Kenya, partnered with Kenya Agricultural Commodity Exchange (KACE) to launch an agricultural commodities market information services. Traders in agricultural products can now check prices of agricultural commodities (Daily Nation 19 August 2003).

2.4 Case study two Agricultural extension services and systems in South Africa

The history of the South Africa Department of Agriculture dates back to 1909. Since then many structural and organizational changes have taken place. In 1993 all agricultural functions including extension services were amalgamated into one department of agriculture (South Africa 2003). The national department of agriculture aims to lead and support sustainable agriculture and promote rural development through:

- Ensuring access to sufficient, safe and nutritious food;
- Eliminating skewed participation and inequality in the sector;
- Maximising growth, employment and income in agriculture;
- Enhancing the sustainable management of natural agricultural resources and ecological systems;
- Ensuring effective and efficient governance and
- Ensuring knowledge and information management (South Africa 2003).

A white paper on agriculture published in 1995 paved the way for the new vision for agriculture in line with the constitution. Globalisation, the removal of impediments to free trade
and the entrance of small-scale farmers are some of the changes that promoted another look at agricultural policy in South Africa.

The white paper outlined the importance of comprehensive information on agricultural conditions, including physical and marketing conditions as well as production constraints as a prerequisite for planning and policy formulation. The document reiterated the need for effective linkage between research, extension, farmers and other stakeholders. The focus shifted from commercial agriculture to resource-poor farmers. Equitable access to the appropriate and effective extension and training is to be ensured, with the emphasis on farming communities who were disadvantaged in the past. Previously the government had two parallel extension services, one for commercial agriculture and another in the self-governing territories (South Africa White Paper on Agriculture, 1995).

Presently the department of agriculture has enhanced provision of agricultural information to resource-poor in an effort of improving their agricultural productivity and raise rural incomes (South Africa White Paper 2003). The South African government has put in place several measures to ensure that resource-poor farmers access a wide range of information on issues affecting their farming activities. The next section reviews some of these efforts made by the government.

2.4.1 Getting information to resource-poor farmers

The South African government supports the notion that there is a direct and positive correlation between access to telecommunications and the socio-economic development in the Global Information Society and that ICTs can play a catalysing role in the functioning of the economic and social sectors (Van Audenhove 1999). In the restructuring of the telecommunications sector, the government has also attempted to address the needs of the poor who predominantly live in the rural areas (Synnan 2002). Mbeki (1995) for instance states that “the modern communications technology ... must help us educate our children, particularly in the rural and other underdeveloped areas of our country.” Against this background the government has instituted measures to ensure that rural disadvantaged communities access information to improve their lives.

Faced with problems such as poverty, poor infrastructure with regard to electricity and telephone lines as well as low education levels and computer skills, the South African government decided on the centre approach as a viable option to place ICTs and other information services within reach of the disadvantaged rural South African communities (Synman 2002). The centre approach refers to the practice of establishing centres as information resources and communication nodes in disadvantaged rural areas (Benjamin et al 2000). Consequently in 1996 the Telecommunications Act was promulgated to provide for, among other matters, the Universal Service Agency (USA) responsible for ensuring universal access to all telecommunications services (South Africa 1996). In 1997 the International Development Research Centre (IDRC) commissioned the National IT Forum (NITF) to investigate the possibility of establishing Multi-Purpose Community Centres (MPCCs).

The paper analyses some of the efforts made by the government in establishing* telecentres, Multi-Purpose Community Centres (MPCCs) and Citizen’s Post Office as ways of empowering rural communities including resource-poor farmers. The three are regarded as the most important vehicles for the centre approach chosen by the government to offer a range of developmental and information services to the rural communities (Berlyn 1998).

2.4.2 Telecentres

The South African government through the Universal Service Agency (USA) was to erect about 100 telecentres a year starting in 1998. An estimated 3000 to 4000 are needed for full coverage of the country (Synman 2002). By July 2002 only 56 telecentres had been established in all the provinces in the country.

The term ‘telecentres’ as used in this paper refers to community based centres that accommodate ICTs, including fax, telephone, computer-based systems with Internet connection, and photocopying facilities. A few telecentres provide additional services such as postal facilities, selling of telephone cards, newspapers and refreshments (Kiplang’at 2001).
The broad objectives of setting up telecentres in the rural areas include:

- The facilitation and elimination of poverty;
- The sharing of knowledge with other communities;
- The empowering of rural people with information and literacy skills and improve agricultural production and primary healthcare;
- The creation of employment;
- The introduction of distance learning by bringing education closer;
- The reduction of the gap in rural-urban development;
- The promotion of gender equity (Kiplang’at 2001).

Each of the telecentres established in South Africa have an average of 140 visiting clients per day (Synman 2002). The clients are composed of the following:

- Farming community
- Agricultural extension workers
- Teachers
- Health workers
- Students
- Housewives
- Community based organizations
- Community and governmental authorities
- Local entrepreneurs among others.

The clients come to seek information related to employment, study opportunities, career guidance, social welfare and presidential speeches. While a few seek legal, medical and agricultural information, little evidence exists to indicate that telecentres are seen as information resources (Synman 2002).

The major problem encountered by the telecentres is lack of reliable telecommunications infrastructure, without which the most basic objectives can be fulfilled. Not much has materialised in the government resolve to embrace public access to telephony, computer literacy and Internet access in under-serviced areas. By mid 2002 only 17 telecentres had public phones, 18 had fax and 9 had Internet connection (Synman 2002). The telecentres had reduced from 65 in the year 2000 to 56 in 2002. Other problems include the lack of financial systems, inadequate training of the managers, unclear tariff structure and the lack of monitoring and evaluation systems.

2.4.3 Multi-Purpose Community Centres

Multi-Purpose Community Centres (MPCCs) are generally structures that encourage and support communities to manage their own development through access to appropriate facilities, resources, training and services. ‘Multi-purpose’ means that the centre is able to provide a variety of services to different user groups within a community. These may include services relating to agricultural and health information, education and training and socio-economic information (Kiplang’at 2002). The telecentres can be defined further as integrated community development centres (Berlyn 1998).

The South African government is currently driving MPCCs forward as the favoured initiative to attain the ideal of universal access to ICTs and plans to have one MPCC per municipality across South Africa (Sfrica 2002). MPCCs aim to empower the poorest and most disadvantaged communities with access to government and non-government information and services. They are described as ‘one-stop shops’ through which communities can access government services, information technology and training (Sfrica 2002). By the year 2001 there were 47 MPCCs functioning (Espitia 2001).

Synman (2002) carried out a survey on 20 MPCCs. She found out that none of the MPCCs had email facilities; seven did not have fax facilities; and five had no postal addresses. Only two MPCCs housed a telecentre with fully equipped telecommunications facilities including Internet access from which information on the government websites can be downloaded. The rest of the MPCCs depend on traditional media such as pamphlets and interpersonal communication for disseminating government information.

According to Synman (2002) not much has been realised in terms of the ideal that MPCCs should form the backbone of development communication and the dissemination of information to needy rural communities. It must be conceded that this initiative is still in a start-up phase. At this early stage, it does, unfortunately seem as if problems with telecommunications infrastructure and management will hamper the initiative. The MPCCs
also encounter lack of well-maintained equipment, lack of relevant information tailored to needs of rural communities and lack of adequate access to Internet gateway that should empower the disadvantaged rural community.

2.4.4 Citizen’s post office

Citizens’ post offices are essentially "Internet cafes" for disadvantaged areas.... Currently about seven CFOs are in operation in the rural disadvantaged areas. Each one is equipped with an Internet cafe and business centre with a minimum of seven and maximum of thirteen Internet terminals per centre. In addition the centres have facilities for copying, word processing, faxing, binding, scanning, laminating, etc. A Government Information Terminal (GIT) provides free online access to government information at all centres. A trained administrator is appointed to operate the CPO and assist clients. The CPOs seem to be better managed, equipped and monitored compared to MPCCs and telecentres. All have Internet access which is the most used service. The types of information needs expressed by users also indicate that information dissemination is taking place (Synman 2002).

2.4.5 The impact of ICTs on agricultural extension in South Africa

The South African government has made some effort by embracing different models of ICTs in providing information to rural communities. Based on the three models of ICTs, it can be said that there is need to address the problems encountered by the centres, if universal access and dissemination of information to disadvantaged rural areas is to be achieved in South Africa. A successful telecentre must involve the local community with a strong ground up focus and input on local issues in agriculture and other developmental areas. The alleged reasons why centre approach in South Africa is apparently not successful are many and varied (Synman 2003, Benjamin et al 2000, Conradie 1998). The three most mentioned reasons include:

• Unreliable telecommunication facilities;
• The focus on technology which diverts attention from the necessity to first build human and social capital; and
• The top-down approach in addressing social problems.

Measures to overcome these barriers can be addressed by an open and collaborative relationship between and among all stakeholders including the South African government.

2.5 Review of ICTs models in other sub-Saharan African countries

This section highlights some of the ICTs models used in sub-Saharan African countries to empower rural communities with information.

2.5.1 Use of telecentres in Uganda, Senegal and Kenya

Several countries in sub-Saharan Africa have established telecentres to provide information to rural and disadvantaged communities. The telecentres are owned and operated by government departments, schools, community organizations and Non Governmental Organizations (NGOs). The telecentres are established in a variety of locations, including libraries, community centres, churches, farmers' groups, cooperatives, post offices and radio stations (Kiplang’at 2001). A typology of these telecentres range from ‘micro telecentres’, usually housed at a shop or other business, and providing limited services such as public telephone and fax services, to full service telecentres.

Most of the telecentres started off with funding or grants from donor agencies. Their successful operation in the rural areas often depends to a large extent on volunteer support from dynamic young people who have completed secondary or university-level of education. The aim of the centres is to generate sufficient income through provision of services so that they become self-sustainable.

Examples of countries that have embraced this technology include Uganda, which was among the first countries to establish telecentres in 1999 with the assistance from IDRC and UNESCO. The centres are Nakaseke and Nabweru Multi-Purpose Community Telecentres. In recent years other countries have also established telecentres. Ugunja Community Resource Centre in Kenya is an example of few telecentres established to provide mainly agricultural
information. It is managed by the Kenya Agricultural Research Institute. In addition to using modern ICTs to disseminate information, the centre holds training courses, field days, festivals and traditional forums (Oguya 2001).

In Senegal the Public Telecom Operator (PTO) does not provide public telephones, but there are over 8000 public telephone shops, called 'telecentres', licensed by the Public Telecom Operator (Sonatel) and managed by local entrepreneurs. Many of these telecentres have added fax and word processing, and over one hundred have added Internet access (Kiplangat 2001). No financing is provided, but to encourage their establishment, Sonatel gives 40% discount on tariffs and provides advice for telecentres wishing to add other services such as fax and Internet access. They have proved popular in providing information to rural communities.

Telecentres offer many opportunities to rural communities and are proving to be the right technologies for bridging the rural-urban gap and accelerating the pace of rural development. However, there are many challenges facing the application of telecentres in rural development. These include among others:

- The low telecommunication penetration;
- The lack of skilled manpower;
- Inadequate resources to maintain ICTs needed for the telecentres;
- Language barriers to understanding content of messages;
- The underdeveloped legal framework.

2.5.2 Use of rural radio in Ghana, Cameroon, Uganda and Mali

The rural radio is becoming popular in disseminating agricultural information across long distances in languages and terminologies familiar to the audiences. Secondly, live discussions can be held with farmers to obtain their feedback on various technologies. Thirdly, radio can relay disaster preparedness, weather and market information. The rural radio is used in most if not all sub-Saharan African Countries. Cameroon, Mali, Ghana and Uganda have linked together broadcasters and other actors in agricultural extension with the aim of effectively disseminating agricultural information to rural communities. The progress of this project will be reported at this workshop.

2.6 Emerging issues and trends

It is evident from the foregoing discussions that sub-Saharan African countries have adopted a variety of ICTs models in dissemination of information to rural communities. Agriculture being the mainstay of the economies of these countries, considerable effort is being made to ensure that resource-poor farmers access information to improve their livelihoods. However, these efforts have been hampered by a knowledge gap, constraints and challenges. The emerging issues that need to be addressed include:

- Poor infrastructure in terms of telecommunications facilities and electricity;
- High telecommunication tariffs;
- Lack of physical access to ICTs;
- Sustainability problem especially for donor funded projects;
- Obsolete ICTs;
- Lack of maintenance of equipments;
- Inadequate funding;
- Lack of awareness of ICTs tools and services;
- Lack of technical know how;
- Lack of relevant content;
- Lack of supportive government policies and legislation on application;
- Lack of education to create awareness on the role and potential of ICTs and
- Lack of commitment and willingness by policy makers and stakeholders.

Despite the problems of access, connectivity, literacy, content, and costs, countries in sub-Saharan Africa are using ICTs to enhance dissemination of agricultural information. The trend is to integrate conventional delivery systems such as radio, television with new ICTs in communication of agricultural information to rural communities. Sub-Saharan African countries can adapt successful ICTs models from other developing countries. Example of this is
Kothmale Radio in Sri Lanka that has combined radio and Internet access. [See Chapter 6.]
The project has leased line connections to the Internet. During “radio browsing programmes”,
presenters browse the Web in the studio on behalf of the listeners who provide requests/input
by phone or post (Caspary 2002). There is also a steady growth in the use of mobile phones
by rural communities in sub-Saharan Africa, in spite of the high tariffs involved.

2.7 Conclusions
It can be concluded that ICTs have potential to bridge the gap for information sharing and
exchange among all actors in agricultural extension in sub-Saharan Africa. ICTs are yet to
have meaningful impact in provision of extension services in sub-Saharan Africa. It should be
realised that ICT aspect is only one among many other instruments that a community could
use in its development endeavour. Agricultural researchers, extension workers, farmers,
donor community, NGOs, CBOs and other stakeholders should be involved at all levels of
developing ICT models for extension. For the already adopted ICTs in sub-Saharan Africa,
many changes need to take place to address the mentioned knowledge gaps, constraints and
challenges so as to improve the quality and availability of information to all parties in
agricultural extension. There is need to evaluate and identify ICT models that are appropriate
for agricultural extension. ICTs if used intelligently and innovatively can transform lives of rural
communities. One does not have to use technology because it is there, but one uses
technology because there is a genuine advantage. The needs for the people and the best
means to satisfy them should determine ICTs to be adopted for use in agricultural extension.

2.8 Agenda for action
The paper proposes an agenda for action that could be included for deliberations in this
workshop:
• Issues on ICTs policies and regulatory on universal access and connectivity in sub-Saharan
  African countries;
• The improvement of telecommunication facilities and electricity in the rural areas of Sub-
  Saharan African Countries*.
• The identification and evaluation of appropriate ICTs to meet the needs of multitude of actors
  in agricultural extension
• The physical access to ICTs
• The funding of ICTs projects
• Sustainability of ICTs in the long run
• Hands-on training on use of ICTs for all actors in agricultural extension
• Design an effective post-implementation evaluation system
• The notion of gender equity in diffusion of ICTs.

The eChoupal and globalization in agriculture

In a 2003 assessment of the road for the U.S. Agency for International Development
to take in its ICT foreign assistance program, its consultants noted that "ICTs can accelerate
agricultural development by providing more accessible, complete, timely, [and] accurate
information at the appropriate moment to those making key on-the-ground decisions.
Examples of such decisions are: what and when to plant; where to find agricultural inputs at
the best price; how to identify and respond to disease, pests and drought; where to sell
products; what new technology options exist for production, post-harvest, and soil fertility
control; what agricultural credit programs are available; and how to access relevant
government programs, including land titling."17

New information and communication technologies are playing an increasingly
important role in providing farmers the information they need to be successful. The next case
study illustrates how this happens in Vietnam, a country that in the middle of this decade has
experienced a robust growth of activity related to ICTs, in both the public and private sectors,

17 Winrock International. Future Directions in Agriculture and Information and Communication
alliance.org/documents/AG_ICT_USAID.pdf.
and in foreign investments. This case study shows some of the challenges in linking expert sources to farmers; there is also evidence of a "digital divide" (see Chapter 6); and the persistence of the top-down technology transfer model.

**YOUNG FARMERS CRAVE INTERNET ACCESS**, Knowledge Systems in Development

Wednesday, 30 August 2006, 2:19 GMT + 07:00

In some rural areas computers are popularly used but most farmers don’t know what information is available or how to find it.

In Vietnam, a country of 84 million people, it's expected that 7,000 communal cultural post centers will be linked to the Internet by the end of 2006 (presently its 2,000).

A farmer in Ha Tay province, Nguyen Sy Tuyen, said that he and many like him often log onto the Internet. He particularly likes to check out the website www.vietnamgateway.org.vn, to learn about growing crops and raising livestock. In the province of Nghe An, farmers in Quynh Luong commune have their own website, www.quynhluong.gov.vn, to let people know what they grow and have for sale. In Vinh Long province, farmers are selling their famous Nam Roi grapefruit online. The Internet has become a tool being used by more and more farmers to both improve production and increase sales.

As with businesspeople everywhere, farmers want to get as much as they can for what they have to sell. It is no longer unusual to see farmers advertising their products on the net or logging on to get information related to the task at hand. This is sure to increase in the future. Old-style subsistence farming was not a business per se. But, in this modern age of soil analysis, herbicide treatments, hybrid varieties, and direct sales to supermarkets, farmers are forced to become more astute businesspeople. Unfortunately, rural schools - and rural incomes - have generally keep computer usage city-bound.

A very small number of the most successful farmers are now linked to the Internet but the Internet, e-commerce and even e-mail have not entered the lives of most, and almost none in the impoverished rural and remote areas have sampled this modernity. Electrification in rural Vietnam has gone forward rapidly in recent years but rural incomes are nowhere near high enough for farming families to afford a computer. How to help these farmers access the Internet to get what is essentially free information while they lack both money and know-how is a problem that has thus far stumped policy-makers.

In some rural areas computers are popularly used but most farmers don’t know what information is available or how to find it. Those working at the communal cultural post centers might help them, or they might not. While some post offices do get linked to the Internet, the system might work for a very short time, until it has what computer people everywhere experience as ‘a problem’. The post center employees generally can’t get it working and the computer just sits, unused.

Poor Vietnamese farmers as a rule don’t have the minimum skills required to use any kind of IT equipment. Deputy head of the Ministry of Trade’s E-business Department, Tran Thanh Hai, said they are just barely literate. But they should be encouraged to take IT training courses and those who do well should be offered loans to buy computers. Collective organizations such as cooperatives, farmer associations and communist youth unions could help farmers to become aware of the benefits that the Internet and e-business can bring. They could offer courses and ask teachers to help farmers learn the necessary computer skills. Computer businesses could be given incentives to sell at preferential prices. Communal people’s committees could offer a place that is computer equipped, such as a communal cultural post center, to teach farmers about online trading.

The director of an information center under the Agricultural Policies Institute, Pham Quang Dieu, said that the Internet could help farmers increase production and improve their lives in many ways. Naturally, the computer is just a tool. It could be a window to information, a means to reach customers, or a compulsion as bored rural youth find the empty excitement of games. It’s a mixed bag, the benefits and the drawbacks, but our rural people want to climb up just as much as do those in the cities.

Chapter 2

The Dominant Paradigm

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The next case study describes an ongoing and rapidly expanding initiative in south Asia that uses computers and a farmer's home as the "last mile" in an extension system. The initiative uses a traditional choupal (gathering place) along with modern digital information technologies to change the way small farmers interact with the marketplace. The innovation was devised by ITC Ltd., a private company in India. The "E-Choupal" system was the winner of the 2005 Development Gateway Award, which recognized ITC Ltd.'s impact in enabling millions of farmers in India to improve their livelihoods with access to information about growing and marketing their agricultural products. As reported in the "What Works" case study series prepared by a consortium of business schools at Columbia University, Michigan and the University of North Carolina, the ITC places computers in rural farming villages, typically housed in the home of one of the farmers. The "E-Choupal" system was the winner of the 2005 Development Gateway Award, which recognized ITC Ltd.'s impact in enabling millions of farmers in India to improve their livelihoods with access to information about growing and marketing their agricultural products. As reported in the "What Works" case study series prepared by a consortium of business schools at Columbia University, Michigan and the University of North Carolina, the ITC places computers in rural farming villages, typically housed in the home of one of the farmers.

WHAT WORKS

ITC's E-Choupal and Profitable Rural Transformation: Web-based Information and Procurement Tools for India Farmers

Agriculture is vital to India. It produces 23% of GDP, feeds a billion people, and employs 66% of the workforce. Because of the Green Revolution, India's agricultural productivity has improved dramatically. Yet most farmers have remained quite poor. The causes include remnants of scarcity-era regulation and an agricultural system based on small, inefficient landholdings. The agricultural system has traditionally been unfair to primary producers. For example, soybeans are an important crop in India, yet they have been exempted from India's Small Scale Industries Act to allow for processing in large, modern facilities. Yet 90% of the soybean crop is sold by farmers with small holdings to traders, who act as purchasing agents for buyers at the local, government-mandated marketplace, called a mandi. Farmers have only an approximate idea of price trends and have to accept the price offered at auctions on the day that they bring their grain to the mandi. As a result, traders are well-positioned to exploit both farmers and buyers through practices that sustain system-wide inefficiencies.

ITC is one of India's leading private companies, with annual revenues of US$2 billion. Its International Business Division was created in 1990 as an agricultural trading company; it now generates US$150 million in revenues annually. The company has initiated an e-Choupal effort that places computers with Internet access in rural farming villages. The e-Choupals serve as both a social gathering place for exchange of information (choupal means "gathering place" in Hindi) and an e-commerce hub. What began as an effort to re-engineer the procurement process for soy, tobacco, wheat, and other cropping systems in rural India has also created a highly profitable distribution and product design channel for the company—an e-commerce platform that is also a low-cost fulfillment system focused on the needs of rural India. The e-Choupal system also catalyzes rural transformation that is helping to alleviate rural poverty. This case analyzes the e-Choupal initiative for soy, efforts in other cropping systems (coffee, wheat, and shrimp aquaculture), while different in detail, reflect the same general approach.

Asia, that has historically been divided and exploited by the last mile. This is an extension system. The initiative uses a traditional choupal (gathering place) along with modern digital information technologies to change the way small farmers interact with the marketplace. The innovation was devised by ITC Ltd., a private company in India. The "E-Choupal" system was the winner of the 2005 Development Gateway Award, which recognized ITC Ltd.'s impact in enabling millions of farmers in India to improve their livelihoods with access to information about growing and marketing their agricultural products. As reported in the "What Works" case study series prepared by a consortium of business schools at Columbia University, Michigan and the University of North Carolina, the ITC places computers in rural farming villages, typically housed in the home of one of the farmers.
BUSINESS MODEL

A pure trading model does not require much capital investment. The e-Choupal model, in contrast, has required that ITC make significant investments to create and maintain its own IT network in rural India and to identify and train a local farmer to manage each e-Choupal. The computer, typically housed in the farmer’s house, is linked to the Internet via phone lines or, increasingly, by a VSAT connection, and serves an average of 600 farmers in 10 surrounding villages within about a five kilometer radius. Each e-Choupal costs between US$3,000 and US$6,000 to set up and about US$100 per year to maintain. Using the system costs farmers nothing, but the host farmer, called a sanchalak, incurs some operating costs and is obligated by a public oath to serve the entire community; the sanchalak benefits from increased prestige and a commission paid him for all e-Choupal transactions. The farmers can use the computer to access daily closing prices on local mandis, as well as to track global price trends or find information about new farming techniques—either directly or, because many farmers are illiterate, via the sanchalak. They also use the e-Choupal to order seed, fertilizer, and other products such as consumer goods from ITC or its partners, at prices lower than those available from village traders; the sanchalak typically aggregates the village demand for these products and transmits the order to an ITC representative. At harvest time, ITC offers to buy the crop directly from any farmer at the previous day’s closing price; the farmer then transports his crop to an ITC processing center, where the crop is weighed electronically and assessed for quality. The farmer is then paid for the crop and a transport fee. “Bonus points,” which are exchangeable for products that ITC sells, are given for crops with quality above the norm. In this way, the e-Choupal system bypasses the government-mandated trading mandis. Farmers benefit from more accurate weighing, faster processing time, and prompt payment, and from access to a wide range of information, including accurate market price knowledge, and market trends, which help them decide when, where, and at what price to sell. Farmers selling directly to ITC through an e-Choupal typically receive a higher price for their crops than they would receive through the mandi system, on average about 2.5% higher (about US$6 per ton). The total benefit to farmers includes lower prices for inputs and other goods, higher yields, and a sense of empowerment. The e-Choupal system has had a measurable impact on what farmers chose to do: in areas covered by e-Choupals, the percentage of farmers planting soy has increased dramatically, from 50 to 90% in some regions, while the volume of soy marketed through mandis has dropped as much as half. At the same time, ITC benefits from net procurement costs that are about 2.5% lower (it saves the commission fee and part of the transport costs it would otherwise pay to traders who serve as its buying agents at the mandi) and it has more direct control over the quality of what it buys. The system also provides direct access to the farmer and to information about conditions on the ground, improving planning and building relationships that increase its security of supply. The company reports that it recovers its equipment costs from an e-Choupal in the first year of operation and that the venture as a whole is profitable.

In mid-2003, e-Choupal services reached more than 1 million farmers in nearly 11,000 villages, and the system is expanding rapidly. ITC gains additional benefits from using this network as a distribution channel for its products (and those of its partners) and a source of innovation for new products. For example, farmers can buy seeds, fertilizer, and some consumer goods at the ITC processing center, when they bring in their grain. Sanchalaks often aggregate village demand for some products and place a single order, lowering ITC’s logistic costs. The system is also a channel for soil testing services and for educational efforts to help farmers improve crop quality. ITC is also exploring partnering with banks to offer farmers access to credit, insurance, and other services that are not currently offered or are prohibitively expensive. Moreover, farmers are beginning to suggest—and in some cases, demand—that ITC supply new products or services or expand into additional crops, such as onions and potatoes. Thus farmers are becoming a source of product innovation for ITC.
DEVELOPMENT BENEFIT
The e-Choupal system gives farmers more control over their choices, a higher profit margin on their crops, and access to information that improves their productivity. By providing a more transparent process and empowering local people as key nodes in the system, ITC increases trust and fairness. The increased efficiencies and potential for improving crop quality contribute to making Indian agriculture more competitive. Despite difficulties from undependable phone and electric power infrastructure that sometimes limit hours of use, the system also links farmers and their families to the world. Some sanchalaks track futures prices on the Chicago Board of Trade as well as local mandi prices, and village children have used the computers for schoolwork, games, and to obtain and print out their academic test results. The result is a significant step toward rural development.

KEY LESSONS
The e-Choupal model demonstrates that a large corporation can play a major role in recognizing markets and increasing the efficiency of an agricultural system, while doing so in ways that benefit farmers and rural communities as well as shareholders. The case also shows the key role of information technology—in this case provided and maintained by a corporation, but used by local farmers—in helping bring about transparency, increased access to information, and rural transformation. Critical factors in the apparent success of the venture are ITC’s extensive knowledge of agriculture, the effort ITC has made to retain many aspects of the existing production system, including maintenance of local partners, the company’s commitment to transparency, and the respect and fairness with which both farmers and local partners are treated.

In 2005, ITC added health services to its network of Internet kiosks. ITC reports that it adds six new eChoupals every day, and intends to scale-up to 100,000 villages in 15 states by 2010.18

Agricultural extension has come a long way since the time when hieroglyphics were used as information sources for farmers. While the use of information and communication technology can reinforce the traditional top-down communication pattern that reflects the dominant paradigm, the potential exists for modifying traditional flows of information. For example, farmers can interact more directly with expert sources to ask questions, report field conditions, or make suggestions—providing the system’s participants are open to these kinds of interactions. Equally important, innovations such as the eChoupal demonstrate the possibility of a shift in power. Evidence from the case studies in this chapter suggests that greater access to information and greater transparency in economic dealings help farmers counter corruption in traditional agricultural marketing systems that are detrimental to them. Farmers and their families also gain strength from greater access to agricultural technology and to health, education and public services.

eChoupal, an expanding rural communication institution

Photo: V. V. Rajasekar
Chapter 3

PARTICIPATION IN DEVELOPMENT PROGRAMS

Participation is one of the major concepts in the development literature. Some people consider it to be a major strategic ingredient in development programs with emphasis on including as much participation as possible. For example, more than 20 years ago, the UN's Economic and Social Council recommended that governments adopt popular participation as a basic policy in their national development strategies and "encourage the widest possible active participation of all individuals and national non-government organizations such as trade unions, youth and women's organizations in the development process in setting goals, formulating policies, and implementing plans." The 1978 Alma Ata declaration of "Health for All by the Year 2000" contained the very clear message that achievement of that goal depended heavily on adopting primary health care as a strategy, an approach that called for greater attention to prevention, as compared to curative practices, which, in turn, meant greater responsibility (participation) of the general population in their health affairs.

A document from the Food and Agriculture Organization (FAO) of the UN links the idea of participation with communication:

Development communication rests on the premise that successful rural development calls for the conscious and active participation of the intended beneficiaries at every stage of the development process; for in the final analysis, rural development cannot take place without changes in the attitudes and behavior among the people concerned.

Participation is linked with development communication because communication is a vital part of the process of promoting the participation idea among various disadvantaged populations and other stakeholders because participation is not necessarily a natural or spontaneous characteristic of human beings. In a project in Guatemala where we attempted to obtain local participation in deciding on programs for a new community radio broadcasting station that we were building, one response we received went like this: "We're not used to being asked what we think; come back another day and maybe I can help."

Participation may be important in the process of designing and implementing communication interventions. For example, a training and communication project in Honduras successfully involved rural women and adolescents in (1) deciding what content was important, (2) writing and producing material for audio recording, and (3) diffusing the recordings among people in the Honduran community.

Some of the characteristics of the participatory approach include:

1- The participatory model sees people as the controlling actors or participants for development. People will have self-appreciation instead of self-depreciation. Development is meant to liberate and emancipate people. Local culture is respected.
2- The participatory model sees people as the nucleus of development. Development means lifting up the spirits of a local community to take pride in its own culture, intellect and environment. Development aims to educate and stimulate people to be active in self and communal improvements while maintaining a balanced ecology. Authentic participation, though widely espoused in the literature, is not in everyone's interest. Such programmes are not easily implemented, highly predictable, or readily controlled.
3- The participatory model emphasizes on the local community rather than the nation state, on monistic universalism rather than nationalism, on spiritualism rather than secular humanism, on dialogue rather than monologue, and on emancipation rather than alienation.
4- Participation involves the redistribution of power. Participation aims at redistributing the elites' power so that a community can become a full-fledged democratic one. As such, it directly threatens those whose position and/or very existence depends upon power and its exercise over others. Reactions to such threats are sometimes overt, but most often are manifested as less visible, yet steady and continuous resistance.

2 The Declaration of Alma Ata is available at http://www.who.int/hpr/NPH/docs/declaration_almaata.pdf.
5 J. Servaes, Communication for Development Approaches," in J. Servaes (ed), Approaches to Development,
The World Bank and participation

The World Bank, whose dominance in the financing of development projects gives it substantial influence in shaping interventions, focused its attention on participation in the 1990s when it launched a Bank-wide Learning Group on Participatory Development. The outcome was an action plan to “mainstream” its support of participation and to shift its institutional culture and procedures to accommodate the policy. In its analysis, deliberations and final report, the Group defined participation as a process through which stakeholders influence and share control over development initiatives, decisions and resources which affect them. In this context, “stakeholders” refers to the variety of persons, families, and organizations that play roles in development interventions, with particular emphasis on the people toward whom the development projects are directed.

One of the Bank’s main motivations for mainstreaming a participatory approach seems to lie in its conclusion that the benefits of development efforts are more likely to be sustained when the ultimate clients are involved in designing and implementing the work involved. Also, the Bank cites the value of learning from the knowledge and perspectives of stakeholders, but especially from the poor. The Bank suggests that as participation increases, this vital information – not usually in the public domain – becomes available and the voices of interested parties can help make governments more accountable. Based on the Learning Group’s analysis it identified the potential benefits of increased stakeholder participation:

1. a check on the relevance, especially to the poor, and on the appropriateness of the processes and products of development efforts;
2. increased commitment and stakeholder ownership of policies and projects, thus a willingness to share costs and an interest in sustaining the benefits;
3. greater efficiency, understanding, and better planning, based on the concerns and ideas of a wide range of stakeholders;
4. a better match between human capabilities and physical capital investment;
5. greater transparency and accountability and improved institutional performance;
6. enhanced information flows which allow markets to function more efficiently;
7. increased equity by involving the poor and disadvantaged in development efforts;
8. strengthened capacity of stakeholders as a consequence of their involvement in the process of development efforts (p. 5).

The Bank acknowledges that there are costs to taking a participatory approach to project development and implementation, but on balance the benefits outweigh the costs. But what are the potential costs? The Bank identifies several:

1. the up-front financial, time, and opportunity costs to the Bank and stakeholders of identifying and engaging with each other;
2. the difficulty of ensuring that stakeholder groups are representative – and are expressing the real priorities – of the people they are assumed to represent;
3. the risk of generating or aggravating conflicts among stakeholders with different priorities and interests;
4. risks of raising expectations that may prove impossible to fulfill;
5. co-optation of the participation process by powerful and more articulate elites to the exclusion of the poor and disadvantaged (p. 6).

To the Bank’s list of costs we add the following:

6. the potential of increasing people’s frustration resulting from delays caused by the participatory process in launching or modifying programs;
7. the cost of changing the culture of stakeholders, including those of ministries, communities, etc.
8. the risk of reducing program quality because of pandering;
9. the risk of manipulation passing for participation.


7 For the Bank, key stakeholders are the poor “who often lack information and power and tend to be excluded from the development process” (p. 3). Other stakeholders might include NGOs, public interest groups, organizations that act on behalf of the poor, private sector businesses, and those who might be disadvantaged by development projects. The stakeholders for any particular project will depend on the situation and the types of activities that are proposed.

8 Sharing costs may mean contribution by the community of resources and effort.
Mainstreaming participation

The World Bank has a portfolio of approximately 2,000 projects. It has estimated that it would cost US$30 million to implement its plan to increase participatory approaches among the development activities of countries who borrow from the Bank for development purposes. The mainstreaming effort would include:

1. Working with borrowing clients (that is, governments) to encourage and help them build participatory approaches into processes and projects that can benefit from stakeholder involvement;
2) Molding the organizational climate and skills within the World Bank itself to aggressively consider participatory approaches in planning and supervising Bank-supported projects.

The specific mechanisms for implementing the mainstreaming include dialoguing with borrower governments, technical assistance, incentives within the Bank's personnel policies, research and analysis on participation, promotion of participation in international forums, "bureaucratic re-orientation" training of Bank staff, and enhancement of the Bank's supervision of its projects.

Following are excerpts from the World Bank's policy document that explains the importance of participatory approaches in Bank operations. As you read the document, detect the situations where the need for communication is implicit and important, and suggest scenarios for specific communication interventions.

LESSONS FROM BANK EXPERIENCE IN PARTICIPATORY DEVELOPMENT:

...37. To identify the lessons of Bank experience, case studies of participatory Bank-supported activities, including both lending and non-lending operations, have been completed. A number of these studies addressed some or all of the twenty-one questions set at the beginning of the participatory development learning process.... The analysis below aggregates these findings. After a brief analysis of the costs, risks and benefits of participation, this section addresses the questions
(i) what conditions favor participatory development in Bank-supported activities;
(ii) what are the main factors which limit the success of Bank-supported participatory initiatives; and
(iii) what strategies have proven successful in overcoming these obstacles and enabling successful implementation of participatory Bank-supported activities.

Costs and Benefits of Participatory Approaches

38. The quantifiable costs to the Bank of using participatory approaches in lending operations are largely incurred during preparation and early supervision. A recent survey of the participation-related costs of 42 Bank-financed participatory projects revealed that the most costly element of participatory preparation was the salary costs of professionals skilled in participation -- Bank staff and consultants -- on [field] missions and at headquarters. The total number of staff weeks required for the design phase of participatory projects was on average 10% to 15% more than that needed for non-participatory projects. Costs were often covered by sources of funding outside of Bank resources -- several participatory projects financed as much as 50% of the total staff during preparation from trust funds; recipient governments or communities often absorbed the costs of workshops and seminars through their budgets or Project Preparation Facility-type funding. The increment in staff time varies with the nature and extent of the participatory approaches used and the level of experience and support on the part of the Borrower. More time is spent on preparation when participatory approaches are new to the Borrower where the Bank needs to convince the Borrower of the value of such approaches and when extensive institutional assessments are required. Similarly, preparation time may be longer when the level of participation sought is higher. A forestry sector project in Pakistan, for example, will include a stage in which the project plans are discussed in dozens of villages. These plans will then be revised in response to villagers’ reactions, and the modified versions will be presented to them for a second review. A process such as this may add months of elapsed time to the preparation phase of a program although the costs to the Bank in terms of applied time may not be significantly higher in such cases. In this same survey, the task managers interviewed concluded that elapsed time for participatory projects up to Board approval does not, on average, differ significantly from the non-participatory program.

Advocacy And Interventions

A Bank-financed participatory extension program in Thailand achieved sustainable positive impacts by

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improved livelihood, he eventually resigned his leadership position and left the organization altogether.

42. More qualitative, perceived "cost" factors related to the Bank adopting participatory approaches have

been noted. For participatory ESW [Economic and Sector Work], these include: partial relinquishing of

control over the process and conclusions (although this perceived cost can reflect successful shared

ownership); the possibility that the agenda originally planned will be changed by the stakeholders involved

(causing delays for the manager); and a possible reduction in the technical quality of some of the work, to

the extent it is taken seriously by client governments, and to the extent it fits Bank requirements.

43. Possible participation-related costs to the Borrower in Bank-supported operations include the use of a

proportion of the project loan to finance participatory activities such as workshops and field visits, extra time

spent in negotiating with other stakeholder groups; and partial yielding of control during design and

implementation. The costs of the participation of the poor are generally measured in terms their added time

spent on organizational matters (attending meetings, discussing priorities, resolving conflicts, etc.), and any

cost-sharing contribution they make, which sometimes may be considered large. For example, in a

Bank-financed irrigation rehabilitation project in Sri Lanka, a member of a farmer organization who served

as a representative to the district canal organization was forced to rent out his land because he found it

impossible to perform all the tasks of both producer and farmer representative. Unable to maintain his

livelihood, he eventually resigned his leadership position and left the organization altogether.

44. The benefits of participatory approaches in lending operations are most often evidenced as

improvements in the quality, effectiveness and sustainability of the development effort. The Annual Review

of Evaluation Results 1992 by the Bank's Operations Evaluation Department (OED) listed borrower

ownership and beneficiary participation as two important features of the 24 lending operations classified as

"outstanding."

45. A statistical analysis of evaluations of 121 rural water supply projects surveyed throughout Asia, Africa

and Latin America, supported by 18 international agencies including the Bank, revealed "beneficiary

participation as the single most important factor in determining overall quality of implementation." The

results established that participation (by women as well as men) was a significant contributor to overall

project effectiveness as well as to the proportion of water systems in good condition, overall economic

benefits, percent of target population reached, and environmental benefits. The analysis also

demonstrated that beneficiary participation was the single most important factor contributing to increased

access and control over water resources. It also resulted in community members acquiring new

water-related and organizational skills, and strengthened community organizations which went on to

undertake other development activities.

46. Other observed benefits of participation in case studies of Bank-financed projects include:

* an increased uptake of project services. When farmers have been involved in the identification of

agricultural extension priorities, they are more likely to adopt the associated extension packages. A cotton

project in Burkina Faso, which had a participatory focus, showed an almost fourfold increase in the number

of farmers affected by the extension programs and a doubling of cotton production during the same period.

A Bank-financed participatory extension program in Thailand achieved sustainable positive impacts by
working closely with hill tribe communities in defining investment and production priorities, including the use of group problem census techniques;

- **decreased operational costs.** When village level water communities were given responsibility for water pump maintenance in a rural water supply project in Cote d'Ivoire, the annual maintenance costs were reduced to less than half those incurred during the previous centralized system, and breakdown rates of hand pumps managed by water committees were 11%, compared with a 50% breakdown rate for other water points. In the Philippines, operational and maintenance costs of irrigation system managed by farmer associations were found to be significantly lower than those for centrally-managed system due to cost-sharing contributions and policing by the associations.

- **an increased rate of return.** In Nicaragua's municipal development project, the quality of completed civil works in barrio upgrading was due in part to the active participation of the direct beneficiaries in overseeing the operation" according to the Project Completion Reports. This primary stakeholder participation contributed to a rate of return which was 50% more than appraised, and the planned 5-year project was completed in 3½ years; and

- **increased incomes of primary producers.** In the Philippines national irrigation project, the establishment of farmers organizations to manage some of the systems resulted in those farmers gaining better access to agricultural inputs, thus increasing the dry season rice yield and increasing the net incomes of farmers by an average of 50%, the greatest gains achieved by farmers at the tail-end of systems. In India, some women's groups which were formed as part of a community-based health care program in Tamil Nadu went on to work together to produce and sell food.

### Conditions Affecting Participatory Development Within Borrowing Countries

47. Comparative analysis of diverse experiences with participation shows that three conditions within borrowing countries will largely determine the feasibility of participatory development approaches in Bank-supported activities. These conditions are:

- A favorable system of governance usually including the presence of participatory decision-making structures and a relatively open relationship between government and stakeholder groups.
- Financial and organizational capacities for participation including strong local level organizational capacity; capable organizations representing the poor; and strong capacity of local level development workers and government at central and local level.
- Previous experience with participatory approaches including a history of participatory approaches within the implementing agency(ies) and top level officials supportive of participatory approaches.

### Constraints on Participatory Development

48. In addition to the absence of one or more of the above general conditions, a number of more specific factors can limit the successful implementation of participatory development initiatives. Four kinds of limitations have been encountered in participatory Bank-supported activities:

1. Bank institutional constraints;
2. borrowing government institutional constraints;
3. political constraints; and
4. shortcomings of the processes supporting the development effort.

49. The Bank's own institutional procedures and characteristics place a number of constraints on the implementation of participatory approaches. Some of the most common constraints include:

1. interpretation of procurement and disbursement procedures in ways that limited flexibility, causing difficulties and delays in community level activities;
2. the limited field presence of Bank staff to establish good rapport with local organizations and to monitor the performance of implementing agencies;
3. the lack of clear guidance, incentives, and, in some cases, support, for task managers to carry out participatory work; and
4. the pressure to maintain project processing schedules, restricting the time available for project preparation often leading to subsequent problems when physical infrastructure is in place before sufficient organizational capacity has been developed and, ultimately, decreasing the level of participation achieved. For example, a Bank-assisted water supply project in Tanzania listed "full participation of villages in all project activities" as a prime objective. However, with yearly targets for the number of wells constructed and a low level of demand from villages, construction crews eventually did everything themselves so as not to "slow down implementation progress."
50. Institutional characteristics of borrowing governments cause problems in participatory projects when:
(i) the staff of government implementing agencies are resistant to the required changes in their mode of working to accommodate participatory approaches. As one high level government official stated during a participation study, “delegating powers is a red light for the department -- no one would like to support anything that reduces their overall control or status;”
(ii) there is a lack of staff with appropriate participation-related skills in technically-oriented agencies;
(iii) a participatory project relies too heavily on the commitment of specific government officials, and these people move or their area of responsibility changes; and
(iv) the borrowing government and stakeholder organizations view each other with suspicion. These problems were reflected in health sector strategy work in Guinea when officials in the Health Ministry were startled that the task manager wished to consult broadly in the countryside, initially judging consultations with “illiterate villagers a complete waste of time.”

51. Political constraints which have limited the success of Bank-financed participatory projects include:
(i) the absence of representative structures both at the national and the community level, including the problem of co-optation by local elites;
(ii) situations of conflict between different local level groups over resources where participatory efforts may be seen to favor one group over another;
(iii) weak capacity of local organizations, in terms of their financial or legal status, their technical or managerial capacity, or qualities of leadership; and
(iv) partisan politics and political manipulation, especially in the lead-up to elections. For example, in the case of a participatory integrated rural development project in Ecuador, the government was suspicious of second level campesino organizations as representing opposition political groups and of NGOs as opponents of official policies.

52. Shortcomings in the process by which participatory Bank-supported activities have been undertaken include:
(i) implementation responsibility divided up among several special agencies which have not collaborated with each other in the past;
(ii) insufficient training given to project staff who are unfamiliar to working with stakeholder organizations, and insufficient incentives offered to these organizations to become involved in the process;
(iii) insufficient efforts to raise the awareness of the borrowing government about the value of participatory approaches, limiting their sense of ownership and the sustainability of the effort;
(iv) problems in identifying representative stakeholder groups; and
(v) inadequate attention to involving women and the poor in the process, limiting the overall success of the project.

Successful Strategies for Participatory Development Initiatives

53. Evidence from case study material produced as part of the learning process, additional Bank documents and conversations with task managers have shown a number of ways in which the above constraints have been tackled or minimized by task managers and others responsible for designing and implementing participatory activities.

54. Successful strategies which have been used to tackle some of the institutional constraints of the Bank include:
(i) adopting a more flexible approach to project development;
(ii) using a variety of innovative funding mechanisms, usually involving some form of intermediary organization as a channel for funds to communities as in many social funds;
(iii) task managers maintaining a close field presence and getting acquainted with some primary stakeholder organizations; and
(iv) task managers mobilizing extra resources (including the Japanese and other trust funds) to supplement the limited resources normally available in the Bank for project preparation. However, it should be noted that this search for funds is itself not without costs. One task manager reported that, while ten years ago he spent only a negligible amount of time generating extra resources for project preparation, he now spends about one-third of his time on this.

55. Some institutional constraints of borrowing governments have been overcome by:
(i) encouraging an appropriate decentralization of authority to local levels of administration and elected authorities supported by
(ii) undertaking and facilitating opportunities for local government administrators to interact with stakeholders; and

(iii) ensuring project staff have adequate incentives and skills to do a quality job. For example, as part of several forestry projects in Nepal, training programs are being conducted for forestry officials to facilitate greater communication and cooperation with rural forest users. Local officials have also been trained to watch for attempts by the wealthy to take control of forests from broad-based users groups and to focus on genuine elected leaders of such groups.

56. Where social and/or political factors limit participatory approaches, innovations include:

(i) starting where success is more likely -- in communities where people have already organized to achieve shared objectives, where conflicts are not a major problem, where local government officials have shown their support for participatory approaches and where the climate for participation is favorable;

(ii) building on existing programs of governmental or nongovernmental organizations;

(iii) supporting persons within governmental agencies who are pursuing participatory approaches by working with and through them; and

(iv) undertaking a thorough assessment of local organizations and designing appropriate capacity-building programs where needed. The poverty alleviation project in Albania and the Social Investment Fund in Bolivia are two examples of Bank-financed participatory initiatives where an evaluation was undertaken prior to project identification to assess community organizations particularly in relation to their ability to represent those who were intended to benefit.

57. A variety of approaches have already been adopted in the design and implementation of Bank-financed work to improve the level and quality of the participation process. These methods include:

(i) starting with a pilot phase to test the participatory mechanisms and the capacities and commitment of stakeholder organizations before mounting a full-scale effort -- as is planned in the Sindh Special Development Project in Pakistan;

(ii) inviting the participation of groups who oppose as well as those who support planned work;

(iii) sharing implementation responsibility with a range of agencies, both public and private, and encouraging a certain amount of competition between the as in a rural water supply and sanitation project in Nepal...which will make funds available to any agency -- community, private, NGO, or public -- to provide water services for the rural poor, based on a common set of transparent criteria. (Interestingly, this mechanism was developed in response to a clear lack of interest within the relevant government agency for small rural water projects);

(iv) giving local communities a choice of which organizations they wish to collaborate with;

(v) making special efforts to seek the participation of a range of community members;

(vi) requiring "participation agreements" between project agencies and participating communities to outline the activities to be undertaken and the responsibilities of each party as is the case in the Bank-supported Kampung Improvement Program in Indonesia;

(vii) requiring some contribution by beneficiaries either financial or in labor or time; and

(viii) facilitating exchanges of experience between communities by arranging field visits to successful examples of community organization. One such exchange is underway in Nepal as part of the Bank-supported hill community forestry project. This project was not initially very successful partly because many villages had not heard about the project and were unclear about the possibilities for user groups to manage forests. A local NGO has therefore been given the task of organizing scores of village meetings to advertise the government's policy on user group forest management, and to bring villagers who are unsure or skeptical about the feasibility of such mechanisms to villages where successful groups are operating in forest management.

VI. CONCLUSIONS

58. The following lessons have emerged from the participatory development learning process. They form the basis for the longer-term strategy as well as the immediate action plan put forward at the end of this report.

59. In the past, the Bank exercised a great deal of selectivity and left its borrowing clients wide latitude in deciding whether or not stakeholders would be involved in shaping Bank-assisted operations. While there is a need for much more empirical work on the costs and benefits of participation (work which DEC [Development Economics and Chief Economist Vice Presidency of the Bank] has now proposed to undertake), there is nevertheless sufficient evidence that broader stakeholder involvement is warranted in circumstances where:
60. The Bank cannot be responsible for ensuring participation on behalf of a borrower any more than it should be expected to prepare projects surveyed. Such a step would run counter to the objective of client ownership and, indeed, the Bank's Articles of Agreement. But, based on the analysis above, it is in the Bank's interest to enable and encourage borrowers to pursue more participatory approaches appropriate to their circumstances and culture in order to facilitate better policy and project-outcomes. In exceptional cases, for example where the design and implementation of a proposed project depend critically on involvement and participation of affected people and groups, and where a borrower is reluctant to invite such participation, the Bank may have some difficulty processing projects in the absence of appropriate participation in project development. This observation should not be interpreted as yet another conditionality nor as a scenario that is likely to occur often if at all. Furthermore, the shift in Bank's lending patterns (toward human resource development and environmental activities) leads more and more borrowing governments to elicit broad stakeholder involvement. In situations where the borrower is willing to invite broad stakeholder participation but does not have the capacity, the Bank should make particular efforts to help build such capabilities through greater reliance on the Project Preparation Facility and other instruments.

61. This report recognizes that there are numerous obstacles to creating an enabling environment for participation. The "participation agenda" is going to be difficult to facilitate in many developing countries, particularly since the Bank's role is to strengthen borrowing governments' ability to promote participatory approaches and not to circumvent governments. The political environment may be unfavorable and the institutions and mechanisms required are often weak or non-existent. Capacity will have to be expanded and awareness raised both inside and outside of government. A move to systematically facilitate participation will require the Bank to better understand borrowers' political and sociological environment and adopt appropriate time frames in which to build up necessary institutional capacity and experience. The Bank's experience in these areas of governance analysis and public sector management is limited and its internal capacity weak with respect to support for participatory approaches. Participation-related learning opportunities and training programs for Bank staff will, therefore, need to be greatly expanded.

62. While engaging with borrowing governments and various stakeholders is not an easy task, the most pressing challenge for the Bank is to involve the poor and other marginal groups. This requires a determined emphasis on participatory mechanisms which can directly involve the poor. The impact which the Bank can make by itself involving the poor more fully in development is limited. However, recognition is increasing about the need to help governments address directly the constraints to participation by the poor. Recognizing that the market is often the most effective promoter and medium of participation, private sector development efforts should focus more on finding new ways to reach and involve the poor. It seems timely to reconsider the Bank's role and capacity to
(i) help borrower governments make financial resources more available to poor people (by stepping up efforts in fiscal decentralization, micro-credit, vouchers, and other market mechanisms) and
(ii) to strengthen the organizational and managerial capacities of stakeholder organizations to more effectively represent the needs of their members, including the poor and disadvantaged. The Bank's capacity to help governments address both these issues will require close working relations with intermediary organizations operating at the grassroots level and appropriate expertise within Resident Missions.

63. In view of the above conclusions on the increased role which the Bank can play in adopting and promoting participatory development approaches, an immediate action plan has been developed within the context of a long-term strategy by which the Bank can re-orient its work by placing a greater emphasis on participation. What is required is the recognition that participation is "the right way of doing business." In a recent letter to staff, President Lewis Preston captured many of the key elements of the analysis above:
I believe our stakeholders would like to see a Bank that is even more effective than it is today; even more accountable for the consequences of its actions; more client-centered, responsive, agile and flexible; more concerned with results rather than intentions; committed to quality defined mainly in terms of the development impact of its operations; and measurably more efficient and cost conscious. The Bank of the future must thus be one in which our unique and remarkable professional energies are fully dedicated to the pursuit of excellence. Some of our present business practices got in the way of realizing that. While continuing to encourage borrowing governments to take ownership of the development policies and programs, the Bank also needs to encourage governments to invite participation of a much wider range of stakeholders in order to improve and sustain development efforts.

The dimensions of participation

While it appears that many involved with development, either as thinkers or doers, believe that participation per se is good, it is important to move beyond that level of generality. For example, is it important and useful to have all stakeholders participating in all aspects of a development program?

Almost three decades ago, Cornell University researchers carefully analyzed the concept and applications of "participation." Based on available data and analysis of field projects over a six year period (funded principally by the U.S. Agency for International Development), the research team concluded that participation is a multi-dimensional concept. The importance of this conclusion lies in the suggestion that planning participation into projects needs to be done strategically and according to specific circumstances, and this requires a more refined perspective of the participation concept. The following excerpt by the late John Cohen and Norman Uphoff is one of the most perceptive analyses written to date on participation, and, based on the Cornell research, provides the tools for that refinement.11

OPERATIONALIZING PARTICIPATION
Clarity through Specificity

...In the field, at the project level, it was also becoming clearer that success was critically affected by the extent of participation in various aspects of development efforts. In her review of rural-development projects in Africa for the World Bank, Uma Lele found the element of popular participation to be consistently important, noting, for example, the experience of the Special Rural Development Projects in Kenya: “the neglect of local input has had an unfavorable effect on the performance of the rural development effort.” In general, she found

Local participation may mean involvement in planning, including assessment of local needs. Even if local people do not participate in planning, at the very minimum they should be informed of the plans designed for their areas if they are expected to consent and to cooperate in program implementation. Participation in planning and implementation of programs can develop the self-reliance necessary among rural people for accelerated development.

An analysis of 50 programs for introducing technological change found that the only effective strategy for doing this was with popular participation.

Certainly, there were cases where attempts at fostering such participation were unsuccessful in terms of development outcomes and, perhaps, more often, the institutions and roles set up for participation did not really provide this. Much of what was called participation, through village development committees or consultations in village assemblies or local planning exercises, was superficial or cosmetic. Still, the climate of opinion was becoming ever more favorable toward participatory approaches. The alternative non-participatory approaches had been unsuccessful so often that practitioners were ready to try something else. The content of development efforts has also been changing to be more suitable for local initiative and management. Technology is usually simpler when more appropriate. There is support now for more reliance on labor for production and infrastructure creation, and this must ipso facto be more participatory. It has been seen that, given conditions of security and profitability, poor people can save and invest. The benefits of development are to be more broadly distributed now that economists no longer agree that this would hold back development. Such a spread of benefits appears likely to result with wider...

participation and to require it as well. There is still ground for specific criticisms and objections to participatory approaches. The evidence is not one-sided or overwhelming. But the tide of thinking has been turning. Whether it will remain ‘in’ or will go ‘out’ again remains to be seen. In part, it will depend on how clearly and effectively participation is conceived and applied.

**GETTING SPECIFIC ABOUT PARTICIPATION**

Because participation is essentially a descriptive term, including numerous different activities and situations, there is much more room for confusion about its causes and effects, and its amounts and distribution. It is necessary to be quite specific about what is meant in any particular situation if we are to speak usefully about it in regard to any particular kind of rural-development effort. This we have done elsewhere and the following is a summary of that complex exercise.

Our framework is based on the key assumption that ‘participation’ is not a thing that either exists or does not exist and which can be measured in the same way as a dam's capacity or an amount of agricultural production. While some studies treat participation as a clearly defined concept capable of measurement, we have chosen to treat it as a rubric under which a number of clearly definable elements can be assembled. While these elements can be related together under a framework called “rural-development participation,” it would be quite misleading to try to define the framework in such a way that a summary measure would result. Rather, empirical indicators of different dimensions are sought. In this sense, participation is an overarching concept best approached by looking at specific, more concrete components.

At the heart of our elaboration of rural-development participation is the distinction between dimensions and contexts of participation. Briefly, dimensions of participation concern the kind of participation which is taking place, the sets of individuals who are involved in the participatory process and the various features of how that process is occurring. The context of participation focuses on the relationship between a rural-development project’s characteristics and the patterns of actual participation that emerge. The context of participation also includes the task environment in which the project operates. This directs concern to historical, environmental and societal characteristics which frequently have a strong effect on emerging patterns of participation in a given rural-development effort. In the sections that follow the dimensions and contexts of rural-development participation will be spelled out.

**(a) Dimensions of rural-development participation**

The framework we have devised delineates three dimensions of participation. Basically, these answer the questions: what kinds of participation take place; who participates in them; and how the process of participation takes place. Each of these will be discussed below to show how it is possible to be specific about participation. The first dimension — what — is the basic one to distinguish, since participation in decision-making can be different from participation in implementation, for example. For project designers and evaluators, the second dimension — who — may be most salient since this deals with so-called target groups whose participation is to be provided for. The third — how — adds a qualitative dimension to consideration of participation, one which may be more difficult to ascertain, but which remains important for purposes of diagnosis or evaluation. It may well make a crucial difference whether the participation by a certain group of persons is voluntary or coerced, continuous or intermittent, and effective or not. What kinds and conditions of participation are relevant in a given situation will depend, of course, on certain other factors, such as the nature of the task at hand or the nature of the task environment.

**(i) What kinds of participation?**

The kinds of participation that warrant major concern are: (1) participation in decision-making; (2) participation in implementation; (3) participation in benefits; and (4) participation in evaluation. We find that the first three kinds of participation are reasonably well defined in the approaches of development assistance agencies up to now, and there appear to be no grounds for objecting to the fourth. Indeed, while participation in evaluation occurs much less frequently than the others, it deserves increased attention if development efforts are to be progressively improved, and its under-scoring here is consistent with efforts being made in the development community to introduce systematic evaluation activities.

Together, these four kinds of participation constitute something of a cycle for rural-development activity. In practice, there is seldom a consistent or complete cycle of interactions. Participation in these different activities is often quite limited or unequal. Yet they constitute a tangible set of things to focus attention on and represent the major ways in which participation in rural development can be assisted and assessed.

Participation in decision-making is what political scientists most often refer to when they think of participation, whereas administrators are likely to focus on implementation participation. On the other hand,
Participation in development programs is a key element in ensuring that rural people play an active role in the success of projects. Rural people can participate in the implementation aspects of a project in three principal ways: (1) resource contributions; (2) administration and coordination efforts, and (3) program enlistment activities.

Resource contributions can take a variety of forms, such as the provision of labor, cash, material goods and information. All such inputs are vital to projects seeking to incorporate local resources in the development enterprise. Through such participation, local people lend their labor to dig wells, give land for a school, contribute timber for the construction of the health station, the donation of tools for working on a local road, donate money for the financing of community grain storage bins or provide crucial information on such topics as crop yields, tenure arrangements, pest problems, sources of nutrition and so on.

The relationship among the three dimensions of participation is illustrated clearly with regard to resource contributions. It is particularly important to know who is contributing and how their contributions are made, whether they are voluntary, remunerated or coerced, the degree to which they are provided on an individual or collective basis and whether they occur on an intermittent or continual basis. These are particularly important questions since resource contributions can often be both unequal and exploitative.

Participation in project administration and coordination is a second way in which rural people can be involved in implementation. Here they can participate as either locally hired employees or as members of various project advisory or decision-making boards. They can also be members of voluntary associations who are playing a role in coordinating their activities with those of the project. By having local people involved in administration and coordination a project may not only increase the self-reliance of the local people by training them in techniques of project implementation, but valuable inside information and advice...
may also be gained concerning local problems and constraints affecting the given project.

Finally, perhaps the most common form of implementation participation is through enlistment in programs. It seems essential to distinguish between such enlistment and participation in benefits because enlistment does not necessarily assure benefits. Our distinction is justified by the fact that harmful consequences may result for rural people who have enlisted in project programs. For example, in a project inoculating a herd against diseases like brucellosis, the benefit is reducing morbidity in one’s cattle herd that is the benefit (if this occurs), and not the inoculations themselves. Planting HYV seed does not assure a better harvest, for the seeds may not be suited to the particular environment or they may encounter weather that nullifies their yield potential. Indeed, if the new varieties are more vulnerable to pests that strike the crop, farmers will be worse off than if they had not ‘participated’ in implementation. The result is ‘participation’ resulting in harmful consequences.

Benefits: Enlistment in a project can lead to at least three kinds of possible benefits:

(1) material; (2) social; and (3) personal. While we would agree that participation in benefits is one of the more passive kinds of participation, it has such a long tradition in the economic literature that it should not be overlooked. Perhaps the only danger in focusing on this kind of participation is that it can sometimes be quite high and lead observers to overlook the fact that participation in other important aspects of the project such as decision-making has either not occurred or has been quite limited.

Material benefits are basically private goods. They can, perhaps, be summarized as increase in consumption, income or assets. Consumption increases can result from higher yields of food grain, and income benefits can result from the sale of surplus production. Increased assets can be seen in the acquisition of land, livestock, implements, improved farm dwellings, savings and so on. As with all other aspects of participation discussed in this paper, it is essential to break down aggregate data on material benefits by analyzing who is participating and the process by which it is occurring.

Social benefits are basically public goods. They are usually characterized as services or amenities such as schools, health clinics, water systems, improved housing and better roads. Increasingly, as rural-development projects are designed to be more ‘integrated,’ and as efforts are increased to improve the ‘quality of life’ for poorer sections of the population, there will be more need to assess participation in such benefits. Particular attention should be given to the amount, distribution and quality of these services and amenities.

Personal benefits are usually greatly desired though often not attained on an individual basis, coming rather to members of groups or sectors as these acquire more social and political power through the operation of a project. We term them ‘personal’ benefits to distinguish them from ‘material’ and ‘social’ benefits, but this does not imply that they are necessarily ‘individual’ in their causes or effects. Among several possible project-generated benefits of this sort, three kinds appear particularly important: self-esteem, and sense of efficacy, including political power. It is essential that the focus on benefits does not lead to a frame of reference that overlooks the large number of possible harmful consequences that can follow from participation in a project. These range from seeds that do not germinate or cross-bred dairy cattle that do not survive to the erosion of the local culture or the eviction of tenant farmers. While harmful consequences tend to be obvious to many careful observers, they are often not studied in the same way that benefits are. As suggested earlier, we concluded that in attempting to assess participation in benefits, harmful consequences should also be studied. If they are, any differential rates of participation in them will be significant data to determine. The main concern will be who is participating in adverse outcomes of the project. Once this is known, one will want to try to establish why so that remedies can be found, if possible, and can be built into a redesigned project.

Evaluation: Because there is little written – or actually accomplished – on participation in evaluation, it is difficult to conceptualize how this kind of participation might best be analyzed and measured. Still, it appears that there are three major activities through which rural people can participate in project evaluation. Direct or indirect participation can occur in relation to actual project-centered evaluation. If there is any formal review process, one would want to know who participates in it, how continuously, with what power to achieve action on suggestions and so on. There may be informal consultation only, in which case we would want to know the same kinds of things. Most probably, unless specifically provided for in the project design, there will be no direct or indirect evaluation in which local people or local leaders can participate. Government personnel may themselves participate in annual budget reviews that fulfill a certain kind of
evaluative function, but local level officials are generally not involved. It is more likely that whatever local efforts and involvement in project evaluation there will occur through political activities of one sort or another. Where there are elected officials such as members of parliament, local people and/or local leaders can voice complaints and suggestions through this channel. Possibly participation in elections at local, regional or national (constituency) level can provide some opportunity for favorable or unfavorable local evaluations to be fed into policy processes. Such inputs, however, are likely to be rather gross, reflecting simply dissatisfaction or satisfaction with what the project has accomplished.

Where there are no participatory political processes available, local people and/or local leaders can engage in lobbying activities possibly through some organization like a cooperative or peasant league – to communicate their views to the project or the government. Alternatively, though not necessarily more effectively, there can be demonstrations or protests if dissatisfaction is high enough to try to force officials to give attention to local grievances. Indeed, sustained conflict and violence have been stimulated by some projects. When any of these activities occur, they should be studied to determine if they provide important indirect evaluation of the project or reflect other issues in the task environment. If the former, the content of the protest as well as the characteristics of those making it should be the subject of inquiry.

Less direct would be participation in evaluative activities that aim at influencing public opinion with the hope this will have the desired ramifications for continuation or possible modification of a project. Usually such efforts seek to use the media, for example, through a ‘letter to the editor,’ to promote a favorable or unfavorable opinion of the project or to suggest some improvement. This is a very diffuse approach, but it might be regarded as one possible form of participation in evaluation and as better than no such participation at all.

(ii) Who participates?

The participation about which most development agencies and governments are concerned then days is that of the ‘rural poor’ or the ‘poor majority.’ If they are considered in such an aggregated mass, it is very difficult to assess their participation in any respect, since they are a large and heterogeneous group. Their being considered as a group is not, indeed, something they would themselves be likely to suggest. There are differences in occupation, location, land tenure status, sex, caste, religion or tribe which are related in different ways to their poverty. To talk about ‘the participation of the rural poor’ is to compound one complex and ambiguous term with another even more complicated and amorphous. If we want to deal usefully with the problems of the rural poor, we need to begin making some analytical distinctions among them.

Our framework begins with a differentiated and flexible scheme intended to analyze the entire rural community in general as well as important groups such as the rural poor. We would distinguish four general types of participants whose characteristics warranted specific attention. Depending on the setting and the goals of the project, certain characteristics of participants would be more significant than others. We would distinguish: (1) local residents; (2) local leaders; (3) government personnel; and (4) foreign personnel. Each of these sets of persons can be subdivided into a number of groups. Moreover, they can be further classified with regard to a number of important background characteristics which are known to be essential to the analysis of individual participation.

The first two sets of people are those who have local roots, whereas the last two are, to varying degrees, outsiders. Local residents form a residual category. It includes a large and heterogeneous group made up of self-sufficient farmers, tenants of landowners, farm laborers, herdsmen, craftsmen and so on. It is this group of people who are usually the target of a rural-development project. Local leaders have a long-run involvement in the area in which they work. Usually they are people who are considered local elites, such as landowners, merchants and professionals. The definition of what a local leader is will vary from area to area. Basically there are three types of such leaders: (1) informal leaders, such as clan chiefs, religious figures, influential professionals and local notables; (2) associational heads elected or appointed for a formal organization, such as a co-operative league president, the chairman of a voluntary association or the leader of a local trade union; or 3) local office holders, such as headmen, elders, mayors or tax-collectors. Sometimes the nature of officeholding, given requirements to uphold government interests, makes it difficult to distinguish such local leaders from government personnel.

Government personnel are assigned to an area for a certain period of time. Even if they are from the local area, their career rests with the bureaucracy at the center, and their future is not usually determined by what happens in the area. This being the case, they are subject to transfer. They usually have higher education and social status than do locals. It is important to look at the participation levels of these people to evaluate
Incentives to participation are particularly important to consider. Usually one looks to see if the participation the opposite trend may emerge. Programs, one frequently finds an increasing number of initiatives come from the grassroots level, though project staff, from local or national officials or from foreign personnel; basically, this particular characteristic the structure people have to obtain the results which they intend to obtain from their involvement in decision-making and implementation. Finally, it will usually be useful to consider: (7) empowerment; how much capacity people have to obtain the results which they intend to obtain from their involvement in decision-making and implementation.

Each of these background characteristics can be subdivided and amplified in a number of ways. Perhaps the best illustration of this would be the division of the occupational characteristic into agriculturalists and non-agriculturists. Here, important distinguishing features may be: 1) size of holding; (2) ownership status; or (3) percentage of income from agricultural production only. Likewise, one could distinguish among (1) large-scale landowners; small-scale owner-cultivators; (3) tenants, either renters or sharecroppers; and (4) agricultural laborers. Even tenants might be subdivided into those without permanent leases and those who have considerable security on the land. And, non-agriculturists might be subdivided in a similar way into (1) businessmen; (2) artisans or craftsmen; (3) professionals; (4) day labor or domestic servants; (5) students; and so on into a number of relevant classifications. This kind of breakdown could be applied to any of the suggested background characteristics. The degree to which one engages in such a break-down depends on the type of project one is evaluating and the important characteristics related to that project. Several principles are involved in deciding which information to gather for assessing who participates in what activities. First, not all of these characteristics are relevant for all projects. Obviously, age and sex would be crucial for a family-planning program, while one might want to know whether certain ethnic minorities or immigrant groups or casual laborers and their families were using health facilities. Second, often the data are not readily available for making some of these distinctions, though some fairly simple, even observational data can be used to make meaningful categories. Finally, where persons are using services such as schooling, credit or clinics, the data on participant characteristics can be gathered. Rather than complete enumerations, simple sampling (like three random days a month) can be done. Where surveys are conducted, most of the information on characteristics can be obtained.

(iii) How is participation occurring?
The how dimension adds something qualitative to the analysis of participation. Attention to it generates insights into such questions as why participation takes place, continues or declines, and why it has particular patterns. The amount, distribution and trends of participation can be assessed by looking at the who and what dimensions. But one would not want to be oblivious to the ways in which participation is occurring, such as: (1) whether the initiative for participation comes mostly from above or from below; or (2) whether the inducements for participation are more voluntary or coercive. It may be relevant to analyze and compare over time; (3) the structure; and (4) the channels of participation, whether it occurs on an individual or collective basis, with formal or informal organization and whether it is direct participation or indirect representations. Further consideration should often be given to: (5) the duration; and (6) the scope of participation, whether it is once-and-for-all, intermittent or continuous, and whether it extends over a broad or narrow range of activities. Finally, it will usually be useful to consider: (7) empowerment; how much capacity people have to obtain the results which they intend to obtain from their involvement in decision-making and implementation.

It is important to focus on who instigates participation. Does the initiative come from the grass roots or from the national center? More specifically, does it flow from the people themselves, from local leaders, from project staff, from local or national officials or from foreign personnel; basically, this particular characteristic focuses on the distinction between top-down and bottom-up initiative in the same project. In project programs, one frequently finds an increasing number of initiatives come from the grassroots level, though the opposite trend may emerge.

Incentives to participation are particularly important to consider. Usually one looks to see if the participation...
is voluntary or coerced. However, often it is not easy to distinguish where one is in the continuum between voluntarism and coercion since participation usually flows from a combination of positive and negative inducements. Coerced participation is generally regarded as inconsistent with democratic values, yet there might be cases where it is productive, such as ensuring compliance with a range management scheme to pool cattle, adhere to herd size limits and follow rotational grazing requirements. Actually, impetus to participate and motivation for participation can be combined to reveal several different types ranging from volunteered participation initiated from below to enforced participation initiated from above.

The organizational pattern greatly affects the process of participation. One of the first questions here is whether a person enters into participation as a member of the group. For example, can any farmer get credit from the project directly or must he belong to a cooperative in order to be eligible? Another question concerns the complexity of the organization. Are there well-defined leadership roles and rules governing activities, and are there fairly clear standards for evaluating the performance of leaders? If organizations are too complex, it may be difficult for local people to engage in any meaningful participation in them. Local elites can often ‘capture’ more complex organizations and use them to promote their own ends. Indeed, complexity might be designed into a project to keep participation under close control.

The process of participation is also affected by whether one participates directly or is represented by someone selected by oneself and others. Direct participation probably has greater impact on building individual capacity. Unfortunately, it is often very difficult to achieve because of the numbers of participants who might be involved. It is also often difficult to get this kind of participation in rural areas with inadequate infrastructure, because people may have a great deal of trouble finding time to journey to far-away meetings. In general, indirect participation is more likely to occur with decision-making activities and direct participation more typical of participation in either benefits or implementation.

The time required of the participant affects the amount of participation which occurs. The longer the participatory experience continues and the more regular it is, the greater the likelihood that a formal participatory organization will exist. Projects should carefully monitor changes in the frequency of participation, giving particular attention to the emergence of more regular and continuous patterns of involvement as well as to trends in the opposite direction.

The intensity of participation that one finds in a given project is frequently related to the range of project activities involving participation. One should consider the number of possible situations in which various members of the groups being analyzed could participate. It is also important to determine whether project procedures make participation in one activity a precondition for participation in other activities. For example, a farmer may have to belong to the project co-operative society before he or other members of his family can attend adult education classes. Careful attention should be given to the number of activities that people are participating in as well as to the effects of that range on their overall participation activities. It may be that multiple participatory activities will lead to inadequate participation in all of them. On the other hand, the multiple activities may reinforce each other in a way that not only returns more concrete benefits to the participant but also raises his awareness about the importance of actively seeking to engage in and affect the society around him.

Careful evaluation should also be given to the degree of power which the participants have. Empowerment of participation ranges from no power or influence to extensive power, and it is important to know whether or not participation is simply a formal action with little meaning or an activity which allows the individual to gain greater control over situations that would alter his or her life.

From our reading of experience, we would give particular attention to the structure and channels for participation. That participation can be individual and unorganized is quite clear, but it is not so evident that it will be effective or sustained in the absence of some organized expression and support. One of the hypotheses that is most worth examining is the extent to which organization is a crucial factor conditioning the amount, kind and success of participation, recognizing that these may vary for different tasks or for different groups.

It is submitted that these different how characteristics will illuminate the possibilities, dynamics and consequences of participation if applied appropriately to the assessment of who participates in what rural-development activities. They may be combined in interesting and different ways or compared to each other in various matrices. The dimensional nature of the how dimension means that a single assessment can hardly be made of it. For example, there is no way to conclude that participation of narrow scope but
high empowerment is ‘less’ participation than that of broad scope but little empowerment.

According to most views of participation, that which is initiated from below, voluntary, organized, direct, continuous, broad in scope and empowered would be the ‘most’ participatory. But judgments about anything diverging from this ideal, typical form can differ. This is not only because people have different values and expectations about participation but because the relevance of different aspects will vary. Indirect participation through representatives may be quite appropriate and satisfactory in some situations and not in others. For maintaining irrigation canals, periodic participation may suffice, whereas continuous participation may be needed for handling the distribution of water. In analyzing the how dimensions, we want to alert persons to the ways in which participation by certain groups (who) in given activities (what) can differ. Even if no quantitative value is attached to these aspects, one should be sensitive to what they are and particularly to such shifts as occur from a bottom-up to a top-down initiative or from a voluntary to a more coerced performance.

PARTICIPATION FOR WHAT

It is essential to consider the *purposes* of participation. Indeed, *for what* may prove to be a critical fourth dimension of participation. Because they are essentially normative, disagreement on the assessment of *purposes* is even more likely than with the more descriptive dimensions discussed above. Quite a range of different purposes for participation can be listed...The difficulty with constructing a standard analytical framework for *purposes* is that their assessment and even their factual basis shifts depending on whose perspective one takes. Farmers taking credit for use of new maize varieties may be seen as reducing national food deficits or even as helping to stabilize the regime from a governmental point of view, while the farmers see it as possibly augmenting family-income consumption. As with all objectives, they may be intended or unintended, stated or unstated, and achieved or unachieved. It is certainly useful to consider the purposes for which participation is undertaken or advocated, but, as yet, their analysis cannot be as rigorous as for the three dimensions outlined already. One of the key questions to ask is whether the purpose which the authorities have in mind for getting people to participate is the same as, or compatible with the purpose the people themselves would accept as their own. Where governments want things from or for the people which they do not want for themselves, we know right away that certain ambiguities and even obstacles affecting the intended participation are likely. We can imagine sinister purposes such as encouraging critical participation from the public in order to identify malcontents (some thought this was done during the campaign in China to “let a thousand flowers bloom”). On the other hand, the opportunities for participation provided by a government to bolster its support could be used to try to bring its downfall.

Questions can be raised about participation’s purposes in terms of *who* is supposed to benefit from it – participation *for whom?* According to Holm, the Village Development Councils in Botswana were allowed to operate only under tight political and administrative control and the government gave no funds for local projects. So popular participation appeared to be mostly an instrument for bureaucratic domination of the village modernization process, in his view. This may or may not be true, and it may or may not be common elsewhere, but is certainly a valid question to consider in evaluating participation. Some would dismiss activity such as Holm describes as not constituting ‘participation.’ But we think it more appropriate to make qualitative assessments of the kind of activity involved and with what effect. An analysis that identifies *who* is participating *how* in decision-making and implementation, and *who* is participating in benefits and evaluation should concretely illuminate ‘participation for whom and for what?’

EMERGING GENERALIZATIONS

We and our colleagues are currently pursuing a number of topics from the common frame work just presented. Based on what we know so far, we would set forth the following major points:

(1) *Participation is not a single thing.* It is, rather, a rubric or heading under which a number of distinct, though related, activities can be analyzed and promoted.

(2) *Participation for development is not the same thing as participation in politics.* The voting, campaigning, lobbying and so on associated with institutionalized politics may be part of developmental participation, but more and different things should be considered with respect to participation in development.

(3) *Participation is not just an end in itself, but it is more than a means.* The debate as to whether participation is to be regarded as an end or only a means is fruitless, since people can consider it as either or both. Pronouncing it one or the other will not end what is essentially an ideological dispute. Participation might best be viewed as a proximate but instrumental goal in development much as employment is viewed in contemporary development strategy. If one seeks employment only as an end to be maximized, there
could be some rather superficial and unproductive efforts made in this direction when, in fact, employment
is valued mostly for other benefits associated with it. At the same time, it does have some value in its own
right. People who are simply provided income without jobs tend to feel less fulfilled and satisfied as human
beings. Similarly, make-work participation, provided for its own sake, has little to commend it. At the other
extreme, getting benefits without any personal role in their creation or acquisition is not generally held to be
satisfactory. We conclude, on both normative and practical grounds, that a middle position is justified in the
debate as to whether participation is to be treated as an end or a means. It appears to be more than just a
means, but, at the same time, it is not simply an end which is always good in itself.

(4) Participation is not a panacea. While its neglect has been often devastating to project results, simply
striving to introduce it will not necessarily make projects successful. In many instances, participation
appears to be necessary but not sufficient for good results. There are many reasons why getting productive
participation started is difficult, and why the results are not always those intended. Having ‘more’
participation is not always ‘better’ as its value depends on what kind of participation, under what
circumstances and by and for whom.

(5) There is a connection among different kinds of participation. This has not been well demonstrated in part
because participation has not been analyzed and studied in a desegregated way. But there is a good deal of
fragmentary evidence that in projects, ex ante participation such as in decision-making is related to ex post
participation in benefits. This seems especially true when one is concerned with the poor majority, as
reliance on paternalistic approaches, neglecting the organization and mobilization of the poor to work and
act on their own behalf seems to produce limited results. We would be the first to say, however, that more
work needs to be done on understanding these relationships. We need to know more to be able to specify
what kinds of participation, and under what conditions, produce the desired results.

(6) Participation even in ‘developmental’ terms is inescapably ‘political.’ Broader participation is likely to
change the use and allocation of resources in society. Indeed, this is why it is often advocated since such
change is associated with the development process. Such change is subject to wide-ranging differences in
the value judgments people make about it, and these should be openly acknowledged. If persons refuse to
recognize and accept this aspect of participation, their co-operation in participatory development
approaches is doubtful. We are not saying that participation is always political in the sense of adversely
affecting the government. Indeed, support of participation can have the opposite effect of building a
stronger political base.

Our overall conclusion is that participation is possible and under many conditions desirable to achieve the
development goals set by development agencies and LDC governments. It can be difficult to promote and
the results are not always predictable. The knowledge base to work from is not yet consolidated. But there
is enough experience and theory so that incorporating more elements of participation into development
strategies is feasible and appropriate.

Participation in the 2004 Tsunami Disaster

We narrow the broader discussion of participation to a case where participation became a concrete
strategy in a development/reconstruction situation. The scene is southeast Asia and the 2004 tsunami (tidal
wave) recovery strategy. The story is told by Frank Hairgrove, who lived in Indonesia for 13 years as a
communications consultant with the organization Professionals International. He lived Indonesia to take up
graduate study in the USA but returned after the 2004 tsunami to assist with reconstruction in Aceh. This is
his story about how participation contributed to that reconstruction in one small village.

TSUNAMI RECONSTRUCTION – MAKING PARTICIPATION WORK

The tsunami in Asia in December 2004 devastated a vast territory and took 178,000 thousand lives, with
50,000 persons missing and presumed dead. In June 2005, a front page story in the newspaper USA Today
asserted that “six months after a killer wave tore across southern Asia’s coastlines, fumbling governments
there are still struggling to distribute aid, clean up and rebuild.” Yet there were many heroic efforts to
rebuild communities in Indonesia, Sri Lanka, India and other lands bordering the tsunami force. One of
these tests some of the principles scholars, researchers, officials and development people often adopt in
their work. This particular case in Indonesia’s Aceh province, one of the places hardest hit by the tsunami,
reveals some of the practical aspects of applying the concept of participation in development programs.

Part of the motivation for mainstreaming a participatory approach in development programs lies in the

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assumption that the benefits of development efforts are more likely to be sustained when the ultimate clients are involved in designing and implementing the work involved. Recall in the earlier World Bank piece in this chapter that the Bank cites as one of the values of participation the value of learning from the knowledge and perspectives of stakeholders, but especially from the poor. The Bank suggests that, as participation increases, vital information not usually in the public domain becomes available and the voices of interested parties can help make governments more accountable.

Incorporating participation in a relief effort like that following the 2004 Tsunami is not a matter of one model fits all. It is advantageous to examine various relevant factors before determining what kind of participation will be most effective. These factors include cultural norms, the amount of infrastructure left intact, nature of trauma being experienced by the victims, and their perceived self efficacy, i.e. their belief that they have the wherewithal to affect their own condition.13

Within days after the tsunami, Norlink, an American non-governmental organization (NGO) cooperating with World Relief,14 discussed relief efforts to determine what its best contribution would be in the face of such widespread devastation. Norlink concluded that its strategy — called Project Salam, which in the Muslim psyche means both life and peace — would be to assist selected communities in meeting community-determined priority needs in culturally relevant ways. Supporting and assisting local communities to restore and maintain social order and community cohesion would be critical for the traumatized population. Concrete, decisive, and rapid reconstruction of homes, livelihoods, schools, health facilities, and other losses would be necessary for the long term recovery of the community.

In selecting a community, it was important for Norlink to locate a community that had most of its community leadership infrastructure still intact. Mesjid Raya, an area 20-40 km north and east of the city of Banda Aceh, Indonesia met this criterion because about 85% of the population survived, whereas the assets such as homes and fishing businesses were near total loss.

Context – Challenges and Unique Opportunities

The stress of the tsunami devastation, fear of the future, loss of loved ones, and the loss of livelihood created a host of communication and reconstruction challenges. Beyond this, Banda Aceh as a strong Muslim community within the Indonesian culture had its own unique challenges of symbols and cultural norms. As a general principle in communication and anthropology disciplines, the burden of understanding in communication lies not with the recipient, but with the communicator. The challenge for Norlink, therefore, was to be aware of context, symbols, and cultural norms in the exchange of ideas with the Aceh community. Or, in other words, the Norlink team needed to understand the community and its worldview in order to communicate effectively with them.

Islamic researcher Waardenburg notes that Islam more than any other religious block has a self identity that borders on an ideological system which he calls a “signification system.”15 This system influences every aspect of the social order. The signification system is highly integrated in the Umat Islam (Community of Islam) concept where, among other things, religious leaders provide significant guidance in community decisions. This is especially prevalent in the Banda Aceh area which prides itself as being the “gateway to Mecca” for Indonesia, the place where Islam first entered Indonesia. Banda Aceh was the first province to institute Sharia law (Islamic law) in Indonesia as a governance system that supercedes the secular constitution. Though decisions are communal, they are not altogether democratic since leaders exert significant influence in the community affairs.

Presidents Sukarno and Soeharto leveraged this hierarchical arrangement by using an RT/RW system for social representation which exists to this day. One RT (an abbreviation for neighborhood leader) is responsible for eight to ten family heads each of whom could have several children with families. As many as 80 homes can be represented by one RT. Eight to ten RTs report to one RW, with several RWs making a Kelurahan, and so on, in a pyramid representative system that leads to the country’s president. When an

14 World Relief is a USA-faith based agency that has been equipping churches and communities to help victims and poverty, disease, hunger war, disasters and persecution for more than 60 years.
RT needs to be replaced, the family heads set forth candidates to the RW who selects an appropriate representative of each community. This provides a community/government balance of representation. Community members well understood this social system and find comfort in following the directives of the local representatives.

In terms of media influence in the recovery effort, the tsunami affected areas have major challenges. The civil war caused by the Free Aceh movement disrupted the economy, resulting in low distribution of newspapers. In the areas outside the capital of Banda Aceh, TVs are rare due to electrical outages and economic challenges that make ownership difficult. Radio signals are often disrupted by the mountainous terrain. In the areas where Norlink has been working there is a cell phone tower but it has been inoperable for years because it lacks electricity. As an example of low media influence, those affected by the tsunami often described the event using words that simply stated that the water rose up. Not using the word "tsunami" suggests that this foreign word had not yet been popularized through media dissemination. The Acehnese villagers are more accustomed to traditional media (word of mouth) to disseminate information. With this in mind in the relief project, face to face communication in group meetings was considered the best means to exchange information in rural Aceh.

Crisis relief normally involves three phases: Rescue, Recovery, and Rehabilitation. The first two phases last from hours for phase one, to days or weeks in phase two with victims being near totally dependent on outsiders for assistance. The final phase can last years and it is the most conducive environment for the victims to participate with outsiders in rebuilding their lives.

**Project Salam**

It was in the context of this third phase of Rehabilitation that Norlink determined it could be most effective. Project Salam began by assisting the selected communities to identify their needs and priorities through the culturally-recognized consensus decision-making process called *Musyawarah* (community deliberation) and *Mutabut* (respected leaders giving guidance). Thus, it was at the very early stages of Rehabilitation that community participation stood out in *Mesjid Raya Project Salam* would then assign three trained Indonesian community development facilitators to come along side each community and its leaders to develop a working plan to progress systematically through the priority concerns of each community working with Norlink. The Norlink team sought ways to identify more closely with the local population. One choice was in selecting the team’s transportation. It chose to use a public vehicle called *labi-labi*. This is a small pick-up truck with a covering on the back and with two bench seats along its sides. It is often likened to the Jeepneys or Jitneys of the Philippines. Most of the villagers use the *labi-labi* when going to the city markets or even between villages. Instead of purchasing a more sophisticated project vehicle as many agencies do, using the indigenous *labi-labi* gave Norlink more credibility with the village population.

Hairgrove reports: In our first reconnaissance trip we arrived at the village of Beurandeh in the *labi-labi* and looked for the community leader. Describing our intentions to help them rebuild, we asked the people if we could hold a *Musyawarah* to discuss the reconstruction of their villages. Together we agreed on the February 7 mid morning time after chores were completed and before mid-day prayers were performed by the villagers. We arrived at the designated time in the *labi-labi* and joined the community in a low open-sided building constructed of scrap wood from the aftermath of the tsunami. It was now functioning as the school house because the original school was destroyed in the tsunami and many of the teachers were lost. Everyone sat crossed legged on the floor in Muslim style, with men in the center and women in the periphery. The three Norlink and World Relief members mixed with the group to reduce the feeling of “us” and “them.” The meeting was conducted in the Indonesian language.

We explained that Norlink was an American NGO, and that many people in America wanted to help them reconstruct their homes. Norlink was not a funding agency, but did have sponsors that could fund projects that the *Musyawarah* decided were needed. We needed to do fact finding and then create an organization that could represent the villagers to World Relief, the funding agency. We then asked them to list the priority needs of the village. We asked that they provide a secretary to keep notes, and a young man was put forth (he had lost his wife and baby in the tsunami as well as his home and a boat). The discussion in mixed Indonesian and Acehnese languages concluded with three main priorities: economic recovery, clean-up, and housing. We then asked for a hands vote as to which was the greatest need. Housing clearly stood out as the highest felt need.

For the discussions to proceed Norlink asked the community to establish an oversight board and then to
give this board a name other than the community’s name. After a rousing discussion in Acehnese, five members were set forth:

- The village RT called Pak Keci (he lost his wife and 10 year old son, home, and boat)
- The secretary noted earlier
- Pak Iman – the Mosque leader
- A family patriarch
- A business leader (he lost several boats and shrimp farms)

Now a name was needed, and almost universally the group agreed upon the name Benteng Iskandar Muda, after a “George Washington” figure who overthrew the Dutch imperialism and kept Aceh from being colonized. The pride of the group as an independent population was venerated in the name Benteng Iskandar Muda.

Norlink then asked that a list be developed of those who lost homes. The members of the community interacted with the leaders and gave a complete accounting of the number of homes destroyed of those who were still alive. Since it was a public forum under local leadership, we felt assured that the list was accurate.

After that Norlink queried the leaders as to what kind of house they would propose be built. Some of the homes destroyed were made of cement while others were wood, each of various sizes and quality of workmanship. After some discussion they arrived at a consensus that one size and style of home would be built – a 15’ by 21’ wood home on stilts built in a traditional style that did not use nails in the frame but with a tenon and mortise construction style. They noted that having the same size and style of home would show solidarity of the umat (Islamic community) in that all would be equal in receiving aid. They expressed that a major concern of theirs was promoting community unity and preventing envy. A consensus was reached that each house would have two simple bedrooms, a cooking area and an entrance area. Toilets and bathing buildings would be shared by two families outside the household. It is considered uncultured to have a bathroom inside simple wooden houses.

Norlink offered to create an architectural drawing to be approved by the leadership and then build a model home so that the community could see and approve the design before the building phase was initiated. This sample home would then serve as a community center after the project was completed. This was agreeable to the leadership and the community.

Norlink suggested that the village organize a main carpentry team from within the community and not seek to hire craftsmen from outside. A fair wage for the carpenter and helper was established by the leadership and Norlink – based upon discussions of wage norms for the community. Norlink then asked that four helpers be provided for each home building project, with one helper being the resident of the home being built. It was established that these helpers would receive half of the normal wage in keeping with a cultural “barn raising” volunteer mentality. The leaders and community felt this was fair and agreed on this procedure. World Relief represented by Norlink would provide the materials and tools necessary to build the homes. In this way the expertise and workmanship would come from the community, and materials would be provided by World Relief. A written agreement was drawn up outlining the above discussions and the five leaders signed it. The sample home was then built within two weeks of the agreement.

After the discussions were completed in Beurandeh, five other communities in Mesjid Raya asked Norlink to hold Musyawarah meetings. Apparently the communities were encouraged that a donor agency was involving them in decisions of the development project. Though each community had a slight distinction in the leadership makeup and home design, each arrived at consensus goals of home rebuilding as the main priority, and that participation rebuilding was important in reestablishing community pride.

### Results and Keys to Success

By mid 2005 the building phase was completed with 300 homes in six villages completed, and Norlink started focusing on livelihood issues. Meanwhile, many areas of Aceh were still without viable projects to address housing needs for tsunami victims. The success of this project can be credited to the ability of the victims to participate in the decision-making and building of homes that they would inhabit. The key to this was the cultural understanding by the Norlink team as to how decisions are made within the Indonesian Muslim communities of Banda Aceh and how these communities implement community social projects. [Hairgove summarizes:] To highlight the success of the participatory discussions, it is important to recount an event that happened while the Musyawarah meeting was happening in the Beurandeh village.
discussion was ensuing about the style of home to be built, a car drove up with banners flying designating a certain relief NGO. Four members stepped out of the car with an Indonesian driver/interpreter. The apparent leader of the NGO placed his hands on his hips and, wearing sun glasses, looked around at the destruction. The village RT, Pak Keci, motioned to a young man to talk with this delegation. One could hear the NGO officials asking if the village had any needs, and the young man told them a few things. They took notes and got back into their car and drove away. Later we asked Pak Keci about this delegation and he answered that they have one or two groups like this come every day but Pak Keci stated “they don’t care. They write notes and never come back again. You understand us and truly want to help.”

This illustrates several keys to the success in this work. The first key is treating the recipients with dignity and cultural respect in ways they understand as dignity and respect. Standing with hands on the hips, wearing sun glasses in conversations, and driving new cars with Indonesian drivers communicates patronage, and is offensive to this community. Norlink’s choice of the labi-labi transportation and sitting on a makeshift floor communicated co-equals and partnership in development. Asking the group to list the priorities and then vote on the highest priority fits within the umat style of decision making. Requesting the group to select project leaders and give the project a name was important in developing the leadership infrastructure and community pride. These leaders were empowered to sign documents and make agreements on behalf of the community.

Finally, asking the community to produce its own carpenters and helpers returned the rebuilding to the hands of the local residents. They built homes that were small but had very important features consistent with a Beurandeh village home. Outsiders can denigrate such small differences but to these traumatized villagers such historical and unique symbols were important. This can be contrasted to other projects in the Aceh area where outsiders shipped in pre-fab homes which were less costly than the Beurandeh home, but the communities had little participation other than choosing the spot for home to be placed. One villager likened these prefab homes to goat pens with stilts.

The schedule of rebuilding of the 300 homes in the six communities was maintained, with each home costing less than $3000 each. More important than the actual homes being constructed was that community integrity was reestablished with a leadership infrastructure that is now able to address other community needs such as livelihood, education, and health/sanitation. Norlink then started cooperating with the community to address these issues.

Cautions about participation

The tsunami reconstruction and other cases reported in the development literature persuade us that participation is an important concept and approach that needs to be considered in organizing social change and development initiatives. Richard Heeks provides an additional perspective that complements Hairgrove’s story and our discussion about the specifics of participation. We introduce some of his major points here, and see more of his ideas later in this chapter.

Heeks suggests that participation is often undertaken without considering the political and cultural context within which it seeks to take place. We see a great contrast between the participatory strategy ignited by Governor Luis Muñoz Marin in his attempt to bolster Puerto Rico’s development in the 1940s and 1950s – and officials like those in the Soviet era who crushed local movements in eastern Europe to maintain their political and economic dominance. (We discuss the Puerto Rico experience later in this chapter.) He also notes the problem of “veneered participation.” Because of the orthodoxy of participation, he says, organizations often feel forced to create a veneer of participation even if they perceive it to be contextually non-viable: “They may do this in order, for example, to please those who are funding a project; with this veneer covering a reality of more top-down, authoritarian approaches to decision-making.”

Heeks notes that participation suffers from inequality and skewed participation, where some groups, often women, are not part of the participation process. We find this especially true where modern

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17 The Tyranny of Participation in Information Systems; Learning from Development Projects, Paper No. 4, Institute for Development Policy and Management, University of Manchester, Manchester, UK, 1999. On-line at: http://www.sed.manchester.ac.uk/idpm/publications/wp/di/di_wp04.pdf#search=%22Heeks%20The%20Tyranny%20of%20Participation%22

information technologies play a role in community development.  

Heeks also identifies token participation which he couples with "bureaucratic participation." This involves using a checklist to get representatives of each existing institution or grouping perceived to be present in a situation, regardless of the validity or impact of such representation. He suggests that this kind of top-down, bureaucratic participation may impose rigid formal structures on pre-existing flexible informal and truly participative structures such as those found in Aceh, thereby submerging the latter. He claims that participation seems especially likely to be injurious in this way if it is "alien participation" introduced as a technique by outsiders, such as consultants. The next article documents some of the early development communication initiatives of the United Nation's Food and Agriculture Organization (FAO) headquartered in Rome. Besides showing a move toward more participatory approaches, Gary Coldevin, the author, also illustrates the uses of media in a variety of different FAO-supported projects. This foreshadows our later discussion of information and communication technologies (Chapter 6). The article was initially published in a special participatory communication issue of the Journal of International Communication (Vol. 7, No. 2, 2001). We have omitted the list of references and footnotes which are available in the original publication.

**FAO AND PARTICIPATION**

**Participatory Communication and Adult Learning for Rural Development: Three Decades of FAO Experience**

The past thirty years have witnessed unprecedented growth in the worldwide spread of electronic mass media, mainly due to the proliferation of communication satellites, along with lowered costs and increased sophistication of receiving equipment. Television as the dominant medium of the so-called “information explosion” during the 1970’s and 1980’s became one of the most powerful forces for stimulating social change and technological advancement. Much of the change was undirected, however, and largely due to the incidental effects of entertainment programming. Its global impact was mainly on people living in industrialised countries, and to a lesser extent those in urban centers of developing countries. By and large, the same pattern of distribution and access has been evident in the 1990’s with the emergence of knowledge-based societies increasingly relying on Internet/Web access for information, communication, and entertainment.

Concurrently in the rural areas of developing countries, particularly Asia and Africa which together constitute almost three-quarters of the world’s population and where nearly 70% live in the countryside, the idea of using communication for a variety of rural development projects, and agricultural improvement in particular, grew out of relatively consistent research findings that found that audience-oriented communication strategies could play a catalytic role in accelerating the rate of technology transfer through providing relevant information, changing negative attitudes, and skills training. “Small media” were mainly used (e.g., video, radio, flip-charts, illustrated pamphlets, village theatre) appropriate to a given community, province or region. Strategies ranged from multi-media campaigns to support for group meetings conducted by extension agents, and materials to strengthen interpersonal communication. Over time, participatory methods were refined to bring in the views of the intended beneficiaries from the start in designing project goals and selecting appropriate communication and adult learning approaches to support implementation. Today, as wireless infrastructures spread and bandwidth increases, telecommunications and Internet-based ICTs (information and communication technologies) portend a radical shift in moving information and experiences from global to rural networks and a potential boon to erasing pockets of world hunger.

The need for knowledge and improved skills to increase food production is clear and present. Current statistics note that more than 65 low-income developing countries (90% in Asia and sub-Saharan Africa) suffer from inadequate food security, with about 790 million people living in hunger (FAO, 1999a). Another 34 million under-nourished people have been identified in industrialized countries and those in transition, mainly in Eastern Europe and the area of the former USSR. And looking further down the road, from a base of slightly over 6 billion people as the 20th century ends, using the high fertility path (PRB.

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The world’s population may exceed 8 billion by 2025 and food needs in developing countries – which will account for 98% of the population increase – will double. The 1999 World Food Summit set a goal of reducing by half the number of hungry people in the developing world - about 400 million people – by the year 2015. The progress achieved during much of the 1990’s though makes this goal appear to be a daunting task. In the 1990/92 period for example, out of a group of 96 developing countries, the number of undernourished was estimated at 830 million people; by 1995/97 this had dropped to 790 million or a decrease of 40 million overall, a seemingly positive result. A closer look at the data revealed, however, that only 37 countries, or 39% of the original 96, had actually reduced the number of undernourished by about 100 million people combined overall. Across the rest of almost two-thirds of the developing world, the aggregate number of undernourished actually increased by 60 million, resulting in a total net reduction of only 8 million per year for the five-year period. These sobering results dramatically suggest that unless more effective solutions are found for increasing food production among the hungry and most vulnerable, and better distribution of it, the goal of the 1999 World Food Summit may never be realised. As Sen (1998) wryly notes, “The contemporary age is not short of terrible and nasty happenings, but the persistence of extensive hunger in a world of unprecedented prosperity is surely the worst” (Sen, 1988:204).

A growing number of development specialists and agencies argue that appropriate use of ICTs for accelerating the dissemination of research-based recommendations, blending them with indigenous practices, and rendering them locally useable though small media adaptation, may well provide part of the solution toward reducing the chronic food deficits (IDRC, 1999; Van der Stichele & Bie, 1998; Richardson, 1997; Woods, 1996). Put more succinctly by FAO, the challenge in assisting farmers to sustainably produce more food implies the need for new technologies, new skills, changed attitudes and practices, and new ways to collaborate. All of this requires that farmers have access to relevant information and knowledge (Crowder, 2000).

The purpose of this chapter is to provide an overview of the FAO Communication for Development Group’s work, arguably the foremost practitioner of applied communication for agricultural and other areas of rural development (e.g., forestry, environment, nutrition) over the past thirty years. During these three decades the role of communication has undergone a 180 degree shift from a one-way, top-down transfer of messages by extension agents to farmers, to a social process which starts with farmers and brings together both groups in a two-way sharing of information among communication equals - in short, participatory communication. Along with communication, it is also now widely accepted that a parallel investment in “human capital” through education and training of adults is essential for project success (Fraser & Villet, 1994). Awareness raising, knowledge acquisition, attitude change, confidence building, participation in decision-making, and action, all require processes of education and communication. And all are essential for effective development—they are not just desirable options, some of which may be left out (Rogers, 1992). In this spirit, the chapter includes an overview of parallel movements in participatory adult learning, notably Farmer Field Schools developed by FAO, and the opportunities for combining participatory methods to refine both communication and learning as partners in supporting project implementation.

Communication for Development at FAO – The 1970s and 80s

In carrying out its field work, much of FAO’s early activities in applying communication for development were subsumed within two main areas (Coldevin, 1987; Fraser, 1983): 1) information dissemination and motivation, and 2) training for field workers and rural producers. The gathering movement toward participatory audience involvement was assumed to be a subset of each.

Information dissemination and motivation, as the most basic area of communication for development, is concerned with simply informing rural people of new ideas, services and technologies for improving their quality of life. Given that one-third of adults in the developing world are illiterate (PRB, 1999), and particularly those in Africa (44%), the broadcast media and principally radio have performed a major service in this role. Not surprisingly, with the advent of the transistor receiver, and lowering of prices, radio, either battery operated or wound-up by hand, became the ubiquitous medium for rural communication, a status that it is likely to retain well into the 21st century. But while much of the emphasis in the 1970’s was on supporting open broadcasting within a national or regional reach, a number of disadvantages were noted. Typically it was carried out in isolation from direct involvement of farmers or extension in its programming, and was literally “open” in the sense that programmes were directed at unorganised audiences. In the face of the criticism that by “attempting to reach everyone, it reaches no one”, open broadcasting for educational purposes, including agricultural programming, was given low priority, averaging less than 5% of total
Advocacy and Interventions

Extension workers have the prime responsibility for selecting and interpreting farmers’ requests for research assistance on technical problems for which there is no ready solution available locally. In this cycle information and skills development required to carry out the actions, and mechanisms for seeking research involvement of farmers in defining their own problems, reaching consensus on actions to be taken, toward perfecting their interpersonal communications skills, and, more recently, in facilitating participatory Communication for Development interventions for training extension workers have been mainly directed.

Training for Field Workers and Rural Producers

Success of the campaign could then be judged by the gap between targeted and actual achievements. Terms of shifts in each indicator included, e.g., post-campaign knowledge levels and practices. The rate of for future reference, was the use of a targeted estimate of how much the campaign should accomplish in control), for integrated weed management in Malaysia, and for pest surveillance in Thailand (Adhikarya, 1994). In each campaign KAP baseline surveys as well as focus group interviews for additional qualitative information were undertaken. An interesting variation in setting campaign objectives, which set a standard for future reference, was the use of a targeted estimate of how much the campaign should accomplish in terms of shifts in each indicator included, e.g., post-campaign knowledge levels and practices. The rate of success of the campaign could then be judged by the gap between targeted and actual achievements.

Radio, whether national, regional or local in reach has also formed the mainstay for many multi-media campaigns, the most powerful of strategies in disseminating information and building motivation. Communication theory has tended to support the case for multi-media use based on the premise that having access to at least two channels allows a production team to present and reinforce the same points in different ways and with varied emphasis. Individuals also differ in their processing of information from different media; some learn better from and prefer visual media than audio and vice versa. In general, evidence from controlled classroom studies suggests that providing a variety of reinforcing channels caters to both learning styles and learning preferences (World Bank, 1983). Practical evidence from the field to reinforce the experimental classroom findings, however, especially in rural development, is rare. Campaigns have been used in virtually every facet of rural development, and examples abound in agriculture. One of the better known case studies, “Masagana 99”, was undertaken in the Philippines during 1974 (Sison, 1985). “Masagana” translates as “bountiful harvest” with the project objective being to increase rice production up to 99 sacks (50 kg) of unmilled rice per hectare. The channel mix included radio broadcasting, a variety of print materials (bulletins, posters), and intensively trained farm technologists. Radio was used in three ways: a) jingles and spot messages for motivation, b) information through a daily 30-minute farm programme, and c) instructional courses through the existing Farmers’ University of the Air. Prior to the campaign the Philippines had to import a substantial part of its rice to meet national requirements. Following the campaign, 1974 rice yields had increased by 28% over the previous year and by 1976 a 40% rise was registered over 1973 pre-campaign levels. During 1977 national requirements were more than met and the country began exporting its excess harvest.

FAO has also accumulated a strong legacy in implementing and validating this powerful delivery strategy in a variety of topics ranging from stamping out rinderpest viruses in thirty-four countries across West, Central and East Africa (Villet, 1988) to increasing maize and sorghum production in Lesotho (Coldevin, 1990). One of its first campaigns, carried out during 1984 in Sierra Leone, was directed at increasing swamp-rice production (Coldevin, 1986). A baseline survey of knowledge, attitudes and practices (KAP), and media access and preferences was undertaken with a stratified sample drawn from both swamp-rice cultivators and uniquely upland farmers. A nation-wide two-month campaign was then designed and launched involving a mix of four 15-minute “farming magazine” radio broadcasts per week reinforced by posters, pamphlets, and sound-slide presentations led by extension workers in targeted villages near swamp areas. Post-campaign results showed that, on average, all farmers had increased their knowledge levels by 60% over baseline scores. The highest gains were made by upland or non-rice farmers whose after campaign scores were over three times higher (307%) than baseline levels. This group also indicated a significant positive shift in their intention to start swamp-rice farming. And farmers who tuned in regularly to the radio broadcasting, a variety of print materials (bulletins, posters), and intensively trained farm technologists. Radio was used in three ways: a) jingles and spot messages for motivation, b) information through a daily 30-minute farm programme, and c) instructional courses through the existing Farmers’ University of the Air. Prior to the campaign the Philippines had to import a substantial part of its rice to meet national requirements. Following the campaign, 1974 rice yields had increased by 28% over the previous year and by 1976 a 40% rise was registered over 1973 pre-campaign levels. During 1977 national requirements were more than met and the country began exporting its excess harvest.

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Well-documented campaigns have also been supported by FAO in Bangladesh and Malaysia (for rat control), for integrated weed management in Malaysia, and for pest surveillance in Thailand (Adhikarya, 1994). In each campaign KAP baseline surveys as well as focus group interviews for additional qualitative information were undertaken. An interesting variation in setting campaign objectives, which set a standard for future reference, was the use of a targeted estimate of how much the campaign should accomplish in terms of shifts in each indicator included, e.g., post-campaign knowledge levels and practices. The rate of success of the campaign could then be judged by the gap between targeted and actual achievements.

Radio, whether national, regional or local in reach has also formed the mainstay for many multi-media campaigns, the most powerful of strategies in disseminating information and building motivation. Communication theory has tended to support the case for multi-media use based on the premise that having access to at least two channels allows a production team to present and reinforce the same points in different ways and with varied emphasis. Individuals also differ in their processing of information from different media; some learn better from and prefer visual media than audio and vice versa. In general, evidence from controlled classroom studies suggests that providing a variety of reinforcing channels caters to both learning styles and learning preferences (World Bank, 1983). Practical evidence from the field to reinforce the experimental classroom findings, however, especially in rural development, is rare. Campaigns have been used in virtually every facet of rural development, and examples abound in agriculture. One of the better known case studies, “Masagana 99”, was undertaken in the Philippines during 1974 (Sison, 1985). “Masagana” translates as “bountiful harvest” with the project objective being to increase rice production up to 99 sacks (50 kg) of unmilled rice per hectare. The channel mix included radio broadcasting, a variety of print materials (bulletins, posters), and intensively trained farm technologists. Radio was used in three ways: a) jingles and spot messages for motivation, b) information through a daily 30-minute farm programme, and c) instructional courses through the existing Farmers’ University of the Air. Prior to the campaign the Philippines had to import a substantial part of its rice to meet national requirements. Following the campaign, 1974 rice yields had increased by 28% over the previous year and by 1976 a 40% rise was registered over 1973 pre-campaign levels. During 1977 national requirements were more than met and the country began exporting its excess harvest.

FAO has also accumulated a strong legacy in implementing and validating this powerful delivery strategy in a variety of topics ranging from stamping out rinderpest viruses in thirty-four countries across West, Central and East Africa (Villet, 1988) to increasing maize and sorghum production in Lesotho (Coldevin, 1990). One of its first campaigns, carried out during 1984 in Sierra Leone, was directed at increasing swamp-rice production (Coldevin, 1986). A baseline survey of knowledge, attitudes and practices (KAP), and media access and preferences was undertaken with a stratified sample drawn from both swamp-rice cultivators and uniquely upland farmers. A nation-wide two-month campaign was then designed and launched involving a mix of four 15-minute “farming magazine” radio broadcasts per week reinforced by posters, pamphlets, and sound-slide presentations led by extension workers in targeted villages near swamp areas. Post-campaign results showed that, on average, all farmers had increased their knowledge levels by 60% over baseline scores. The highest gains were made by upland or non-rice farmers whose after campaign scores were over three times higher (307%) than baseline levels. This group also indicated a significant positive shift in their intention to start swamp-rice farming. And farmers who tuned in regularly to the radio broadcasting, a variety of print materials (bulletins, posters), and intensively trained farm technologists. Radio was used in three ways: a) jingles and spot messages for motivation, b) information through a daily 30-minute farm programme, and c) instructional courses through the existing Farmers’ University of the Air. Prior to the campaign the Philippines had to import a substantial part of its rice to meet national requirements. Following the campaign, 1974 rice yields had increased by 28% over the previous year and by 1976 a 40% rise was registered over 1973 pre-campaign levels. During 1977 national requirements were more than met and the country began exporting its excess harvest.

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Training for Field Workers and Rural Producers

Communication for Development interventions for training extension workers have been mainly directed toward perfecting their interpersonal communications skills, and, more recently, in facilitating participatory involvement of farmers in defining their own problems, reaching consensus on actions to be taken, information and skills development required to carry out the actions, and mechanisms for seeking research assistance on technical problems for which there is no ready solution available locally. In this cycle extension workers have the prime responsibility for selecting and interpreting farmers’ requests to research
Training for rural producers, typical involving extension or subject matter specialists as the vital interpersonal link, has tended to rely on group media such as slides, film-strips, audio-cassettes, flip-charts, village theatre and video. In the hands of a trained facilitator these media add punch and authority to a presentation. Perhaps the most advantageous aspect of group media is the possibility for immediate feedback from the audience and establishment of a two-way flow of information. Participants' level of understanding can be tested, central points can be repeated where necessary, and discussions can be started with a view toward initiating action on agreed upon development problems.

Cases abound where FAO has used film-strips and slides with sound commentaries in virtually all areas of its mandate (FAO, 1981). Normally the presentations are reinforced by booklets, which depict the visuals used in the script with accompanying dialogue. Routinely, the booklets become manuals in their own right. The pre-recorded audio-cassette is another low-cost medium, which FAO has promoted extensively. The cassette's chief advantage over radio is the control that a group facilitator has over the information flow and the ability to start and stop at will, and repeat messages. Cassette recordings are also an easy way to bring farmers' questions and information needs to the attention of extension and research. Folk media in the form of popular singers and musicians have also proven highly effective for focusing community attention on population issues (FAO, 1994).

Of all the group media, however, video has emerged as the medium of choice for supporting participatory farmer training in a variety of FAO rural development projects (Coldevin, 1988). Its many advantages are unequaled by any other medium, namely, its production “immediacy” with instant replay in the field to check on shooting details, its ability to add on commentary in local languages, its ease of editing, and its “show anywhere, anytime” flexibility using battery or generator operated playback equipment where electricity is lacking. During extensive long-term projects in Peru, Mexico and Mali, FAO has perfected a complete learning package that combines video with discussion, simple printed materials, and practical field work. Often referred to as a model for international reference, the efficiency of the methodology has been successfully documented by World Bank studies in terms of both training costs (ranging from 1/3 to 1/5 the costs of traditional training; Balit, Rios and Masias, 1996) and internal rate of return (Fraser & Restrepo-Estrada, 1997). More recent examples include training for women farmers in Jamaica where video was combined with drama performances, oral testimonies and printed materials (Protz, 1998).

Communication for Development in the 1990s: Evolution of a Participatory Model

The importance of popular participation in planning and executing projects was largely postulated during the 1970’s (see for example, Freire, 1972). In a ground-breaking article on development communication, Rogers (1976) suggested that the passing of the “dominant paradigm” of top-down planning would signal a shift toward self-development wherein villagers and urban poor would be the priority audiences, and self-reliance and building on local resources would be emphasized. The role of communication in this process would be “1) providing technical information about development problems and possibilities, and about appropriate innovations in answer to local requests, and 2) circulating information about the self-development accomplishments of local groups so that other such groups might profit from others’ experience” (Rogers, 1976:141). Despite these early predictions, rural communication systems continued to service the transfer of technology or “TOT” model in which information passed from researchers to farmers though the extension system (Ramirez, 1995). At least a decade would pass before participatory methodologies began to gain acceptance. And where they were tentatively introduced, most projects up to end of the 1980’ were mainly concerned with having beneficiaries discuss how to implement projects. The practice of full “interactive participation” (Pretty, 1995), started with beneficiaries deciding which development initiatives should be pursued, whether the initiatives were feasible and prioritising those that were, and only then deciding how to carry them out, all the while keeping in mind the requirements for sustainability and ultimately “self-mobilization” upon project completion.

From the Drawing Board to Implementation: Two Examples

Forerunner Trials in the Philippines

One of FAO’s forerunner exercises in “interactive” participatory communication for development was carried out over a three-year period in the Philippines from 1991-1994 (Coldevin, 1995). The UNDP funded project was implemented by the Applied Communication Division (ACD) of the Philippine Council for Agriculture, Forestry and Natural Resources Research and Development (PCARRD), and 5 of its 15 Regional Applied Communication Offices (RACOs). Building on the mounting literature in participatory rural
appraisal (PRA), and refinement of its methodology (e.g., Chambers, 1992), the over-riding goal of the project was to take the ACD and each of the five RACOs through prototype exercises in setting priorities for technology transfer in carefully selected, isolated and economically depressed pilot-communities (called barangays), one per region. This involved bottom-up needs assessment through a number of PRA tools (social and livelihood mapping, seasonal calendar, problem trees, key informant panels, media access and preferences) and quantitative baseline KAP surveys, which served as diagnostic profiles for the framing of communication support objectives. A variety of multi-channel communication approaches were then implemented, spear-headed by a new lead-medium in the form of community audio-tower systems or CATS, in each participating barangay. (Each CATS consisted of a karaoke system, two microphones, and a 500-watt amplifier housed in a studio and connected to four 100-watt loudspeakers attached to a metal tower. Total cost: US$2000. Construction of studio housing and towers was provided by the communities. “Broadcasts” can reach up to a two kilometer radius.) “Broadcasting associations” were subsequently formed to manage, produce and broadcast programmes created by thematic sub-committees, e.g., agriculture, health, cooperatives and youth, on a weekly schedule (Ramirez & Stuart, 1994). In one typical example, a multi-media campaign was launched to promote increased rice production in a depressed barangay near Zamboanga, Mindanao. The campaign was built around a four-month School of the Air (SoA) with three half-hour CATS broadcasts per week, along with print support and field demonstrations by specialists covering all facets of rice farming, including integrated pest management. Knowledge level scores among the rice farmers rose from an average of 55% prior to the campaign to 92% following it, while practices of recommended technologies rose from a baseline level of 46% to a post-campaign high of 68%. As a consequence, in comparison with pre-campaign levels, rice harvest yields more than doubled where farmers had been exposed to the full campaign (Coldevin, 1995).

The SADC (South African Development Community) Regional Centre of Communication for Development

The SADC Centre of Communication for Development based in Harare officially began operations during mid-1996, assisted by a 4-year FAO project. Its opening marked the first regional multi-purpose communication facility for rural development in Southern Africa, serving all 14 countries under the SADC mantle. The Centre’s mandate is broad and encompasses providing communication advice, setting up linkages, clearinghouse documentation, production of information and discussion materials, and training for all development sectors with an emphasis thus far on agriculture, health, sanitation, and environment.

The Centre has carved out its principal aim as “facilitating people’s participation at all levels of the development effort to identify and implement appropriate policies, programmes and technologies to prevent and reduce poverty in order to improve people’s livelihood in a sustainable way” (Anyaegbunam et al., 1998:10). In its operationalization a revitalized methodology, Participatory Rural Communication Appraisal or PRCA, has been developed as the basis for dialoguing with people using a mix of qualitative and quantitative research. Qualitative aspects of PRCA refer to developing a profile of a given community’s needs, opportunities, problems and solutions, its key interaction groups, traditional and modern communication networks, and influential sources of information. This front-end portion of PRCA also provides basic indicators and sharpens the focus for framing quantitative baseline surveys of awareness, knowledge, attitudes and practices or AKAP of the development problem(s) to be addressed. Results of the full PRCA in turn make it possible to formulate specific AKAP objectives, segment key interaction groups, plan problem-solving communication strategies and approaches, design messages, select appropriate media and interpersonal channels, and develop and pre-test materials. PRCA also sets the basis for monitoring and adjusting a communication programme or campaign as it unfolds, and for measuring its immediate AKAP outcomes and longer-term impact after completion.

The Centre’s main draw thus far has been a series of “Action Programme” or AP workshops, initially lasting ten weeks, but now reduced to seven following a market research survey. Each workshop presently comprises an initial two-week introductory session in Harare (theory of communication for development, preparation for field PRCA, and baseline AKAP surveys), two weeks of field research at project sites in participating countries, and back to Harare for a final three weeks of analysis of field research, communication strategy design, setting objectives, message content, media-mix, preparation of a sample of media materials, budget and work plan to carry out an actual communication programme or campaign for a given project. Eight such AP workshops have been given thus far – for the most part focusing on multi-media communication campaigns – each with an average of about 25 middle-level communication
and extension personnel drawn from about 4 to five organizations (e.g., UN Agencies, Government Ministries, NGOs). Following each AP workshop, the Centre provides backstopping as the various field projects are undertaken.

As in the case of CESPA in Bamako, Mali, the SADC Centre is also working toward self-sufficiency and services are provided on a cost-recovery basis. Based on recommendations of a business plan commissioned in 1998, a cost recovery strategy was worked out in which the “phase in” internal revenues of the Centre versus the “phase out” of donor funding would start at a 30/70 ratio in the first year (i.e., 30% internal revenues versus 70% external) to about 75/25 in year three and thereafter. Assuming that training and advisory services are charged at prevailing market rates, the Centre would still require something in the neighbourhood of 25% outside funding support to remain fully functional. One of the avenues to seek external support would be through contracts with development agencies, at the regional and national levels, that would appoint the Centre to act as a service agency under their yearly development programmes.

**Networking through Village Telecentres**

While the call for “networking” has become the 1990’s mantra, sub-Saharan Africa in particular has faced deepening marginalisation. According to current data provided by IDRC, in 1999, excluding South Africa, only one African in 9,000 has access to the Internet, while around the world the average is one person in 40 (IDRC, 1999). IDRC has responded with project “Acacia”, designed to encourage access to ICTs by low-income groups in cities and the countryside, to provide tools and techniques that make it easier for low-income groups to use ICTs, and to adapt applications and services to meet community needs. The vehicle for doing this is through the establishment of information and communication service centers or “telecentres” accessible within an hour of home by foot. Most of its emphasis has thus far been on urban telecentres - which have been mushrooming - with typical services offered consisting of telephone, fax, photocopying, e-mail, Internet, and small group training in ICT proficiencies (e.g., information data navigation, networking, Web site design). Pilot telecentres are also being tried out in a limited number of rural settings (e.g., two communities in Mozambique; one each in Mali and Uganda).

FAO has been actively supporting the use of ICTs for agricultural development (Richardson, 1997; Richardson & Paisley, 1998) through rural telecentres, and other means (such as cooperatives and farmer associations), although the pace has been much slower than the explosion in urban settings. Rural multipurpose community telecentres (RMCTs) have much or all of the capability of their urban counterparts as well as access to more traditional media such as audio and video playback equipment. Typically, they can also serve as venues for formal and non-formal distance education training for extension and subject matter specialists. As information “depots” or “hubs” they can place regional, national and international information at the fingertips of agricultural development workers - information on markets, weather, crops, livestock production and natural resource protection (Crowder et al, 1998). Undoubtedly, as they become more developed and wide-spread, PRA/PRCA principles will be applied to bring crystallised farmer group’s technology information needs to telecentres, tapping the relevant data bases available through the net that provide useable recommendations, and then packaging the results to respond to local demands and disseminating it through a variety of conventional media, and especially radio for maximum reach.

Much of the debate revolving around the RMCTs has been in establishing the link from the global networks to national, town, and finally to village levels, the latter referred to by some as “the last mile” of connectivity (Van der Stichele & Bie, 1997) and others, “the first mile” (Moetsabi in Richardson & Paisley, 1998). Costs appear to be the main constraint. IDRC estimates that if a wired land-based network is to be put into place, the expense for connecting rural subscribers in Africa will be five to ten times higher than that of city dwellers. The cost of equipment, and training of those to operate it, must also be factored in. But the issues of connectivity, start-up costs and sustainability can be solved, according to Woods (1996) through establishing rural telecentres as a “Community Utility”, accessible on a pay-to-use basis. Based on IDRC’s experience, however, the report card on making RMTCs financially viable is still in the making. Others more optimistically suggest that trend is clearly wireless, mobile, multi-media and broadband ICTs, with costs dropping appreciable (Crowder, 2000).

FAO’s initial experience with Internet-based ICTs started in Latin America in the early 1990’s when farmer-operated information networks were established in Chile and Mexico. Linkages were established with agricultural producers, farmer associations, extension services and NGOs. The networks provided data on seeds, inputs, markets, weather forecasts, and credit facilities, among other essential topics. All told, the networks have proven an effective way for farmers to access local, regional, national and even
global sources. By knowing market price information in larger centers, they have also increased profitability in setting local crop selling rates, and a base for better planning of quantities to plant in the future (Crowder, 2000). Building on the experiences in Latin America, FAO recently carried out a study to design a farmer-operated network, or FarmNet, with the Uganda National Farmers'Association (UNFA). The study found that the best approach would be to enhance existing communication efforts through face-to-face meetings, audio listening groups, local radio, publications and other media with the use of a simple e-mail-based communication system. UNFA members overwhelmingly indicated the need for information on markets, improved agricultural technologies and weather conditions.

Another more recent FAO development has been the Virtual Extension, Research and Communication network or VERCON, designed as an open network to improve communication between research and extension and for those with access including, farmers themselves. Prototype software is being developed which can be readily adapted locally to improve the flow of information between extension and research departments. A pilot VERCON project is currently under way in Egypt to test and refine the system (FAO, 2000a). And in an attempt to bridge the “digital gap”, an FAO project is currently under development in Mali to link four rural radio stations to the Internet. The overall focus of the initiative will be to train radio producers to collect and package scientific and technical information available on the Internet for broadcasting to rural audiences in formats and languages they easily comprehend. At the same time, locally relevant agricultural information that is collected through radio reports and field interviews will be formatted and disseminated through the Internet.

Parallel Evolution of a Participatory Adult Learning Model

Hand in hand with the development of participatory theory and practice in communication has been a recognition of the importance of indigenous knowledge bases accumulated by farmers, and an examination of how new research recommendations might best fit into them. This reversal of the uni-directional passing on of research findings through extension to farmers, long advocated under the training and visit system (Benor & Cleaver, 1989), now implies that “farmers are the ones who must control the learning and be able to access information according to specific needs, times and means (Ramirez & Stuart, 1994:4). Previously technologies were typically finalised in research institutions before farmers got to see them, essentially leaving them three choices: adoption, adaptation or rejection. When farmers make choices about what technologies are needed, and the knowledge and skills required to use them through what Rogers (1992; 1996) terms “a critical reflection on experience”, the roles of research and extension are dramatically changed. Under the new paradigm, the “assertion of a knowledge gap, of a disparity between “experts” and local people is wrong – unless the “experts” through cooperation and learning from local people can apply their knowledge in the context and to the benefit of local “expertise” (Servaes & Arnst, 1992:18).

Along with the levelling of extension services to match farmer demands, the shift from teaching to learning with them through practical applications has assumed vital importance. Roling & Pretty (1997:183) put the case succinctly. “It is important to recognize that local people are always involved in active learning, in (re)inventing technologies, in adapting their farming systems and livelihood strategies. Understanding and supporting these processes of agricultural innovation and experimentation have become an important focus in facilitating more sustainable agriculture with its strong locality-specific nature”. One of the more successful of these methodologies has been the Farmer Field School or FFS pioneered by FAO (Gallagher, 2000; FAO, 2000b).

FFSs were first established in Indonesia in 1989 as part of an FAO Integrated Pest Management (IPM) project. Courses take place in the field, field conditions define the curriculum, and real field problems are observed from planting of a crop to harvesting. An FFS is usually initiated by someone who has had experience at growing the crop concerned. For this reason, most IPM programmes have begun with training extension field staff in basic technical skills for managing an IPM crop. Each school lasts for one cropping season, with a group of about 25 people meeting on a weekly basis to study and make decisions based on the cropping calendar (e.g., seeding, fertilizing, weeding, curbing pest encroachment). Instead of listening to lectures or watching demonstrations, farmers observe, record and discuss what is happening in the field. This discover-learning approach generates a deep understanding of ecological concepts and their practical application.

An FFS is always held in the community where the farmers live, with the extension officer traveling to the site on the day when the school meets. The field used for study is usually small, and either provided by the community or some other arrangement so that farmers can carry out risk-free management decisions that
they might not otherwise attempt on their own farms. All field schools include field-based pre- and post-tests for the participants. Those with high attendance rates and who master the tests are awarded a certificate. Graduates routinely take over the job of extension facilitator by doing farmer-to farmer training or most of the functions of a follow-up season’s training. The effects of IPM methods taught in FFSs are also compared with conventional practices. In one notable example drawn from Indonesia in 1993, the inputs and outputs of 10 rice farmers who participated in an IPM field school during one wet season were compared with those of 10 rice farmers who had never been FFS trained. Overall, the IPM farmers achieved 21% more rice harvest yield on a per hectare basis (6.9 tons versus 5.7 tons), for 97% of production costs, when compared to their non-IPM farmer counterparts. The significantly lower “input” costs for IPM farmers were largely attributed to minimal usage of commercial pesticides. Labour costs were also slightly lower for IPM farmers, possibly because of better land management (FAO, 1993:72).

**Hard Lessons Learned for the Road Ahead**

1) The most obvious lesson from this review is that to be most effective a participatory communications and adult learning component should be built-in from the start of a project. The literature is now rife with confirmative statements to this effect. Two examples will suffice:

   If the goal of the development effort is to assist the poor, the endeavor should begin in their context, not in the planning office, not in the research station, and not from theories and constructs of far-removed institutions. … The claim is not that rural farmers are the foremost experts in macro-level planning but they are often the most qualified to decide how, or if, a given project’s planning and objectives applies at the local level. … Participation is not a supplementary mechanism “diffused” to expedite external agendas, or a means to an end. It is a legitimate goal in itself (Servaes & Angst, 1992:18).

   Access to and control of information sources are essential for poor people to participate fully in decisions affecting their lives and communities. Sustained social change is impossible without their full participation (Rockefeller Foundation, 2000:2).

Unfortunately, all too often when communication is included, it is treated as an “add-on” type of materials production component to assist project objectives that may be well off the mark. Simply stated, communication with target groups in the planning stage gives a better project design and better chances of making it successful.

2) Associated with getting participatory communication and adult learning started early on in project formulation is the importance of incorporating indigenous knowledge and practice. The adage of “start with what people already know and build on what they have” subsumes the notion that “indigenous knowledge can provide a different understanding and analysis of a situation which was formulated in response to the environment and relevant cultural issues” (Servaes & Angst, 1992:18). Further, “the location-specific nature of sustainable agriculture implies that extension must make use of farmers’ knowledge and work together with farmers. (Roling & Pretty, 1997:186). And finally, “experiences from around the world have shown that new “scientific technologies” are not always the best strategy to adopt. Farmers’ indigenous agricultural practices offer many answers and the best of both knowledge areas needs to be considered to meet local needs” (Protz, 1998:2).

3) A third lesson relates to providing adequate funding from the start for communication and learning components. A rule of thumb estimate is to budget 10% (Fraser & Villet, 1994) but large projects may require proportionately less and smaller ones more. And based on the limited evidence thus far, training and technical support for ICT related projects will need substantially more funding than previously allotted for conventional media. Norrish (in Richardson & Paisley, 1998) for example, points out that an average of 24% of the funding for a World Bank information technology component was spent on training and technical support.

4) Fourthly, and although not a new theme, building human capacity takes time, usually much more than provided for in a typical five year project. Balit (1988) notes that the most successful of FAO’s projects with a communication for development component have had a running time of seven to ten years. Benor & Cleaver (1989) go even further when suggesting that support to extension systems should be designed with a long-term perspective (15 years at least). As they skeptically conclude, “The continent of Africa is littered with five-year projects, abandoned on ‘completion’ by farmers” (Benor & Cleaver, 1989:2).

5) Given the location-specific nature of the PRA/PRCA process, a “small is beautiful” focus of projects should be at the community level. While a number of communities may be included in a given project,
individual attention should be stressed such that each would build on its own strengths and unique opportunities. As Rolling & Pretty (1997) conclude from their review of extension’s role in sustainable agricultural development, “Most successes are still localized. They are simply islands of success” (Rolling & Pretty, 1997:181). And undoubtedly, it is much easier to encourage and facilitate what we might call the four pillars of collaborative development at the individual village level, namely, multi-stakeholder involvement or pluralism, transparent negotiations, representational participation, and accountability (Anderson et al, 1998; Ramirez, 1998).

6) Planning for gender sensitivity in communication strategies and media content continues to be haphazardly applied, particularly with regard to rural women’s concerns. As Balit (1999) points out, women farmers are responsible for half of the world’s food production and in most developing countries produce from 60 to 80% of food destined for household food consumption. The “feminization of agriculture” means that rural women are key actors on the development agenda. PRCA applications should address social, economic, cultural, and time constraints faced by women in producing and preparing food and factor these into the design of communication messages, the choice of appropriate channels to use, and best timing and locations for delivery.

7) The issue of the lack of evaluation continues to undermine the perception of the value of participatory communication and learning project components. Assessing and taking credit for outcomes and longer-term impact which rightly accrue from communication and learning activities, such as changes in awareness, knowledge, attitudes, skills and behaviour, should be applied more frequently. Time and time again one reads that a true assessment of the value of communication and training was not possible due to the lack of pre-testing or a benchmark survey. Building in both qualitative and quantitative baseline measures such as those advocated in PRCA ensures that shifts in indicators can be measured during project implementation, upon its completion, and well after to probe longer-term impact. Inferences as to the effects of media and learning strategies on agricultural production levels - as a result of practice changes - can also be made (e.g., results of IPM-FFS on increases in rice production in Indonesia). In short, we need to consolidate a portfolio of validated best practices to better enable project decision-makers to harness the power of communication interventions.

One way to encourage more evaluation, and to curb the contention that PRCA is such a time consuming process, is to choose and apply only those PRA tools that will yield useful information; and the turn-around time for baseline quantitative surveys can be reduced by choosing smaller, but representative, samples and asking only what needs to be asked for formulating a communication strategy and media-mix.

The issue of evaluation is taking on mounting importance since the day is rapidly approaching when donors will want hard evidence of the results of their project investments. Anecdotal, narrative descriptions of outcomes and impacts will no longer do. Results-Based Management or RBM (CIDA, 1999) which sets specific inputs, activities, outputs, outcomes and impact performance indicators is already being applied by SIDA, CIDA, USAID and some UN Agencies, e.g., UNFPA. Assuredly other, if not most, development agencies will follow. Mainstreaming gender into RBM and factoring it into the evaluation grid of project indicators is another very positive step in this movement.

8) The question of how to best achieve sustainability following project completion remains a constant challenge but some answers are starting to emerge. Among these:

• a community focus with beneficiary participation is essential for setting achievable project objectives and creating local buy-in from the start;
• extension communication and learning approaches should build on indigenous know-how and consult research on technical problems for which there are no effective local solutions available; sufficient time should be allotted to routinise project objectives;
• follow-on activities should use local resources (staff, media equipment and facilities) and fall within the means of extension, and the community, to afford them.

In sum, perhaps the most instructive residue emerging from this paper is that researchers, educators, extensionists, communicators, and farmers must begin to act as a dynamic unit in synergizing and complementing each other toward getting the best out of methods and practices of participatory communication and learning. This implies each sector taking the lead at a given stage (e.g., communicators facilitating PRCA, farmers setting development priorities and their information and training needs, extension and media producers packaging research recommendations, skills training provided by educators and extension workers, and farmers training other farmers), but all working toward a common set of objectives.
Finally, it should be kept in mind that most of the guidelines developed for participatory communication and adult learning thus far have been accumulated over three decades. The current rush to network the rural areas of the developing world, and to apply the inherent global resources available through the Internet toward meaningful community progress, would be well served by observing the rather more slowly accrued hard-earned lessons from traditional and older electronic media applications.

**Building Participation into Communication Programs**

As noted in Chapter 1, telecenters have become an important instrument for providing many people with access to information and communication technologies. With the support of the International Telecommunications Union and FAO, we prepared a manual for staffs of telecenters in developing countries, and in it we included a section on participation that was designed to help telecenter managements consider how participation could contribute to their enterprises. Here is how we approached the subject for telecenter staffs.  

**PARTICIPATION IN TELECENTER OPERATIONS**

In the 21st century, community participation is becoming increasingly important for various local enterprises. So you can expect organizations outside the community as well as the community itself to raise questions about how “participatory” your telecenter is. While participation is often approached in a philosophical way, it has very practical implications for a telecenter operation. Participation is important because it helps you decide what services to provide, and it affects who uses the telecenter, how relevant the telecenter is to the community, where you get dedicated staff, and whether the telecenter can survive.

1. **WHY IS PARTICIPATION IMPORTANT?**

   The goal of participation is to increase the relevance of a project by using the knowledge, values and beliefs of people and groups within the community. The benefits of participation lie in its emphasis on the involvement of diverse people and organizations that can influence the success of a telecenter (we sometimes call them stakeholders) – stakeholders who often represent a range of perspectives and ideas, all of which the telecenter staff should recognize and acknowledge. The diverse perspectives of individuals within a community serve not only as a reservoir of ideas concerning the community’s ability to address its needs and desires, but also as a reservoir of skills and talents that can be used for taking action to fulfill those needs and desires. As a local citizen itself, these are matters a telecenter should consider addressing.

   Participation can lead to partnerships. Often another organization or group in the community will have resources that will be useful for the telecenter, and the telecenter might help those organizations work towards its goals.

   Participation in a telecenter is both a means to – and an indicator of – sustainability. It is a fundamental component of most community-based sustainable projects, and it is also a measurement of the success of the telecenter in meeting community needs.

   A word of caution: developing and using participation takes time and requires a high investment of energy, particularly in the beginning stages. While participation may initially seem inefficient and time-consuming in comparison to other methods of management, strong support of a participatory approach will ultimately result in a telecenter that is relevant and effective in meeting community needs. These are the keys to telecenter success and sustainability.

2. **ELEMENTS OF SUCCESSFUL PARTICIPATION**

   2.1 Involving a variety of stakeholders.

   The key component to a successful participatory process is the involvement of the stakeholders who will use the telecenter, directly or indirectly. In most cases, this will include representatives of the entire community. Special attention and energy should be given to attracting typically under-represented or marginalized groups (for example, poor people, women, minorities, the elderly) to the telecenter.

   A participatory process that only includes community members from the dominant class or favored sectors will not adequately bring attention the multiple interests and needs of the entire community, which the
2.2 Evaluating community needs through continuous feedback.

Participation is an ongoing process. A community is a dynamic body that constantly responds to new social and environmental conditions and often changes in the process. As such, the needs and desires of a community are also continually changing. To operate telecenters in the most effective way, telecenter managers must continually assess the needs of the community to ensure that the telecenter is up-to-date in meeting those needs. One of the best ways to ensure that the emerging needs are met is to ask the community. This can be done, as we will discuss later, by making participation a part of the management policy of a telecenter.

Participation should not only be promoted, it should also be measured. By conducting regular needs analysis studies, telecenter personnel will be able to measure progress and identify areas in which to consider providing information services. A needs analysis in a community serves the double purpose of collecting assessments from outside the telecenter as well as spurring participation. Through sharing their opinions in the studies, individuals will, indirectly, be participating in the development of the telecenter. In other Chapters, we provide specific guidelines on doing simple but useful studies of a community's information and communication needs.

2.3 Creating significant integration of the telecenter into community institutions.

One of the best ways to enhance the potential for telecenter sustainability is to combine efforts with already existing organizations in the community. This has several advantages. First, it integrates the telecenter into a pre-established social and organizational network, thus increasing the chances that the telecenter will become established as an important part of the community. Second, it works to ensure that the activities of the telecenter will complement—and not compete with—existing community projects. Third, the telecenter can provide services to the established organizations to aid them in their work and enhance their efforts. Integration with these community institutions requires that the telecenter invite them to participate in the life of the telecenter. It is not by good luck that this happens, but rather by good design. We will address this issue later.

2.4 Raising awareness about the telecenter to the community.

Simply establishing a telecenter is not enough; supporters must actively "market" the idea that information is valuable and that the telecenter is the key to the benefits of good information and communication. Although seemingly obvious, it is important to note that community members must first become aware of the telecenter and its services before they will get involved in it. Telecenter managers must persuade their communities of the benefits to be gained through information technologies. Focusing on the information, not the hardware, is the key to reaching much of the community that has a natural resistance to technology. Diffusion, using (as in training), and sharing of information is the goal; technology is merely the medium. Advertisements in the local paper, on the local radio and/or television station, pamphlets, fundraising activities—these are all examples of basic marketing ideas that are discussed in more detail elsewhere in the Handbook. It is good to remember that a satisfied customer is the best advertisement there is.

A recent study by FAO indicates that few participatory needs assessments are done prior to the installation or formation of ICT initiatives, including telecenter projects. FAO suggests how important participation is for some of the practical concerns of a telecenter operation especially in relation to the idea of "appropriation."

Local appropriation of ICTs is about communities and groups selecting and adopting communication tools according to the different information and communication needs identified by them, and then adapting the technologies so that they become rooted in their own social, economic and cultural processes. It is about creativity and freedom of expression and, in some cases, about resistance to political and cultural dominance and to global media markets that are dominated by a handful of transnational companies. Appropriation is about power – power over the tools and content of communication.

Local appropriation of ICTs is important because it can:

- Contribute to reducing the digital divide (as well as rural-urban, wealth and gender divides) at individual, group and community levels.
- Give a voice to the voiceless (at household, community, national, regional and global levels). For example, communication processes can give rural women a voice to advocate changes in policies, attitudes and social behavior or customs that negatively affect them.
- Foster and facilitate community decision-making and action and empower them to take control of local development processes.
- Advance community ownership of ICTs for development, empowering communities to take charge of all aspects of ICT initiatives, including deciding priority applications, content, training, technical management and even financing.
- Ensure that ICTs serve the purposes of local communities. Through appropriation, communities select and transform the technologies and content to fit their needs, rather than reflect the interests of external groups.

— FAO, Discovering the Magic Box: Local Appropriation of Information and Communication Technologies (ICT).

3. GETTING STARTED WITH A STRATEGIC APPROACH

A starting point is for the telecenter leadership group to address some basic questions about participation in the telecenter's operations.

3.1. Why is participation important to this project? Among the answers might be: because it conveys a sense of community ownership; it provides indigenous wisdom; it helps reflect community values and will help us identify information needs; it provides important resources, such as volunteers or technical expertise, at a favorable cost; and some people need the telecenter's services. Your telecenter team, which might be joined by representatives from various organizations in the community to explore this and other questions, can add to this list.

3.2. Who should participate? The answers may flow out of the first question, but they should be made explicit; it is not enough to say “the community.” What groups of people should receive specific attention because of the possibility they will be marginalized – like women, poor people, minorities, the elderly? We’ll note later how the nature of information technologies themselves can exclude people from participation and the potential benefits of telecenters.

3.3. How might people participate? The easy answer is to say that all can participate through their use of the ICT facilities and services. But there are other ways community members can participate telecenter: volunteers who oversee daily operations; tutors who give lessons; advisory groups for policy making and management of the telecenter; people who provide links to other community organizations; and people who manage particular data bases and add value to information resources.

3.4. How much participation should be sought? Is maximum participation the goal, or should there be a target called optimal participation? Some would advocate a kind of participation where the community is fully responsible for the telecenter, from policies and management to raising money and care taking. Local culture and people resources may dictate a more limited role for the general community. It is not hard to imagine situations where there can too much participation. Agreement needs to be reached on the “how much” issue.

3.5. When should participation take place? This depends on what kind of participation (the how) is being considered. It probably should begin no later than the time in the planning when participation itself is being considered. By making participation an issue in the planning process, it sets the climate for implementation in various aspects of telecenter life – and being specific about the timing avoids the “we know it’s important but haven’t got to that yet” excuse.

3.6. What incentives can be offered? How people participate is related to what incentives should be offered for their participation. Benefits they receive from the telecenter's services may satisfy most. Money and public recognition are important, but so too are special privileges regarding use of telecenter facilities or, for telecenter volunteers, discounts from shops in the community (which is a way that merchants can participate).

Other answers for some of these questions will come from the following discussion; some answers will depend on your own community’s circumstances, and only you and your telecenter team can provide those answers. But it is important that the answers be addressed and incorporated in a clearly agreed upon plan of action for the telecenter.
4. OBSTACLES TO PARTICIPATION

Telecenters are an innovation and thus a stranger to the community. And a new telecenter in the community will mean a change in the way some parts of the community work. Some members of the community will welcome the telecenter with curiosity and fascination. Others will see it as a threat and an intrusion in a system that already has its time-tested traditional ways. In this section, we look at some of the obstacles that need to be addressed in getting widespread participation. We start by breaking up participation into individual participation and collective participation.

4.1 Individual participation.

We need to think about the uses of the telecenter by a specific community and involvement of community members in telecenter activities. We can call this individual participation. What are the obstacles to this kind of participation?

(1) Economic obstacles. Can everybody in the community pay for telecenter services? Acknowledging that you must have a business plan for the telecenter’s sustainability, you will need to consider what services people can people afford, and who might be excluded if there are charges for various services. Research and planning will reveal what services are feasible and affordable. We can also ask another question: even if community members are able to afford the services, is the community willing to pay? The approach we take may determine whether those who use the telecenter are participants or just clientele.

In India, free and paid services

In an experimental telecenter project in South India, organized and planned by the M.S.Swaminathan Research Foundation and funded by the Canadian Government, the community is not ready to pay for information services. Telecenters provide a kind of information they think should be public and free. This perception is connected with the fact that many villagers are used to receiving government subsidies and they see the telecenter as a service that should be also supported by state funds. So the services are free. This removes the economic obstacle to participation, but what about the sustainability of the project? The villagers are being very creative in yielding solutions. They are trying to sustain the project financially through community banking practices and the support of self-help groups. The telecenter, as an information and training center that is at the root of self-help group activities and is the promoter of community banking opportunities, is seen by different community groups as essential for their activities. That is why they keep most services free. A share of the money kept in the bank (probably in form of interest) would serve to pay a salary to telecenter volunteers and to maintain the equipment.

(2) Physical obstacles to participation. Do community members have problems in accessing the center? We have to ask ourselves: where is the telecenter located? It is clear that if the telecenter is away from the usual community meeting points, it might hinder participation. In South Africa, the telecenter in the township of Mamelodi, in Pretoria, was originally located in the local library. Later, the telecenter management decided to move to an independent location. Esme Modisane, the telecenter manager, explains the reason why: “the library location was not appropriate because it appeared to the community as an official or government site. People were intimidated by the library and what it means; they think it is for ‘intellectual people’. They do not feel it as their own community center if it is located within the library.” In Hungary, the very rural nature of the telecenter movement usually means that there are few locations in a community where a telecottage can be placed, so it is the community that decides where it should be placed – in fact, participating in an important decision related to the telecenter’s operation. In Latin America, we are told that Internet facilities are often put in what are perceived as “male places” such as post office, and this keeps women away.

(3) Social obstacles to participation. Are there any social or ethnic reasons (including gender and age) that impede the participation of some community members in telecenter activities? It may be difficult to engage some members of the community in a participatory process because they are marginalized, geographically distant, or very busy. The telecenter manager should make every effort to include these individuals by making their participation a comfortable and respectful experience. Additionally, the telecenter manager should be flexible, adaptive, and most importantly creative in encouraging these community members to participate. In a community in Canada, locations had to be set up separately for young people and adults because each intimidated the other, thereby impeding both groups’ participation. Because women are often discouraged from moving beyond the home, you need to give special attention to how they can become
actively involved with the telecenter. For example, as part of a strategy to attract women to participate in telecenter activities in Pondicherry, India, the Swaminathan Foundation requires that at least one woman is engaged in the management of each center (for instance, the telecenter in the village of Embalam is ruled by four female volunteers).

(4) Political obstacles to participation. Some groups within the community may be unfriendly or even hostile to each other, which can make effective collaboration among them difficult. The telecenter manager may not be able to eliminate these tensions; however, the manager may still be able to gather input from these conflicting groups by meeting with each of them separately. Are there political reasons that restrain the participation of some people? If a telecenter is politicized, it can create power struggles. An example is the first telecenter established by South Africa's Universal Service Agency, the Gasaleka telecenter, in the Northern Province. This telecenter, which is run by the local South Africa National Civic Organization, has very good links to community groups. All the organizations in the area support and work with the telecenter. According to the telecenter manager, Masilo Mokobane, “the telecenter is well-known, although we need to engage the tribal authorities more. However, we don’t have problems with any organization. We do have problems with some individuals within those organizations, though, because they feel jealous of the resources we have here. But when those reticent individuals are informed, and know the telecenter is here to support the community, they help us. The telecenter cannot be politically driven, because it is for the community.”

Cultural factors in access

There is a story we were told in South Africa by Paula Middleton, a British Council official who is actively working on telecenters in that country. It is a story about computers. She explains: “The British Council demonstrated a telecenter at the Commonwealth Summit exhibition in Durban last year. It was very interesting to see the reaction from the public to visiting the telecenter stand. Indian visitors to the stand were confident with using the computers, whereas Black visitors needed encouragement to try out the computers and to navigate the Internet, not sure how the technology could be applied to their own experience. This experience seemed clearly to point to the heritage of previous disadvantage in this country and the challenges faced for the use of technology to enable equitable development. On the other hand, Black children felt very comfortable in front of a computer. And this fact clearly shows that entering the digital age is an educative process.”

Associating a telecenter with a partisan organization such as a political party or religious group runs the risk of excluding non-members of those groups. There are also more subtle aspects of political power. For example, those people in power may discourage or obstruct the community’s use of information technology because of potential challenge to their authority. In Mexico, we asked a schoolgirl in a telecenter if her teacher encouraged her to use a computer for her schoolwork. “No,” said the girl, “the teacher is afraid of the computer because we might learn something she doesn’t know.”

(5) Public awareness. Does the community know about the telecenter? The obstacle to participation here has two parts: awareness that your telecenter exists and awareness of what benefits there are from the telecenter. The second of these is the most challenging. It is illustrated by the woman Supatra Koirala, who works at a private nursing home in Nepal, who raised the question “Our priorities are hygiene, sanitation, safe drinking water. How is having access to the Internet going to change that?”

Is the community aware of the potential of ICT? As Richard Fuchs states, “people need to be encouraged to become involved in "information-seeking behavior." Simply put, people need to understand that it is worth their time and energy (and sometimes money) to find information to help solve their problems. While macro data relating telecenters to improvements in a nation’s Development Index are difficult to find, many examples exist of people discovering the benefits of telecenter services. In Shanghe, a small village near Chongqing, China, we encountered a peanut grower sitting at a computer in the telecenter. She reported how – through a web page – she was able to find a good price for her peanuts in a neighboring county. And, she said, it was worth the logistics effort to do business that way. In nearby Qing Lon village, a woman used the web to improve her silk worm practices. In India, a 40-year old woman in a self-help group urgently used the village information center to find a veterinary doctor who could provide immediate artificial insemination for her cow. The timely action resulted in some important income for her family. News of good services will contribute to the community’s awareness and positive assessment of the telecenter.

The question of benefits is closely related to how people in the community think about the telecenter’s
relevance to them. In India, the Swaminathan Foundation is making a big effort in this direction: trying to make the telecenter relevant to the surrounding communities. As part of their telecenter project, they have established a value addition center (which we mentioned in Chapter 1). This center collects and repackages information (thus making the information locally relevant) on a daily basis, and makes it available to a network of telecenters through a wireless communication system. For example, you will recall the example in Chapter 1: they placed a telecenter in the fishing village of Verampatinam where they found that many local fishermen, most of them illiterate, expressed the need to have timely information on weather forecast and wave height. To meet this need, the value addition center downloads the weather information from the US Navy web site every day, translates it to Tamil, the local language, and then sends it to the local telecenter as an audio file.

Some of the suggestions from the community may be difficult or inappropriate to implement within the telecenter. However, the telecenter manager should strive to respond to community needs and to gather ideas from the community. Being open and honest about the goals of the telecenter and the resources available will help align community expectations with the practical limitations of the telecenter.

Visibility? In a Canadian community, just changing the name from a somewhat forbidding “Community Access Program Site” to “cybercafé” increased the visibility and use of the facility.

The BusyInternet (BI) telecenter in Accra (Ghana) takes seriously the issue of awareness. To attract people to the center who might not otherwise be interested in technology, movies are shown at the center on weekends. Another magnet is Liquid, the BI Accra restaurant and bar with its cool-blue bubble design. This is where the local cyber crowd hangs out to network and dream up ideas. The BI philosophy is that creating a social scene around technology will help spark an innovative technology culture, and it places equal importance on both social and financial return. For example, to raise awareness about national ICT policy, the telecenter hosts monthly debates and organizes experts’ lectures. Low or no-cost Internet access is offered to those attending HIV/AIDS workshops and other socially oriented programs. Those who cannot afford the normal daytime prices of fee-based services can pay half-price at night.

(6) Technophobia is one of the obstacles that prevent the community from getting involved in the activities of telecenters, either as users of the services or in other aspects of a telecenter’s program. Continuous efforts to familiarize key people in the community with the process is an important tactic. Young people, who tend to learn and value technology quickly, can be used as a path to getting parents involved. Training programs for community health workers not only gets them involved, but also may lead them to influencing their clients to use the telecenter services. Similar approaches can be made with teachers and extension agents.

How can we overcome these obstacles? Here we are dealing with marketing and awareness raising, with creation of value addition products (and this might be related to training issues), and with research and analysis related to the socio-economic dynamics of a community.

4.2 Collective Participation

Next, we need to think who is going to be involved in telecenter planning and management. We can call it collective participation. We are referring to perceptions of community ownership. We suggested earlier that there can be community steering committees that set the direction of the telecenters and supervise the work of the telecenter manager. Some of the successful telecenter operations such as those in Australia, Canada and Hungary build this feature (community ownership) into their organizational structure.

We have to ask ourselves: How well is the community represented in the steering committee? This question is difficult to answer, and it depends much on the community structure itself to decide what stakeholders should be represented in the committee.

What are the problems that this kind of management entails? We can see the example of the Universal Service Agency (USA) telecenters in South Africa. The system permits not only joint decision-making and evaluation, but also higher financial transparency. However, the added layers of ownership mean that decision-making is subject to the complications of bureaucratic layers. The effect of this is a less proactive style of management. Decisions cannot be made immediately – as and when they are needed.

5. PARTICIPATION OF WOMEN IN TELECENTER ACTIVITIES

There’s a story about new information and communication technologies and rural development from Peru that urges us to think seriously about the role of women in our telecenters. It comes from The Washington Post newspaper. The story starts: "Until a brilliant sunny day when the Internet reached his Ashaninka
Indian village in central Peru, tribal leader Oswaldo Rosas could think of few benefits modern life had brought to his people. The story goes on to tell of how through grants from the Canadian government, the local telephone company, and a nonprofit organization, things were changed by the introduction of a computer, portable generator, a satellite dish and a big screen monitor. Rosas and five other tribal leaders received eight weeks of computer training which led to developing their own Ashanika web site. With it they sold their organically grown oranges in Lima, 250 miles away, and boosted tribal revenue 10%. Now, Rosas’ hut also doubles as a tribal cybercafe. So benefits from information technologies are reaching the Ashaninkas in Peru. But almost all of the middle aged women there cannot read or write (a situation common in the poorest Latin American countries and in other countries around the world), and thus they could miss some of the benefits of ICTs. Literacy is not the only obstacle women face in using ICTs. Because girls are sometimes denied the opportunity of going to school, they lose the chance to become familiar with computer technology at an early age and later may develop technophobia. Furthermore their culture often defines (and they themselves begin to believe) that technology is for males, not females. The social environment in which a woman lives may prevent her from going out of the home to a telecenter where there may be men who are not from her family. And women may perceive telecenters as irrelevant to their lives. These issues present a challenge for telecenters that want to serve the whole community. [We address gender issues more fully in Chapter 7 of Advocacy & Interventions.]

PERSPECTIVES

It should be clear by now that participation is an important concept that needs to be considered in analyzing development communication approaches, and in planning communication initiatives. Before ending, we need to look specifically at some of the issues that arise in applying the participatory approach in development communication initiatives. When discussing the tsunami disaster earlier we mentioned Richard Heeks and some cautions about participation. Here we provide his full quote from "The Tyranny of Participation in Information Systems; Learning from Development Projects."

CAUTIONS ABOUT THE PARTICIPATION ISSUE

Abstract: The Tyranny of Participation

It often seems that use of participative approaches in the development of information systems (IS) has reached the status of a new orthodoxy: a ‘magic bullet’ technique that is always relevant, always beneficial in trying to overcome the high failure rate of information systems. Yet participation is clearly not so magical in practice and is often beset by problems. This paper sets out to investigate and understand some of these problems. It does so by recognising the parallels between debate on the role and value of participation in information systems development, and debate on the role and value of participation in development projects more generally. These projects aim to deliver development goals and they have frequently involved participation. They therefore provide fertile ground for learning about approaches to information systems development. Participation is seen to fail in such projects because it ignores context; because it is itself ignored; because it ignores reality; and because it ignores other factors. Based on this analysis, a more critical approach to participation in IS projects is suggested, with three critical questions identified that must be answered before participation can be considered.

Problems of Participation

Participation has become a ‘container concept’ (Musch 1998): so broad as to cover a multitude of approaches and techniques. Participation can thus mean many things. For example, one can participate in providing information; in decision making; in implementation of decisions; and in evaluation of those implemented decisions.

Like ‘motherhood and apple pie’, participation defies tight definition, yet is regarded as a ‘good thing’. It thus attains the status of a new mantra amongst development agencies, despite limited hard evidence of success of participation (Cleaver 1998). Its mantra status is confirmed by the fact that most debate has

settled into discussion about different participative techniques rather than a deeper or continuous questioning of the value of participation per se.

Yet that deeper questioning reveals a number of problematic aspects of participation, where it ignores or is ignored.

**Ignoring Context**

Participation is often undertaken without considering the political and cultural context within which it seeks to take place: ‘participatory processes have been increasingly approached as technical, management solutions to what are basically political issues’ (Gujit and Shah 1998:3). In particular, there are clear cases in development contexts where participation is not participation: where the culture and politics of an organisation prevent apparently participative processes producing truly participative outcomes by constraining who can say what and how within any kind of group activity (Biggs and Smith 1998). For IS projects, this suggests that there will be contexts in which participation is not a viable technique, and where attempts to introduce it will fail. Participation cannot therefore be viewed as a universalisable technique.

*Veneered participation.* Because of the orthodoxy of participation, however, organisations often feel forced to create a veneer of participation even if they perceive it to be contextually non-viable. They may do this in order, for example, to please those who are funding a project; with this veneer covering a reality of more top-down, authoritarian approaches to decision-making. In such organisations there may be constant reference to theories and models of participation as guiding principles when, in fact, they do not guide actual practice. In some cases, this veneer is erected to cover decision-making processes that are ‘organisationally recognised’ as being more effective or efficient. In other cases, though, the veneer may be a cover for the attainment of personal objectives by one or two powerful actors. In understanding apparently participative IS projects it is therefore necessary to ‘scratch beneath the surface’ and see whether there is any real sense of participation in those projects.

*Inequitable participation.* There can be a mistaken assumption that the process of participation breaks down existing inequalities. In practice, political context suffuses participation. Outcomes of supposedly participative processes are frequently dominated by those individuals who are themselves powerful through position, knowledge, etc. or who are representatives of powerful groups or who, more prosaically, have the power of being publicly articulate. One well-observed finding has been the lack of input from women in processes that outwardly appear participative (Mohan 1998). Particular mention can also be made of the role of external facilitators and their powerful ability to steer apparently participative processes and to shape decision outcomes.

*Skewed participation.* Inequality may arise even before participation itself has begun in the way that representatives are selected to ‘participate in participation’. Membership is often skewed towards the powerful and away from the marginalised. This happens both through nomination and self-selection of members. It can, for instance, bias IS participation towards managerial secondary users and away from clerical primary users.

*Non-communicative participation.* Participative groups and processes tend to reproduce their political and cultural context. One consequence is the inability of representatives from different stakeholder groupings to empathise and communicate with each other. In the IS project process, this is seen most strongly around the ‘ITernal triangle’ (Knight and Silk 1990 - see Figure 1) that recognises the separate cultures, mindsets and even language of three groups: a) senior managers; b) IT staff; and c) mainstream staff and users. Consequences of their non-communication include delays, misunderstandings and inappropriate design or implementation.

*Career-enhancing participation.* The use of participation may reflect the personal agendas of one or two powerful staff rather than the needs of the project or organisation. Those who introduce participation into their projects will often see their careers boosted – and may even go on as consultants to sell the skills and techniques of participation to other organisations – regardless of the success or failure of the initial project (Mosse 1998).

**Ignoring Participation**

Because participation has become the new mantra, it is often introduced in a top-down, blueprint manner. This may preclude true participation, as already suggested by many of the acontextual approaches described above.

Figure 1. The 'ITernal Triangle' of Gaps Between Different Staff
Indicative/token participation. Where participation is merely a token – perhaps a presence more for external than for internal consumption – there may be an obsession with the institutions and overt indicators of participation, such as committees and meetings, rather than the process and outcomes of participation (Cleaver 1998). Mere membership of such committees, mere attendance at meetings is equated with successful participation. Projects therefore claim to be successful by demonstrating an appearance of participation rather than by demonstrating achievement of participative outcomes. Such token participation is normally not part of any wider or longer-term process of empowerment. For an IS project, the outcomes are little better than those achieved by top-down diktat. Indeed, the outcomes may be worse if, for instance, user groups are disappointed by the tokenism and thus become alienated from the IS development process.

Bureaucratic participation. Very similar is the bureaucratic approach to participation, or ‘participation by numbers’: a checklist approach that fails to create any true process of empowerment or involvement. One example of this is ‘bean-counting participation’ that requires one representative of each perceived existing structure or grouping to be present, regardless of the validity or impact of such representation. For IS projects this may create dysfunctional teams that are unable to produce the required decisions and outputs.

Injurious participation. Top-down, bureaucratic participation may impose rigid formal structures on pre-existing flexible informal truly participative structures, thereby submerging the latter. Formal committees and meetings can jeopardise longer-term, carefully-crafted relationships between existing stakeholders (Hailey 1998). If imposed, participation may also be seen as a powerful and demotivating ‘vote of no confidence’ in existing IS staff and their methods. Participation seems especially likely to be injurious in this way if it is ‘alien participation’: introduced as a technique by outsiders, such as consultants. This undermines the ability of organisational groups to take responsibility themselves for change generally and for IS development more specifically, thereby increasing their external dependence (Mohan 1998).

Ignoring Reality

As already described, supposedly participative approaches may ignore the realities of context and the realities of poor outcomes. Reality may also be ignored in other ways.

Resource-deficit participation. Those introducing participation can make a mistaken assumption about the innate resourcefulness of individuals and groups: assuming that they are latently capable and resourced and that these capacities merely need to be uncovered through participation. In reality, this is not so. Members of organisations, like members of communities, often have heavy existing workloads and have no time to invest in new processes of participation. Where they do participate, there are frequent cases of stress and burnout (Dockery 1998).

There are equally a significant set of required capabilities for those who would take part in participative processes: to absorb information; to put forward a viewpoint publicly; to take decisions; to implement
decisions; to evaluate decisions; etc. In reality, individuals may lack these capabilities.

**Inefficient participation.** Even where there are no resource deficits, participation may deny the reality of its resource costs. In practice, participation – which can be a substantial consumer of time, effort and money – may be far less efficient than a well-communicated top-down decision that could be equally acceptable to most stakeholders. There is a constant danger that participative groups may invest heavily to produce an information system that is no better (or even – see below – is worse) than one produced much more efficiently by less democratic means.

**Rational non-participation.** There may be a mistaken assumption about the presence of a further resource: motivation. It seems generally assumed that engagement in participation is the only rational approach that individuals can adopt; that there is no such thing as a rational choice not to participate in a decision-making process or an IS development process.

In reality, it may often be rational for individuals not to participate. This may be so even where the decision outcomes are of interest, if someone else will make and implement decisions that will be beneficial, or at least acceptable, to the individual without requiring them to invest time and effort. Even more, where the individual is not interested in the decision or outcome, it is rational not to participate.

The result of this mistaken assumption can be top-down imposition of participation on individuals or groups who resent this. Participation in common projects – such as an organisation-wide information system – can be seen as a constraint by some individuals, who feel bound by common goals and actions that they do not share. For these individuals, it is more empowering not to participate since this leaves them free to pursue their own agenda.

**Groupthink participation.** Participation generally means working in groups, and the reality of group working is not always positive. Cooke (1998) describes three potentially negative outcomes:

- **Risky shift:** the tendency of some groups to take more risky decisions than those that they would have taken as individuals. Where risk-taking is valued, groups diffuse responsibility and allow, for instance, participative processes to endorse IS designs that are excessively prone to failure.
- **The Abilene paradox:** the ability of some groups to produce an apparent consensus that no member actually desired or supported, through misperception (“But I thought that’s what everyone else wanted”). Groups can agree to proceed with information systems that no-one wants – particularly in situations of risk aversion and cultures of not speaking out or of not speaking plainly and openly.
- **Groupthink:** the ability of some groups to become insular and isolated from reality, and therefore to take decisions which are either unrealistic or are damaging to those outside the group. Where potentially participative groups come to think of themselves as special, different, and ‘above the rest’, they may start to plan information systems regardless of the real-world consequences.

**Ignoring Other Factors**

Post-modern participation: ignoring rigour. There can be a mistaken conflation of participation with the post-modern view that all perspectives are of equal value, or even with the view that there should be a categorical rejection of formality and structure. This, in turn, can mean a rejection of rigour in decision making and action. There can be deification of personal feelings and opinions that ignores more structural, systemic, environmental factors that need to be considered. With information systems, this may materialise in the idea that having a talking shop about the IS is good enough and that any kind of rigorous analysis, design or implementation can be – indeed should be – rejected.

‘Let it all hang out’ participation: ignoring confidentiality. A necessary part of ‘proper participation’ can be seen as a requirement to bring all issues and all feelings out into the open. In the first place this is clearly alien to many organisational cultures. Secondly, secrets have their value in all contexts. ‘Letting it all hang out’ can have negative impacts of increasing disagreement and conflict within the organisation, making a positive outcome of participation less rather than more likely.

**Conclusions**

From the discussion above, one can differentiate:

a) operational constraints: that make participation hard to achieve in some or most situations, and

b) inherent problems: that emerge even when participation does take place.

Despite all these criticisms and shortcomings, participation will remain an important tool in the IS development toolkit. Not surprisingly, then, new and refined techniques are still suggested to cope with both the identified constraints and problems. For example:
Focusing on group formation of the IS development team more than the outcomes of participation, given that good decision-making comes from mutual understanding and trust.

‘Walking and talking’: getting IS decision makers on a long-term basis to understand and be trusted by stakeholder groups. This to be achieved by having those decision makers get out, walk around and talk constantly with the groups.

Focusing on a longer-term, deeper approach to empowerment within the organisation, of which participation would be just one part. Thus, attempting to shift organisation-wide factors such as structures and culture rather than just attempting to ‘bolt on’ participation to IS projects.

More generally, it is clear that participation needs to be approached far more critically and without the assumption that it will always and necessarily bring benefits either to development projects generally or to IS development projects more specifically.

“It is important to look at what is going on around the techniques themselves if, as suggested here, the main determinants of outcomes lie not with the choice of method but with the institutions and protagonists in which those choices are made.” (Biggs and Smith 1998:245)

This therefore suggests three key questions must be asked where participation is being considered.

1. What is the political and cultural context?

As noted, it seems likely that this context determines IS and other outcomes more than the particular approach or techniques – participative or otherwise – that are utilised. Discussion and diffusion of politico-cultural analysis tools may therefore be of greater value in the IS domain than the minutiae of participative or technical analysis techniques.

2. Who wants to introduce participation, and why?

Those initiating participation may be motivated by a desire to offload IS responsibilities and workloads onto others, or by a desire to achieve certain career goals. This is obviously less likely to be successful than the situation where participation is driven by a desire to improve IS decision-making and increase the ownership of those decisions.

3. Who is participation sought from? Do they want to, and can they, participate?

Similarly, from the perspective of potential participants, their motivations and resources are central. Where they lack a good reason to participate in an IS project and/or where they lack the resources to participate, participation failure is the likely outcome.

Alfonso Gumucio-Dagron, a well-known Guatemalan communication scholar, brings considerable thought and experience into the discussion of participation. Note that his book Making Waves, which you encountered earlier in this book, has as its subtitle: Stories of Participatory Communication for Social Change. The following article by Gumucio-Dagron is titled: “Vertical Minds versus Horizontal Cultures. An Overview of Participatory Processes and Experiences” and appears in the UNESCO publication Approaches to Development, cited earlier.

IN SUPPORT OF PARTICIPATION

Introduction: Vertical Minds versus Horizontal Cultures

It happened at a very small village west of Koudougou, in Burkina Faso. The name of the village is not very relevant. Not even the name of the country. It could have been any other country in Africa. We were visiting a small radio station, one of the six “local radios” that President Thomas Sankara had set up when he was Minister of Information during the early eighties. Outside the mud-brick small room that housed the station we found lying on the bare floor, under the rain, long rows of post office boxes, several hundreds. Our local contact saw a big question mark on our face and immediately provided an explanation: “Oh, these are for the new post office building, which will be built here. It’s a donation from Germany”. Rust was already taking care of the donation. We inquired: “How long ago did you get them?” He replied: “Last year. But you know, the government has not yet started to build the post office, I’m not sure they will ever do it”.

Certainly, we thought, if we were the government we would never do it either. What kind of brain can conceive a post office building, with hundreds of luxurious PO boxes “Made in Germany”, in a small village with no more than 300 families, mostly illiterate peasants? We couldn’t imagine any of them keeping a key for the PO box, and visiting the post office once a week to retrieve non-existent letters. We couldn’t see many of them writing any letters either. The whole concept seemed to us imported and imposed by people who don’t know much about how communication flows in rural areas of developing countries.
On the other hand, we could imagine the role that the local community radio could play. Besides its typical role of airing music. If by any chance a letter came to the community, it will go straight to the radio station, and a short message would alert the family to whom the letter has been addressed. Actually, many community radio stations in the world started to build their constituency by providing precisely this kind of services to the community.

We’ve seen too many of these grotesque perversions of development in countries of Africa, Asia and Latin America. Mostly the result of imposed projects, by irresponsible donors that care more about an annual report on development cooperation that looks good and glossy, rather than caring about people. Very few governments in the Third World will say no to funds from cooperation agencies. Some of them, better prepared for negotiations with international or bilateral development agencies, will put the country priorities forward, but these are only a few. Many other governments will just take anything they offer them, because of corruption or because they themselves are not aware of national priorities in development. What does this have to do with communication? Actually everything.

**Vertical Minds, Horizontal Cultures**

During the past twenty years, the whole discourse of development has began to experiment deep changes, from a very vertically imposed and rigid model of “assistance” from international and bilateral development agencies, to more flexible alternatives, that take into account what people really need, or at least, what governments say that their people need (which often is not the same).

The real needs of the so-called “beneficiaries” have seldom been taken into account. International and bilateral cooperation agencies offer ready-made packages and summon developing countries: “Take it or leave it”. They have learnt to identify many of the bilateral cooperation agencies by their agenda. These agendas correspond seldom with the priorities of developing countries. For example, one of USAID priorities has been to control AIDS and STDs in developing countries. Many millions have been spent in many programmes of reproductive health and family planning (birth control), even in countries where the number-one health priority is diarrhoea or malaria. Take it or leave it.

As communication is building its own personality as a discipline for development, its influence is being noticed by cooperation agencies, at least in the discourse, though the practice is yet to change. Even World Bank documents in recent years show much concern about development models that were embarrassing failures mainly because they failed to identify what people really wanted, let alone what they really needed (which often is not the same). The whole concept of development and international cooperation is in crisis and is being reviewed, while more democratic governments displace the authoritarian regimes and civil society empowers itself to put an end or at least to denounce corruption.

The vertical minds that guided international cooperation were shaped during colonial times. They just “knew” what was best for countries in Africa, Asia or Latin America, until they found some countries that had their own ideas about development.

There is no room for vertical minds in a world of horizontal cultures. This was actually well understood as new pressures came on developing countries with the force of a tidal wave: globalisation. In spite of being pervasive in the economic and trade arena, it has encountered great resistance in culture and civil society. Numerous cultures in the world are not ready to let it go. People hold to their mother tongue, they hold to their dress, to their music, to their religious practices. Still, the tidal wave can be powerful enough to wipe many off the globe in the long term, if there is no reaction to it now. Here again, communication in development and participation could be of great help. It is a resource with a potential that hasn’t been fully uncovered yet.

The problem of communication, as it has been conceived through so many decades, is that it was not meant to communicate, just to inform, conform and deform. Inform as a one-way flow of content towards the passive receiver (the old paradigm is still very much alive); conform as a way of adjusting the behaviour of people to the needs of expanding markets and/or for political purposes; and deform as distorting history, memory, truth and culture, for the purpose of domination either by local privileged classes or by multinational conglomerates (the former “banana republics” of central America did learn a lot from those years).

Still today, the English language doesn’t clearly differentiate information (one way) from communication (multiple ways), let alone communications (the technology) from communication (the human factor). This is very annoying as most of the literature on communication is written in English. Mass information media is often referred to as “mass communication”. The horizontal and dialogic components in content flows, which
are essential to the act of “communicating”, are simply not taken into consideration. The whole concept of participation, which etymologically is in the core of the word communication, has been ignored for many years. Communication was until very recently the fifth wheel in the car of development. Seldom it formed part of the essence of the development process. Maybe, because development was not even perceived as a process itself. The lack of communication and its basic principle, dialogue, has prevented many projects from succeeding. That is, if we understand “success” as people democratically guiding the process of change for their own community, for the benefit of the majority.

So why is the relationship between development and communication beginning to change? Why is the car of development now starting to use the spare wheel to redress its direction? It is not because the discourse is changing within the international cooperation, and even less because some scholars started writing about it. Actually, both have come to represent, digest and popularise what has been already happening at the community level for many years.

Participation in development has finally shattered institutional barriers, and participatory communication is helping to make of it a clear expression by communities. Better late than never. International or bilateral cooperation agencies can no longer ignore what the subjects of development have to say. Moreover, they need them if they want to claim any sustainability in their programmes. Without people’s participation, no project can be successful and last long enough to support social change. This may sound as an obvious truth, but it was amazingly ignored for decades, and still is in many development projects where donor’s agendas are imposed over people’s needs. Imperfect, difficult to label (which makes scholars feel uneasy), culturally diverse and often escaping from institutional control, participatory communication is feeding a new approach to communication and to development as well. Participatory communication is fragile, it is often contradictory – which conspires against the ready-to-replicate model exercises, but in the end it is as alive as the communities that use it as a means to promote dialogue and networking on issues that are important for the community life: development, yes, but also culture, power and democracy.

### Process of Participation

We hold tight to words and concepts; that is what most of us do for a living. Maybe it’s time to be more flexible, to imagine that definitions can also be a burden when trying to define something that we don’t fully understand. Let’s take, for example, “participatory project”, which already encapsulates a contradiction. A “project” is something that has to be designed in advance, with a clear understanding of all its phases and results. It’s actually a very academic and intellectual exercise. Maybe that is why we like to use the word: research project, development project, and even sentimental project. Participation, on the other hand, is a wide-open window towards a collective goal that we can only imagine over the horizon. By its very nature, participation is a process and when we refer to a participation project we are actually thinking of a participatory process.

It is true that often a participation process starts with a project that aims to encourage participation. Actually, this is more likely to happen when dealing with development communication. The very fact of implicating communication with a participatory purpose can make a development project different. If a communication initiative is seeking for participation with the aim of involving the community of beneficiaries to the point of them becoming the owners of a project, then a communication process has to unwind over the time to make it possible. The “ownership” of the development project –and first, of the communication component-, is what helps to establish the difference from the typical interventions in development communication projects, which reproduce the sender and receiver paradigm, just with a more progressive content.

Unfortunately, research on participatory communication has often very little “sync” with what is actually happening on the ground. Research comes late or never. It is partial and tends to generalize based on very few examples. There are several reasons for that:

1. Most of the research is done in Europe and the United States/Canada, while the subjects of research, the participatory communication experiences, are located in developing countries.
2. Researchers can only spend short periods of time visiting developing countries, so they tend to pick only very few experiences for their case studies.
3. Many researchers work on information readily available on the Web or in other published case studies and information, which limits enormously the scope of their research, and also highlights excessively only a handful of experiences, in detriment of many others.
4. Most researchers speak only English, which limits their research to sources in English and/or to countries
where English is spoken. And even in those countries the researcher may find many difficulties to communicate with the local population, which is only fluent in the local language.

5. Researches from the North (Europe and North America) have a whole system of values that prevents many of them from understanding local culture and local values of the South, thus reflecting a limited comprehension in the resulting research documents.

6. Many local participatory communication experiences remain invisible because they are not promoted, funded or anyhow related to the mainstream international cooperation agencies.

7. Very few research projects involve local researchers who can provide valuable insights on the social, economic and cultural contexts.

While preparing a report on participatory communication\textsuperscript{23} we came in touch with many experiences that were unknown and neglected by researchers. We are convinced that every developing country is rich in community based participatory experiences where communication is an important factor, but very little of this is acknowledged by researchers in North America and Europe, who too often prefer to recycle in their writings the same few case studies that a few have prepared. We believe that the only way to report and to understand these experiences is being there and trying to capture at least some of the context and culture.

The analysis on participatory communication, more than any other analysis, has to deal with the context as much as with the media or communication tools being utilized. Project documents and success stories do not provide that insight. Those very academic attempts to systematize or theorize based on what others have written can only contribute to transvestite the original experience into an intellectual and speculative exercise that has little to do with reality. Often, enthusiasm for the novelty eclipses the description of the complexities that are found at the level where the communication process is actually taking place.

\textbf{Waves of Change}

If we had never been to Radio Kwizera, we would have had difficulties understanding the importance of this development communication experience in the context of a refugee situation. The small station located at Ngara, near the Tanzanian border to Rwanda and Burundi, is the most important media for half a million of refugees that can’t go back to their countries, and can’t go out of the refugee camps to join the Tanzanian or any other African society. Nobody wants them. The radio station, which was set up by the Jesuit Refugee Service (JRS), gives at least a sense of identity to the refugees, besides supporting very concrete activities related to environment, health, education, human rights, water and sanitation, etc. Considering the number of refugees, this is by any standards a “big” communication project in terms of the captive audience. But even if it were smaller, such as La Voz de la Comunidad in Guatemala or the Community Audio Towers in The Philippines, it would still be the most important communication tool for the community, and from their perspective that is what is needed.

Only a few thousand people are reached by a \textit{Community Audio Tower} (CAT), just as many as can be reached by the sound that travels from the cone speakers mounted on a high mat, to the homes that are scattered over a 4 or 5 kilometre radio. Many in the success-oriented world of international cooperation would tend to minimize the importance of this type of local media, considering it “too small” to invest any funds in it. But if they would listen to what the community has to say, maybe their perspective might change.

For example, people at the \textit{Community Audio Tower} at Tacunan, in Davao del Norte, told us they were certain that without their cone speakers they could have never progressed as they did in a few years. They got potable water, electricity and a new road. And we could add: pride and a voice to express their culture and identity.

\textit{La Voz de la Comunidad} basically airs music and short messages for its constituency, the poor neighbourhood of San José Buenavista, hanging on the slopes of a ravine under the Incienso Bridge, not far from the very center of Guatemala City. As other community radio stations, \textit{La Voz de la Comunidad} has been under government pressure to “legalize” its status, which really means paying the equivalent of several thousands of US$ dollars to buy a FM licence. Instead, the station decided to place the transmission antennae in the lowest spot of the ravine, so to avoid the signal to reach further than the communities for whom the transmission is intended.

During the struggle against the Apartheid, radio was instrumental to defend local culture and to build a sense of democracy in South Africa. \textit{Bush Radio}, \textit{Radio Zibonele} and the multi-media programme \textit{Soul City} 23

had to fight their way towards legal recognition. Both Bush Radio and Radio Zibonele were shut down as “illegal” and only surfaced again only in 1995. Women of Mouse Mpumalanga Province organised, often against the will of men, to create Moutse Community Radio Station, a rural enterprise also contributing to the peace and reconciliation process. Many other radio stations have joined since, making of South Africa one of the most fertile grounds for participatory communication experiences. Radio is generally the most successful communication tool in developing countries and usually the first to be experimented by communities that are in search of their own “voice”. Before 1998, for example, there was no radio station at all in Kiritimati, one of the islands of the Republic of Kiribati, deep in the Pacific Ocean. A water and sanitation project supported by the Australian cooperation allowed the community to build a small radio station in just a couple of months. The Tambuli Radio Network in The Philippines represents a cluster of 20 small stations scattered throughout remote islands of the archipelago, all of them serving the social and cultural interests of small communities.

Images of Identity
Similar “isolated” experiences are using video or theatre or Internet as the communication tool. We are yet to see participatory television experiences in developing countries, but it may happen when the current video experiences develop their broadcast capacity. Take for example TV Maxambomba in Brazil and TV Serrana in Cuba. These are two communication experiences that in spite of including “television” in their name, are not broadcasters. Which doesn’t mean at all that they don’t reach people. Yes they do, and certainly with much more quality than many broadcast channels. Quality, because people participate in the video exhibitions with a sense of community, a very different type of access than having a TV control in their hands that allows them to zap and forget. The two experiences have in common, along with TV Viva, also in Brazil, that their communication action is not limited to documenting reality or producing educational videos, but mainly reaching people and interacting with communities, offering poor neighbourhoods (TV Viva, TV Maxambomba) or rural areas (TV Serrana) a programming that deals with their problems, their culture and their daily lives, which are never portrayed or taken into account by commercial broadcasters, and not even by the public service networks, forced to broadcast for a “general” public, thus ignoring the particularities of the various cultural and social settings of communities.

Video is also cleverly used as an instrument of community research, revealing internal problems and seeking solutions through community participation. The example of Maneno Mengi in Tanzania is better known, because it has supported several peasants or fisher folks communities to improve their living conditions by strengthening their organisations and their capacity to deal with authorities. Similarly, poor women in India (Video SEWA) and Egypt (Video and Community Dreams) use video as an organisation tool. Video has also been an important communication tool for peasant communities in Chiapas, in the South of Mexico, the scenario of confrontation between the government and the Zapatista Army, and for some indian tribes of Brazil (Kayapo Video) to re-invent their culture and face the challenges of modernisation and the risks of loosing their territory to multi-national and government developers.

More related with an institutional framework, several video “projects” with a participatory component have been successful in engaging a long-term process of education and communication. Action Health (Nigeria), uses video for AIDS prevention and reproductive health, training groups of youth to interact with their peers through video. Video supports other activities, like drama and inter-personal communication, allowing young Nigerians to openly discuss issues related to their sexuality. In Bolivia, the Lilac Tent project has also been dealing with reproductive health and sexuality through video and a series of other interpersonal communication activities, which include games, quizzes, and entertainment. A huge lilac circus tent travels from one community to the next offering a wide range of communication activities involving the villagers as well as the local authorities, teachers, health staff and even police and army officials.

For at least four decades, the United Nations Food and Agriculture Organization (FAO), has supported long term video projects aimed to support community mobilisation around development projects. Three are notable experiences: the Centro de Servicios de Pedagogía Audiovisual para la Capacitación (CESPAC) in Perú, which started in 1975; the Programa de Desarrollo Integrado del Trópico Húmedo (PRODERITH) in México, which started in 1978, and the Centre de Services de Production Audiovisuelle (CESPA), in Mali, which was set up in 1989 and had less impact than the other two. The three projects are a similar mix of video training and video production of “pedagogic packages” meant to facilitate exchanges of knowledge between grassroots communities and project managers and technicians. Hundreds of videos dealing with agricultural problems and solutions were produced by these projects, whereas the participatory aspects...
were not fully developed. The video shows organised to mobilize communities are interesting examples of community-based dialogue facilitated by a new technology. In this case video has little to do with broadcast television and is in fact closer to community theatre, which is another important communication tool in Third World countries. Often, drama representation is already part of the local culture and part of the internal communication processes.

**Drama in the Roots of Culture**

There is hardly a community, rural or urban, that doesn’t already have a form of participation and communication through music, dance or drama. Even the poorest do. They will have to be much less than poor to have lost the last mark of identity and culture. Unfortunately there are, of course, some of those that have been cut away from their roots, forced to migrate to urban areas for work or because of war, deprived of their language and customs, and their culture gone flat under the pervasive effect of globalisation. This is what happened in the seventies to small indigenous tribes from the Eastern tropical lowlands of Bolivia, which were left without land and migrated to the capital city, Santa Cruz, to become in only few years prey of alcoholism and prostitution. In Colombia, Teatro Kerigma has found a way to strengthen cultural identity –or maybe even re-invent it-, in poor barrios of Bogotá, made mostly of migrants that arrived from rural areas since the early sixties. Since 1978 the Kerigma association has been using street theatre to mobilize the local population around cultural and human values. Teatro La Fragua in Honduras, and Teatro Trono in the outskirts of La Paz, Bolivia do something similar, just to mention three examples of community theatre groups in Latin America that have organised their work around the needs of marginalized populations consisting of migrants to the capital cities. The three projects include not only theatrical activities, but also a wide range of social and cultural manifestations.

The long tradition of performing arts in Asia and the Pacific has enormously facilitated the establishment of drama groups that go deep into historical memory and tradition in search of cultural values that relate with today’s social problems. Nalamdana, a drama group operating in poor neighbourhoods of Chennai, has developed intense activity that goes far beyond researching, scripting and performing community drama to create awareness on health and social issues. The group is also involved in conducting workshops and developing educational materials and television dramas on STDs and HIV, especially for illiterate men and women.

In the high plains of Nepal, the Aarohan Street Theatre has developed a network of community based drama groups that use local traditions and modern contents to promote dialogue and discussion about voting rights and democracy, environmental and sanitation issues, as well as other health related problems. With only “one small bag” to carry props and costumes, Wan Smolbag is a theatre group in Vanuatu, Solomon Islands, that has also been dealing with issues of governance, representing, among other plays, a few related with voting rights and child rights. The environment is no less important for Wan Smolbag and several drama groups that have been trained during the past decade to create awareness on marine life under threat. Their influence now extends over numerous islands through more than fifty different plays that have been created to tackle the topics mentioned above, as well as AIDS/STDs and other health related issues. In recent years Wan Smolbag has diversified its activity, including books, radio programmes and videos.

Theatre groups tend to multiply at the community level, as they represent a genuine form of local participatory communication. The concept of community theatre or popular theatre –as it is called in Latin America-, has as little to do with conventional theatre as video with broadcast television. In a country like Nigeria, where even radio and television doesn’t effectively reach the majority of the population, local drama group have been instrumental in supporting health programmes of immunisation and prevention. In the early nineties, UNICEF supported the training of local drama groups and the development of plays, based on “Facts for Life”, dealing with safe motherhood, malaria, sanitation, AIDS, nutrition, and other health-related issues. Each play was locally adapted not only in terms of language or dialect, but it also took the culture, rites and practices into account. Around 46 local drama groups were active, touring from one rural community to the next.

**Gadgets or Tools for Development?**

It is clear that the participatory communication process can adapt any tool or technology to support the process of community participation. Although several decades ago there was a tendency to refuse new technologies based on the assumption that they would have a pervasive influence on local cultures, reality shows that any technology can be appropriate to a social change and development process if used to
articulate local needs and local contents. One of the most powerful examples is the use that Bolivian miners made of community radio for fifty years, since 1948. But there are many other examples to support the idea that technology can be adapted and “appropriated” by local communities. Video in the hands of market women in India or the Kayapo indians in Brazil, are also encouraging examples.

A powerful new trend has been developing in recent years under the worldwide impact of the new information and communication technologies (ICTs). Agitating the banners of “e-mail for all” or “Internet for all”, many governments, multinational corporations and international development agencies have teamed to provide “access” to computers and Internet to every community in the world. The chant of sirens of technology saving the world from poverty has been heard in Africa, Asia and Latin America. Millions are been invested in strengthening national networks and setting telecentres or “information shops” in the most remote rural areas, where there is no electricity or telephone available. ICTs have become the latest fashion in the development jargon.

Unfortunately, the large majority of ICTs projects are not being set up for the benefit of intended communities. An important part of the trend is just “business as usual”, meaning, companies selling by thousands pieces of hardware and software, and other intermediaries benefiting from the transfer of technology: consulting firms from Europe and the US, Third World government bureaucrats and a few universities. The ICTs “instant remedy” to underdevelopment and social exclusion sounds too much like the trendy “diffusion of innovations” of the seventies. Again, transfer of technology is seen as the panacea, the ultimate solution, regardless of social, economic and political causes, and also regardless of the cultural implications of introducing new technologies that carry within, as a Trojan horse, the culture of globalisation.

In the frenzy of competing to provide computers and connectivity, most of ICTs projects are overlooking obvious facts. It is almost boring to repeat what we all now know, but it is still worth to do it because many are just reluctant to be confronted by the evidence: of the huge mass of information known as the World Wide Web that can be accessed through the Internet protocols, 90% is in English and 99% is irrelevant to 99% of the population of the world; 80% of the world’s population never made a phone call; only 6% uses Internet; 90% of all Internet users are in industrialized countries; Internet users in Africa & the Middle East together account for only 1% of global Internet users; 52% of Internet world users are non-English speakers; while 40% of households in the US have access to Internet only 0,005 % of the population of Bangladesh uses it. Do we need to continue with more examples?

In the name of “digital divide” lots of money are being invested –and the so-called divide is widening. As long as the “digital divide” is reduced to a technological gap, we will witness the widening of the social divide, the economic divide, the political divide, etc., thanks to new technologies.

Fortunately, parallel to the expanding wave of mercantilism that uses ICTs as the point the lance, new critical voices are joining both in developing and industrialized countries, seriously warning about the consequences of pushing new technologies over Third World countries irrespective of priorities, needs and the local capacity to make a good use of them. Today, we can clearly draw the line between those projects that are part of the technological frenzy and the ones that understand ICTs as one more instrument to be put in use for the benefit of development and social change. It is increasingly clear that Internet connectivity projects that do not include as a mainstream force the creation of local contents, are vowed to failure.

Ironically enough, the future of Internet for development is not the World Wide Web, but the infinite Local Community Networks that should be created in tune with language, culture and society. Only the development of local databases and appropriate local contents can meet the needs of those thousands of poor rural and urban communities that have been graced by ICTs and do not exactly know what to do with it. As many reports indicate, users are more interested in making phone calls or photocopies than in any other feature offered by a given Internet shop.

Other than the voices that are drawing the line in the debate around the “digital divide”, recent experiences are showing the way for an appropriate use of ICTs in development and social change. It is true that there is only one of these projects for every one hundred that are set up with no regards for community needs and culture; however, the experience of well-planned community based initiatives may positively influence the communities where computers were dumped by ICT pushers or ICT naïve promoters who thought something magic could happen in “poverty reduction” when people would access Internet. Unfortunately, by the time communities realize there is a different way of dealing with Internet, it is likely that thousands of computers that have been parachuted over rural and urban communities will be obsolete.

Internet based development communication experiences are rather new and mostly unknown, in spite of a
large number of reports that have been issued. Two or three years of development are usually not enough
to evaluate the social impact of a communication tool. However, the eagerness of some researchers to
immediately assess the operation of ICTs at the community level is bringing enormous benefits. We see this
research trend as “research with a purpose”. Meaning, a purpose that defies the academic exercise and
contributes to redress the evolution of ICTs experiences as they develop, by the immediate devolution of a
critical mass of information obtained at the community level. The research that grows and modifies itself in
parallel with the experience that is being acquired by Internet-based development projects, can only benefit
the course of action. India and South Africa are two countries that are outstanding in terms of the use of
ICTs for social development, and the two have benefited from early research “with a purpose” of looking at
each experience with the eyes of the community.

One of the most outstanding programs is undoubtedly, the one known as Village Knowledge Centers, in
Chennai, India, implemented by the M.S. Swaminathan Research Foundation (MSSRF). Formerly called
“information shops”, the Village Knowledge Centres - operated by individuals on a semi-voluntary basis,
were established to take advantage of new technologies to provide information to the rural population on
agricultural issues such as: health (availability of vaccines and medicines in the nearest health centre,
preventive measures); relief information (issue of loans, availability of officials); inputs for agriculture (prices
and availability, costs, risks and returns, local market price for the rural produce); transport information;
micro-meteorological information (relating to the local area); surface and ground water related data, pest
surveillance and on agronomic practices for all seasons and crops (based on queries from the rural
families); maintenance and update of data on entitlements of the rural families (vis-a-vis public sector
welfare and infrastructural funds). The training and materials are in Tamil, the local language. The Village
Knowledge Centre enables farming families not only to produce more without associated ecological harm,
but helps everyone in the village to create a hunger free area. The villagers themselves identify who the
hungry amidst them are; 12 to 15 percent of the families fall under this category.

Similar projects have been promoted in other parts of Asia, as well as in Africa and Latin America, with
mixed results. At least, they aim to be established as community development tools and instead of simply
seeing the community as potential user, they also see it as provider of information and cultural parameters.
The telecentres in Gasaleka and Mamelodi in South Africa, the Nakaseke Telecentre in Uganda, the InfoDes
project in Peru, the experience of El Limón in Domenican Republic, are only a handful of growing
community based experiences that are signalling the way for new technologies of information and
communication.

Taking Further the Good Intentions
The changing discourse of international development agencies should evolve parallel to changing
development practices in relation to communication. If communication is not understood as the oil that will
allow the new discourse to effectively move the machinery of development and social change, little will
actually change in the development practices.

How does the new development discourse of international cooperation agencies affect the programs and
projects supported? Are things really changing or is it always “business as usual”? There are some
requisites and conditions to make changes happen. Are donors, development agencies and governments
ready to make changes that go beyond the discourse and the good intentions?

One of the indicators of real changes, for example, would be the allocation of budget lines to communication
activities in every programme or project. What we generally see in development projects, is that
communication is absent from the budget. What we may find is insufficient, to say the least. We may find a
small budget for “promotion” of the overall project, which is more related with public relations than with
development communication. Often, budget lines of “information” are used to organize press conferences
or to support journalists or media houses. None of these really has any influence in changing they way
things are done inside each project. A neat line needs to be drawn between information activities that aim to
build the external “image” of a program or project, and the communication activities that should be
inseparable of program activities at the community level. We are of course referring to programmes of
health, agriculture, human rights, poverty reduction, water and sanitation, or any other that includes
activities directly involving beneficiaries. A communication budget should ideally represent a minimum
established percentage of the overall budget, and should allow communication activities to take place from
the inception of the project, and all along the implementation phases.
A logical consequence of budgeting communication in a development programme would lead cooperation agencies to reflect on their human resources, particularly those in charge of administrating the fund allocated to communication activities. In recent years, some development organizations, such as the World Health organization (WHO), have increased their allocations to communication activities, but without changing the profile of the staff in charge. Doctors and other health personnel are improvised as development communicators and given the responsibility to follow-up on communication activities. As a result, very often these communication activities do not correspond to a coherent communication strategy. They are just a sum of improvised activities aimed to spend the funds allocated. Such a mechanical implementation of communication resources may not contribute to any deep changes, until cooperation agencies fully understand that communication is a specialized field of development. Some organizations, acknowledging their lack of expertise, have turned towards external consultants, with mixed results. Too often, advertising agencies are hired to conduct information activities that are more in line with social marketing and image making, than with community participation. It is obvious: advertising agencies do not have the experience and the skills to do otherwise.

Only very few international development organizations have an understanding of the profile of communicators that are needed to deal with development issues. At different levels, these organizations have placed people that are in a better position to contribute to participatory development. UNICEF, for example, besides having an important cluster of information and communication specialists in its headquarters in New York, also has communication officers in the field, in every single country where the organization is present. The communication staff at the field level is known under various names (at one point, UNICEF identified around fifty variant titles): information officers, communication officers, social mobilization officers, social marketing officers, community mobilization officers, and so on. These are a clear indication of the lack of definition that exists. But names and titles are only the tip of the iceberg. Job descriptions tend to be even more confusing, and the whole recruitment process depends usually on people that are not sufficiently knowledgeable about communication. The result: among the hundreds of information and communication officers that UNICEF has in the field, the large majority has no development communication background and experience. Many of them are journalists, media oriented, which partly explains UNICEF’s strength in working with media houses, and its weakness in working with communities. Other development organisations have no tradition of having communication staff at the field level, but they are supportive of development communication from their headquarters and regional bureaus. Just to mention two other United Nations agencies, FAO and UNESCO have made important contributions in terms of training and setting up projects where participatory communication is the mainstream driving force. We have already mentioned the video centres that FAO has supported during long periods in Peru, Mexico and Mali. The organization has also promoted important “think tanks” and publications. UNESCO is exceptional in terms of having communication at the same level as culture, science and education. In spite of its limited budget and overgrown bureaucracy, UNESCO has made the difference supporting development communication activities worldwide, including many community radio initiatives, but not only.

A look at the main players in international development, both the funding institutions and the development agencies, bilateral and multilateral, show little improvement in terms of providing enough room in their programmes for the growth of development communication initiatives. Many have attempted to frog leap from nothing to “ICTs for development”, with very mixed results. Once more, improvising ICT managers that may know a lot about technology, but little about knowledge and culture does not contribute to change the usual practices at the community level. Communication, which should be central to the introduction of new information and communication technologies, is actually grossly overlooked. The sudden abundance of ICT projects is obscuring the problematic of communication for social change. Just by sowing computers and connectivity doesn’t mean these projects will harvest anything else but old and outdated machines in three or four years.

**Participation is Dialogue**

The bottom line is that development organizations should look closer to what has been already happening during the past decades at the field level, in terms of communication and participation. At one point we thought their discourse was changing because of their acknowledgment that the place where development really happens is the community. However, the new discourse seems to be already getting stiff due to the lack of exposure to reality.

If there is only one thing that we can all learn from participatory communication experiences and their mixed
results, it is that dialogue is the key for development. If civil society is to take a larger role in conceiving and working for development, then dialogue is unavoidable. If development organizations are ready to change their practices and their relation with governments and the civil society, then dialogue is essential at the community level. Participatory communication movements are an invitation to dialogue, which ought not to be refused.

SUMMARY AND CONCLUSIONS

For many, participation is an essential element in development programs. While those in development cannot claim to have invented the concept of participation, certainly promoting it has become a significant part of development rhetoric since the 1970s. Communication is related to the participation issue in several ways: the need to deliberately and strategically motivate people to participate; “training” them how to participate; and linking participatory and participating groups into development planning, administration, and implementation of projects. Communication is vital in creating a culture of participation. These are essential roles for communication because participation does not always happen spontaneously; in fact, bureaucracies and people themselves may discourage it.

But even as we see examples of success, a lingering difficulty is the lack of precision in employing the participation concept. The aggressive incorporation of participation as part of development planning faces a variety of obstacles, some of which are found in the development strategists themselves. These include:

1. The assumption that participation is the answer and that top-down is wrong. Perhaps we should acknowledge that providing information from expert (outside) sources may have a role in stimulating people to participate and in providing some of the material people use in their participation.
2. Failure to be more specific about when and under what circumstances participatory approaches are most useful, and where they’re not useful. When there is a plague sweeping toward a district, or an epidemic erupting, rapid information and action from the “top” may be essential.
3. Failure to look at participation analytically: where in the process is it most appropriate: planning, benefits, resources, monitoring? In the beginning, middle or end of a project? Is it more appropriate in some sectors than in others? And at different times than others?
4. Failure to take into consideration the social structures that make participation unproductive, unrealistic or undesirable. Are there situations where the local community participation pattern is one in which local elites dominate through their participation? Note the possibility of endangering local participants — for example, farmers being assaulted by guerillas for “collaborating” with the government in agricultural development programs in the highlands of Central America.
5. Failure to distinguish clearly between participation as a means or an end. Thus, is it more important to maximize or optimize participation?
6. Failure to recognize the difference between manipulation and participation. Sometimes the distinction is made between genuine participation and pseudo participation.
7. Participation is sometimes closely associated with using indigenous knowledge and traditional knowledge to arrive at solutions. For this approach to avoid the blind-leading-the-blind, or blending ignorance, some validating information through a top-down expert system may be beneficial. We are becoming more aware that some traditional knowledge, beliefs and practices can be counter-productive. Note, for example, the considerable obstacle that traditional beliefs concerning female genital mutilation present for contemporary programs in reproductive health. A situation in Nigeria in which a woman was sentenced to death by stoning – a determination made by local people interpreting a controversial religious law – provoked an international outcry by governments and civil society groups. (See box.) These cases demonstrate that what the community believed was true, useful and practical decades or generations earlier may not be appropriate under current conditions. An example related to agriculture comes from Egypt, where the completion of the Aswan Dam in the 1970s brought many advantages to the country but also brought some unanticipated problems.

The silt that was deposited in the yearly floods and made the Nile floodplain fertile is now held behind the dam. Silt deposited in the reservoir is lowering the water storage capacity of Lake Nasser. Poor irrigation practices are waterlogging soils and bringing salt to the surface.

For further discussion of this issue, see Alternatives to Traditional Approaches in the Formulation and Implementation of Family Planning Programmes in African Countries, United Nations Economic Commission for Africa, Addis Ababa, 1993.
Mediterranean fishing declined after the dam was finished because nutrients that used to flow down the Nile to the Mediterranean were trapped behind the dam.

There is some erosion of farmland down-river. Erosion of coastline barriers, due to lack of new sediments from floods, will eventually cause loss of the brackish water lake fishery that is currently the largest source of fish for Egypt, and the subsidence of the Nile Delta will lead to inundation of northern portion of the delta with seawater, in areas which are now used for rice crops. The delta itself, no longer renewed by Nile silt, has lost much of its fertility.25

In his vivid description of a young man's life after the Aswan Dam was built, Richard Crutchfield reveals the frustration of some farmers when some of the old agricultural practices validated by generations of successful harvests no longer fit the newer three-crops-per-year intensive agricultural system. The new conditions brought about a substantially different relationship between the farmer and the agricultural and government community around him.26 In some cases, indigenous knowledge and related practices may never have been good for the ends desired. The following case illustrates the conflict that can arise from adherence to some traditional practices.

Lagos, Nigeria — ... Kaduna is one of a dozen northern states that has introduced a strict version of Islamic law in the past few years, which among other things, forbids sex outside marriage. Earlier this week, in the neighboring state of Katsina, an appeals court confirmed that Amina Lawal, a young woman with an 8-month old daughter, should be stoned to death for having a baby out of wedlock.... The northern state governor's aggressive promotion of sharia also reflects a rise in religious fundamentalism across Nigerian society. Declining standards of living and rising levels of violent crime have helped raise interest in pentecostal churches as well as in the law and order [that] sharia is supposed to uphold. Sharia is a code by which all Muslims are supposed to live, but authorities combine it with severe punishments such as cutting off the hands and stonings.... Lawal, who was originally convicted in March, is the second Nigerian to receive worldwide attention after being condemned to death by stoning. Safiya Hussaini, a woman from Sokoto state in the northwest, had a death sentence [that was] imposed last year overturned by a sharia appeals court in March.... The stand-off between state, federal, and international politicians means Lawal could remain under death sentence for some time. The punishment — which would be carried out by burying her up to her head in sand and pelting her with rocks — has already been deferred until January 2004 to allow her time to finish breast-feeding her baby. Even before then, elections next year may change the political balance of Nigeria at both the federal and state levels. [She was not executed.]


Making participation work — the Division of Community Education in Puerto Rico

One example of putting ideas such as development communication, sustainability, participation, and empowerment together is a program initiated in Puerto Rico in the late 1940s, a case largely overlooked in the development literature. Luis Muñoz Marin had just become the first popularly elected governor of the Commonwealth of Puerto Rico. Governor Muñoz and his colleagues realized that the transition from an agrarian economy to an industrial economy would challenge a culture that reached back into the centuries. It is important to note that at about the same time, an island-wide study was conducted of the Puerto Rican agrarian economy to an industrial economy would challenge a culture that reached back into the centuries. The Division of Community Education became the vehicle for solving their main problems. The report, published by UNESCO (1954), revealed that the general attitude of the people was to wait for the government to solve their own problems. The Division of Community Education became the vehicle for changing this dependency situation.27

Unlike many governments at the time, the Muñoz administration did not seek to impose its will by force, either psychological or physical. Instead, it sought the community’s participation in defining problems, singling out needs, articulating wishes, assessing talent and resources, and mobilizing action toward


26 See R. Crutchfield, _Shahhat, an Egyptian_, Syracuse University Press, Syracuse, NY, 1986. The story appears in greater detail in Chapter 10 of _Advocacy & Interventions_.

27 I wish to acknowledge the contribution of two colleagues, Ronald E. Ostman and Vivian Franco, to the following discussion which is based on our collaborative research in Puerto Rico. For a more detailed paper, complete with references and citations, see “Assessing Long Term Impacts of Communication Programs,” in _The Journal of Development Communication_, Vol. 2, No. 4 (1993). See also Franco’s MS thesis, _A Model for Community Development_, The Puerto Rican Division of Community Education, Cornell University, 1994.
solution and fulfillment. This was to be a massive transformation, initiated from the top but carried out "willingly and eagerly" at the grassroots level – based on democratic discussion and argument. Issues such as health, nutrition, education, human rights, technology, economics, and community infrastructure were to be addressed in democratic fashion. The Division of Community Education would educate and motivate jibaros (rural dwellers) so that their civic employment (participation) would be the major non-monetary resource of the Muñoz administration for improving the standard of living and for giving impetus to economic expansion. Muñoz believed that it was fundamentally wrong for communities to expect handouts from centralized government; he believed communities should not be "civically unemployed." He also acknowledged that communication media would be the key stimuli at all phases of the process to initiate, to educate, to implement, and to sustain community efforts.

**The Division's organization and methods**

The organization of the Division was simple: it consisted of the Production Section (to create educational messages), the Field and Training Section (to bring the messages to the people and to stimulate and guide community discussion and development processes), the Administrative Section (to keep the planning and paperwork flowing), and the Analysis Unit (to assess effectiveness). The administrative style of the Division itself emphasized making plans and implementing programs via group decisions.

In addition to producing communication materials, the staff focused on mobilizing community groups, because the jibaros had little experience at working together towards the solution of community problems. The Division of Community Education effectively used Group Organizers to help the barrio people foster social change by organizations the jibaros created themselves. The island was divided into 40 rural communities, each with a Group Organizer who visited many communities to recruit grassroots individuals and to involve them in community activities. Once contacted, the persons formed groups to distribute booklets around the community, to put up posters announcing films, and to make plans for meetings and programs for the community. Groups of 20 to 30 persons were formed and the meetings they organized were the first steps of democratic participation in the communities. The Group Organizer also visited individual families in their homes to discuss the affairs of the barrio.

It was important to have local people as Group Organizers. Hundreds of persons applied for these positions. It was a big job to select from this applicant pool, but several criteria appear to have been critically important. The Group Organizer should be a person "from the people." That is, the person would need the ability to interact easily with the rural people in their everyday lives. The person should believe in democracy. This meant that Group Organizers had to be willing and able to bring people together, let them speak and make suggestions, and to respect the people's decisions.

The Division was not looking for persons who necessarily were aggressive salespersons for a specific idea, public works project, or ideological platform. They were looking for persons who were effective in bringing people together, stimulating them to think and speak out, listening to what was said, bringing discussions ultimately to a conclusion and decision, and then be able to work with the community and outside resources in order to implement and foster action. Beyond the bridges and schools and physical manifestations of community projects, the Division was looking for individuals who could foster a sense of confidence, dignity, independence, and personal/communal growth in the rural population, so that change could be sustained through continual and active participation. According to one observer, the hard lesson the successful candidates had to learn was that it was not their job to build bridges, schools, roads, gardens or latrines; it was to encourage people to develop the initiative, the ability to plan, and the discipline that would eventually result in community projects. The Group Organizers were not to be leaders or teachers, but catalytic agents in building community efficacy.

**The communication media used by the Division of Community Education**

In addition to the interpersonal communication facilitated by Group Organizers, communication media were used extensively. The Division produced films that addressed two different aspects of education: information on specific community problems and events, and messages designed to change attitudes. The films were shot on location in Puerto Rico and included real situations and real persons, both in documentary and drama formats. People from the barrio participated in making many of the films, as production staff and performers.

Project organizers also chose booklets as a medium. These booklets were both inspirational and technical; they were written at a level appropriate to the community and were well-illustrated. Often the
Division published as many as 200,000 copies of a title so that each family in the various communities would have one. Films and booklets were coordinated, so that for every film there was a booklet. Typically, films were viewed first and booklets provided detailed ideas for later group discussions.

Our investigation into the impact of the Division revealed that various initiatives — water systems, schools, roads, community centers — built more than 20 years earlier by the barrio people were still in use. Likewise, the Group Organizers reported that many community groups started by the Division continued to function even though the Division itself was no longer active. These groups, found throughout the island, continue to meet to solve community needs as well as to provide mutual assistance for individual projects such as home building. Our interview records show an unambiguous connection between the Division of Community Education's strategies to present day community cooperation. We conclude that the goal of the Division to develop people who could themselves bring about change in their communities was achieved and that, in some communities, the spirit passed into later generations.

And, finally, the link between communication and participation is well illustrated by a feature-length drama film produced by the Division to motivate jibaros to work together on community projects. Directed by Jack Delano and considered by some critics to be the best film ever made in Puerto Rico, Los Peloteros (The Baseball Players) is a story within a story and was based on a true story from a Puerto Rican community. In the film, men are standing around grumbling about the need to build some of the community's infrastructure. One of the men tells the story of a group of boys who work together to raise money for much-coveted baseball uniforms so they can compete in a baseball league. Most of the film dramatizes the boys' efforts to raise the money for the uniforms. After some dramatic plot twists the effort is successful. At the end of the film, the men in the film listening to the story suddenly realize that they too could cooperate and build what was needed for the community rather than wait for government to do it. An important aspect of this case is the fact that the children who played the roles of the young baseball players were actually poor children from the barrio recruited for the film — another example of community participation. The overall effort was consistent with the Division's and Muñoz Marin's core philosophy of stimulating community participation for meeting the needs of the community. (See also the case of the short documentary film El Puente mentioned in Chapter 1.)

**Conditions for making concepts work**

The Division of Community Education demonstrated that concepts such as development, communication, the growth of people, and community participation can go beyond philosophical and ideological statements. The implementation of these concepts can extend beyond small pilot projects and can be sustained and institutionalized to achieve impact for relatively long periods of time. Based on less successful experiences elsewhere, we know that empowerment and participation do not always take root. In Puerto Rico, there were several factors that contributed to making them work effectively, including the extraordinary leadership and commitment of Luis Muñoz Marin, who, as governor, placed enormous confidence and trust in Puerto Rico's jibaros. Equally important was the free and supportive social and political climate that helped the people's participation lead to their empowerment. A free and supportive social and political structure is not always present in places where a struggle toward development goes on. For example, we have witnessed farmers who declined to participate in agricultural research and experimental projects in their fields because guerrillas threatened them for collaborating with the government agricultural research station. Participation and collaboration were not acceptable.
Chapter 4

INFORMATION, EDUCATION AND COMMUNICATION IN HEALTH INITIATIVES

In Chapter 1, we mentioned briefly some of the factors helping shape the approach called Information, Education and Communication, which very early was associated especially with population issues and family planning. A much broader concept appeared in the 1990s with the convergence of a variety of health related issues, ranging from nutrition to HIV/AIDS. In recent years, this convergence has been reflected in the term public health communication or just health communication. The tone was captured in a document Communication for Child Survival that emerged from a major multi-year project of the same name supported by the U.S. Agency for International Development (USAID) and conducted by the Academy for Educational Development. The documented noted that:

Public health communication is a specialized discipline which has emerged during the past ten years [1978-1988]. It can be broadly defined as the systematic attempt to influence positively the health practices of large populations, using principles and methods of mass communication, instructional design, social marketing, behavior analysis, and medical anthropology.

Several issues have arisen in the past decade that have significantly influenced how governments and development agencies perceive health and, consequently, health communication. Later we will mention two of these in greater detail: the International Conference on Population and Development which stretched the practice of family planning communication to include such issues as fertility and infertility and women's health in general; and the HIV/AIDS epidemic, which has sought a variety of treatments, strategies and solutions. One of the major pronouncements concerning the role of communication in the health field came from a senior World Health Organization (WHO) official who contended that the most important weapon we have for dealing with the AIDS situation is information. There are other data coming out of WHO and other organizations to suggest that communication as compared to conventional health education has become the field's principal tool for public understanding of health issues.

The WHO Constitution includes the principle that "informed opinion and active cooperation on the part of the public are of the utmost importance in the improvement of the health of the people." Although the first meeting of the WHO Expert Committee on Health Education in 1954 recognized that health education involved working with people and enlisting their good will and participation, the practice of health education was widely characterized by a centralized, top-down, one-way process of information transfer, principally through classroom teaching styles. Health education was done in the health sector and by health service providers, and sometimes by teachers in a schoolroom. It was quite common, for example, to visit a family planning clinic in Latin America and witness women sitting stoically as they listened to the charla (talk or lecture) that was a part of the process for obtaining contraceptive services. Typically, in health education, the social, psychological and cultural dimensions of persons' health behaviors were not prominently considered when lessons or messages were designed and packaged. It reflected what has been termed "the medical model" where doctors prescribe and patients comply.

A shift in WHO approaches came primarily as a result of the shift toward the "health for all" (HFA) philosophy that dominated the Alma Ata International Conference on Primary Health Care (PHC) in 1978. The Alma Ata conference, consisting of leaders of most of the world's nations, declared a goal of Health for All by the Year 2000. It was a shift from an emphasis on disease treatment and eradication to one stressing prevention and the needs of the poor.¹ Primary health care became a key strategy in health outreach programs. The changing scene was again dramatically illustrated in China where a highly dictatorial approach to family planning compliance changed to an approach mandating "informed choice." In State

Council Decree 309 (2001), the Chinese government’s decision to adopt a version of “informed choice” as a basic right in family planning magnifies the importance of communication as a part of the reproductive health environment. In this regard, we explore some of the issues that need to be considered as many countries build “information societies” and evolve new policies related to reproductive health and family planning.

The new relationship wherein communities and health providers collaborate in the planning and setting up of health-care programs has demanded a two-way flow of information between decision-makers and the community: people must know and learn about the technologies of health and the options available to them; health-care providers, including officials, need to understand the health culture and life-styles of the communities they serve and how these are influenced by social, cultural, political and economic factors. According to WHO, for PHC to succeed, it was necessary to have mutually supportive participation of all sectors – including communication – in community development efforts. This includes mass media to advocate health at all levels, including policy and decision-making levels, to mobilize professional and social support for HFA/2000, and to inform and educate people to develop skills to recognize, solve and control their health problems.²

The Alma Ata HFA declaration implicitly laid out some important challenges for communication. Facing the challenges at a 1982 WHO Expert Committee, the Director General called for "new thinking" about health education. As another WHO official put it: "The models and structures of health education developed over the years were found to be no longer relevant. To create in people ‘informed opinion’ and ‘active cooperation’, it was felt that larger, more extensive information channels to reach wide sections of the people must be used."³

The broader role for communication in the health sector becomes most emphatic in WHO’s publication Communication, A Guide for Managers of National Diarrhoeal Disease Control Programmes, published in1987. The document, produced by the WHO’s Diarrhoeal Disease Control Programme (CDD), stresses processes often associated with social marketing: heavy emphasis on research, monitoring and evaluation; a user orientation; and an analytical approach to the selection of messages and channels. (We will discuss Social Marketing in Chapter 5.) The approach outlined in the Guide clearly represents a departure from institutionally-based health education. In the Preface, CDD notes:

The time has come for national CDD programmes to put more emphasis on user-oriented approaches to complement the provider approaches already underway. Experience in the more successful national CDD programmes, such as Egypt, Honduras, and the Philippines, clearly indicates the potential value of these approaches. Communication has been a critical element in all these countries, and to a lesser extent in some others.

Communication in CDD programs "deals with changing the behavior of mothers and those who influence them....Communication in this context refers to planned information, motivation and education activities, together with associated research, training, monitoring and evaluation activities" (p. vii).

The Guide places considerable emphasis on the process of "deciding how to get our messages across most effectively, including decisions about what to say, to whom and through which communications channels (such as interpersonal, print, broadcast, or traditional media." However, this is not presented as a one-way, conveyor-belt kind of information transfer: the Guide adopts a dictionary definition of communication "as a process by which information is exchanged between individuals to reach a common understanding and agreement" (p. 2, emphasis is in the original). And further: "the most significant initial communication activity in the CDD programme is user analysis. As a result, concerns and

³ S. S. Jha, Information and Education for Health in South-East Asia, World Health Organization Regional Office, New Delhi, 1988.
users are better understood, considered and addressed by both communication experts and the CDD programme managers."

The Guide identifies six steps toward effective health communication and uses the figure in the accompanying box to illustrate them. These steps include: Investigate (research), Plan, Develop Materials, Test and Revise (pre-test), Implement, and Monitor, Evaluate and Revise.

The shape and flow of the illustration conveys the idea that this is an *iterative* process in which the results of one cycle (Monitor, Evaluate & Revise) feed into the next cycle. One of the important aspects of the CDD approach and the Guide is recognition of communication as an explicit component of an overall health program and including within the parameters of communication such elements as research, decision-making among a variety of channels/media, and potential partners outside the health establishment. One can also see in the approach the connection with some of the issues raised in the earlier discussion of participation (Chapter 3).

**Perspectives on IEC**

In this very brief description, we can see a change from the practice of sending out educational messages to passive recipients toward a more complex communication role related to social and behavioral change – and involving research, planning, monitoring and evaluation. We should digress for a moment to give credit to people who contributed several decades ago to the foundation for some "new thinking" about communication in the health sector. Jack Ling, who served as Director of the Division of Public Information and Education for Health at WHO headquarters in Geneva, launched the concept of Project Support Communication in UNICEF (where he also held a senior communication post). At various international meetings Ling outlined a broader role for communication in health programs, a position consistent with that of Erskine Childers and Mallica Vajrathon (Chapter 1) who were spreading the word about Development Support Communication in the late 1960s. They all saw communication as much more than a transmission of information from experts to receivers.

As mentioned earlier, for several decades the acronym IEC has been associated in the English language with population and family planning programs around the world. The UNFPA was among the first to use the term IEC when in 1969 it applied that label to its communication activities. Specifically, UNFPA used IEC in relation to efforts to promote adoption of contraceptives or other practices to limit births.
Many will remember that the terms “birth control” and “family planning” frequently were used in regard to concerns about rapidly increasing populations. The challenge for communicators in public and private sector organizations was quite unambiguous: how can we most effectively persuade people (particularly women) to adopt effective birth control methods according to priorities of government officials?

Changes affecting IEC

A variety of issues have influenced the IEC approach during the past two decades. Among the most dramatic social changes related to population are recent fertility data. In the industrialized nations, the fertility rate has fallen from 2.8 to 1.5 since the 1950s. In the less industrialized nations, the rate has fallen from about 6 to under 3. In China it is now 1.8. This has led to the prediction of a scenario in which the world population may stabilize in 40 years at 7.7 billion, and decline thereafter. In 1998, for the first time in history, the number of persons over 60 years of age in a country (Italy) exceeded the number of children under 20. This has prompted concern about old age dependency and population replacement. The situation has caused some nations (for example, Singapore) to advocate marriage and child bearing.

The 1994 Cairo International Conference on Population and Development (ICPD) significantly influenced the family planning agenda. The ICPD Program of Action gave family planning programs a “human face that placed their emphasis on clients’ needs” and focused on individuals’ needs as well as couples. From a concern with population numbers, attention shifted to a broader social agenda. Among its items were concerns about gender equality and the conditions of women and children. These sometimes became linked with human rights issues. Population issues also were linked to the AIDS situation, to providing assistance to infertile couples, and to development in general.

Along with these issues was the increasing recognition in the 1990s of different approaches to reaching populations including social mobilization, social marketing, advocacy, and interventions emphasizing participation and empowerment. Woven into these approaches were the questions: whom should communication programs reach, how and what is their reality – the assumption being that perceptions of problems by the experts and those of the ordinary people could differ significantly. Within many agencies, the emphasis began shifting from agency-dictated objectives to objectives jointly determined by the agency (or government) and the needs expressed by the people – although the agencies’ longer term goals, such as reducing the incidence of malaria, would likely remain.

China has been part of these changes. For example, in 1997, the Chinese State Family Planning Commission included in its periodic administrative surveys several questions on reproductive health status, and needs and quality of family planning services from women’s perspectives. According to Isabelle Attané, gone were items directly related to the efficiency of the birth control policy. And in 1999, Yang Kuifu, Vice Minister of the State Family Planning Commission noted that “In recent years we have given our special attention to combine our family planning program with a poverty alleviation program, with rural economic development...and with uplifting women’s status”.

More recently, “informed choice” and informed consent” have become important parts of reproductive health terminology. Informed choice refers to clients deciding for themselves.

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5 See, for example, material that has been produced by the WHO program Women’s Health and Development, including WHO 1997a, WHO 1997b, WHO 1998a, and WHO 1998b; and UNICEF 1997a, UNICEF 1997b and UNICEF 1997c.
on the health care that best meets their needs. Informed consent means that a client understands the medical procedure proposed and the other options, and has agreed to receive the proposed care. Though different, the common element in both concepts is the central role of communication and information, for without them “informed” will not exist. In China, Article 3 of Decree 309 (June 13, 2001) states:

The technical services for family planning shall follow the principle of combining the government guidance with individual voluntariness. Citizens have a right to know and chose the contraceptive methods. The State guarantees the citizen’s right to gain access to appropriate technical services for family planning.

While regulations prohibit family planning workers from imposing contraception on clients, the central Government faces a challenge implementing the new policies because some officials in the lower government levels continue to follow the ways set earlier by the Government. This suggests that communication must play a variety of roles in the family planning program as agencies deal with potential adopters and the bureaucracies that separate policy-makers from the general population. This suggests the need for advocacy and training within those bureaucracies.

A further comment about UNICEF is warranted because it has given visibility to the concept of social mobilization in health, nutrition and child welfare. Social mobilization has become one of the roles of communication. WHO’s and UNICEF’s Joint Committee on Health Policy issued a paper in 1987 titled "Mobilizing All for Health for All." The key word is mobilizing. The paper notes that information, education and communication are major tools "if not a decisive instrument" for facilitating the process that heightens awareness of health as a national issue among policy-makers and the public, and ultimately leads to the recruitment of agencies of various sectors to support actively health-related programs. It is an advocacy function. Thus, while action and behavior must occur among those who are targets of a health program, communication efforts need to focus on others in the system, ranging from policy-makers to field staff. Another key part of social mobilization is empowering people to demand satisfaction of their needs. And it is clear from UNICEF documents that communication strategies play a central role in its brand of social mobilization.

Communication and capacity building

About a decade ago, we examined the ways these and other UN organizations looked at communication in development programs. In addition, we interviewed people from several international agencies working at regional or national offices. WHO, UNICEF, the UNFPA, FAO, and UNESCO were the principal organizations. Particularly striking was the convergence in how each seemed to perceive the role of communication, whether it was in health, agriculture, family planning or nutrition. Could it be that Childers’ message really penetrated the UN system? It is an approach typically putting emphasis on systematically obtaining information as well as sending information. In fact, the examination permitted us to generalize as to some of the common needs for capacity building, for example, what are the needs for training and for training materials across these sectors. This was of particular interest to the UN Population Fund, which sponsored our study (through UNESCO), because it was launching a project to create training "kits" for various agencies to use in strengthening communication. Here are five of the areas we reported then where communication training resources appeared to be needed. The list still seems relevant in the 21 century, and perhaps more so as major international and national bodies recognize the priorities and targets in the Millennium Development Goals and see their relevance to communication.

1. Skills training: Our examination revealed that a wide range of communication skills continued to be needed throughout the organizations involved in development. These include

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skills for: (1) communication planning; (2) management of communication programs; (3) designing and producing media materials, and for adapting generic or "syndicated" materials to local conditions; (4) practical research and evaluation methods; and (5) interpersonal communication. Priority, we said, needs to be put on training materials that could be used on sub-national levels, especially at the community-level, and it needed to be culturally relevant to people at that level.

2. Guidelines for analyzing communication in a sector: At the national level especially, it is important to have a protocol or a planning manual for identifying and forecasting the need for communication training. The manual should provide help in analyzing a sector – such as health – in order to chart explicitly the structure of its communication networks, and to assess the communication resources needed to make the network operate. This is important in matching training needs with training resources. This identifying and forecasting process is especially important in this early part of the 21st century when the information and communication resources are changing so rapidly because of the digital revolution. We have yet to see significant activity in forecasting the need for people with relevant communication skills and linking forecasting to training programs.

3. Operationalizing participation: Either in word or idea, participation is found in many of the statements of development and social change agencies. Yet, participation continues to be an elusive term and a vague process. In many cases, participation does not happen spontaneously on the part of program officials, service providers, nor on the part of so-called beneficiaries who are expected to participate. Training is needed that could be used to orient and train key people on how to facilitate meaningful participation. For example, what kinds of techniques might be used in various aspects of advocacy and intervention programs, such as in the design, administration, implementation and evaluation in regard to eliciting participation? As applied especially to the communication component of the program, the training (or training materials) would deal with participation in laying out strategy; in the creative, design and production aspects of designing communication materials; in pre-testing and monitoring; and in distribution.

4. Credibility of communication: For politicians, officials, and technical specialists outside of communication, training materials that deal with the role and benefits of a systematic communication component in a development program could be useful in gaining greater legitimacy and credibility for the communication function and for those undertaking it. In professional schools for health personnel and leadership training institutes (like the training for the India's Administrative Service), training materials should be modular and adaptable to already crowded curricula. Similarly, such training modules should be developed for in-service training curricula, and on-the job training. The point is not to make these persons into professional communicators, but to make them aware of the significance of communication for the health field, and to know better what to demand of communication people within the organization or from contracted organizations such as advertising agencies and NGOs.

5. Media relations: People who work in the development sector often need to understand better the workings of the mass media and related enterprises such as production houses, advertising agencies, and public relations firms. Similarly, people who work in media need to understand the culture of development-related interventions. Training materials are needed that can be used along with professional courses in these fields. For more than a decade we conducted short workshops for the World Health Organization (WHO) that brought reproductive health and mass media professionals together at the same table to understand better each others' working environments and cultures. These frequently led to commitments on both sides to collaborate.

WHO and IEC in the 21st Century

The following WHO article summarizes a large variety of material that is shaped into "lessons learned" in IEC. The article also previews a longer discussion of communication strategy that appears later in Chapter 9.

INFORMATION, EDUCATION AND COMMUNICATION

What is "Information, Education and Communication"?

Information, education and communication initiatives are grounded in the concepts of prevention and primary health care. Largely concerned with individual behaviour change or reinforcement, and/or changes in social or community norms, public health education and communication seek to empower people vis-à-vis their health actions, and to garner social and political support for those actions. IEC can be defined as an approach which attempts to change or reinforce a set of behaviours in a "target audience" regarding a specific problem in a predefined period of time. It is multidisciplinary and client-centered in its approach, drawing from the fields of diffusion theory, social marketing, behaviour analysis, anthropology, and instructive design. IEC strategies involve planning, implementation, monitoring and evaluation. When carefully carried out, health communication strategies help to foster positive health practices individually and institutionally, and can contribute to sustainable change toward healthy behaviour.

IEC LESSONS LEARNED

The following set of lessons learned represents a synthesis of documentation from numerous IEC projects over the past 25 years and also reflects the opinions of those interviewed or surveyed for this paper. These lessons constitute a compilation of some common features of programmes that have been deemed successful. They are not exhaustive, but speak to the issues which arise most frequently as IEC interventions are being planned, implemented, monitored, or evaluated, and which are seen as most critical. These lessons are intentionally presented in succinct fashion so that they may serve as a "check list" or ready reference.

Lessons Learned – General

• The most important lesson learned in IEC is that it works. It creates awareness, increases knowledge, changes attitudes and moves people to change or continue their behaviour or to adopt an innovation.
• Very rarely does a person make a decision alone. To make a lasting change in one individual, the key influential must be identified and encouraged to support these changes.
• Mass media help to create an agenda for public debate. They reach many people and are not very expensive. However, to be effective, mass media must be supported by interpersonal and group communication.
• Communication channels should ensure availability of feedback mechanisms. This is important for reinforcement and for clarifying questions and issues.
• Personal testimonies of affected people are far more compelling than any other form of communication. Fear arousal is seldom effective.
• When a communication programme is designed and carried out by expert practitioners, it is more likely to achieve success.
• A mass communication programme dealing with sensitive issues socially validates open discussion of these issues, thus making them part of the everyday agenda.
• In order for a communication campaign to be successful, the relevant social services infrastructure should be prepared to satisfy the increased demand for services created by the campaign.
• An important element in a health communication campaign is an adequate blend of entertainment and social messages.
• A continuing barrier to the success of IEC interventions is limited resources and unrealistic expectations.
• Resources need to be devoted to producing salient materials in sufficient quantity, to establishing a workable distribution and reordering system, and to showing service providers how to use materials. Also needed are basics: signs showing the way to services, what services are available and what they cost, days and hours of service delivery, and how one can access services.
Planning a Strategy

- IEC succeeds when it is planned with a comprehensive strategy. This means having clearly articulated objectives, keeping the client at the centre of what is being designed, conducting appropriate research, undertaking audience segmentation, carefully crafting and testing messages, knowing and using appropriate channel choices, and planning for monitoring and feedback.
- Particularly in the case of reproductive health initiatives, it is important to know and incorporate community traditions (e.g., disposal of placenta, respecting preferred birth position), and to "follow the community at its own rhythm". Communities will test you and credibility takes time.
- Much can be achieved through a comprehensive IEC intervention that emphasizes long-term capacity building at the grassroots level. In this respect, the community is vital; it is not simply a message channel or a passive recipient of services or information.
- IEC issues overlap with related issues of service delivery, quality of services, community participation, and so on. There must be a true dialogue around a wide range of issues relevant to public health during the planning stage.
- Changing behaviour is not an easy or quick task. An ideal campaign is sustained over time to foster changes in social and behavioural norms.
- It is important to remember that everything cannot be changed at once. Also, it is important to focus on what is relevant or not relevant, and consider not only information but also the "knowledge-behaviour gap."
- IEC interventions are more cost-effective when there are clear links with health care service delivery programmes rather than when they are conceived as stand-alone IEC projects. From a communication perspective, this makes vital the quality of client-provider contact. Provider behaviours require monitoring, reinforcement, and updating. The lack of a supportive environment from the health care provider is also a factor that can hinder individual behaviour change.
- People learn new behaviours best: when they are learning something they feel is useful, when they can put into practice what they are learning, and when they receive feedback and are rewarded for doing well. Modelling is often the best way to teach complex behaviours.
- Programmes that seek to teach new behaviours work best when they define through research what the health problem really is, who it affects, how those people understand and respond to the problem, what obstacles they are likely to encounter, and how the audience can be influenced to change. A particular behaviour can be part of a complex set of behaviours with differing responses to each component along a continuum of change.
- Sound programmes also use audience segmentation (i.e., the grouping of audiences by demographic, social, and psychographic variables), marketing techniques, behaviour analysis, and anthropological research to create messages that are salient, action-oriented and attractive. They test those messages, integrate communication channels, monitor and evaluate regularly, and commit to the long haul.
- Getting information on which to base an IEC strategy doesn't need to be time-consuming, costly and complicated. A short list of highly specific questions can keep formative research focused on essential issues, i.e., identifying concrete and realistic behavioural targets for the different audiences, ways to reach each audience, and appropriate messages for each audience.
- The type of information needed will drive the research methods to be used. Most programmes require a mix of ethnographic, market, observational, attitudinal, consumption and epidemiological research. Hybrid approaches (qualitative and quantitative) are often best and are not necessarily more costly or time-consuming.
- More effective campaigns combine mass media with community, small group, and individual activities, and are supported by an existing community structure. Campaigns for preventive behaviour are more effective if they emphasize positive behaviour change rather than the negative consequences of current behaviour. Fear arousal as a campaign strategy needs to be used with caution. It is rarely successful as a long-term campaign strategy.
- In message design, be aware that people seldom like to be told what to do.
The timing of a campaign helps to determine its effectiveness. For example, in diarrhoeal disease campaigns, seasonality is an important consideration since diarrhoeal disease often occurs in the rainy season.

If more than one set of messages is being delivered via an umbrella campaign (e.g., several issues are being covered under one unifying theme), phasing of messages might be important to avoid information overload.

**Implementing a Strategy**

- Support of community leaders, public opinion leaders and decision-makers can lead to stronger results. The use of such identifiable and credible sources of information can enhance the success of an IEC initiative.
- Actively involving the target audience in the design, implementation and monitoring of a project is critical. Listen to local language, custom, and experience. Negotiate the relevance of an intervention with the audience. Make sure the intervention addresses reality "on the ground".
- Establish linkages and relationships with, and actively involve, traditional healers, local nongovernmental organizations (NGOs) and local support groups, and recognize the important role each plays. Share information with them.
- The interaction between health care providers (at all levels) and clients is important for successful IEC interventions. This is where one stage of decision-making takes place. Provider behaviour is critical and the need for behaviour and attitude change among health workers has been established. (Physician resistance to change, as well as punitive actions by all other levels of health worker, is well documented.) Training in interpersonal communication and counselling skills is absolutely critical to successful programming.
- Multimedia campaigns are most effective when mass media and popular traditional channels are used in combination with person-to-person interactions. There is less power in stand-alone multimedia campaigns than in campaigns that link the power of media and the power of individual persuasion with service delivery.
- A media campaign should use diverse broadcast and distribution channels, combining television, radio, print and traditional media, in order to maximize penetration and impact. More attention needs to be focused on the mix of channels used in a given situation. Achieving "reach and frequency" in communications takes careful research and planning.
- Decisions about media channels and frequency and intensity of broadcast or distribution should be closely tied to initial and ongoing research with the target population.
- Take advantage of local holidays and festivals to disseminate messages or for inaugural events.
- IEC interventions cost money to implement and to sustain over time. There is an imbalance between expectations about what IEC can do and the resources allocated to carry out those interventions. It is important to realize that change within five per cent of a designated population represents good progress. Remember, even Coca-Cola never stops promoting its product.
- Logos and symbols offer a way to create unity between a wide range of communication messages, allowing the target audience to build up interpretations and meaning over time. However, certain symbols are recognized at only certain levels of the population. Ensure that you have adequately tested a symbol or logo and are aware of the audience's understanding or interpretation of the same prior to launching. The use of logos and symbols in advocacy campaigns has also been successful. The red ribbon has come to symbolize the international struggle around HIV/AIDS, but this meaning has only developed through continued association with other HIV/AIDS messages. The White Ribbon Alliance for Safe Motherhood raises awareness about the need to make pregnancy and childbirth safer for all women and infants.
- A campaign should reach relevant segments of the target population with meaningful messages; materials should have broad appeal and, at the same time, some materials should be tailored to meet specific subsets (e.g., by gender, age, race, economic status). It is important to direct messages at specific behaviours and when defining behaviours to think...
A media campaign should be ongoing and responsive to shifts in the market and the audience in order to prolong and sustain its impact.

- Media campaigns need to reflect an entire programme’s behavioural objectives through appropriate message cycles to targeted audiences. Such messages should support existing desired behaviours, promote new behaviours as necessary, and alter unhealthy behaviours. Conditions must be in place to support whatever behaviours are being promoted. For example, birth spacing messages might reinforce dialogue between partners, encourage clinic visits for contraception, and address community social norms that advocate large families. It is then incumbent upon reproductive health facilities to have trained practitioners and counsellors on hand to facilitate these behaviours.

- Sometimes it is important to anticipate trouble and to develop a crisis communication plan if the intervention is considered controversial. It may be important to determine in advance who will act as spokesperson for the programme and s/he should be prepared. Centralizing information for dissemination to the public may help to avoid problems. It is important to communicate with all key audiences and to maintain good relationships with them. Know who the possible opponents are and, insofar as possible, build trusting relationships. Remember that people respond best to facts. Listen first, then act. Be prepared to make short-term sacrifices for long-term gains.

- Facile pretesting can yield poor information. Many erroneous conclusions have been attributed to superficial testing for such things as comprehension. Observations of materials in use and trial periods can help to detect problems. Go beyond simple focus group discussions. Use different approaches to collect information, and remember that moving from data to messages is difficult.

- Simple, inexpensive print materials can be useful and more cost-effective than more expensive and elaborate products, for example, counselling cards are helpful for use by health workers. Also, graphic materials for home use can be important, especially in empowering women to negotiate their reproductive health needs. Materials like fotonovelas (similar to comic books but using photographs) have been used to assist women in Latin America, for example, to negotiate with their sexual partners.

- It is important to move beyond the "I need a poster" syndrome in developing print materials. Choosing the right print product can be difficult and requires rigorous exploration and selection. Be sure to tailor materials to the appropriate literacy level, even when developing materials which only require visual literacy.

- IEC materials are more widely distributed when their distribution system is combined with relevant health commodities (for example, distribution of contraceptive commodities simultaneously with posters for family planning). Distribution of print materials may occur more effectively if contracted out to the private sector. The failure to plan for, implement and maintain distribution systems is often a major failing of IEC efforts. Stories of materials, video cassette players, and other materials and equipment "sitting around gathering dust in warehouses" abound.

### Monitoring and Evaluating a Strategy

- Monitoring has been neglected as a tool for understanding operational dynamics and for detecting what works or doesn’t. Inexpensive methods for monitoring can be used and should be explored (for example, observation).

- Documentation of programme inputs and implementation experiences is important for understanding successes and failures. Methods for doing this should be institutionalized as part of management information systems.

- Evaluation of IEC efforts is a complex task and should be considered from the very beginning, when projects are being planned and not just after they are underway or completed. Involving specialists in research design and evaluation early on can ensure that process and impact evaluations are valid and reliable.

- There is a need for extreme specificity in questions asked in an evaluation, especially in countries where multiple interventions have been carried out. Carefully constructed questions
are very important. In designing questions, messages must be carefully analysed so that primary messages (for example, "breast is best") are distinguished from secondary messages (for example, promotion of weaning practices).

- The research and evaluation team should be given an opportunity to fully understand the project. The stronger the understanding between programme staff and researchers, the better the product.
- Evaluation should be considered a learning tool by programme staff and should be embraced as a resource for programme redesign.
- An evaluation framework should be responsive to programme needs, and should feed information and data back to programme staff to allow for corrections and adjustments to programme components during implementation. Evaluation should not impede implementation. As one evaluation expert put it, "We will rarely have evidence that is incontrovertible; nonetheless, we still need to act sensibly on the best evidence we have."
- Recognizing that research and evaluation designs may have limitations and factoring in those limitations when assessing the effectiveness of programme strategies can contribute to more successful outcomes.

Training

- Provided with relevant training, non-IEC professionals can coordinate the development of good quality IEC materials and approaches. In order for training to be relevant, it must take into account the role and job description of the persons being trained. People should not be trained just for the sake of training. All training designs should be seriously deliberated and individualized in order to meet the needs of the programme and of those being trained.
- People need training in materials use and distribution as well as materials development.
- Phased training – focusing first on skill building and then on skill transfer – is a successful model. It allows trainees to practice their new techniques (for example, counselling) before actually becoming trainers of others in the same skill area. This enhances overall programme sustainability. A competency-based approach to training is most effective at building skills.
- Training should be curriculum-based and apply the principles of adult education. Like other programme components, training should be evaluated, and those who are being trained should be involved in developing the curriculum.
- Even when trained, people have difficulty discussing personal matters (such as sex) with others. IEC training needs to address this problem, and to provide specific techniques for opening dialogue and moving it forward. It must also address the need for health care workers to come to grips with their own behavioural and cultural biases. (For example, can a midwife act against female genital mutilation in a believable way if it has been done to her and she has allowed it to be done to her daughters?)
- There is a pressing need for training in IEC techniques that effectively motivate people to express their genuine desires relating to reproductive health. Similarly, training design needs to take into account the desires of trainees and/or providers as well.
- It is most effective if the number of levels of trainers is kept to a minimum. That is, instead of having different trainers for each level (province, county, township, village), have perhaps two levels of trainers responsible for all training activities. The fewer the number of levels, the less opportunity for important content to be lost during training of trainers workshops.
- Ensure that appropriate training materials are available for community level workers. This includes budget considerations to assure funding so that adequate materials reach all levels, not just those at the higher levels.
- Include leaders and managers in the programme or establish a parallel programme for them to ensure they understand the importance of interpersonal communication work and will support it in future.
- A client-centered approach to training can have dramatic results in terms of service delivery. A consumer perspective requires that health workers understand the client's circumstances, that they seek solutions to problems in collaboration with the client, and that they are systematic about follow-up.
- Well-designed and tested training modules can serve as reference points for national and local training programmes. In designing materials for widespread use or for local adaptation,
three strategies can help assure relevance and widespread use: involving a wide range of potential user organizations in identifying needs and issues; involving them in pretesting the materials in their respective programmes; and involving them in the translation and publication of materials.

- Incorporate interpersonal communication principles and skill training in regular, pre- and in-service training programmes.
- Include in any training curricula, sessions on how to conduct audience research and how to use the results to adapt training materials for use at different levels.
- Include as many posters, models, and other teaching aids as possible in training programmes to supplement curricula and training materials.
- Schedule follow-up or refresher training.
- Be sure that clearly articulated job descriptions with realistic expectations are reviewed regularly and that supervision is ongoing.

Two organizations that have pioneered much of the work related to IEC in the health and nutrition contexts are the Academy for Educational Development (AED) and The Center for Communication Programs (CCP) at Johns Hopkins University. Both appear in relation to several documents in this book. For more than four decades AED, a Washington-based not-for-profit organization, has been among the leaders in designing and implementing initiatives directly related to communication and development. Often these have been associated with projects funded by the U.S. Agency for International Development and various UN organizations. A visit to its website can be rewarding: http://www.aed.org/. In addition to managing and advising on development communication projects abroad, CCP has undertaken much "action-research" in conjunction with its work. Its website is: http://www.jhuccp.org/. Both AED and CCP have been generous in sharing their lessons learned with the other professionals – officials, practitioners and scholars alike. The following section on family planning communication comes from much field experience of the CCP professional staff as well as a careful analysis of other researchers' findings. 10 The document reinforces and elaborates on some of the points made in the previous article, but also moves into new territory such as the issues of cost, and applications to family planning.

**STRATEGIES FOR FAMILY PLANNING COMMUNICATION**

Family planning programs ultimately depend on reaching and influencing entire populations. More than most areas of development, family planning largely depends on individual actions taken in private with little or no supervision. People need good information and reinforcement to encourage them to practice family planning regularly, consistently and effectively.

In population and family planning programs, where millions of people need to understand, approve and actually use family planning, the role of information, education, and communication (IEC) is critical:

- IEC creates awareness;
- IEC increases knowledge;
- IEC builds approval;
- IEC influences behavior.

Increasing evidence shows that well-designed IEC campaigns, using proven methods, can make a major difference in increasing initiation and continuation of modern family planning methods. This paper identifies the most important lessons that have been learned over the last two decades – especially during the 1980s – about designing and developing programs that promote family planning.

**LESSONS LEARNED FROM IEC PROGRAMS**

**Interpersonal communication.** Interpersonal communication influences whether, when and how well couples use family planning. Interpersonal communication occurs at the clinic level,

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in the community and in the home. It is the interaction between health care providers and
clients, friends and relatives, or husband and wife. In the clinic, interpersonal communication
enables immediate feedback between provider and client. Interpersonal communication is
powerful because it allows a health care provider to respond to a client's individual questions,
needs and concerns. A good health provider or counselor will have a positive impact on a
client's decision to use family planning.

New family planning programs should take into account the most important lessons learned
about interpersonal communication:
1. The quality of interpersonal communication with health care providers influences client
satisfaction with family planning services. Clients are more likely to use family planning if
health care providers treat them with courtesy and respect.
2. Counseling plays an important role in the quality of family planning services. Clients are
more likely to adopt and continue using a family planning method when health care providers
give them the information they need to make informed choices. Family planning counseling
should be conducted in privacy and clients should be assured that all information will be kept
confidential. Clinic design, staffing, client flow and management information systems and other
program components should all be designed with counseling in mind.
3. The quality of family planning services can be improved by training providers in
interpersonal communication and counseling skills and providing them with support materials.
Skills learned in training should be reinforced through regular supervision. Support materials
such as flipcharts, pamphlets and cue cards help health care providers do a better job of
counseling and help clients retain information better.
4. IEC campaigns can encourage open discussion about family planning so that it becomes a
household word and a community norm rather than a taboo issue. Research has shown that
open discussion between spouses positively influences acceptance and continuation rates.
5. With proper training and support, peers and satisfied family planning users can be effective
family planning motivators. Peer motivators have been used successfully in programs for
various groups including youth, men and workers.

Recommendation. Family planning programs should stress counseling as a key component of
quality services. Training programs in interpersonal communication should be designed to
strengthen providers' skills and, thereby, help clients use family planning methods more
effectively. All family planning programs should develop strong peer group communication
activities and appropriate print and visual materials to reinforce interpersonal communication.

Recommendation. Donor organizations should support IEC programs which stimulate
communication about family planning within the family and the community.

Mass media. Mass media can efficiently reach enormous numbers of people with convincing
family planning messages. Increasingly during the last decade, even in relatively
underdeveloped areas, people have begun looking to television, radio, cinema, or print for
information on health and family planning. Experience from around the world shows that mass
media can create awareness of family planning and stimulate community acceptance.

But the question lingers – can mass media influence individual family planning behavior?
While early research suggested that mass media had little effect on behaviors, recent
research, looking at more sophisticated campaigns, shows that mass media IEC campaigns
that are well-executed, rely on audience research, and mobilize personal and community
interaction can indeed change behavior.

Mass media components in family planning programs should be designed keeping in mind the
lessons already learned from IEC campaigns:
1. Most people in most countries want more family planning information from the mass media
even though government officials may be reluctant to disseminate family planning information
through mass media channels.
2. Mass media can stimulate behavior change. Many mass media campaign have stimulated
people to seek further information – whether from a hotline, a clinic, or a community based
development (CBD) worker. Information-seeking is a necessary first step in the complex
process of adopting family planning.
3. Mass media and interpersonal communication can reinforce each other; they are not competitive but highly complementary. Where mass media provide information quickly and repeatedly to large audiences, interpersonal communication leads to more in-depth understanding, addresses individual concerns, and elicits immediate feedback.

4. Multi-media campaigns which exploit the strengths of mass media and interpersonal communication can have a strong impact. For example, family planning campaigns in Africa and Latin America that have used mass media to identify family planning service sites and enhance the status of family planning programs and health care providers have been successful in increasing user rates.

5. Mass media that use entertainment to promote family planning messages can effectively reach large audiences. Called "enter-educate," this approach brings together entertainment and health professionals to produce songs, videos, soap operas, films, or comics with family planning messages. The appeal of entertainment is powerful because it holds the audience’s attention, evokes strong emotional responses and provides role models for behavior change.

**Recommendation:** Policy-makers should be made aware of the benefits of providing family planning information through the mass media. They should also be encouraged to liberalize censorship policies and make free air time available.

**Recommendation:** Family planning programs should use mass media, especially radio and television, to publicize messages; they should also use the "enter-educate" approach wherever possible. [See Chapter 9.]

**Recommendation:** Family planning programs should develop comprehensive and consistent IEC strategies that link mass media and interpersonal communication channels.

**Cost saving and cost recovery.** The importance of IEC components in family planning programs is no longer questioned, but family planning programs still need to know how much of a program budget should be spent on IEC. To find the optimal funding balance between IEC and other program components, additional research is still needed. Recent program experience, however, suggests that for family planning messages to have a measurable impact at least 10-25 percent of the total project budget should be spent on IEC. For some projects that may seem high but the costs of IEC, particularly of large mass media projects can be offset by cost saving and cost recovery strategies. While IEC programs are unlikely ever to pay for themselves entirely, considerable savings can be effected. IEC experience has shown that:

**1. IEC programs with built-in cost saving and cost recovery strategies help to minimize IEC costs while maximizing IEC impact:**

- Costs can be recovered through the sale of commercial-quality project materials, especially "enter-educate" products such as recordings, films, videos, or comic books. A video production center in Guatemala, which produces both commercial and family planning video spots, was able, by the beginning of its fourth year, to finance all production costs as well as 60 percent of indirect costs.
- "Enter-educate" materials and activities can attract corporate sponsors. A single "enter-educate" project in the Philippines generated corporate support for collateral materials for campus tours, posters, calendars, salary support for telephone hotline counselors and TV ads.
- Costs can be saved by negotiating entertainment fees. Professional entertainers, writers, or producers are often willing to work for lower rates or even to donate their talents if they believe that association with the project will strengthen their careers. Entertainers in Latin America, the Philippines and Nigeria have worked gratis or below market rates for IEC "enter-educate" programs which did, in fact, increase their exposure and boost their careers.
- Costs can be saved by negotiating with government and private broadcasters for free air time. A music project in Latin America received more than one million hours of free air time. A multi-media campaign in Turkey was donated air time equivalent to $1.2 million. The dollar savings in both cases amounted to far more than the total cost of the IEC campaigns.

**2. Family planning IEC programs can save on costs by purchasing professional IEC services from the private sector as needed.** In many cases, it is more economical to enlist the services of experienced commercial agencies than to hire technical staff and maintain
expensive equipment in-house. The important lesson is that family planning programs require IEC managers rather than IEC technicians.

3. Governments can reduce the overall cost of family planning services by promoting private sector supplies and services for those who are willing to pay for them. Limited government resources can then be concentrated on public sector services for those who cannot afford to pay. In Indonesia, where public sector family planning services were already well established for poor rural clients, a campaign was designed and implemented to promote greater use of private sector fee-for-service practices in urban areas where more clients could afford to pay.

4. IEC programs can save on costs in the long run by using mass media to promote family planning. Although mass media, especially television, involve significant up-front costs, mass media are cost-effective because they can reach large numbers of people, quickly and repeatedly with family planning messages. In Nigeria from 1990 to 1992, an IEC strategy using mass media extensively increased awareness of family planning methods from 46 percent to 83 percent at a cost of about US$1.00 per woman reached, and in the same period helped increase use of modern methods from 8.6 percent of women of reproductive age to 11.5 percent.

Recommendation: The IEC components of family planning projects should be large enough to have a measurable impact; at least 10-25 percent of the budget of a comprehensive project should be allotted to IEC.

Recommendation: Cost saving and cost recovery strategies should be built into family planning IEC programs from the start. Tested approaches include generating corporate support or IEC activities and producing IEC materials that are commercially viable. Family planning programs should always negotiate aggressively on IEC costs such as air time and entertainers and producers' fees.

Measuring cost-effectiveness. Measuring the cost-effectiveness of IEC is an evolving science. In the early stages of family planning, IEC project planners wanted to know, primarily, how many people their campaigns reached, then how many people became family planning acceptors as a result of IEC campaigns. Now planners want to know how much it costs to reach one person with family planning information, how much it costs to get one person to accept family planning, and what approaches are most cost-effective.

A few IEC programs have generated data about the cost per person reached and the cost to change a person's behavior. Even so, cost-effectiveness findings will not be easily generalizable from one program or country to another. Many factors affect cost-effectiveness measures: population size, media penetration, the quality of the IEC intervention, and the use of IEC materials. The cost-effectiveness of a radio spot, for example, depends on the size of the target audience, the level of radio listenership, the broadcast schedule and the quality of the spot.

Recommendation: Specially designed operations research studies and evaluation research that focus on cost questions should be part of all IEC projects. Research findings should be rapidly disseminated for use in designing further IEC projects. Program Design

Family planning IEC programs should be developed according to a step-by-step process that includes: 1) analysis, 2) design, 3) development, pretesting and revision; 4) implementation, monitoring and assessment; and 5) review and replanning. Clear program objectives should be established at the start of every IEC project, including specific objectives for changes in knowledge, attitudes, and practices among the intended audience. These objectives form the basis for later evaluation. Data should be collected systematically before and after any IEC activity to measure changes. The timeframe for project completion and the project budget should realistically reflect the IEC process.

In most cases, existing family planning programs do not have sufficient experience with the IEC process to organize successful IEC campaigns. They can benefit greatly from technical assistance throughout the IEC process.

Recommendation: Family planning organizations should develop multi-year IEC programs,
rather than one-shot or short-term interventions. IEC projects should have clearly defined objectives and be implemented according to a systematic, step-by-step process. A number of program issues that relate to the structure and development of IEC projects will be increasingly important in carrying out IEC programs in the 1990s. Though common to many development-oriented programs, these issues have special implications for family planning IEC.

**Building institutional capability and getting immediate results.** Whether to build long-term in-country institutional capability at the expense of short-term projects that yield immediate results is not an issue for family planning IEC programs. The goal of family planning IEC programs is both to achieve positive results and, at the same time, to build institutional capability. Institutions in the field of family planning IEC are best developed when they undertake clearly defined projects which can produce measurable results. The skills and experience gained while developing and implementing programs build capable and lasting institutions. Family planning IEC can combine institution-building with specific measurable objectives that require definite IEC outputs. On-going support for a program should be conditional upon achievement of specific impacts on the intended audience. Campaigns that are operated to meet definite objectives may do more to strengthen an institution and build real capacity to carry out health promotion than long-term salary support that is not linked to measurable objectives. The process of carrying out such a campaign properly and with adequate technical assistance is the best form of on-the-job training; it generates institutional pride and a positive attitude for the long term.

*Recommendation:* Family planning IEC programs should be designed with components that combine building institutional capability with the achievement of specific IEC objectives, since carrying out a successful program is the best way to train personnel and build capable, results-oriented institutions.

**Building in-country technical skills through technical assistance and the use of intermediary organizations.** Building results-oriented institutions calls for extensive technical assistance and training both at the project design stage and throughout project implementation. The experience of The Johns Hopkins University Center for Communication Programs (JHU/CCP) has shown that one technical assistance visit every other month is usually needed at the start of a project to launch new activities successfully. For on-going assistance, three or four technical assistance visits per year by the same person are recommended to keep a project on track. Additional visits by specialized consultants are also often needed. In many cases, consultants from the host country or neighboring countries can be identified.

To provide the extensive technical assistance necessary to ensure successful IEC projects, family planning agencies should work with intermediary organizations that have the resources and experience to provide comprehensive technical assistance on an on-going basis.

*Recommendation:* Donor and support institutions should provide a high level of technical assistance and training to project personnel. Technical assistance for a specific project should be provided on a regular basis throughout the life of a project – from design through evaluation – by a consistent team of experts. To provide this technical assistance, government and donor agencies should develop partnerships with intermediary organizations that have expertise in IEC.

**Integrating services and IEC.** If ever integration were needed in health programs, it is in linking family planning IEC and available services from the start. At all stages of program development, both public and private, family planning IEC should be closely linked to existing services and supplies. Clearly, implementing IEC activities before services are in place can destroy a family planning program’s credibility. At the same time, an otherwise well-designed family planning program can be seriously handicapped if it waits until after supplies, personnel and services are available before implementing IEC activities.

Accurate reports may never catch up with inaccurate gossip if the public is not given a chance at the beginning of a project to understand just what family planning is. Furthermore, IEC
activities bring new clients into service sites and encourage high service standards that are rarely present when services are little known.

For a new program, the issue is not whether to develop an IEC strategy and use media and other channels effectively but how best to do so within the local cultural and political climate. New programs need to introduce the general idea of family planning and show how it can benefit individuals and families. Ongoing programs need constant feedback to deal with public questions, concerns, or issues before they become program crises.  

*Recommendation*: IEC should be closely linked to existing services and supplies and included in all stages of family planning programs.

**Taking advantage of private sector expertise.** Family planning IEC can benefit from the increase in commercial and nonprofit private sector organizations, service providers, suppliers and creative communication talents that are increasingly available in developing countries. Non-governmental organizations (NGOs) have been leaders in promoting and providing family planning services which governments, fearing controversy, are often too timid to promote. Because NGOs have greater flexibility in responding to audience needs and demands, they are often more successful in carrying out IEC programs than government agencies. All the qualities that mark good IEC—creativity, audience analysis, flexibility, and responsiveness to audience feedback—are difficult to sustain in government bureaucracies. In addition, by meeting a demand for family planning services for those who can afford to pay, private sector fee-for-service organizations keep government family planning costs down. Government roles in family planning IEC should, in fact, be to mobilize and encourage the private sector to take on greater responsibilities.  

*Recommendation*: Donor, government and family planning organizations should encourage and develop mechanisms to use more private sector expertise, both non-profit and commercial, for family planning IEC activities.

**Handling opposition and controversy.** An important aspect of family planning IEC is learning to deal effectively with controversy. Controversy is inescapable for family planning population programs. The more conspicuous the IEC effort, the more likely it is to arouse some kind of opposition from conservative religious groups, professional associations or from special interest groups wishing to protect the rights of women, men, or students, or other prospective users or providers.

Family planning programs can benefit from public controversy if they are able to define and present controversial issues in such a way as to enlighten rather than confuse people and establish an open forum to increase public knowledge and agreement. PROFAMILIA in Colombia used religious opposition to press public debate on family planning and reach a broader audience. In Kenya, family planning received nationwide attention after the government withdrew a drama on teenage pregnancy from the broadcasting service. Despite the importance of dealing effectively with controversial issues, few projects include a systematic approach to deal promptly with rumors or public opposition.  

*Recommendation*: Family planning programs should be prepared in advance for controversy, rumors, and opposition; they should develop systematic approaches to training family planning personnel to handle controversy. Family planning programs should be equipped to turn public debate into a vehicle for increasing knowledge and understanding of family planning.

**Supporting IEC.** IEC is now recognized as a crucial component of family planning projects, just as ideational factors are now recognized as a crucial element in the demographic transition. The term IEC refers to the broad scope of information, education, and communication. The term is increasingly well understood throughout the world. If the term were used consistently, it would convey to worldwide policy-makers the importance of IEC in family planning and other people-oriented programs.

Donor agencies which provide broad program support should require and incorporate IEC strategies within these programs. A coordinated IEC approach that includes specific guidance in dealing with IEC issues and the use of qualified IEC specialists at each stage of the program cycle would strengthen the capability of governments and nongovernmental agencies.
to design and implement IEC activities. The challenge today is to act promptly so that much needed IEC activities can play an effective role in expanding population programs.

**Recommendation:** Donor agencies should ensure that qualified IEC experts are used at each program phase to guarantee optimal program design, implementation and evaluation.

**Recommendation:** The term IEC should be used consistently to convey the broad scope of information, education and communication that is needed in the field of family planning.

### DESIGNING EFFECTIVE IEC PROGRAMS

Effective IEC programs are long term, reaching people repeatedly with carefully designed messages through a variety of media over a period of years. Long term IEC strategies involve progressive phases; in each phase, the messages and channels are adjusted to address the audience's changing needs as their health knowledge, attitudes and behavior change. The first phase of an IEC program may, for example, be aimed at increasing approval for family planning. Subsequent phases may be aimed at directing people to service points, addressing misinformation about family planning methods, or reinforcing correct method use. Only through such sustained programs can IEC influence large numbers of people to adopt and maintain new behaviors. One-shot efforts or a series of short, unrelated campaigns will have little impact in the long run. When the short-term campaign ends, without further reinforcement, people will quickly revert to previous behaviors.

Effective IEC programs are developed according to a process. Simply producing some IEC materials – whether a poster, a radio spot or a billboard, regardless of how attractive – from behind a desk does not constitute effective IEC. Rather, effective IEC begins well before the poster is sketched or the radio spot is scripted. It begins with identifying the problem, developing a strategy to address the problem, and identifying and learning about the target audience. What do they know? What are their fears and concerns? How do they obtain health information? Only after these questions are answered are media selected and messages and materials drafted and pretested.

Family planning programs will be most effective if donors support the development of multi-year IEC programs that are implemented according to a systematic and tested process. Sufficient time should be allotted to follow a sequence of steps as described below. Materials developed in a rush without adequate audience research, pretesting and other groundwork will generally not have the desired effect on the intended audience and thus be a waste of resources.

The five-step IEC process and key lessons learned are … described in the next paragraphs. [Compare this with the WHO figure that appears earlier in this Chapter.]

1. **Analysis**
   This entails identifying the problem to be addressed by an IEC program. For example, contraceptive prevalence is very low in rural areas or among the uneducated; rumors about dangerous side effects of modern methods discourage potential users and male attitudes are an obstacle to family planning.

   After the problem is clearly identified, information is collected about potential audience — why they behave as they do and how they can be persuaded to change their behavior. Family planning policies and programs are assessed, communication resources are evaluated, and sponsoring institutions are identified. Clearly, analysis must precede any plans for developing specific materials.

2. **Design**
   Design involves establishing program objectives and developing a strategic plan to achieve the objectives. This entails identifying the target audience, developing messages, selecting communication channels and drafting an action plan.

   a. **Programs should set clear, well-defined objectives for the IEC program and select the most appropriate IEC strategy to meet the objectives.**

   In any given setting, there are countless possible choices of audiences, messages and communication channels. The task of the program manager is to define the problem, decide on an IEC strategy within the available resources that best tackles the problem and articulate
specific, measurable objectives. For example, if the problem is a high rate of contraceptive failure because of incorrect method use, the IEC objective would be to decrease the contraceptive failure rate by a specific percentage. The IEC strategy might be to train health care providers how to counsel clients about method use and also to disseminate information on correct method use through the mass media.

b. **The audience is the most important element in IEC. Audience research and segmentation are key.**

Successful IEC campaigns are those which reach and address the concerns of the intended audience. Audiences must be segmented into homogeneous groups because different groups have different ideas about family planning and respond differently to family planning messages. Substantial survey and focus group research has shown, for example, that men’s concerns differ from those of women. Men are most likely to be influenced by economic appeals such as the cost of educating children and providing for the family. Women, in contrast, are influenced by appeals based on maternal and child health and on greater opportunity to control their lives.... In another example, research found differences between the reactions of boys and girls and younger and older teenagers to Tatiana's and Johnny's songs [in the Enter-educate program in Mexico]. The girls reacted much more positively to the songs than the boys. Listeners 15 years and younger were more likely to interpret the message as "think about consequences" (of having sexual relations) and "avoid early marriage," whereas the 16-18 year olds interpreted it more specifically as "postpone sexual relations"....

Initial research and audience analysis are crucial in finding these differences and developing messages that will influence the intended audience. Focus group research is increasingly used to probe for audience opinions, emotions, vocabulary and spoken as well unspoken reactions to health problems and proposed new approaches.... Observation, surveys, ethnographic and other research are also useful, even though they may be time consuming.

c. **Messages should be clear, simple, specific, easy to understand, and often repeated.**

An IEC campaign has the greatest impact if messages are repeated frequently and consistently through many channels. In the Philippines music project, for example, the songs were played on the radio and the music videos on TV repeatedly for several months. Television spots, a variety of print materials, the singers’ guest appearances on popular television shows and tours to schools and other places repeated and reinforced the messages. As a result, recall and understanding of the messages was very high. (Rimon, 1989).

The best messages are specific, telling the audience exactly what they should do and providing all the information necessary to do it. For example, social marketing messages tell audiences to buy specific brands of contraceptives and where to buy them. The Egyptian oral rehydration campaign successfully taught mothers when and how to use oral rehydration solutions (ORS)....Numerous family planning campaigns direct audiences to specific clinics, CBD [community-based distribution] posts, or other services. General messages about responsible parenthood or the benefits of smaller families may have a long term impact on attitudes, but their immediate impact on behavior is limited...

d. **Messages should be consistent and coordinated even when they come from different agencies.**

Family planning can be carried out by a number of different agencies. Ministries of Agriculture, Education, Women’s Affairs, Youth, Culture and others, as well as many private organizations, have outreach programs that can reach different audiences. In theory, these agencies offer a great opportunity to disseminate family planning messages. In practice, it is a massive task to recruit, train, supply and monitor outreach workers who have different primary missions so that they become effective family planning promoters. Outreach activities are more often recommended on paper than effectively implemented in the field or evaluated by objective, quantitative measures.

Nevertheless, disseminating IEC family planning information through multiple channels can be useful, but it is especially important that the messages be consistent and coordinated. This
means any agency, public or private, which seeks to promote family planning should develop mechanisms for coordination. Advisory councils or committees that meet to share plans, experiences and materials can be valuable. Members can review focus group research or other material used to develop messages and be sure that messages developed are not contradictory or confusing. Because such agencies may be somewhat competitive or exclusionary, donor organizations are best situated to insist on consistency and coordination and to monitor inter-agency committees to ensure that they play a useful role.

e. The source of the message must be carefully selected. The audience should identify with and find the source credible.

Any message is associated with the person who delivers it so the person must be credible .... For example, women in the Dominican Republic ask for the "Vickiana pill" because she is the popular singer who appears on the television commercial using the pill. In contrast, one of the reasons adolescents in Mexico discounted the song "Frena" (Stop), which delivered a sexual responsibility message, was that they thought the male singer was not a credible source for that message....

The audience must be able to identify with the source. Generally, the more similar the source is to the audience – in terms of language, values, personality and social characteristics – the more likely the audience is to perceive the source as trustworthy and heed the message (Rogers, 1973). For example, the characters in "Hum Log" (We People), the Indian television soap opera, resembled members of the target audience and served as positive or negative role models...

f. The media mix must suit the target audience. Multi-media approaches are the most powerful.

The media selected should, of course, be those credible to and accessible by the target audience. For example, songs may be appropriate for youth, newspapers and magazines for educated, urban men and radio for illiterate women. Research on the media preferences and habits of the target audience, as well as the budget and goals of the project, will help determine which combination of media to use. A multi-media approach – combining mass media and interpersonal communication – is generally best, increasing the chances that the target audience will be reached, increasing repetition of messages and building on the strengths of various media.

3. Development, Pretesting and Revision

The message concepts and materials are designed, pretested with the target audience and "gatekeepers," revised, and finalized.

a. Materials should always be pretested with the target audience to ensure that they are liked and understood. Also, pretesting results can help persuade decision-makers that materials are acceptable to the public.

Before any poster is printed, any TV spot is aired, or any IEC material is finalized, it should be pretested with a sample of the target audience. Do they like and understand the materials? Do they find the messages clear? Is anything offensive?

There are countless examples demonstrating the importance of pretesting with the target audience. In Bangladesh, for example, a draft booklet about oral contraceptives showed a woman with her hair loose sleeping next to a glass of water and a pill. In pretesting, it was discovered that the target audience thought the pill had killed the woman because, among traditional Bengalis, a woman's hair is let down only when she is dead.... In Kwara State, Nigeria, a musical soundtrack was replaced in one television spot because the pretest audience said the music was religious. One scene was reshot because the male actor had marks on his face identifying him as of a specific ethnic group; programmers wanted to avoid any such impression....

Pretesting with the intended audience is also important because it can help address objections of policy-makers. Careful research can help to persuade policymakers, who are often fearful of a negative public reaction, that messages to be used on mass media are acceptable. In Colombia, a generic condom promotion campaign was suspended for two weeks because
government officials feared a public backlash. Pretest results finally persuaded officials of the Ministry of Communication that the messages were acceptable. Social marketing campaigns in Bangladesh, Ghana, and the Dominican Republic initially met opposition, but later efforts in these and other countries used research findings and closer ties to government during the planning phase to answer government objections and provide evidence that the public would not be offended.

b. Involve gatekeepers and pretest materials with them.
Where gatekeepers are not involved at an early stage, they may veto projects if they find something objectionable. In the Dominican Republic, for example, PROFAMILIA released a controversial television spot showing Vickiana, a popular singer, dressed in a lace nightgown, along with a man wrapped only in a towel. She embraces him, turns toward the camera and shows a packet of oral contraceptives – her daily secret for enjoying love. Opinion leaders, including church officials, were disturbed and the spot, which had not been pretested, was shown only for a few weeks (ISTI, 1988). It made an impression on some viewers, however, who continued to ask for “Vickiana’s pill.”

Such problems can be avoided by involving opinion leaders early. In Oyo and Enugu States, Nigeria, for example, local advisory councils comprised of decision makers and technical experts reviewed family planning television programs before they were finalized.

4. Implementation, Monitoring and Assessment
This involves carrying out the action plan, monitoring the program and measuring the impact of the program. While implementation is the most visible stage of the process, its success depends on the strength of the foundation laid in advance.

a. Monitoring systems should be established to identify problems at an early stage and allow for mid-course correction.

IEC programs, no matter how carefully designed, rarely proceed exactly according to plan. A monitoring system helps identify problems, flaws and oversights before they become major impediments to success, and it also allows for mid-course adjustments. Also, monitoring provides tangible evidence of the success of the project at an interim point which is important in encouraging and rewarding program managers.

A monitoring system should track actual performance vis-a-vis the implementation plan. Mechanisms for tracking may include: audits of materials at distribution points, focus group discussions or intercept interviews with members of the target audience, and monitoring of actual broadcasting schedules on radio and television.

5. Review and Replanning
The overall impact of the program is evaluated, and future activities are planned.

a. Evaluation should be an integral component of IEC programs built in from the beginning.
Impact evaluation which looks at the effects of the IEC program on the knowledge, attitudes and behavior of the target audience should be an integral component of IEC projects. In addition to assessing impact, the evaluation can examine how and why specific IEC activities were successful and determine for what types of people and under what circumstances the project worked. Such insights are invaluable for making decisions about future activities. Effective evaluation depends on a clear model that identifies specific changes in knowledge, attitudes and behavior that are anticipated at the start of a project or program and that can readily be measured as the program proceeds.

A convenient and useful model for evaluation of IEC activities follows the hierarchy of effects, adapted from William McGuire (Figure 3). Using the specific steps identified in the process of behavior change, various evaluation techniques can measure how many of the intended audience were exposed to a specific message, remembered it, understood it, agreed with it, discussed it with other people, sought more information, tried the proposed behavior, continued the behavior and finally recruited others to do the same. Quantifying this step-by-step process of behavior change can not only measure the impact of a specific IEC activity – such as counseling television spots, radio soap operas, brochures, or national campaigns – but also can identify the steps where more emphasis is needed.
Evaluation research methodologies in IEC are improving, and many programs now employ techniques for rapid, accurate assessment of this type of step-by-step change. Techniques have been drawn from market research and advertising experience. Some of the effective evaluation techniques used to measure changes in knowledge, attitudes and behavior are: baseline and follow-up sample surveys; time-series analysis of clinic/hospital client records before, during and after the IEC intervention; exit interviews with clients or "mystery clients" (people posing as clients) after clinic visits; focus group discussions; and structured interviews with small, purposive samples of health care providers and community leaders associated with the IEC intervention. These techniques can be used in a coherent, integrated system called a "media impact research system"....

Figure 3. Hierarchy of family planning communication effects

Knowledge stage:

1. Recall (spontaneous and aided) of FP messages
2. Comprehension of FP messages.
3. Knowledge and skills for effective FP practice

Persuasion stage:

4. Liking, positive emotional response, and approval
5. Discussion of FP with spouse, friends, and providers
6. Acceptance/agreement of FP messages
7. Positive image of FP service providers and contraceptives
8. Support for the FP program (community norm)

Decision stage:

9. Intention to seek additional FP information and advice
10. Intention to practice FP for spacing or prevention

Implementation stage:

11. Acquisition of additional FP information, advice
12. Acquisition and use of an appropriate FP method
13. Continued use of an appropriate FP method

Confirmation stage:

14. Recognition of the benefits of FP practice
15. Integration of FP practice into one's lifestyle
16. Promotion of FP practice among others

In summary, family planning IEC programs should be developed according to a tested process which begins with analysis and strategic planning and ends with impact research, the results of which feed back into the programming cycle. It is incumbent on donor organizations to emphasize the need for sound methods in IEC. The timeframe for project completion and budget should realistically reflect the IEC process. In most cases, family planning programs do not have experience with every step of the IEC process and benefit from training and consistent technical assistance throughout the process.

Health promotion, advocacy and communication reinforcement

Much of our discussion has focused on efforts to inform and educate on the way toward changing behavior. Some call this: "behavior change communication." Two reminders are necessary at this point. First, that while changing behavior is important, it is also important to consolidate and reinforce behavior. The social marketing discussion in Chapter 5 addresses this issue in greater detail. When interventions are successful in changing behavior, such as changing people's behavior regarding more healthful diets or sanitation practices, communication efforts should continue to support continuation of those behaviors especially when environments may tempt a return to earlier practices. A "campaign" approach to behavior change might put substantial effort on bringing about change, but fail to consolidate those changes using a longer term communication program.
Advocacy communication is a partner with behavior change communication. For example, in Nigeria’s effort to reform its health system, communication plays a role in prompting the “demand side” of the public’s access to public health resources, but government policy also includes substantial attention to the need for advocacy among government agencies and various partners to persuade them to strengthen their roles in the health reform process, especially in the supply side of the health system. For example, generating demand for health services such as those related to safe motherhood are counterproductive if the services are not readily available. Partly in recognition of the behavior change and advocacy aspects of communication, in 2006, the Nigerian Federal Government introduced a National Health Promotion Policy that led to the establishment of a Health Promotion Division high in the Ministry of Health’s organizational structure.

The health promotion idea had gained international prominence in the First Global Conference on Health Promotion in Ottawa, Canada in 1986. In 2005, the Sixth Global Conference held in Bangkok defined health promotion as "the process of enabling people to increase control over their health and its determinants, and thereby improve their health." Nigeria’s Health Promotion Policy indicates that health promotion involves a multidisciplinary application of skills in psychology, anthropology, economics, political theory, consumer rights/law, communication, media design, epidemiology, management, community mobilization and the application of research, planning and evaluation skills. The Policy identifies three major components of health promotion as: Health Education (communication directed at families and communities to influence awareness/knowledge, beliefs/attitudes, action/behavior change, etc.), Advocacy (agenda setting and advocacy for healthy public policy including policies for the removal of obstacles, reducing gender barriers, etc.) and Service Improvement (including improvement in quality and quantity of services, accessibility, counseling, patient education, etc.).

Reproductive health and communication in Ethiopia: an example of communication planning and advocacy

Some of the new approaches to IEC have begun to take root in countries that are building their capacity to deal with population matters. Ethiopia is a good example. Ethiopia is the third most populous country in Africa. Its fertility rate of 7.0 children per woman raised official concern about achieving a steady pace of economic development and social well-being for the population as a whole. In 1993 Ethiopia adopted a National Population Policy and in 1997 became the first country in Africa to draft a national IEC and Advocacy Strategy in support of a National Population Policy. A UNFPA workshop drafted the strategy.11 One of the values of its layout is that it includes conventional IEC as well as advocacy objectives.

The contents of the document illustrate vividly the scope of activities that confront communication people in the country’s official National Office of Population. First, two “thematic areas” are identified:

(1) Reproductive health and (2) Population and development. Each thematic area is subdivided as follows:

Reproductive health
- Safe motherhood
- Family planning
- STIs including HIV/AIDS
- Access and quality of RH services and care
- Gender issues

Population and development
- Rapid population growth
- Implementation of the National Population Policy

• Gender and development
• Research/data collection and dissemination
• Youth and development
• Other Population Policy priorities (migration and urbanization, environment, and special population sub-groups)

For each of these “Thematic areas” in this framework, there is a list of priority issues. And for each priority, there is a program goal, and for each goal there are IEC objectives and advocacy objectives. Here is an example.

Thematic area: Reproductive Health

Programme Component: Safe Motherhood

Issue #3: High prevalence of reproductive health related harmful practices: Women and girls are subjected to several harmful practices which can affect their reproductive health in a negative way. Early marriage, female genital mutilation, and harmful practices done with an intention of assisting labor, birth and recovery during postnatal period are widely practiced in Ethiopia....

Programme goal: To reduce maternal and neonatal morbidity and mortality associated with harmful practices....

IEC Objectives: To increase awareness and knowledge about the health hazards of early marriage, female genital mutilation, and other malpractice, and bring about change in attitudes and behaviors among relevant segments of the population.

Advocacy objectives: To mobilize the participation and support of religious and community leaders for actions leading to the elimination of FGM, early marriage, and other reproductive health related harmful practices.

i) To increase the understanding on the need for data collection and research on harmful practices, and mobilize support for undertaking relevant data collection and analysis.

ii) To gain support for raising the age of marriage to at least 18 years through the revision of existing legislation and regulations, and to have declared supportive regulations to abolish reproductive health related harmful practices.

iv) To mobilize support to bring about changes in religious and customary laws, practices, and norms that foster early marriage, FGM, and other reproductive health related harmful practices.

The document goes on with charts identifying who the IEC audiences are and who the advocacy targets are, what the messages are for each, and what channels need to be used for each population group identified. The document then provides indicators for marking progress and impact.

The Ethiopian IEC and Advocacy Strategy illustrates a very complex communication enterprise that focuses on producing outcomes rather than outputs. The strategy includes a research effort that provides data for situational analysis and measures outcomes, involves a substantial variety of stakeholders (from adolescents to policy-makers) and media (to “reach the ultimate audiences directly”), and extends over a five year period. The Strategy is especially distinguished by its attention to policy, laws, norms, advocacy and other matters that surround decisions and practices of people in relation to their reproductive behavior. The lesson is that RH behavior change involves far more challenges than the behavioral changes to be made by potential contraceptive users alone.

EMERGING ISSUES IN REPRODUCTIVE HEALTH AND COMMUNICATION

The 21st century has brought with it important challenges and opportunities in reproductive health. While many readers will be especially interested in health technology, it is increasingly important for health professionals to be informed about parallel developments in the communication field.
Information and communication technology

Significant changes in communication technology have joined the recent social and political factors in enhancing and complicating traditional IEC practices. A communication revolution is spreading across the world driven, to a large extent, by the availability of moderately-priced personal computers and the Internet. (We explore many of these information technology issues in Chapter 6.) Some 300 million people are using the Internet and it is estimated that two million web pages are being added to the Internet each day. Although radio and television continue to be important new technologies for some parts of the world, it is the web-related technologies that are attracting the attention and support of international agencies, national governments and non-governmental organizations. In English the letters ICT are becoming familiar abbreviations especially for the new information and communication technologies that are associated with the computer and the Internet.

The significance of ICT for the health field is underscored by the announcement in mid-2001 that, under a pilot program with the World Health Organization, six publishing houses would provide medical schools, laboratories and health departments in “poor” countries with free electronic access to about 1,000 medical journals. The Health InterNetwork Access to Research Initiative (HINARI) provides free or very low cost online access to the major journals in biomedical and related social sciences to local, not-for-profit institutions in developing countries. By 2006, more than 70 publishers were offering their content via HINARI. (See Chapter 9.) Local, not-for-profit institutions in two groups of countries may register for access to the journals through HINARI. The country lists are based on GNP per capita – using 2001 World Bank data. Institutions in countries with GNP per capita below $1000 are eligible for free access. Institutions in countries with GNP per capita between $1000-$3000 pay a fee of $1000 per year / institution. Eligible categories of institutions are: national universities, research institutes, professional schools (medicine, nursing, pharmacy, public health, dentistry), teaching hospitals, government offices and national medical libraries. All staff members and students of these institutions are entitled to access to the journals. HINARI information is available at http://www.who.int/hinari/about/en/.

Similarly, a Reproductive Health Gateway (http://www.rhgateway.org) – managed by the Johns Hopkins University’s Bloomberg School of Public Health (USA) – offers a new way to find reproductive health information. It is “a gateway to a set of websites preselected for relevance and reliability.” Participants in the project include the Population Council, International Planned Parenthood Federation, WHO, Family Health International and 36 other partners. The Gateway provides free-text search, a list of links that take you directly to specific relevant web pages, and links to the 40 participating organizations. Another gateway related to reproductive health is http://www.developmentgateway.org/pop managed by the UN Population Fund (UNFPA) with 12 other organizations.

Other development-oriented and country-specific gateways are being created in countries around the world and – as we reported in Chapter 1 – these complement the World Bank Foundation’s Global Development Gateway (http://www.developmentgateway.org).

Along with a lot of enthusiasm, there are some key obstacles to the success of digital networks for providing information. These include sustainability, people’s awareness of networks’ value, and, especially important is the quality and relevance of the information and communication services available. The problem is illustrated in the following comment.

Even if the woman in the village has access to the internet, she will not necessarily be able to use the information to improve her child’s health because “trying to get information from the internet is like drinking from a firehose – you don’t even know what the source of the water is.”

12 In this context, “technology” refers both to hardware (such as video recorders) and software (such as systems for using hardware, including web sites and the “enter-educate” approach to communication content which is addressed in Chapters 8 and 9.).

An agenda for the 21st century

With considerable priority given to maternal mortality and reproductive health in the Millennium Development Goals, we concentrate the next few pages on some approaches to dealing with these concerns. With new policies and approaches in reproductive health and with the emergence of innovations in communication, there needs to be a closer connection between the two in the decades immediately ahead. In China that has been accomplished to a degree by organizations like the Shanghai International Center for Population Communication which has produced an extraordinary array of quality audio visual materials related to reproductive health. Most of these are freely available to the public through various delivery systems. However, it is important to step back and identify the priority goals for a comprehensive reproductive health communication program and the organizational scheme for reaching the goals. Here are six goals to consider for reproductive health strategies.

1. Promote public understanding of the wide range of issues that make up reproductive health (RH).
2. Foster good public relations for the RH organization, particularly to gain and keep visibility and support from policy makers, funders and the community.
3. Conduct advocacy programs in support of social, political and cultural changes that will contribute to norms and policies favorable to RH. In China, for example, we noted how important it is to gain acceptance of the informed choice policy among health and government cadre at provincial and township levels.
4. Promote and sustain behavioral change among appropriate stakeholders including contraceptive users and influentials such as RH service administrators and front-line health workers.
5. Share technical knowledge with other RH and communication professions.

It is important to recognize that each of these broad goals needs to be elaborated and operationalized as individual and explicit goals although they are clearly related, and they may overlap. For example, threaded through all of the items is the need for explicit process and outcome evaluation. In addition, each goal requires a distinct communication strategy, with its own specific outcome objectives, media mix, content, and stakeholder list.

Establishing a reproductive health communication unit

An underlying theme in what we have experienced in recent years of training reproductive health specialists in a variety of countries in Asia and Africa is that communication is a vital and an indispensable part of the on-going activities of a reproductive health unit and its responsibilities. We boldly assert that without a communication component, such a program inevitably will fail in its responsibilities to the public, to the scientific profession, and to the institutional structure that supports its work. However, the complexities of the scientific, social and political environment strongly suggest that the general-purpose “information office” does not fulfill the needs of reproductive health, whether it be in a ministry or in a research institution. The danger in the general purpose public information office is that it inevitably ends up doing primarily public relations and promotion activities. Nor do conventional audio-visual units suffice because they are predominantly media production-oriented – and communication is more than posters, videos, and web pages.

To carry out some or all of the agenda proposed above, reproductive health institutions should consider establishing communication units that are capable of carrying out five central functions. These include:

1. Communication planning and strategy. Organizations need to do systematic analysis of the needs for information in their environment, draw up a plan for meeting those needs, and mobilize the resources to execute the plan. It is in this planning process where some or all of

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14 Needs include both “felt needs” of the community and the needs determined by health specialists. As noted earlier in this chapter, an effective IEC strategy should follow a strategic planning approach that starts with identification of issues and proceeds in stages through the setting of goals and objectives, identification and segmentation of audiences, selection of messages and media – to the implementation
the six goals listed above get put on an explicit action agenda. The function requires social
science-trained communication specialists in preference to media production or health people.
2. Research and evaluation. Information gathering runs throughout a communication
intervention, from situational analysis to process and outcome evaluation. Research and
evaluation are integral to setting goals, testing tactics, maintaining focus, monitoring progress,
measuring outcomes, and establishing accountability.
3. Production planning. While communication units can “out source” media production jobs, it
is important that basic message and media decisions and the supervision and coordination of
information production and delivery reside within the reproductive health unit. Piotrow and her
Johns Hopkins colleagues suggest how entities outside the unit itself can contribute to the
media production process, but they note emphatically that program managers need to provide
close supervision of the creative and production people. This part of the organization might
cordinate with the Country Gateway to upload appropriate RH news and guidelines for
practitioners, the public and other constituencies.
4. Information and documentation management. With the growing availability of professional
resources, it is vital to provide assistance to researchers and other reproductive health staff in
monitoring the professional and intellectual environment. Periodically, for example, WHO’s
Special Programme of Research, Development and Research Training in Human
Reproduction (HRP) distributes to reproductive health professionals around the world compact
disks (CDs) containing a vast amount of RH research information. This information is carefully
compiled by systematic analysis and by drawing evidence-based conclusions — resulting in
specific treatment recommendations. There may need to be someone on the receiving end of
this CD to sift through the material and alert appropriate practitioners to its availability and
relevance to local issues, or to assist practitioners by giving them instructions in how to access
the information by themselves. Similar help may be needed for making searches on Internet
gateways. (This is the reference librarian-type function in an electronic era.)
5. Communication orientation and training. Persons associated with reproductive health
research programs need a variety of communication skills. These range from researchers who
need to be able to report their research both orally and in professional papers to staff people
who need to interact interpersonally with clientele and colleagues.15

HIV/AIDS AND COMMUNICATION

The HIV/AIDS situation, addressed in the 6th Millennium Development Goal
(Combat HIV/AIDS, malaria, and other diseases) has presented a special challenge to the
health field, especially in developing nations where resources to deal with the problem at all
levels are scarce, for both political and economic reasons. While they also may apply to other
kinds of health problems, the following issues — important in a communication approach — are
especially pronounced in the AIDS situation:
1. The HIV/AIDS afflictions carry with them health problems — but also social problems such
as stigmatization, which may complicate locating and communicating with those afflicted.
2. Public communications concerning HIV/AIDS sometimes invokes fear in their approaches,
and fear-arousal in messages needs to be carefully pre-tested for its effectiveness. People
may turn away from messages because of the fear content.
3. While some agencies such as UNAIDS propose communication principles that emphasize
communities being agents of their own change, HIV/AIDS is an urgent issue. A recent book
puts it this way:

of specific activities leading to measurable outcomes. Research, monitoring and evaluation are integral
parts of this process.

15Colin Fraser reports a situation that is probably quite typical in the health field. “Our initial results in one
area showed that mothers were deeply resentful of the authoritarian and superior behavior of the
medical staff towards them during their first or early visits, and so they refused to return. We had a
prickly meeting with the health managers, who flatly rejected this research finding. It was only after
continued research in other areas of the country confirmed that the problem was general that they
agreed to training in social skills for their field staff” C. Fraser & S. Restrepo-Estrada, Communicating for
Those working in HIV/AIDS face a dilemma. On the one hand, many accept the principle...and recognize the importance of community-driven social change and its effectiveness in the long range. On the other, they are acutely aware, given the urgency of the epidemic, that participatory processes with communities can be labor-intensive and time-consuming....Those responsible for combating HIV/AIDS must find effective means of reaching the largest possible number of people with information and motivation that could save their lives (p. 44).\textsuperscript{16}

4. HIV/AIDS may be perceived as a one-to-one behavioral issue, but the social and cultural environment in which people are imbedded can be a major factor in the dynamics of dealing with sex and HIV/AIDS. Neel McKee and his colleagues note that "Few young people in the countries hardest hit by HIV/AIDS have the power to negotiate the time and conditions for having sex, including the use of condoms."

5. Identifying the priority stakeholders is a challenge. Are they those who are "at risk"? The general public? Policy-makers? The key word here is priority because although many may have a stake in the AIDS situation, resources usually are limited and this limits the number kinds of persons who can be addressed in an intervention.

6. Some of the communication theories that we use have come from Western academia and have not been suitably tested in other environments.

Despite the complications, McKee and his associates offer three principles in dealing with HIV/AIDS intervention programs and communication.

1. Target social norms as well as individual behavior.
2. Expand beyond ad hoc activities to a coordinated social movement.
3. Bring community-level activities "to scale" through a linkage with the mass media.

COMMUNICATION AND THE STIGMA OF AIDS

Report: South African HIV/AIDS Television Serial Drama Leads to Decrease In Stigma and Improved Prevention Behaviors among Youth

BALTIMORE––A new report from the Health Communication Partnership (HCP) demonstrates how a powerful television serial drama about young adults living in a rural South African town impacted by HIV/AIDS led to improved attitudes about HIV/AIDS, stigma, living openly and positively with HIV and faithfulness among its viewers.

[An issue of HCP’s Communication Impact profiles Tsha Tsha] a gritty Nguni language drama (with English subtitles) set in the Eastern Cape that focuses on the lives of several young people exploring love, sex, and relationships in a world affected by the realities of the AIDS pandemic. Based at Johns Hopkins Bloomberg School of Public Health’s Center for Communication Programs (CCP), HCP is a global communication initiative supported by the U.S. Agency for International Development (USAID).

According to national audience rating data provided by the South African Broadcasting Corporation Limited, Education Division (SABC), Tsha Tsha reaches an average of 1.8 million viewers each week, for an estimated cost of $.55 per person reached.

SABC Education and SABC One, Curious Pictures, the Centre for AIDS Development Research and Evaluation (CADRE), and HCP collaborated to develop this entertainment-education drama series. By depicting the challenges facing young South Africans, the series aims to enhance its young adult viewers’ capacity to reflect on their own problems, engage in developing solutions, and become active agents in shaping their future.

The U.S. President’s Emergency Plan for AIDS Relief supports the research, development, and production of Tsha Tsha through the USAID. SABC Education produces, markets, and

\textsuperscript{16} N. McKee, J. T. Bertrand, and A. Becker-Benton, Strategic Communication and the HIV/AIDS Epidemic, Sage, New Delhi, 2004. We highly recommend this book for its solid scientific and theoretic foundation as well as for its practical guidelines for undertaking health communication interventions. This section on HIV/AIDS is heavily based on this work.
Chapter 4 | Information, Education and Communication in Health Initiatives

SABC One broadcasts the series, which premiered in April 2003. HCP provides technical assistance in all aspects of the show's design, scripts, production, research and evaluation, and funds all elements of production. HCP also works with SABC Education, CADRE and other South African partner organizations to set up community viewing clubs for the series. CADRE and HCP researchers evaluated audience responses to the first 26 episodes based on data collected between April 2003 and May 2004. Researchers used propensity score matching — a relatively new statistical procedure — to analyze the responses by creating a matched control group to compare against a group that watched the drama. This fulfilled one of the aims of the research – to develop more precise research tools for evaluating the effects of mass-media education programs. This method effectively overcomes the problem of confounding variables that influence exposure being associated with outcome variables – an issue that has been one of the most vexing challenges in establishing equivalent exposed and unexposed groups for evaluation of mass media interventions.

Recall of the drama content served to measure exposure. The percent of respondents that recalled the program increased from 57.6% after 13 episodes to 67.6% after 26 episodes. Viewers and non-viewers differed significantly on the following variables after controlling for the effects of propensity to view the series:

- Compared to the statistically created control group, viewers were more likely to have positive attitudes about HIV issues addressed in Tsha Tsha, including stigma towards people living with HIV/AIDS.
- Viewers were more likely to practice HIV preventive behaviors, such as abstaining from sex, being faithful to one partner, having sex less often, using a condom to prevent HIV, or using a condom at last sex....
- Viewers were more likely to undergo Voluntary Counseling and Testing (VCT) to determine their HIV status....

The qualitative data reflected a high level of visual literacy amongst viewers, and an interest in engaging with the series and its characters. Viewers saw the series as realistic, captivating, entertaining, and educational. They considered the rural setting novel and the show appealed to both rural and urban residents. Knowledge and general awareness about HIV/AIDS increased, and various self-reported shifts in HIV attitudes, beliefs, practices, and behaviors occurred.

Viewers also reported an increased sense of responsibility for the well-being of others as Tsha Tsha portrayed the dynamics of living openly with HIV and the problems and challenges involved in sharing one’s status with others. It provided strong, positive images of young people confronting their HIV positive....

HCP is a global communication initiative based at CCP in partnership with the Academy for Educational Development, Save the Children, the International HIV/AIDS Alliance, and Tulane University's School of Public Health and Tropical Medicine. In addition to the five core partners, HCP works with leading Southern-based health communication organizations as well as global programming partners from the corporate sector, international media, academic institutions, and faith-based organizations.


Using modern communication technology with the wrong message? This story appeared on the One World Website at: http://africa.oneworld.net/article/view/136927/1/. What could have been done to avoid this situation (other than doing nothing)?

A COMMUNICATION FAILURE
Anti-AIDS text messaging campaign raises hackles in Swaziland
Caroline Nenguke 25 July 2006
In one of the biggest demonstrations seen in Swaziland in years, HIV-positive people marched on the offices of the prime minister and the national AIDS council this week to protest an "insulting" new media campaign.

The project by the National Emergency Response Council on HIV/AIDS (NERCHA) seems to
suggest that HIV is caused by sexual infidelity. It was launched last month without consulting people living with the virus. "The campaign further stigmatises the HIV infected. It is an insult, we are angry. It is time we are involved in matters pertaining to us," said protest leader Vusi Matsobula, chairperson of the Swaziland National Network of People Living with HIV/AIDS (SWANNEPHA). Around 1,000 people participated in the demonstration.
The media campaign, called "Makhwapheni", SiSwati slang for illicit lovers, has sent out tens of thousands of cellphone text messages mimicking secret lovers arranging a sexual rendezvous. The marketing company behind the initiative was quoted in the local press as saying its critics failed to understand the campaign's creative rationale, and said cellphones were the primary means of communication for couples having affairs.

But to Swaziland's growing number of people living with HIV and AIDS - over 40 percent of the sexually active adult population – the campaign smacked of cheap sensationalism. "HIV is not just spread by cheating husbands and secret lovers – this insults us all," said Senzo Nkhosi, a protestor who said he was HIV-positive.

A survey by the Times of Swaziland found the general public split on the merits of the campaign. Supporters, none of whom said they were HIV-positive, contended the approach was meant to startle and provoke discussion.

NERCHA did not return IRIN's phone calls on Friday, but in previous press statements the organisation, which falls under the authority of the Prime Minister's office, has argued that Makhwapheni was a dramatic attempt to change people's behaviour. However, SWANNEPHA has accused NERCHA of arrogance, and its staff of making a living off the AIDS crisis, which NERCHA has denied. The protestors also claimed NERCHA was concentrating its media efforts on uninfected Swazis while ignoring people in the advanced stages of opportunistic diseases brought on by AIDS.

The Makhwapheni campaign has become the catalyst for AIDS groups to raise other objections. At the march they delivered petitions to NERCHA and the prime minister demanding universal access to care and treatment for people living with the virus, and legislation protecting the rights of those who are HIV positive.

COMMUNICATION AND IMMUNIZATION

The World Health Organization considers vaccinations as one of the vital approaches to reaching Goal 4 of the MDGs: reducing child mortality by two-thirds by 2015. One of the important indicators (targets) for Goal 4 is the proportion of one-year-old children immunized against measles. A related goal was to eliminate polio by 2005 and to accomplish this there was a Global Polio Eradication Initiative (GPEI) led by the World Health Organization. However, incidents in some parts of the world suggest that immunization is significantly larger than a health issue. Take the situation that occurred in northern Nigeria in 2003 reported by anthropologist Maryam Yahya. As most of the world was moving toward the goal of eradicating polio by the end of 2005, Nigeria was experiencing an outbreak. The country's Polio Eradication Initiative (PEI) came to a virtual halt because of fears in Nigeria that Oral Polio Vaccines (OPV) were deliberately contaminated with anti-fertility agents and with the HIV virus. While the central government ultimately ascertained the integrity of the vaccines and the campaign advocated by WHO and UNICEF, strong religious groups led boycotts of the PEI. Complicating the situation were several background issues including earlier drug tests by an American drug company which were tainted by questionable ethical practices also involving complicity some officials of the Nigerian government, a government primary health care system that lacked the capacity to manage the PEI, and many people's trust in traditional forms of vaccination and their perception of polio as a "supernatural affliction" to be addressed by traditional healers who can deal with Shan-Inna, the powerful female spirit that consumes the limbs of human beings. Yahya states:

Today global and national policymakers highlight the problem of anti-vaccination rumours as a major threat to vaccine demand and coverage. Policy and media commentary on such instances, and the limited social science work which has addressed them, vary in their interpretations. Some write them off as ill-founded rumours grounded in misinformation spread by a few with misguided intent, to be corrected through education. Others interpret them as collective resistance based on religion or the spread of conspiracy-type theories in (it is implied) a rather unreflective African society (p. 7).

The struggle in northern Nigeria over OPV and PEI clearly demonstrates the importance in Nigeria and elsewhere of advocacy, education and communication interventions to translate international and national health policy into local practices compatible with the local culture. The case also demonstrates the importance of strong initiatives to help people understand the culture of the health system. For example, Yahya contends that there is limited knowledge and understanding of immunization among parents. There are prevailing notions that one vaccine prevents all diseases including malaria, pneumonia and cholera – and that one dose is enough. Some of the mis-information apparently comes from 11-year old vaccinators recruited by the health system!

A 2005 report by Silvio Waisbord and Heidi Larson provides evidence of the impact of communication activities on immunization programs and indicates the ways in which communication initiatives have contributed to some of those programs. They include: advocacy efforts with local governments, community mobilization to boost participation, and behavior change initiatives to encourage compliance with vaccination schedules. 18 The report identifies four major challenges to immunization efforts, two of which are directly related to communication:

- Children do not get vaccinated if caregivers do not know the value of vaccines, when children need to be immunized, and where vaccines are administered; and
- Children do not get vaccinated if caregivers do not trust the safety of vaccines.

Two additional challenges relate more specifically to the enabling environment, but which could be related to advocacy aspects of a communication and immunization intervention.

- Children do not get vaccinated when communities are excluded or beyond the reach of immunization services; and
- Children do not get immunized when vaccines are not available.

Drawing on case studies from Africa and Asia, Waisbord and Larson suggest 10 communication-related lessons learned from successful programs. These include:

1. Communication strategies must be tailored to fit the population segment one wants to reach.
2. Proactive communication strategies are needed to curtail and prevent negative publicity and resistance to immunization, and to build continuous trust in vaccination programmes.
3. Frontline health workers need positive attitudes and good interpersonal communication skills.
4. Strengthening and supervising health providers’ communication skills should be an integral part of immunization planning and training
5. In-country advocacy coalitions are key to building and maintaining awareness about immunization programmes and to securing sustainable funding from governments and donors.
6. Evidence and data on both cost and effectiveness are needed to successfully advocate for vaccination programmes.

7. The impact of a single information medium depends, in part, on whether it is used with other communication strategies.
8. Communication interventions should be tailored based on information distinguishing knowledge and attitudes among users and non-users of immunization services.
9. Grassroots communication strategies are more likely to succeed if they are integrated with the provision of other community health and social needs.
10. Effective communication interventions can increase demand, but if the quality or availability of services is poor, many caregivers are not likely to return to complete schedules.

Waisbord and Larson conclude with a list of 11 recommendations for strengthening the communication component of vaccination programs. These include:

1. Earmark adequate funding for communication activities.
2. Make strategic communication plans a requirement within immunization proposals.
3. Offer incentives and rewards to national plans that assign above-average resources for communication positions and activities.
4. Identify key gaps in communication capacity and fund raising and capacity-building programs as well as communication positions at regional and national levels.
5. Provide technical guidance to immunization managers to design and budget communication plans.
6. Support baseline and evaluation studies to guide communication interventions.
7. Fund and offer technical assistance for advocacy activities to support the introduction of under-used and new vaccines.
8. Fund programs to monitor and document effective use of interpersonal communication, and training of frontline health workers.
9. With MOH, implement selective reward programs for health staff in districts where caregivers are highly knowledgeable about vaccines and immunization schedules.
10. Collaborate with other stakeholders to develop communication strategies.
11. Contribute to setting up and sustaining immunization coalitions with relevant health organizations, communities, and opinion leaders.

The following chart summarizes more specifically the various roles communication can play in reference to particular people involved with children’s health and immunization.

<table>
<thead>
<tr>
<th>STAKEHOLDERS</th>
<th>THE CONTRIBUTION OF COMMUNICATION</th>
<th>&quot;Responsibles&quot;</th>
<th>Key enablers</th>
<th>The public</th>
</tr>
</thead>
<tbody>
<tr>
<td>Awareness of vaccinations</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Informing/educating</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Training in administering vaccinations</td>
<td></td>
<td>x</td>
<td></td>
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<tr>
<td>Building trust in the vaccination system</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Persuasion/motivation to act</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Logistics (where, when, cost?)</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Reinforcing decisions made</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
</tr>
</tbody>
</table>

* Included in responsibilities are parents, relatives, caregivers and others directly and personally involved in very young children’s welfare; key enablers includes people who influence healthcare resources and the socio-cultural norms of communities, ranging from political, religious and mass media leaders to community healthcare providers; and the public is included because of its power to adopt or reject immunizations as part of the culture.

SUMMARY

One might think that the varied communication roles we have mentioned in this chapter have always existed alongside the traditional IEC activities but were not visible as part of an overall communication program. Based on a comprehensive analysis of its own work and that of others, the Johns Hopkins University Center for Communication Programs suggests otherwise:

- Family planning communication, once mainly simple brochures and flipcharts to supplement lectures and counseling, now encompasses national communication strategies for multimedia
promotion of reproductive health — strategies that combine the reach of the mass media, the immediacy of interpersonal communication, and the social influence of community action.

- Once limited to the objective of increasing awareness of contraceptive methods, communication now aims to spread new community norms and encourage new individual behavior.
- Once concentrated on meeting targets for numbers of new acceptors, family planning communication now focuses on enabling informed individual choice.
- Once an ad hoc “let’s-print-a-poster” approach, family planning communication programs now follow a tested step-by-step process that is goal-oriented, audience-focused, systematic, and responsive to feedback.
- Once an appendage of service delivery, family planning and reproductive health communication has matured as a discipline of its own, with scientific theory influencing program design and with program experience, in turn, stimulating the evolution of theory.
- Overall, communication has become a more prominent, more scientific and a more strategic component in family planning and reproductive health programs.

Nigeria launched a major national health reform project PATHS – supported by the Britain’s Department for International Development. A principal theme was “Better Health Begins With You” – an initiative that called for an aggressive health promotion and communication program. Part of the communication challenge was to convince the population that they must participate in the process of achieving better health; another part was to give the population the information they needed to participate effectively.
"I get a lot of calls for help.... I got a call from an eye surgeon in a small southern community last month. She was writing a grant proposal to promote community eye care, and she said she had heard about me from a friend and that she wanted to include social marketing in her proposal. I naturally expected her to ask me to join her team – but no. She said, and I quote: "Dr. Smith, I have to get this submitted by tomorrow. Could you tell me all I need to know so I can use social marketing effectively?" I told her how glad I was she had called – because I had just been asked to do some eye surgery at a friend’s house this afternoon. And if she would teach me eye surgery I would teach her social marketing."

Bill Smith, Senior Vice President, Academy for Educational Development, writing in Social Marketing Quarterly, Volume 9, Number 1 / January-March 2003, pp 63-70.

Smith will not teach you on the phone how to do social marketing. However, he has written a book available free on-line that offers practitioners valuable guidelines on how to do social marketing. Later in this chapter, we will highlight some parts of the book, and in Chapter 8 we will go into more detail on methods for carrying out the communication part of social marketing. Defining social marketing as "a process for influencing human behavior on a large scale, using marketing principles for the purpose of societal benefit rather than for commercial profit," Smith describes some of the characteristics that make up a social marketing approach:

1. A philosophy of exchange, wherein both parties must receive something they want if the interchange is to be successful.
2. A strategy that integrates research with action, using research tools that influence the development of a programme by providing constant data on audience response.
3. A mix of the 4 Ps of marketing: changes in the product, the price of the product, the place where the product is made available, and finally how the product is promoted.
4. A positioning strategy, recognizing that a product must be described and presented in relation to its primary competitors.

In Chapter 1, we mentioned that social marketing is not a kind of communication, but that communication is a part of social marketing. Marketing, Smith points out, is more comprehensive than communication or advertising. Rather than focusing on the message alone, "the real power of marketing lies in the design of social products and services that sell themselves." In Social Marketing Lite, Smith provides low-cost suggestions for implementing marketing ideas as a part of programs for social change.

Social marketing is a popular method for dealing with issues that are a serious concern to communities and society. Back in the 1970s agencies began using the techniques that had been successful in commercial marketing to deal with issues ranging from condom use and immunizations to environmental programs. The Academy for Educational Development identifies almost 50 domestic and overseas projects in which it has applied social marketing methods. The places range from Afghanistan (the REACH program works with the Afghanistan Ministry of Health to deliver essential health services to rural women and their children under five) to multi-country situations such as The Change Project (developing state-of-the-art tools and strategies to facilitate individual and social behavior change relevant to child health, maternal health, infectious disease, and HIV/AIDS in more than 60 health-related projects in 24 countries). These and other AED activities appear at: http://www.aed.org/SocialMarketingandBehaviorChange.

The accompanying box reports on Turning Point, an agency that supports the application of social marketing to improve health care services in many parts of the United States.

### Turning Point and social marketing

Turning Point, started in 1997, is an initiative of The Robert Wood Johnson Foundation and the W.K. Kellogg Foundation. Its mission is to transform and strengthen the public health system in the United States by making it more community-based and collaborative. The initial idea for Turning Point came from the foundations' concerns about the capacity of the public health system to respond to emerging challenges in public health, specifically the system's capacity to work with people from many sectors to improve the health status of all people in a community.

Turning Point created a network of 23 public health partners across the USA to:
- Define and assess health, prioritize health issues, and take collective action
- Promote education to decrease the risk of infectious and chronic disease
- Strengthen environmental health services for clean air and water and safe food
- Gain access to health care for everyone
- Improve health status for minority groups

National and state Turning Point partners formed the National Excellence Collaboratives and worked from 1997 to 2006 to modernize public health statutes, create accountable performance management systems, use information technology, invest in social marketing, and develop public health leadership. Several of the collaboratives are continuing their work. Its network of 23 public health partners has, as one of its four major thrusts, promoting the application of social marketing principles and practices to improve public health service delivery.

One of the products of Turning Point's efforts is a digital product called CDCynergy-Social Marketing Edition Version 2.0 that is designed to guide public health professionals in analyzing health problems and to help them plan, implement, and evaluate social marketing programs to address those problems. Turning Point says that "social marketing is a powerful tool you can leverage to improve health. It goes beyond simply raising awareness, and focuses on creating voluntary behavior change. As an interactive multimedia decision support tool, CDCynergy-Social Marketing Edition provides users with step-by-step guidance for developing and documenting a successful social marketing program. The CD-ROM, contains case studies, commentary from experts in the field of social marketing, tutorials for each stage of effective program development, an extensive resource library and tips for managers who oversee social marketing programs."

The Turning Point's Social Marketing National Excellence Collaborative offers the CD, which was developed in cooperation with the Centers for Disease Control of the US Federal Government and the Academy for Educational Development (AED), for the cost of packaging and shipping.

For the Turning Point's various social marketing tools, see: www.turningpointprogram.org.

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Social marketing is popular with many non-governmental and governmental agencies but it is also widely misunderstood. Among the various misconceptions are that it is a special kind of communication; that it is the same as social advertising (like "Smokey the Bear" forest fire prevention radio and TV announcements); that it is mass media driven; and it is a top-down instrument of persuasion.

The box below contains an article from the Center for Advanced Studies in Nutrition and Social Marketing, an organization that applies social marketing to nutrition programs. In a concise form it too describes the essential characteristics of social marketing. It was posted on the Communication Initiative web site www.comminit.com, which is a source for a large range of materials related to social marketing and to development and communication in general. Note in the article that the number of P's has been expanded from four to five – the addition being "positioning."
What is “Social Marketing”? A number of definitions of the social marketing construct have been offered (Lefebvre & Flora, 1988). Kotler (1975), for instance, defines social marketing as “the design, implementation, and control of programmes seeking to increase the acceptability of a social idea or practice in a target group(s). It utilises concepts of market segmentation, consumer research, idea configuration, communication, facilitation, incentives, and exchange theory to maximise target group response.” Andreasen (1995) defines social marketing as “the application of commercial marketing technologies to the analysis, planning, execution, and evaluation of programmes designed to influence the voluntary behavior of target audiences in order to improve their personal welfare and that of their society.

These and other definitions share more commonalities than distinctions. First, the “social marketing” label is typically applied to causes judged by persons in positions of power and authority to be beneficial to both individuals and society. Second, unlike commercial marketing, the agent of change does not profit financially from a campaign’s success. Third, the ultimate goal is to change behaviors believed to place the individual at risk, not simply increase awareness or alter attitudes. Fourth, the optimal social marketing campaign is tailored to the unique perspective, needs, and experiences of the target audience, hopefully with input from representative members of this group. Fifth, social marketing strives to create conditions in the social structure that facilitate the behavioral changes promoted. Sixth and most fundamentally, however, is reliance upon commercial marketing concepts. It is often said that there is poetic justice in using the very marketing concepts employed by such “disease peddlers” as the tobacco and fast food industries to combat their negative influences.

Social Marketing Vs. Product Marketing

The selling of healthier behaviors and the selling of products have much in common. Even so, neither health nor brotherhood can be sold like soap. Practitioners remind us that there are significant differences between social and product marketing. These differences include the following:

Promoted Change: Health campaigns typically seek to change behaviors. Product marketing can strive for behavioral change, but is just as likely to attempt to activate a favorable disposition. In addition, social marketing can also seek environmental and systems change, something that product marketing rarely attempts to accomplish.

Expectations: Social marketers strive to change the unhealthy behaviors of a large percentage of the target audience. Product marketers are usually delighted with small increases in market share. Salience: The attitudes and behaviors targeted by social marketers are often fundamental to the people targeted; product marketing more often than not targets less involving behaviors. As such, social marketers must often overcome attitudes and values that are central to the person’s identity. Product marketers typically deal with self-constructs that are more peripheral to the person’s identity.

Certainty of Gratification: Social marketers promise only an increased probability that benefits (e.g., a lower risk of cancer) will come to the person who adopts recommended changes. It cannot be proven with certainty that the behavior change advocated will produce a particular health outcome. In contrast, product marketers usually offer unequivocal gratifications, and may even provide a guarantee that benefits promised will result. The causal link between the purchase and these satisfactions is seldom in doubt.

Timing of Gratification: It may take months or years for the health benefits offered in social marketing campaigns to result. Indeed, many of the benefits sold are preventive in nature, resulting in the absence of an event (e.g., the non-development of cardiovascular disease). Product marketers offer benefits that are realised soon or immediately after purchase of the product.

Presentation: Social marketers must strive for an “informational tone” and avoid overselling the benefits of recommended changes. With product marketing, overselling, and even some deception, may be accepted by consumers.

Trust: Greater trustworthiness is typically attributed to the sponsors of a social marketing
campaign than to the sponsors of product marketers. This trust advantage may be due to the belief that social marketers have no vested interest or other hidden motive, other than the desire to do good. Thus, in social marketing, “purchase” of the product benefits primarily the consumer; in product marketing, the sponsor is the chief beneficiary of the consumer’s decision to make a purchase.

**Budgetary Constraints:** Social marketers must usually attempt to achieve their goals with small budgets. In-kind services, volunteerism, and donations of other resources may add to the available resources, but the social marketer can seldom match the resources available to product marketers. As a corollary, product marketing campaigns tend to be supported by more extensive formative and summative research and more professional and extensive communications with the consumer.

**The Five P’s**
The marketing concepts employed in information campaigns based upon the social marketing approach are numerous. The “5Ps” are perhaps the best known among these. The purpose of the 5Ps is to develop a message strategy that offers consumers the optimal “marketing mix” of product, price, place, promotion, and positioning. When applied to social marketing, these concepts can be conceived of as follows:

- **Product:** the behavior or health idea that the campaign planners would like the targeted individuals (a.k.a., “consumers”) to adopt. The product can be an action (e.g., performing breast self-examinations regularly) or material item (e.g., fat-free dairy products).
- **Price:** the costs associated with “buying” the product. Costs can involve sacrifices related to psychological well being (e.g., increased anxiety), sociality (e.g., possibility of ostracism), economics (e.g., financial sacrifice), or time (e.g., inconvenience).
- **Place:** the distribution channels used to make the product available to target audiences. When the product is a physical item, it must be easily obtainable by consumers. When it is an idea, it must be “socially available” – supported within the consumer’s social sphere. The target audience must be informed of where, when, and how it can obtain the social marketing product(s). An important placement issue is the competition for finite space in the marketplace for food products, healthy and otherwise.
- **Promotion:** the efforts taken to ensure that the target audience is aware of the campaign. These publicity efforts should be designed to cultivate positive attitudes and intentions regarding the product that pave the way for behavior change.
- **Positioning:** the product must be positioned in such a way as to maximise benefits and minimise costs. “Positioning” is a psychological construct that involves the location of the product relative to other products and activities with which it competes. For instance, physical activity could be repositioned as a form of relaxation, not exercise. Serving low-fat meals to one’s family could be positioned as an act of love.

**Marketing Concepts**
The 5 Ps only begin to touch upon the marketing concepts employed by the social marketer. The following concepts also deserve mention:

- **Consumer Orientation:** The social marketing programme is founded upon the reality (beliefs, attitudes, values, practices, etc.) of the target audience. The consumer’s involvement with the product is a primary facet of his or her orientation.
- **Audience Segmentation:** The target population is segmented into homogeneous groups that are uniquely targeted with messages tailored to their shared qualities. The social marketing product may also be modified for different target audiences. At minimum, the product will probably require a different positioning for varying groups.
- **Channel Analysis:** An effort is made to identify through research the communication channels most likely to reach each segment and the times when these individuals will be most receptive to the message.
- **Strategy:** The strategic concepts that offer the highest probability of achieving established goals are employed throughout the planning, design, and implementation of the campaign.
Process Tracking: Research and other mechanisms are used to ensure that the programme is implemented as planned and to provide feedback about programme revisions that may be required.

It is instructive to consider what social marketing is not. Social marketing is not a theory. It does not tell us how to change a person’s behavior. Rather, it is an approach to thinking about and structuring a social change programme – one that is consumer-driven. Within this framework a number of social and behavioral theories can be drawn upon to develop a strategic course of action.

References


As we have seen, the core ingredient of social marketing, adapted from commercial marketing, are the four Ps. Some writers on social marketing have expanded that number beyond the conventional four Ps. Nedra Kline Weinreich, president of Weinreich Communications, a USA-based social marketing firm in Los Angeles, California, applies social marketing to health issues and adds four more Ps.

THE P's OF SOCIAL MARKETING

Product
The social marketing "product" is not necessarily a physical offering. A continuum of products exists, ranging from tangible, physical products (e.g., condoms), to services (e.g., medical exams), practices (e.g., breastfeeding, ORT or eating a heart-healthy diet) and finally, more intangible ideas (e.g., environmental protection). In order to have a viable product, people must first perceive that they have a genuine problem, and that the product offering is a good solution for that problem. The role of research here is to discover the consumers' perceptions of the problem and the product, and to determine how important they feel it is to take action against the problem.

Price
"Price" refers to what the consumer must do in order to obtain the social marketing product. This cost may be monetary, or it may instead require the consumer to give up intangibles, such as time or effort, or to risk embarrassment and disapproval. If the costs outweigh the benefits for an individual, the perceived value of the offering will be low and it will be unlikely to be adopted. However, if the benefits are perceived as greater than their costs, chances of trial and adoption of the product is much greater.

In setting the price, particularly for a physical product, such as contraceptives, there are many issues to consider. If the product is priced too low, or provided free of charge, the consumer may perceive it as being low in quality. On the other hand, if the price is too high, some will not be able to afford it. Social marketers must balance these considerations, and often end up charging at least a nominal fee to increase perceptions of quality and to confer a sense of "dignity" to the transaction. These perceptions of costs and benefits can be determined through research, and used in positioning the product.

Place
"Place" describes the way that the product reaches the consumer. For a tangible product, this refers to the distribution system--including the warehouse, trucks, sales force, retail outlets where it is sold, or places where it is given out for free. For an intangible product, place is less
clear-cut, but refers to decisions about the channels through which consumers are reached with information or training. This may include doctors’ offices, shopping malls, mass media vehicles or in-home demonstrations. Another element of place is deciding how to ensure accessibility of the offering and quality of the service delivery. By determining the activities and habits of the target audience, as well as their experience and satisfaction with the existing delivery system, researchers can pinpoint the most ideal means of distribution for the offering.

**Promotion**

Finally, the last “P” is promotion. Because of its visibility, this element is often mistakenly thought of as comprising the whole of social marketing. However, as can be seen by the previous discussion, it is only one piece. Promotion consists of the integrated use of advertising, public relations, promotions, media advocacy, personal selling and entertainment vehicles. The focus is on creating and sustaining demand for the product. Public service announcements or paid ads are one way, but there are other methods such as coupons, media events, editorials, “Tupperware”-style parties or in-store displays. Research is crucial to determine the most effective and efficient vehicles to reach the target audience and increase demand. The primary research findings themselves can also be used to gain publicity for the program at media events and in news stories.

**Additional Social Marketing “P’s”**

**Publics** – Social marketers often have many different audiences that their program has to address in order to be successful. "Publics" refers to both the external and internal groups involved in the program. External publics include the target audience, secondary audiences, policymakers, and gatekeepers, while the internal publics are those who are involved in some way with either approval or implementation of the program.

**Partnership** – Social and health issues are often so complex that one agency can’t make a dent by itself. You need to team up with other organizations in the community to really be effective. You need to figure out which organizations have similar goals to yours – not necessarily the same goals – and identify ways you can work together.

**Policy** – Social marketing programs can do well in motivating individual behavior change, but that is difficult to sustain unless the environment they’re in supports that change for the long run. Often, policy change is needed, and media advocacy programs can be an effective complement to a social marketing program.

**Purse Strings** – Most organizations that develop social marketing programs operate through funds provided by sources such as foundations, governmental grants or donations. This adds another dimension to the strategy development-namely, where will you get the money to create your program?

Source: [http://www.social-marketing.com/Whatis.html](http://www.social-marketing.com/Whatis.html)

Another core idea of social marking is that it is an exchange process. In adopting a social marketing approach, an agency adheres to the principle that it obtains something that it wants and the consumers gets something they want. Smith puts it in the words of two different parties:

A mother: "I want my children to be healthy; therefore, I get them immunized in exchange for a better chance at good health."

An agency: "I want to reduce the incidence of measles; therefore, I will offer an immunization service in exchange for mothers coming to be immunized."

So, says, Smith, the central problem for any social marketing program is to establish what exchange is likely to satisfy both the agency’s (marketer) needs and the consumers’ wants – to produce a societal benefit. The implication of this for the change agency is that it must invest in market research, part of which must focus on consumers’ decision-making processes.

**Consumer behavior**

Effective social marketing demands an understanding of what factors influence a consumer's decision making and behavior change. This requires attention to consumers' **beliefs** and **perceptions** and conditions in the environment that aid or impede adoption of
different behaviors. The literature on behavior change provides important and useful guidelines. One of the best books mining this literature and applying it to social marketing is Alan Andreasen’s *Marketing Social Change* published by Jossey-Bass in 1995. The following discussion is based heavily on Chapter 4 titled "Understanding How Customer Behavior Changes." Andreasen puts it succinctly: "Whether the target consumer is a mother with a sickly child, an obstructionist health care worker, an important government official, or a major media figure, the social marketer must understand where the target consumer is coming from and what can and should be done to bring about desired change" (p. 141).

Social marketing people are usually focused on behavior changes that are considered "high involvement" for the consumer. The behaviors involved are important and they often are charged with deep emotion. Changing sexual behavior is a higher involvement action than changing cigarette brands. Likewise, discontinuing smoking involves higher involvement than changing brands. The degree of involvement may be influenced by a person’s investment in a behavior, for example, how long the behavior has been practiced and how the consumers perceive the behavior’s acceptance by people who matter in their lives. To put it simply, among other tactics, an agency may need to influence a consumer’s perception of the proposed behavior, the consumer’s perception of the reference group’s position on the behavior, and/or the reality of the reference group’s position. (It is sometimes said that "perception is reality" and that people act on perceptions as if they accurately reflected reality. Perceptions are actually a product of a variety of stimuli including what is physically seen, past experiences, expectations and emotional states.)

Andreasen offers a number of insights concerning adoption and behavior change in high involvement situations. *Stages of change* is one of the key concepts he draws on from the literature on behavioral change.

**Stages of change**

Change takes place in stages, not usually rapidly nor in one step; and social marketing tactics, especially concerning the communication aspect of social marketing, differ for the different stages. Furthermore, consumers may be at different places in the sequence of stages. Andreasen’s four stages are: pre-contemplation, contemplation, action, and maintenance.

*Precontemplation:* This is when consumers are – from the marketer’s point of view – at the starting point, largely unaware of the issue of changing their behaviors or its relevance to them. Andreasen:

> During the Precontemplation Stage, the social marketing challenges are to make the target population aware of the new behavioral possibility and to show them that proposed behaviors are not antithetical to the values of the consumers’ society and that they may improve individual audience members’ own lives. Here, the appropriate technologies are the tools of education and propaganda. Major players that social marketers will need to bring to bear here will be educators, popular communications media, and various public agencies and figures (pp. 148-9).

The social marketer listens to the consumer and develops a message according to what is important to the consumers, in language they can understand and through channels to which they will pay attention. The challenge is to (1) emphasize what the consumer wants to hear and (2) focus on the education and propaganda elements that are likely to influence behavior, not everything they could tell them.

Thus, says, Andreasen, social marketers have important roles to play during this behavior change stage in making sure that the necessary *education and value* change takes place, which will be critical in cultures where a new behavior is being introduced for the first time. It is important to note again that some population segments will be in different stages, with some having moved on to more advanced ones. This means that interventions may need to be multi-faceted – aiming simultaneously at different groups of people in the different stages.

In monitoring progress in this stage, it is mental states such as knowledge, values and attitudes that are measured in progress toward behavior change (in Chapter 8 we call these...
outcomes), not agency communication activity such as posters distributed, programs broadcast, web pages created, or newspaper stories published (which we will call outputs.)

Contemplation Stage: This is the point at which consumers begin to consider changing a behavior. Social marketers can benefit from a significant amount of research and experience that helps explain the decision-making process at this stage, especially in regard to how beliefs play a role. Important, suggests Andreasen, are consumers' beliefs about the potential positive consequences of the new behavior, about the negative consequences, about what others expect, and about one's assessment of his/her ability to carry out the behavior (self-efficacy). Persons go through an internal (and perhaps external) dialogue weighing the benefits and costs of the new behavior, both in absolute terms and in relation to other options—such as adopting other behaviors—or continuing or stopping the current behavior.\(^2\)

Andreasen pictures the internal dialogue this way:

There is nothing unique about this. It is the way that a rural mother makes decisions about whether to follow up the suggestions of a community outreach worker that she go to the public health clinic to get her child vaccinated. She thinks to herself, if I go: It will help my child be healthier... I'll have to walk five miles each way and probably wait several hours for an appointment. This will be very arduous given my poor health.... if I go, I will have to leave my other children behind with someone and I will not be home in time to cook dinner for my husband when he wants it.... I will not be able to take care of the garden in back of our living area and do the wash I do every day.... And so on through a series of calculations that will be instantly recognizable in form, though the specifics change according to the mother's lifestyle (p.152).

The dialogue takes place in interplay with another psychological layer in the person's mind. Andreasen: "[A] mother who says "It will help my child be healthier" may be reflecting an underlying need to be a good mother. This, in turn, may be linked to other needs and wants, perhaps to impress her mother-in-law...." He says this may also reflect another value: "to live up to an internalized principle that "the first priority for a married woman with children is to be a good mother" (p. 152).

In general, the social marketer attempts to increase the perceived ratio of important, salient benefits to the most important relevant costs. So, as Andreasen notes, the strategy is to increase the anticipated desired benefits, and decrease the anticipated unwanted costs. Also, the agency can add new benefits that the consumer can perceive, and increase the perceived costs of the likely alternatives (the competition). This is where the matter of positioning may become a factor because how a product is positioned could influence the extent to which people believe they will get the benefits they want, and/or believe that they will avoid the costs associated with the behavior. Based on research by Prochaska and DiClemente\(^3\) and his own social marketing experience, Andreasen generalizes that benefits are better promoted for persons in the early part of the sequence of stages (starting with Precontemplation), and the cost arguments should be emphasized in the latter part of the sequence. Andreasen gives an example:

Suppose a mother in a developing country is currently treating childhood diarrhea ineffectively with traditional herbs and teas. She is contemplating using oral rehydration therapy but knows little about it. Before she is likely to move on in the Contemplation Stage, she will need to shown its benefits. The social marketer's challenge at this stage will be explaining what ORT does and how to use it and touting the great advantages it has over other alternatives—while, of course, being sensitive not to attack traditional cultural values. Once target mother sees the potential benefits of the new behavior, existing experience suggests that her thinking will then focus on all reasons why she can't carry the behavior out. She may think

\(^2\) It is important to remember that behavior change may include not only adopting a new behavior but also extinguishing a behavior that is being replaced.

\(^3\) Andreasen bases his deduction on a series of research papers by Prochaska and DiClemente from 1983-86. See Andreasen, pp. 144 & 156.
about how she cannot find uncontaminated water or how she could find the time and patience to feed the child the amount of ORT that is desirable. It is at this point that the marketer needs to stop emphasizing benefits and focus on minimizing or eliminating costs that now loom large in the consumer's mind (p. 156).  

**Action Stage:** This third stage involves getting the relevant populations to test the newly proposed behavior. It is a step toward incorporating the behavior into one's pattern of behavior. Another belief is relevant at this Action Stage: the person's belief that the behavior can actually be accomplished. One aspect of this is the person's knowledge, skills, and energy for taking action. A second aspect is the person's perception that environmental factors will enable the person to perform the behavior. Thus one challenge for an agency using a social marketing strategy may be to teach consumers new skills. Andreasen:

- For example, smokers must learn how to quit, what to do when they are nervous, how to fend off friends (or spouses) who offer cigarettes, and so on. Sex workers need to learn how to negotiate with customers in order to get them to agree to wear a condom and then learn how to put them on their customers. mothers with kids who get diarrhea need to know how to mix oral rehydration solutions; dieters need to learn new eating (and cooking) habits; sedentary individuals must learn how to exercise safely and productively, and individuals with high blood pressure need to learn how to detect harmful foods and what to substitute for them (p. 162).

If the environment is, in reality, not supportive of the behavior change (for example, lack of resources such as contraceptives or clean water or uncooperative persons with power), the social marketing agency needs to change the environment, not just the perception of that environment.

**Maintenance Stage:** We noted earlier that in the Action Stage the person is testing the new behavior. The Maintenance stage deals with the adoption and long term integration of the particular behavior into a person's on-going activities. Andreasen describes it this way:

- In a relatively small number of cases, social marketers are only concerned with a single act. Thus, if a man has a vasectomy or a woman has a tubal ligation, the social marketing task is essentially over(...). In the majority of cases, however, the marketer is interested in continuous behavior as well as in correct behavior. In some cases, such as in mixing and administering an oral rehydration solution, correct behavior means doing something properly. In other cases, such as in the use of condoms to prevent AIDS and other STDs, it means doing the proper behavior every time.

Initial behaviors are sometimes really trials in the consumer's mind, with subsequent behaviors following only upon a person's evaluation of the actual consequences. In other cases, the consumer may have moved beyond trial and be committed to the new behavior, but there is still always a very real risk that the consumer will drop out. The latter is a serious problem for certain kinds of socially desirable behaviors. Recidivism rates for quitting smokers and dieters are over 70 and 80 percent. Thus, marketers cannot let down their guard once the first action is completed (pp. 163-4).

Andreasen points to the possibility of cognitive dissonance intruding on the success of the Action Stage. In simple terms, cognitive dissonance occurs when people have second thoughts about having made the commitment to the new behavior. A mother who has just had a baby vaccinated for the first time should not be simply dismissed to go home. The last chapter reported on some of the issues swirling around vaccinations and these could trigger dissonance in a mother. The health service needs to establish a way of reminding her of the benefits she received from her action (recognizing that the mother will not see concrete evidence of the benefit because the positive result is that the disease does not happen.) The effort might include some kind of take-home item as a reminder of her good action, a series of radio announcements reinforcing the vaccination message, or a challenge to her to carry the vaccination message to other people. Andreasen also suggests the possibility of using a

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4 We should note that "minimizing or eliminating costs" can refer to both reality and perceptions of reality.
reward system (an adaptation of B. F. Skinner’s scientific experiments in reinforcing desired behavior in pigeons) when consumers adopt recommended behaviors.

We mentioned earlier that exchange is a core idea in social marketing, and that research about consumers is a vital part of the social marketing process. Andreasen sums up this point.

There is a key set of information that a social marketer needs to know about consumers in order to bring about behavioral change. To put this in specific terms, consider the behavior of a hypothetical target village mother of a one-year-old boy needing immunization. In one-on-one situations, health workers can learn much of this information in simple conversations. And then social marketers must turn this information into effective interventions to move the mother on to the next stage of the behavior stage continuum that is, from Precontemplation to Action and Maintenance.

- Is the mother at least at the stage where she is contemplating taking her child to the health clinic for his first immunization shots? Does she know what immunization is and why it might benefit her son? Does she have any religious or cultural reservations about immunizations?
- What are the major alternatives she is considering?
- What does she see as the costs and benefits of going for the first time to get the first immunization shots? For each cost and each benefit (a) how likely is it to occur? (b) how important is it to her?
- What does she think others who are important to her want her to do?
- Does she think that she can actually take the child for immunization at the next opportunity (that is, does she know where and when to go)?
- If she has undertaken the behavior before, how did it turn out? What did she find particularly rewarding about it? What was negative about it?
- What is the probability she will undertake the behavior again? What could increase this probability?

The answers to these questions should give the social marketers a very good sense of what to do at the next step in the social marketing process (pp. 166-67).

Approaches to social marketing

UNAIDS has been an active and robust proponent of using social marketing in its programs to combat HIV/AIDS. It reports on six different applications of social marketing techniques in its publication *Condom Social Marketing; Selected Case Studies*. Below are the case studies from Mozambique, Cameroon and Colombia. Others in the collection come from Haiti, Kenya, and India. While our discussion of social marketing up to this point has emphasized its communication dimension, these case studies delve into distribution (the *place* part of marketing) and specific kinds of *promotion*. The variability of the approaches demonstrates the flexibility in adapting social marketing techniques to different circumstances. The document lays out lessons learned that are useful in seeing social marketing concepts in the social marketing inventory play out in the reality of field experience.

**CONDOM SOCIAL MARKETING; SELECTED CASE STUDIES**

Social marketing programmes generally use the existing commercial infrastructures in countries to develop and distribute specifically branded products such as condoms. This "traditional" approach, also known as the "own brand model", is the most common amongst social marketing programmes in developing countries and is closely associated with Population Services International (PSI) and DKT International, organizations that pioneered international social marketing in the 1970s and 1980s. It applies standard commercial marketing and sales techniques for promotion and distribution through wholesale and retail sales points to the mass market. The social marketing organization may receive unbranded products from international or national donors, or may directly procure quality products from

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manufacturers, and develops its own brands and packaging for distribution. This entails the establishment of a professional in-country sales force and management structure, frequently involving a local partner organization.

However, the ability to operate as effectively as possible in a wide variety of contexts is a key element in any social marketing programme. In most developing countries low-income populations form the great majority and within it there is a frequent need to target specific, often difficult to access, population groups with particular needs. In addition to working through traditional sales networks involving wholesalers and existing retail outlets for consumer goods, social marketing programmes must frequently seek to develop non-traditional outlets and informal distribution systems to meet the needs of specific groups, and even communities, within the population.

The potential use of alternative distribution systems is an essential aspect of social marketing. Today, in many developing countries, socially marketed condoms are to be found in both traditional retail outlets such as pharmacies and drugstores and non-traditional points such as bars, coffee shops, brothels, beauty parlours, workplaces, gas stations, and bus and truck terminals.

Therefore, other ways of social marketing of products have been developed and are also common. These approaches are not mutually exclusive although one or more may be applied exclusively by a programme or project, or also as parts of a project for strengthening and improvement of an existing "traditional" approach.

These models, or possible approaches to social marketing, include:

- Community-based systems of product promotion and distribution ("community-based distribution" /CBD) where non-professional sales agents are recruited from among particular groups within the general population. The individuals receive basic training in IEC and sales and are usually rewarded financially from small margins on their sales. This approach is increasingly chosen as a means of reaching geographical areas and socio-cultural groups that are difficult to access. Many programmes incorporate the method to complement more traditional, retail outlet sales; some programmes, usually run by local NGOs, are based entirely on the system.

- An innovative and promising variant of the CBD approach has recently been developed and piloted over two years in Chennai, India, by International Family Health (IFH) and its local partner NGO, the Indian Institute of Community Health (ITCH). In this model ("community-based social marketing" /CBSM) sales agents are recruited from among the general public as well as from within specific groups. In addition to benefiting from basic training in reproductive health and from commissions on their sales, the agents also benefit financially from recruiting others to act as educational and sales agents. CBSM is derived from commercial "network" and "multi-level" marketing techniques successfully applied in developed countries, and has shown potential in rapidly attaining community penetration and involvement in reproductive health issues and HIV prevention.

- The "manufacturer's model", where support is provided for the promotion and distribution of brands developed and owned by a manufacturer (foreign or local) or local manufacturer's agent, frequently an importer of the product. The support usually takes the form of grants directly to the manufacturers and/or their distribution agents so as to reduce their commercial marketing costs and therefore allow greater investment in key activities, such as promotion and advertising. A retail price significantly below the usual market price is the expected end result. In contrast to the "traditional /own brand model" the "manufacturer's model" is the least common. The approach has been almost exclusively associated with The Futures Group International (TFGI) and its international, USAID-supported SOMARC project.

- The "targeted service delivery" approach involves planning appropriate social marketing activities, through which the project strives to reach and distribute products to specific target groups, usually high-risk or other priority segments of the general public. These groups are often inadequately served by other service delivery mechanisms, including standard social marketing activities. Their identification usually results from market segmentation studies carried out once the basic distribution structure to the mass market is established, so targeted
service delivery is often a component of programmes mainly structured around the "traditional" or wider commercial approach. However, many local organizations, usually NGOs, adopt this approach either from necessity (restricted resources) or from particular interest.

There are many ways of applying social marketing concepts, approaches and techniques at the national, local or community levels. Flexibility in planning and implementation are key to successfully meeting the needs for information and products such as condoms in the fight against the spread of HIV and AIDS.

Planning and implementing social marketing programmes is by no means restricted to large, well-funded international organizations. Local initiatives in social marketing by organizations within the national "private sector", including NGOs, exist in many countries. These can range widely in size and purpose from small, localized projects restricted, for instance, to training and employing ex-commercial sex workers in a particular location as sales and IEC agents only for condoms, to comprehensive, full-scale reproductive health programmes active at the national level.

Of particular interest to local initiatives is the fact that well-managed and adequately supported social marketing projects are among the most cost-effective of health interventions. The projects can recover a large proportion of costs and revenues from sales which can be invested in other activities, such as capacity-building or strengthening the programme itself if the organization works exclusively in social marketing (the Social Marketing Company of Bangladesh, for example). If the organization has other activities, as does PROFAMILIA in Colombia, then these revenues can also be used to subsidize: these activities within a policy of cross-subsidization.

The following concrete examples of social marketing applied to the prevention of HIV/AIDS and STDs in different countries and contexts are offered to illustrate the various approaches described above. The cases described below are examples of the uses of these approaches to social marketing that have been adopted in some countries by different organizations; all the cases focus on ways of condom distribution and promotion that were designed and implemented in response to different situations.

**Mozambique – Programme: "Communications and Condom Marketing for AIDS Prevention: the promotion of safer sex among high-risk individuals in Mozambique"**

The prevalence of HIV infection amongst adults in Mozambique was estimated at 13.2% by the end of 1999, among the highest in Africa, with 1 200 000 people living with HIV/AIDS and 98 000 deaths due to AIDS in 1999. By 1996 HIV prevalence among antenatal women tested in different locations across the country was found to be between 18% and 23%; in addition, the prevalence of STD is known to be high and by 1995, depending on the location, studies of male STD clinic patients found that between 23% and 40% of those tested were HIV-positive.

As a result of the end of its civil war in 1992, HIV transmission rates in Mozambique rose dramatically with the return of refugees from neighbouring countries where HIV prevalence had been higher than in Mozambique. The government had a programme of free distribution of condoms but this had been severely affected by the years of civil war and prospects for improvement were thin. In 1994 the government's National AIDS Control Programme (NACP) invited PSI International to design and implement an AIDS prevention social marketing project to promote safer sexual behaviour and the use of condoms as a component of the NACP's own programme.

The overall goal for PSI was to improve the health of sexually active men and women and their children, by reducing transmission of HIV/AIDS and other STDs. The project that was implemented in early 1995 had two specific objectives:

- Increase the use of condoms, particularly by persons vulnerable to HIV transmission, through the introduction, promotion and sale of a condom specifically developed for social marketing in Mozambique ("JeitO", the condom brand name, meaning in Portuguese "style" or "flair", which lends itself to popular slogans such as Living with Style);
- Increase the demand for condoms through the implementation of an integrated behaviour change communications strategy which would promote safe sex, especially targeting high-risk
groups such as commercial sex workers, long-distance truck drivers, STD clinic attendees, night club patrons, military and police, people with non-regular sex partners, youth (in and out of school) and women.

Having begun as a pilot project in limited urban and periurban areas in four provinces in 1995, the project was expanded to the national level by 1996 with sales and motivation teams established in all ten provinces. Together with the National AIDS Control Programme, from the total of 140 districts in Mozambique, 71 priority districts for AIDS prevention were then identified based on the following criteria:

- High incidence of STDs
- Common borders with high HIV prevalence countries
- High volume of trucking
- High urban population density
- High incidence of returning refugees and migrant labourers.

The project then recruited and trained 65 Community Agents (CAs) from these districts. The CAs were trained in interpersonal communications (for example, each CA conducts monthly 15 small group discussions with project target groups) and in sales techniques for "JeitO" condoms, focusing on ensuring access to these by high-risk groups through non-traditional outlets. The CAs receive a monthly stipend for their work in communications and, additionally, a margin from their sales of condoms. Supervision of the CAs is provided by the PSI Provincial Sales /Motivation agent. They are also regularly evaluated and provided with refresher training when necessary. New CAs are recruited and trained as vacancies are filled whilst maintaining the total of 65.

The CAs have an important role in the overall project strategy to promote behaviour change, i.e. correct and consistent use of condoms, reduction in the number of sexual partners, treatment of STDs and, particularly for young people, sexual abstinence until marriage. The project developed a framework based on six factors deemed necessary for behaviour change to occur:

- Personal perception of being at risk
- Education on condoms
- Existence of an enabling, supportive environment
- Ready access to condoms
- Self-efficacy, or having the intent and skills to take preventive action
- Appropriate condom brand positioning: the "JeitO" brand concept.

In applying this framework, the project developed activities designed to affect each of the factors based on information gathered from the different target groups. The activities are designed around a mutually reinforcing media mix, emphasizing interpersonal communications (drama, theatre and small group discussions) along with mass media (radio and TV spots, music videos and cassettes) and promotional materials. The project has eight theatre groups trained to conduct five different targeted plays in every province of Mozambique, and on any given day it can be expected that five plays are performed somewhere in the country.

The results have been impressive. To date, an estimated total of 50 000 peer education AIDS/STD sessions have been held, reaching about 1 million members of the target population. In addition, 150 traditional healers and some traditional birth attendants have been trained in promoting the use of condoms with their clients. A KAP survey conducted in 1997 in urban and periurban areas revealed that 87% of respondents were aware that condoms exist, 31% had used condoms at least once and 78% cited condoms as a means of preventing HIV infection (as compared to 38% in a similar survey in Malawi).

More than 3000 condom sales outlets have been established nationwide, including non-traditional outlets for condoms in Mozambique such as bars and clubs, kiosks and tobacconists, gas stations, market stalls, NGOs, supermarkets, street vendors, "traditional healer" outlets and within workplaces. Demand for and sales of socially marketed condoms then rose dramatically, although sales were affected by a shortage of subsidized product in 1998.
According to reports from PSI/Mozambique, the main constraints and obstacles encountered included:

- The "JeitO" package of four condoms is sold to consumers for the equivalent of US$ 0.08 and condoms are still donor-supported; in 1998 there was a shortage of subsidized condoms due to donor shortfall.
- PSI in Mozambique is seen as an international organization in spite of the fact that the management of the project is 98% Mozambican and it has a close relationship with the national government. One solution might be to entrust the capacity in social marketing to a local NGO.

Key lessons learned from the experience include:

Government can be an active partner in social marketing and even include it in its own programmes, as in this case with the NACP in Mozambique where the condom social marketing project is a component of the national HIV prevention strategy. The government recognizes the need for coordinating free condom distribution through the national health system with the social marketing project, bringing condoms to the entire population regardless of the individual client's purchasing power. This is an objective of the current NACP strategic plan.

The principal factor in the success of the project has been the emphasis given to involving the community in sales and promotion, right down to individual input through peer education and direct promotion at points of sale.

The success of the project has been in large part due to its intensive promotional activities - not only through the media and theatre performances, but also by the individual community-based promotion by sales outlets, CAs, peer educators and traditional practitioners....

Cameroon – Social marketing based on targeted service delivery in Cameroon

The prevalence of HIV infection amongst adults in Cameroon was estimated at 7.7% by the end of 1999, with 540 000 people living with HIV/ AIDS and 340 000 deaths due to AIDS since the beginning of the epidemic. In 1993, HIV prevalence among sex workers tested was found to be nearly 30% and, by 1996, 5% of antenatal women tested in Douala were HIV-positive; prevalence among antenatal women tested in rural areas in 1996 was found to be 8%.

From May 1996 to September 1997, the Cameroon Social Marketing Programme (Programme de Marketing Social au Cameroun /PMSC), PSI's local affiliate, implemented a Young Adult Reproductive Health Project in the city of Edéa. The project integrated a youth-targeted intervention within the nationwide PSI social marketing programme. It was designed as an operations research study with the objective of assessing the effectiveness of social marketing techniques for promoting sexual and reproductive health among adolescents and young adults aged between 12 and 24 years.

The Young Adult Reproductive Health Project ("Horizons Jeunes") made use of a "targeted service delivery" approach or model. In this approach, a social marketing project strives to reach and distribute products to specific target groups, or priority segments, of the general public who are often inadequately served by other product/service delivery mechanisms including standard social marketing activities.

"Targeted service delivery" is often a strategy adopted within programmes structured around wider, commercially-based distribution. Targeting specific groups can result from surveys and market segmentation studies carried out once the basic distribution structure to the mass market is established and opportunities for improvement are identified.

Programme: "Horizon Jeunes"

PSI's Cameroon Social Marketing Programme is focused on HIV/STD prevention, family planning, safe sex, improved awareness and preventive behaviour, and reduction in unwanted pregnancies and related abortions (in 1996, 42% of declared pregnancies were terminated by abortion). Activities also include linkages with child survival, use of mass media, peer education, and extension of the adolescent reproductive health component to other cities in the country.

PMSC's system of distribution of its products, including condoms, is nationwide and effected
through a traditional, commercial structure involving wholesalers, retailers and a sales force. Its principal product is the male condom, "Prudence Plus", sold in packets of four at the low, affordable price of US$ 0.18 per packet (private condoms in the market are sold at between 4 and 5 times this price). The packets have a distinctive logo of a panther, denoting strength and masculinity, "For the man who is sure of himself". The brand mainly targets low-income, high-risk population groups of both sexes.

"Prudence Plus" was developed and launched in late 1989 and is sold nationwide. In 1998 sales attained 6,713,053. In 1992 a second condom was launched, "Promesse", at a higher price (approximately US$ 0.27 /unit) and targeting higher income groups. It therefore sells considerably less than "Prudence". To date total sales of both brands have attained almost 60 million.

"Horizons Jeunes" was a key component within PMSC's social marketing strategy. Designed as an operations research study, the project's overall objective was to assess the effectiveness of social marketing techniques for promoting sexual and reproductive health among young people aged 12 to 24 years, of both sexes, in Edéa, a coastal city of 86,000 inhabitants located about 60 kilometres from Douala, the second largest city in Cameroon. Changes in behaviour of young people were compared with those in a control city. The concept was based on similar successful PSI projects in Botswana and South Africa with young people.

Specific objectives included:
- Target behaviour change in youth through communication and promotion;
- Effect distribution of condoms and, to a lesser extent, of "Novelle" oral contraceptives targeted at youth;
- Determine the effectiveness of targeted social marketing in addressing the key reproductive health problems of young people.

During the design phase of the project, PMSC trained staff to increase their understanding of the concerns of young people, and held discussions with community leaders and government officials to ensure their support for the project. PMSC also hired a local research agency to learn more about the target group and help guide the project design.

The main approaches to execution that were used:
- Community-based activities, with active participation and contribution of young people in all project activities (e.g. development and production of campaign messages, radio talk-shows, brochures).
- The extensive use of mass media and IEC campaigns, in support of the on-going peer education, with radio talk-shows and distribution of IEC materials on reproductive health, video broadcasts, theatrical sketches, and round-table discussions, many of which targeted also parents, teachers and community leaders.
- PMSC developed a campaign brand name, "Horizon Jeunes" (Youth Horizons), and logo to tie all project activities and materials together. Later in the project, peer educators developed slogans, "Pensez Avant d'Agir" (Think Before Acting) and "Choisissons la Vie" (Let's Choose Life). The brand name and slogans appeared on promotional materials as well as in radio spots and programmes.
- Peer education: PMSC recruited and trained 28 peer educators, including 17 out-of-school youth and 11 students, in communication techniques and reproductive health topics. The peer educators carried fanny-packs (printed with the brand name) packed with condoms to sell to youth, acted in effect as mobile sales points, and held educational sessions on weekends at popular youth hangouts in Edea.

Peer educators also created and maintained "Clubs Horizon Jeunes" at six junior high schools in the project area with club promotional logos, T-shirts and caps. Each club had about 50 members and was led by two or three peer educators. Club members organized activities such as debates, conferences, and theatre performances tied to reproductive health issues. The clubs greatly enhanced the project's ability to reach inschool youth.

In addition, several "Edutainment Events" were organized in order to make extensive use of
entertainment as a way to communicate with youth, as described below:

- During a football match, peer educators rode into a stadium on motorcycles and used a portable microphone to give a lively AIDS-prevention presentation and distribute brochures focused on youth;
- Peer educators led a round-table ("town meeting") discussion among 800 community members, including youth and their parents;
- At popular video clubs, the project showed reproductive health-related films for 50 CFA (approximately US$ 0.08), much less than the price of a movie theatre ticket. After the films, peer educators led a discussion and answered questions from viewers;
- The project conducted AIDS-awareness sessions at popular dance clubs by preparing tapes of popular music interspersed with short health messages. Disk jockeys in the participating clubs agreed to play the tapes and allowed peer educators to conduct question-and-answer contests, giving out campaign T-shirts, hats, and condoms as prizes;
- The project made heavy use of the media by working with a popular radio station, FM105, based in Douala. Two well-known DJs hosted the Horizon Jeunes bi-weekly radio programme, which covered a reproductive health topic and encouraged young people to call in with questions and comments.

The results of the project were evaluated by the effect on condom sales in Edéa and, in addition, by operations research conducted in Edéa and a control city. There was a considerable increase in the numbers of condoms sold in Edéa, and a significant improvement in understanding by both male and female adolescents of ways of avoiding unwanted pregnancies and HIV/STD infection.

Project staff created new condom outlets in areas frequented by youth and promoted these outlets as "youth-friendly". Monthly sales at 23 sales points in Edéa rose from about 6,000 to over 17,000 condoms between December 1996 and August 1997. There was also significant spin-off to parents, teachers and community leaders. However, it was felt that the project duration had been too short to allow this knowledge impact to develop into common practice. For this reason, PMSC is seeking funds to extend the project, as well as to apply the successful method to other cities in Cameroon.

At the same time, however, some difficulties and obstacles were reported by PMSC, summarized as follows:

- A high percentage of young men have tried condoms but do not use them consistently.
- There is a belief that condoms are not necessary in trustworthy or steady relationships.
- There is a strong stigma attached to female adolescents obtaining or carrying condoms.
- Different motivations to condom use must be addressed: basically, young women mainly use condoms to prevent pregnancies and young men to avoid STDs.

Key lessons learned from the project include:

- Young people’s exposure to project activities was high. After the intervention, surveys showed that 91% of young people in Edéa had heard about Horizon Jeunes, compared with only 5% in the control city of Bafia. Twenty-eight per cent of youth in Edéa were actively involved in Horizon Jeunes; 60% had talked to a club member; and 47% had attended at least one club meeting. Moreover, since the local radio station had a wide reach, a large segment of the young had been exposed to the radio talk show.
- In a relatively short period, the project had a positive impact on several areas of young people’s health beliefs and behaviour. Among young women, there was greater self-efficacy (the belief that they can take action to protect themselves) and more contraceptive use. Fewer young women reported having their first sexual experience by age 15 and more reported using abstinence for pregnancy prevention. Among men, there was an increase in contraceptive use (methods other than condoms) and an increase in abstinence.
- The project experience confirms that involving the target audience is one of the best ways to ensure the effectiveness of an intervention directed at young people. PMSC staff found that their efforts to involve youth in the design and implementation of the project were welcomed. By tapping into young people’s energy, creativity, and desire to belong, the project helped them find their voices and eased their way to becoming young adults.
Colombia — A local private sector initiative in social marketing in Colombia

Programme: "Condoms, Towards a Definitive Segmentation of the Market"

The prevalence of HIV infection amongst adults in Colombia was 0.31 by the end of 1999, close to that of other South American countries, with an estimated 71 000 people living with HIV/AIDS and 1 700 deaths due to AIDS in 1999. In 1994, HIV prevalence among antenatal women tested was found to be 0.5%.

Planning and implementing social marketing programmes from small-scale projects targeted at specific groups to large and comprehensive nationwide programmes is possible for local organizations in developing countries. Many such projects exist around the world. The successful example of the Asociacion Colombiana Pro-bienestar de la Familia (PROFAMILIA) in Colombia substantiates this possibility. It also illustrates how social marketing can significantly contribute towards the recovery of running costs in middle-income countries, or even the attainment of financial self-sufficiency, by a national, independent NGO working in reproductive health through a strategy of cross-subsidization.

PROFAMILIA is a private, independent and non-profit organization that has provided education and comprehensive public services in family planning and reproductive health in Colombia since 1965, and has been affiliated with the IPPF since 1967. HIV/AIDS prevention was included in its activities as of 1987.

PROFAMILIA's mission is to serve the needs of Colombia's lower-income groups, which account for almost 80% of the population. The organization has grown steadily over the years since its founding to the point where it now accounts for over 50% of family planning and reproductive health services in the country. It is currently the largest national, private organization of its kind in the world.

Although initially heavily dependent on foreign donors for funding its activities, PROFAMILIA soon adopted a successful strategy of diversification of its services with the goal of eventually achieving sustainability and financial self-sufficiency. The social marketing of contraceptive products, including condoms, was a key element of that strategy and this activity was begun in the early 1970s.

By commercially distributing quality assured-condoms and other relevant products at costs affordable to lower-income groups, and at the same time providing comprehensive clinical services related to reproductive health, PROFAMILIA has been able both to subsidize its core
family planning activities from the modest profits that resulted from diversification, and at the same time come close to virtual financial self-sufficiency....

Today PROFAMILIA is 90% self-sufficient, with some 65% of its income derived from its diversified services and 18% from its social marketing (SM) activities.

Key reasons for PROFAMILIA’s success with SM:

- Top management commitment to adopting and investing in commercial marketing and sales techniques, staffing and motivational training of field and clinic staff in the concepts and aims of social marketing;
- Management emphasis on creativity and willingness to try new ideas;
- Addition of clinics and community-based health workers in the sales structure;
- Regular strategic planning and reviews including cost-benefit analyses of alternatives and options, frequent consumer and operations research studies on effectiveness, satisfaction, trends, needs, market segmentation, and product development, particularly for pack designs, pricing and communications;
- Initial, start-up support from international donors, particularly with subsidized, quality-assured products;
- Cultivation of national and local government support, especially amongst policy-makers and particularly regarding import duties, pricing and distribution permits.

PROFAMILIA's social marketing programme distributes a range of contraceptive products, including condoms, through a national network of almost 4,000 retailers and 140 wholesalers. The country is divided into four regions, each with a sales team and each member of which has a sales district or, in some cases, a specific population group to serve. Each team is attached to one of PROFAMILIA's 35 clinics around Colombia and in addition all the clinics have depots and sales counters for individual clients, general consumers and wholesalers. Large volumes for some wholesalers are dispatched from a central warehouse in the capital city, Bogotá, which also distributes to PROFAMILIA's regional depots. In rural and marginal urban areas, community-based health workers complement the sales network as distributors.

All staff and volunteers involved in distribution and sales are trained in AIDS and STD prevention as well as family planning, and provided with specific IEC materials for their clients; communications materials for condoms focus on "double protection".

Condoms were first introduced into Colombia by PROFAMILIA with the development and distribution of its social marketing brand "Tahiti" in 1976. Two additional brands have since been introduced by PROFAMILIA, "Confiamor" in 1993 and "Piel" in late 1999. The acceptance of condoms by Colombians has resulted in the appearance over the years of a number of competitive organizations and brands seeking to follow the trail blazed by PROFAMILIA.

Competition increases yearly. If in 1997 PROFAMILIA still led the market in total sales, today it ranks fourth, although "Tahiti" remains the most popular brand. Considerably more significant than PROFAMILIA's performance and market position in commercial terms is the fact that - due to this organization's efforts - the availability and accessibility in Colombia of quality-assured, affordable protection from both unwanted pregnancies and infection by STDs and HIV has been enormously increased.

From virtually nothing in the early 1970s, when PROFAMILIA introduced the first brand, total condom sales today in Colombia average an estimated 40 million units a year. By the end of 1998, PROFAMILIA alone had sold 133.5 million condoms since the launch of "Tahiti" in 1976. It is worth noting that of these 133.5 million, 45 million were donated by international development agencies, mainly USAID, so that affordable prices to lower-income groups could be assured. However, these donations progressively declined in time, and PROFAMILIA has increasingly procured its condoms on the international market (there are no manufacturers of latex condoms in Colombia), mainly from the United States, Germany and, more recently, China and Thailand.

By 1995, and within an overall contraceptive prevalence rate of 72%, condoms were the fourth
preferred method regularly used among married women of reproductive age in general (4%) and had been tried by 20%. However, they were also the second method most used amongst unmarried but sexually active women (38%). In addition, trial and use is known to have increased significantly as awareness about AIDS increases, particularly among young men. Condom awareness amongst youth is high: by 1994, 76% of young people knew of condoms and 72% knew where to obtain them.

Although the target consumers or clients of PROFAMILIA's condom social marketing activities are primarily sexually active adult males, the increasing importance and participation of women in condom usage and purchase is recognized and taken into account. The success of condom social marketing programmes should be evaluated not only in terms of sales and distribution figures but also through their impact within the wider social and reproductive health context. PROFAMILIA invests heavily in market, consumer, and demographic health surveys in order to monitor and evaluate its performance, identify trends and opportunities, and plan effectively.

The individual condom brands were developed entirely within PROFAMILIA. Outside suppliers for packaging designs and communications were contracted as needed, such as advertising agencies, printers, and a central media agency. With key decisions based on research, the brands, although generally aiming at adult males, are positioned in the market for specific target groups within the population that include women and sexually active young people.

Currently, there are no other condom social marketing projects in Colombia. Condom brands socially marketed by PROFAMILIA are:

TAHITI: With a recommended retail price equivalent to US$ 0.16 per condom, the brand is positioned in the lowest price segment and therefore targeted at the highest number of people. It is the lowest price within PROFAMILIA's line of condoms and one of the lowest in the market. Its primary target group is made up of young adults and adults aged 25 to 46 within low to middle-income groups.

CONFIAMOR: Positioned in the mid-price segments, at US$ 0.25/unit, for young adults and adults aged 25 to 45 within middle to high-income groups.

PIEL: At the equivalent of US$ 0.35/condom, it is positioned as a premium-priced brand primarily for sexually active young people and adults within middle to highest-income groups. The brand was launched in late 1999 in response to a need for a brand at this high-income level but also with the aim of increasing PROFAMILIA's financial returns for its cross-subsidization plans for 2000 onwards....

The key lessons learned by PROFAMILIA from its social marketing programme are:

- If cross-subsidization is adopted within an organization in order to fund other activities, the planning should consider maximizing margins on sales, i.e. condom social marketing is not an end in itself but a means to aid in achieving the organization's wider objectives.
- In a situation where funds and resources are always limited there is a premium on creativity and initiative, particularly for promotional and communication activities.
- Building team spirit is key, motivated by the wider social objectives of the organization.

LESIGN LEARNED FROM UNAIDS CONDOM SOCIAL MARKETING...

Each of the social marketing country programmes described provides valuable lessons that may be applied in other countries and circumstances, whether in planning new projects or in working towards expanding or improving existing programmes. These lessons are included in the sections on each project. However, some general issues are relevant as key points to be considered.

1. Social marketing for HIV/AIDS and STDs is at present largely focused on condoms. This will not always be so.

UNAIDS advocates social marketing, and particularly the social marketing of condoms, as a key strategy in the fight against the global HIV/AIDS pandemic. The case studies described here have much to offer both new and other on-going condom promotion projects. However, although male and female condoms are currently the only manufactured products that provide
protection against infection from HIV and many STDs, other products, such as microbicides and vaccines, are in development and will one day become available. They will be more quickly and easily accessed by those who can afford their commercial price. However, in developing countries, the vast majority of the population will find it difficult, frequently impossible, to avail themselves of the new products and increased protection. The lessons to be learned from the past experience and experiments in condom social marketing can help significantly in making new products and services more widely available and accessible as quickly as possible.

2. Marketing, and consequently social marketing, is a very flexible and adaptable technique.

The concepts and principles of marketing can be applied to almost any products and services and on virtually any scale, whether for commercial or social ends. Nor is there a single model of marketing that is necessarily any better than any other; the practical application of the technique’s guiding principles may take many forms, depending on circumstances and aims. The few examples of applied social marketing described in this booklet illustrate the range and flexibility of the discipline, and how it may be adapted to deal with widely differing situations, constraints and opportunities.

Social marketing projects and programmes can be large and nationwide or, as appropriate, small and targeted at specific locations or groups within the population. A programme may stand alone or be a component of a larger, more comprehensive project; similarly, a social marketing programme may contain within itself different tactics and strategic approaches, such as when “traditional” product distribution through commercial wholesalers to shops is complemented with community-based distribution to individuals. Nor, as has been seen, does a social marketing programme necessarily require the exclusive use of experienced marketing professionals. People drawn from the general public or from specific, targeted groups can be effectively involved in a project’s design and implementation.

3. Research is fundamental to effective social marketing and achieving behaviour change.

In designing and implementing a social marketing project, detailed knowledge of the target group’s situation and context is essential: assessing the availability of and degrees of accessibility to needed products and services, and discovering the group’s values, attitudes, habits, needs and wants in relation to the project’s goals, are necessary for the identification of opportunities and means for action. In other words, the planning process and subsequent reviews, as well as the monitoring and evaluation of performance and progress following implementation, must be guided by relevant, reliable, up-to-date information and data. Social marketing therefore requires comprehensive “market” and “consumer” research, and several of the cases described above have illustrated its importance. The depth and scale of the research conducted will of course depend on the amount and quality of available resources, but even where resources are limited, whether for lack of funds or technical “know-how” or both, it is possible to collect and analyse reliable information.

Where technical resources for research are limited, obtaining and acting upon knowledge about targeted groups is often made easier, or even fully achieved, through the partnerships that are increasingly being forged between social marketing projects and local, often community-based, organizations. Many of these joint projects are set up in order to improve the reach of social marketing to specific groups or population segments but individuals can be trained also in collecting information from their peers, through individual interviews and focus group discussions, as well as in sales and distribution.

4. The measure of success of a social marketing programme is much more than the volume of product sales achieved.

The success of social marketing should be evaluated not only in terms of sales and distribution figures but also through their impact within the wider social and reproductive health context. Techniques and indicators that can document the impact of programmes above and beyond sales figures exist, such as measures of awareness, recognition and acceptance of risk, behaviour and social change, and programme reach, and others are being developed.
5. There is a need for increased and expanded implementation of social marketing in the fight against HIV and STDs.

Social marketing has been applied towards the improvement of sexual and reproductive health since the 1970s. Its contributions in this field have been significant, especially in expanding access to reproductive health services and products in developing countries. Within the area of HIV/AIDS and STDs, the social marketing of male and female condoms to low-income and high-risk groups is becoming increasingly widespread and has resulted in many countries in greatly improved access to condoms. For example, in 1991 social marketing programmes operated in 37 developing countries and sold about 575 million condoms; by the end of 1999, programmes existed in almost 60 developing countries and sold over 900 million male and female condoms.

Nevertheless, there is still room for expansion and further growth. Many more countries can adopt social marketing as a key strategy within their HIV and STD prevention programmes and many of those with existing programmes would benefit from assessing their needs for improvement. It is hoped that the experiences and lessons learned from the programmes described here may contribute to this.

THE COMPLEXITY OF SOCIAL MARKETING

Finally, we review some of the major strategy issues related to social marketing.

• Often complex behavior. Which behaviors are more complex: using a condom as an AIDS-prevention measure, or switching to a Pepsi? Of course, some commercial marketing processes are complex, but generally those behaviors advocated in social marketing (and other development communication initiatives) call for the consumer to undertake a fairly complex task. For example, careful research has shown that a rural woman in Guatemala may require more than 40 steps to boil water. Using a contraceptive requires precise behavior to ensure effectiveness.

• Limited resources. It seems too obvious to mention, but, as a reminder, we must remember that the persons toward whom social marketing programs are aimed often have small amounts of money and other resources for discretionary use. Thus, if a purchasable product is involved, social marketing programs often subsidize the actual cost. In general, social marketing’s proposed behavior must be low cost, both in money terms and in non-financial terms.

• Vague satisfaction. Compare the satisfaction one gets from a refreshing drink or a new car with getting an immunization for a child, or wearing a condom, or boiling drinking water. Satisfaction from following a behavior proposed in social marketing may be non-existent or long delayed. In some cases, there may actually be temporary dissatisfaction – such as the crying of a newly inoculated child.

• Evaluation. Because the behaviors advocated in social marketing usually have no perceivable unambiguous outcome, or the outcome may come a long time after the behavior is adopted, measuring results can be problematic. There is no immediate reward except the satisfaction of knowing you did it. For example, many social marketing interventions promise that something will not happen: no pregnancy, no HIV-AIDS, no small pox, no environmental degradation, no iron deficiency problems. However, some interventions may have prompt observable results, such as the use of oral rehydration salts for child diarrhea. This issue of evaluating results is problematic for the consumer, for the advocating agency, and for the funding organization.

• Controversial. Often the behaviors promoted in social marketing programs are controversial, and may even face obstacles in the form of local norms or government policies. These often are concerned with gender, sex, religion and environment-related activities.

CONCLUSION

Here are some summary points about social marketing.

1. Social marketing concentrates on behavior change and behavior reinforcement.

2. Understanding their consumers is a major priority of social marketers.
3. Social marketing has at least four dimensions that correspond with commercial marketing practices. These are product, price, place, promotion. Promotion is where you find communication. But communication alone usually cannot increase insure behavior change.

4. Behavior change is a multi-stage process and using a social marketing approach demands that you recognize these stages and plan accordingly.

5. Social marketing requires a significant research effort. If you are using social marketing, you need to understand the product, the "customers" and their social environment, the behavior change itself including its benefits and costs, the competition, and the obstacles. Social marketing also assumes considerable formative and outcome evaluation related to each stage of the behavioral change process and to each segment of the population involved.

6. Segmentation of the population – as compared to mass or broadcasting approaches – is an important way social marketing projects emphasize efficiency and effectiveness. We addressed the segmentation issue earlier in suggesting that people in different stages of behavioral change need to be approached differently. Likewise, social marketers use various demographic and psychographic factors to segment populations in order to adapt decisions about the Ps to those circumstances.
Chapter 6
INFORMATION AND COMMUNICATION TECHNOLOGY FOR DEVELOPMENT

The Internet has spread more rapidly than any other technological innovation in the history of humankind. — Everett M. Rogers, The Diffusion of Innovation (5th ed.)

[AISI Vision] Every man and woman, school-age child, village, government office, and business can access information and knowledge resources through computers and telecommunications. — The African Information Society Initiative

Since 1997 [South Africa] has established 70 telecentres in rural areas, of which 26 had to be closed because they are not financially viable. The problem is that the community often does not see the need for using the internet or the telecentre. — Universal Service Agency

ICT Helping Chinese Farmers

In the village of Wu’an in Hebei Province...farmer Li Suotian received continually updated market information [through the Internet]. He found out that Israeli breeds of tomatoes sold well in Hebei. He then grew more than 1 mu (0.07 hectares) of tomatoes and obtained an annual income of 3,500 yuan (US$421) from them. That income was eight times his normal income from grain growing. www.i4donline.net, May 4, 2004

Katherine Sierra, a World Bank Vice President at the World Bank, notes that there was a time when the benefits of applying information and communication technologies (ICTs) to fighting poverty and promoting economic growth were not widely understood. She says that many in the development community questioned how high tech communication technology could be used to alleviate such dire challenges as starvation, homelessness and lack of basic education and health services. As we will see later, even Bill Gates of Microsoft raised the same question. “Lately, however,” she notes, “this view has given way to an understanding of ICT as an essential component of broader effort to harness the free flow of information to increase voice, accountability and economic development.”

Following are several personal glimpses of some incidents that reflect the promise and complexities of the newer information and communication technologies. I was standing outside the Los Angeles airport arrival terminal in the summer of 2005 and overheard a cell phone conversation. Apparently the person I overheard had not been picked up at the airport at the proper time. The conversation went something like this: “But [imagine an angry frustrated voice] I left word on your cell phone!” And then, after a response from the other end of the conversation, an unhappy conclusion: “Oh, you didn’t check your cell phone!#*&%”. The brief, simple lesson from this episode is: hardware is not enough in transforming the digital divide into digital opportunity.

Here is a second incident. The Apple computer people displayed the latest iPod technology – an Ipod that allows you to play television programs on this amazingly small and compact device. Accompanying the announcement of the new technology was the breathless announcement that Apple had forged an agreement with the USA Fox television network that would provide episodes of the television program "Desperate Housewives" to iPod users the day after the regular network broadcast version of "Desperate Housewives." The brief point here is that information and communication technology is important but there are major challenges in generating constructive content that make the technology worthwhile.

The third situation relates to something that I found in my email. It was a report of an organization in India’s West Bengal. The organization works with high school children to make their education more practical and meaningful. This report tells how students are learning to study and record social and physical features of their environment. The records are then maintained in computers and they are often the only source of such information for their communities. This incident suggests that there are millions of persons available worldwide to

build locally relevant and useful content for our information and communication technologies. But it is still an "expert-driven" system.

The fourth incident is discovery of an article that appeared in the on-line publication Science and Development Network. Titled "We need to Reinvent the University" Harvard University Professor Calestous Juma argues that there is a new awakening of interest within international development agencies about the role of technological innovation in economic growth. Yet, he says, much of the discussion on Africa's development only marginally addresses the need to harness the world's existing fund of knowledge for development. Professor Juma's point is that universities and other institutions of higher education can be "engines of development and social renewal" but that a qualitative change in the goals, functions and structure of the university is needed. What he is suggesting is that we need to reinvent the university. We need a new generation of universities that can serve as engines of both community development and social renewal. We will return to each of these four issues and others as we travel through this chapter.

The dramatic introduction of new communication-related technologies in the latter part of the 20th century significantly accelerated the exploration and trial of innovative information systems. These technologies included miniaturization, portability and consumer-friendly innovations in conventional media such as radio and television, as well as the linking of computers and telecommunications to mass and specialized information systems. Thus, at the turn of the 21st century, we spoke of a telephone in every village in India and China, and women operating telephone businesses in Bangladesh, Uganda and Rwanda using cell phones and no copper wires. And we are on the brink of an International Telecommunications Union initiative to put telecommunications into the world's 800,000 villages. How these technologies are penetrating our lives is reflected in our language with words like tele-medicine, tele-education, tele-commuting, and "community informatics" becoming a common part of our vocabulary.

This chapter is an elaboration of one of the "threads" mentioned in Chapter 1 and applied to particular situations in Chapters 2 and 6. It is about the role of information and communication technologies (ICTs) in development, and the measures that international and domestic organizations are taking to provide access to these technologies by people in cities, towns and villages across the world in attempts to build "knowledge societies" or "information societies."

We start with a reminder about the potential value of information, then move to the roles of ICTs, and then concentrate on the emergence of community-based communication centers (telecenters).

**The role of information and ICTs**

International consultants Colin Fraser and Sonia Restrepo Estrada provide excellent documentation using concrete case studies that show where a systematic approach to providing access to information has made a significant impact on the welfare of rural and urban people. Their examples range from family planning successes in Indonesia and immunization programs in Colombia to agricultural development in the Philippines and Mexico. They also note the consequences of inadequate information. Referring to situations in the Philippines, they report that a mountain tribe was losing its land to "land-grabbers" because the tribe doesn't know about existing laws that could protect them; and a farmer traveled by sea and land for seven hours to buy seeds, not knowing that a fellow farmer three kilometers away had them for sale.

The 1998 World Telecommunications Development Report summarizes several situations related to the value of information to various populations:

- In rural southern Ghana, petrol stations are able to place orders with suppliers by telephone when previously they could only be made by traveling to Accra; in Zimbabwe, one company generated US$15 million of business by advertising on the Internet; in South Africa, lives have been saved since citizens have been able to call the police from strategically located community payphones; in the

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2 http://www.scidev.net/content/opinions/eng/we-need-to-reinvent-the-african-university.cfm.

mountains of Laos and Burma, yak caravans employ mobile phones to call ahead and find the best route to take during the rainy season to bring their goods to market; and in China, a little girl's life was saved when her doctor posted her symptoms to an Internet discussion group and received an immediate answer.\(^4\)

We mentioned in Chapter 1 that the central and vital role communication and information play in the lives of people was officially recognized by the UN General Assembly in December 1997 when it endorsed a statement on the Universal Access to Basic Communication and Information Services. The statement embraced the objective of establishing universal access to basic communication and information services for all. At a 2002 Special Session of the UN General Assembly on information technology and development (June 17-18), then Secretary General Kofi Annan succinctly placed ICTs among the important tools of development. Opening the session, he declared:

> A wide consensus has emerged on the potential of information and communications technologies to promote economic growth, combat poverty, and facilitate the integration of developing countries into the global economy. Seizing the opportunities of the digital revolution is one of the most pressing challenges we face.

In 2002 UNESCO focused on the potential of ICTs in its "ICT for Poverty Reduction" project carried out in South Asia. UNESCO supported nine small scale ICT projects in India, Sri Lanka, Nepal, Bhutan and Bangladesh to learn more about how ICTs and other means of communication work with local social networks, social organizations and processes. (We report on aspects of this in Chapter 7, dealing with gender issues.)

Traditional interpersonal means of providing rural people with information have long been acknowledged as being inadequate. Government extension systems, for example, have been plagued by the social, cultural and educational gap between the agricultural scientists and technicians and their clientele, the poor training of the technicians, and their lack of understanding of farmers’ problems.\(^5\) In recent years, governments typically have sought alternative solutions to labor-intensive and expensive face-to-face community contacts. These solutions include greater use of radio, television and other media.

In a 2003 assessment of the road for the U.S. Agency for International Development to take in its ICT foreign assistance program, its consultants noted that "ICTs can accelerate agricultural development by providing more accessible, complete, timely, or accurate information at the appropriate moment to those making key on-the-ground decisions. Examples of such decisions are: what and when to plant; where to find agricultural inputs at the best price; how to identify and respond to disease, pests and drought; where to sell products; what new technology options exist for production, post-harvest, and soil fertility control; and what agricultural credit and other government programs such as land titling are available.\(^6\)

The value of information can be seen in more personal terms at the community level with real people. There are many stories from around the world that illustrate how valuable information and the new information technologies can be for someone in the community. For example, a group of vegetable farmers in Shandong province have created their own web site to extend their production market worldwide. Note also the report in Chapter 2 about the eChoupal. The story appeared on the front page of The New York Times in early 2004 telling of a villager in India who every day turns on a computer in his house to obtain soy bean prices on the web site of the Chicago Board of Trade in America.\(^7\) His home is called an "eChoupal!", which is a local term for a digital village or gathering place. After viewing the data on-line, the farmer reports his findings about prices to other farmers in the community. Those prices


\(^5\) Fraser & Restrepo Estrado, pp. 16-17.


influence the farmers’ decisions about selling their soy beans in the local market, or holding them until the prices on the Chicago Board change. These farmers are dealing in a digital world and a world market. An agricultural entrepreneur – ITC Limited – has set up more than 5,000 similar village information systems (network kiosks) in India that bring farm families into the global village. According to some studies, the agricultural kiosks are bringing more profits to farmers, eliminating profiteering middlemen, and improving market operations, as well as providing information on health, nutrition, bus schedules and entertainment.8

The World Bank’s Willem Zijp has made a strong case for the role that information technology can play in agriculture and rural development.9 In regard to rural communities, Zijp says that information technology is “better” because —

• Farmers’ organizations can use fax and/or e-mail to obtain better information for their members and speak more effectively on behalf of their members, strengthening their advocacy role.
• Rural groups can use video camcorders to present their needs and potential solutions more effectively to policy makers through the use of visual images.
• Farmers and other rural groups can easily use powerful multimedia training programs with touch screens, even if they are not literate.
• Vertical farmers’ organizations can use telecommunications, radio, and/or packet radio to obtain and transmit price information in order to become integrated into production and marketing chains, providing them with greater strength in negotiating with buyers.

Zijp says communication technology is faster because —

• Farmers can get information about daily market prices on the radio or through e-mail notices posted at a local center before taking produce to market.
• Rural people get information via radio about impending weather threats.
• Rural midwives can get immediate information about particular health problems from a microcomputer at a local clinic.
• Small craftspeople in isolated villages can get information about transportation via radio.

And, Zijp says, information technology has cost advantages because —

• Rural advocacy groups can make video tapes cheaply with camcorders to describe their problems and suggested solutions through powerful visual and oral messages.
• Community groups can develop their own radio programs, addressing local needs.
• Rural people can get high quality, consistent training at low cost via distance education or interactive training technologies.

In Knowledge Societies published by the United Nations Commission on Science and Technology for Development, the editors stress the need to harness ICTs for development by enabling their use for empowering the poor, and for scientific and technical capacity building that is consistent with development. “The new technologies,” they emphasize, “can be implemented to support democratic decision-making, more effective governance and lifelong learning.”10

ICT characteristics

In various contexts in Advocacy and Interventions we have implied the characteristics of ICTs. Here we distill the benefits of ICTs in list form because it is these features that cause excitement among many planners of development interventions. These include the following — associated with the older media:

• Reaching many people simultaneously;
• Overcoming geographic boundaries;
• Overcoming social and literacy barriers;
• Providing frequency and repetition of contact;

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• Storage of information for on-demand access;
• Capturing the reality of events, by depicting them graphically and in real time;
• Greater efficiency (lower costs) in sending and receiving information.

In the 1990s, computers and digital networks exploded into the communication environment and provided additional dimensions to the list of ICT benefits. These newer technologies provided at least six additional features. These included opportunities for:
• Relatively convenient individual information searching through a vast array of information sources, on-demand and often 24 hours a day;
• Timely interaction between and among computer users that allows convenient and "contemplated" exchanges: exchanges that are quick but not necessarily instantaneous;
• "Broadcasting" of information to many by ordinary individuals, including easier bottom-up" message initiation;
• Global reach almost constantly and instantly;
• Convenient storage facilities for text, graphics, audio, video and data; and
• Intermixing of media forms and content.

These features of ICTs can translate into benefits in education and health, reducing social distance, better connections between governments and individuals, marketing advantages, and, overall, improved opportunities for information sharing. But there is still a more profound implication regarding ICTs. According to some analysts, writing and reading have long been symbols of, and contributors to, social inequality because these skills provide their holders with information and knowledge that lead to power and privilege. Now, "the rise of multimedia should provide an important opportunity to level the playing field of literacy by restoring the status of more natural forms of audiovisual communication that are in some ways more broadly accessible."^11

The potential of ICTs – highlighted by computers and networks – for development has prompted countless international conferences and workshops in an attempt to harness this potential. Enormous hours of work and untold sums of money were poured into the preparations and arrangements for the World Summit on the Information Society (Geneva 2003 and Tunisia 2005) in part to understand the implications of what has become known as "the Information Society." The major actors include both multi-national and national bodies such as the World Bank Group, UNDP, ITU, UNESCO, FAO, USAID, IDRC and others.

However, widespread discussion in this decade points to a concern about the possible negative consequences of the uneven access to computers and telecommunications networks. This concern has resulted in the popularization of the term "digital divide" – for which there are now more than 800,000 entries on the World Wide Web (the "www" you see on web page addresses). Widespread belief that computers, networks and other kinds of information and communication technologies can positively affect development has led to various approaches to providing people with use of these resources. In some countries, the emphasis has been on developing low cost computers such as India’s Simputer and Brazil’s computador popular, and promoting lower cost connectivity such as wireless local telecommunication loops. However, the cost of individual ownership and connectivity remains well beyond a majority of the populations in developing nations. In Africa, for example, the average total cost of using a dial-up Internet account for 20 hours a month is equivalent to US$60, which is higher than the average African salary. One observer noted that it would take 30 years for Africa to catch up to North America’s rate (in 2002) of 85 personal computers per 100 households. Internet use per 100 persons was 87 in North America while it was 4 in Africa. The percentage of North American university graduates with IT skills was 85% compared to 5% in Africa, with an estimate of 45 years to catch up. However, when one sees (in 2007) the vast penetration of mobile phones in some African countries, it is easy to be more optimistic about the diffusion and use of ICTs. Note

also that Nigeria was reported in 2007 to have purchased a million low cost (approximately
US$120 each) computers for its public schools through the One Laptop Per Child (OLPC)
project led by a group of experts from the Massachusetts Institute of Technology. Other
countries that have committed to buy OLPC computers are Argentina, Brazil, Libya, Rwanda,
Thailand and Uruguay.14

The effectiveness of ICT

Some observers are cautious and somewhat skeptical about what they see as the
“euphoria” surrounding anticipated benefits of ICT for development.15 However, the critics
inevitably address factors associated with ICTs that are not necessarily inherent in them. Some
of the concerns about the effectiveness of ICT, and especially related to the Internet, include:
(1) The diversity and incompatibility of equipment and program protocols. This applies to
conditions within countries and between the “least developed countries” (LDC) and more
advanced nations. For example, once a correspondent in China informed me that he could not
download a report I sent because – while traveling in the rural areas – he could not find a
computer on-line larger than a 286 or 386 model. Similarly, at one time I sent documents to
colleagues via email using attachments in WordPerfect only to be requested that they be sent in
Word. Earlier-generation word processing programs did not readily convert alien programs.
(2) The language and access system. Much of the information available in storage systems on
networks may be in a language different from the users’. Not only might there be a linguistic
difference, but also a gap in understanding the conceptual content. Scientific language is not
designed for lay people; and the language of America’s Silicon Valley and of India’s Bangalore
area can be a mystery even to a university professor. (To this day, I am not sure of the
information technologist’s meaning for the word “platform.”) Charles Kenny notes that a majority
if those living on less than a dollar (US) a day speak a minority language in their country and
most of those languages are mostly absent from the World Wide Web.16
(3) Information management. Although ICTs may be multi-media, many information storage
systems (such as electronic data-bases) depend on one’s ability to read and to understand the
way information is organized and packaged. Information management, along with computer
skills, has become an essential skill.
(4) Relevance. Much of the information available via electronic networks may not meet
communities’ needs for local information on agriculture and health and nearby markets. Any
information system, including interpersonal communication, is headed for failure if it does not
meet the interests or the perceived needs of the consumer. Thus, we need to pay attention to
the concept “demand-driven.”
(5) The value of information. The “culture” of information – for example, understanding how
knowledge and information about diseases, distant markets, and government policies can
contribute to their welfare – may not yet be part of some people’s consciousness.
(6) Maintenance. Technology, appropriate or not, often falls victim to parts that cannot be
replaced, servicing that is no one’s responsibility, and weather that is inhospitable.
(7) Technophobia. In a world where half the people have yet to make their first telephone calls,
keyboards, disk drives, Internet and multi-media may be large, bewildering, and forbidding
steps into ICT. It is a phobia most evident in adults – those most likely to represent the cultural
mainstream of a national community. The following story tells about reducing the phobia.

14 See InfoWorld on-line, March 28, 2007 at
15 See, for example, R. Gomez, P. Hunt, and E. Lamoureux. Telecenter Evaluation: A Global Perspective.
International Development Research Centre (IDRC), Ottawa, 1999, on-line:
http://www.radiofalamulher.com/man_cyberela/docs/gomez_lamoureux_telecentre_eval.pdf; and R.
Heeks, Information and Communication Technologies, Poverty and Development, University of
MALAPPURAM: Another feather in Kerala's cap. The state has transformed one of its most backward districts Malappuram into India's first e-literate district, deploying the world's largest rural wireless broadband network. Payment of electricity bills, getting birth certificates can be done by e-mails, doing away with long bus journey and wait at counters. State government has appointed SBI as e-payment gateway for such bill payment transactions. Also, police stations in the district are accessible to people through 'Akshya Kendras' or information kiosks. Malappuram residents can file complaints to police stations from Akshya centres through e-mail. Over 600 Akshya Kiosks have been set up at every 2 km by entrepreneurs.

The panchayat in Malappuram has spearheaded a computer literacy programme, offering 15-hour PC and Internet training to one member from each of 600,000 odd families in the district. "Our mission is to make entire Kerala e-literate by 2005. We will extend Akshya Kendras to remaining 13 districts," says Aruna Sundararajan, secretary, IT mission. "I have never heard of the word computer a year ago. Now, I can handle computer, send mails," says taxi driver Abdul Wahib, in remote Kolmanna village in Malappuram. Malappuram has at least one family member working in the Gulf. While there is a long waiting period for BSNL landline connection, people now visit Akshya centre for making Internet phone calls to be in touch with their dear ones...

(8) Resource deficiency. ICT ineffectiveness may result from the lack of the resources people need to have in order to do what is proposed in ICT messages. We often hear of farmers, for example, who complain that they learn about innovations in seed technology or animal husbandry, but are unable to obtain the seeds or the starter animals; and about people who understand the HIV/AIDS message about sexual relations but are prisoners of a gender system that prevents them from changing their behavior.

(9) Accessibility. Despite the rapid diffusion of cell phones and such innovations as the Grameen Phone Ladies, many people in the world do not have convenient and affordable access to the telecommunications services that help them become part of a modern information society.

Some of the concerns about the effectiveness of the Internet in development initiatives are actually concerns about unresolved obstructions in the environment. Although ICTs and the Internet might be constructive in assisting people to understand and use health services, inadequate health services may be a reason for the perceived ineffectiveness of the ICT to improve a community's health. Careful analysis is necessary to identify the weak links.

National ICT strategies

It should be noted that most of these perceived obstacles to ICT effectiveness can be addressed by suitable planning, support and training. Many of the so-called failures of ICT in development can be attributed to inadequate policies and management rather than to anything inherent in the technology or hardware system. Many countries are addressing these issues by developing ICT policies or national "e-strategies." The Plan of Action that emerged from the 2003 session of the World Summit on the Information Society encouraged nations to develop e-strategies by the time of the 2005 session. Such policies and strategies address a variety of issues such as e-Government, e-Education, e-Health, e-Commerce, IT human resources development, the information technology infrastructure, legal and regulatory reform in the telecommunications field, developing locally relevant multimedia content, telecommunications infrastructure, and the IT industry. The 2003 WSIS meeting produced ten targets for ICT connectivity to be achieved by 2015 (a date that corresponds with the target date for the MDGs).
These included:
1. Connecting villages with ICTs and establishing community access points.
2. Connecting universities, colleges, secondary schools, and primary schools with ICTs.
3. Connecting scientific and research centers.
4. Connecting public libraries, cultural centers, museums, post offices, and archives with ICTs.
5. Connecting health centers and hospitals.
6. Connecting all local and central government departments and establish MDG web sites and e-mail addresses.
7. Adapting all primary and secondary school curricula to meet the challenges of the Information Society, taking into account national circumstances.
8. Ensuring that all of the world's population has access to television and radio services.
9. Encouraging the development of content and putting in place technical conditions in order to facilitate the presence and use of all world languages on the Internet.
10. Ensuring that more than half of the world's inhabitants have ICTs within their reach.17

The issue of digital connectivity runs through most of these items, and that explains why many nations and many international organizations have a keen interest in including such topics as "broadband" and "wireless" connections in developing their ICT strategies. Heather Hudson, long time expert of telecommunications systems, notes that "increasing access to telecommunications services ranging from voice communications to the Internet requires investment both in backbone networks and in facilities to reach end-users; this latter component is often called 'the last mile'."18

In a document prepared for the 2005 WSIS program, Bruno Lanvin, a World Bank ICT expert, noted that an increasing amount of international effort had been devoted to building information societies but that there is limited awareness among development specialists and national leaders about the potential role of ICT in the fight against poverty.19 He notes, for example, that ICTs appear in the Millennium Development Goals as "a second thought" or a relatively minor tool to reach the MDGs. One explanation is that the evidence concerning the impact of ICT projects has not been aggregate sufficiently to convince decision makers at the policy level. He also suggests that the energy to pursue e-agenda sometimes appear to be diminishing as some donors and aid recipients "come to regard e-strategies as a distraction from other, more fundamental development objectives.

Nevertheless, information and communication technology for development (ICT4D) has become a worldwide issue. The UN Secretary General created a UNICT Task Force in 2001 with a mandate to help harness the potential of ICT for advancing development. With the expiration of its mandate in 2005, a successor organization, the Global Alliance for ICT and Development, was approved by the Secretary-General in 2005, and its mission is to facilitate and promote further integration of ICT with development activities,

- thus contributing to linking the outcomes of the World Summit on the Information Society with the broader United Nations development agenda. The alliance will build on and advance the work of past initiatives such as the Information and Communication Technologies Task Force as well as the experience of the World Summit on the Information Society process in addressing core issues related to the role of information and communication technology in economic development and eradication of poverty and the realization of the Millennium Development Goals.20

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20 Activities of the Task Force and the Global Alliance can be traced beginning at http://www.unicttaskforce.org.
The agenda of the 2005 WSIS included the importance of using information technologies to help reach the Millennium Development Goals. It generated a substantial number of documents that have attempted to sharpen the focus on ICT4D (information and communication technologies for development) – such as the International Telecommunication Union’s Golden Book that records and acknowledges the commitments made during the Tunis (2005) phase of the WSIS. More than 375 submissions were made to the Golden Book by governments, international organizations, NGOs, companies and individuals, describing their work towards promoting ICT activities. ITU estimates that the activities announced during the Tunis Phase to promote WSIS goals represented a total value of at least € 3.2 billion (US$ 3.9 billion). Governments committed to implement projects for some € 1.9 billion, representing nearly two-thirds of estimated total value of all commitments, while international organizations pledged to carry out activities for around half that amount, i.e. 0.83 billion Euros. 21

Telecenters and rural development

Telecenters were described in Chapter 1 as public places in the community where people can have access to ICTs and other services. In 2005, the ITU announced an initiative to connect the world’s 800,000 villages that do not presently have a telephone or Internet connection (30% of villages worldwide). It was planned as a public/private sector partnership with 22 founding members. The target date for achieving the goal is 2015 – which also corresponds with the due date for the Millennium Development Goals. It is by means of community-based telecenters that people in those 800,000 villages are most likely to be connected to the world information systems. In fact, India has launched a program to connect all of its 600,000 villages by the year 2007, primarily through the use of ICT kiosks and telecenters. ITU, UNESCO, USAID, IDRC and other organizations have supported the establishment of telecenters, many of them in Africa.

While ICT may not be part of their vocabulary, many of those on the other side of the "digital divide" in those rural villages are like some people in China where a survey of Hunan peasants in 1993 showed that 64% of the peasants expressed their need for production, technology and market-related information; and only 6% said that they did not need such information. 22 Asked about their grievances, the peasants “ranked lack of information” fourth after “heavy taxation, chaotic markets, and crime.” As we have seen earlier in Readings, the challenge that has been taken up by many international agencies is to bring the benefits of information and communication technologies to populations and nations that have not shared significantly in the communications revolution of the last five decades. Many of these are in the rural areas of the developing world where the struggle is greatest to reach the Millennium Development Goals and where especially those in the remote rural areas are being left behind. Data from the 2006 Millennium Development Goals Report show that 82% of children in developing nations who are not in school are in rural areas. And it is predominantly rural people who are on the negative side of the digital divide.

At the turn of the 21 century, there was much focus on the telephone because at that time, the telephone line provided the principal connection between computers and information resources such as data bases and networks. Cellular telephones and new wireless telecommunication technologies are rapidly having an impact on planning and designing digital systems, and this has pointed to significant leapfrogging of traditional telephone diffusion patterns. For example, laying copper wires in environmentally and politically inhospitable areas is no longer an essential step for expanding telephone services. However, in most of the world, the strategy of one telephone and one Internet connection for each household is not likely to happen soon despite the rapid growth and diffusion of the new technologies.

Telecommunications specialists use the term “universal service” to describe the one-telephone-to one-household ownership pattern. The more viable strategy for developing countries is “universal access.”

21 See: http://www.itu.int/wsis/goldenbook/Publication.html.
The concept is that a telephone should be within a reasonable distance for everyone. The distance depends on the coverage of the telephone network, the geography of the country, the density of the population, and the spread of habitations in the rural or urban environment.23 “Reasonable distance” in Brazil is to be within five kilometers of a telephone; in South Africa, the standard is a 30-minute traveling distance to the phone; and in China, it is “one family, one telephone in urban areas and telephone service to every administrative village in rural areas.” Canada’s International Development Research Centre (IDRC), which is especially active in the field of information and communication technologies in Africa, uses “an hour’s journey on foot” as the criterion for reasonable distance.24 Implicit in these descriptions is the idea of a fixed telephone linked to the telephone network by pairs of copper wires. As we have seen in the Grameen Phone initiatives in Bangladesh, Uganda and Rwanda, the mobile cell phone and related devices introduce a new dimension to the telephone scenario. By 2006, there were more mobile phones being used in the world than traditional land-line phones.25 Despite the widespread diffusion of information technologies, in 2005 the UNICT Task Force and the Science, Technology and Innovation Task Force of the UN Millennium Project produced a report that argues that the “digital divide has shifted perilously in recent years to the detriment of the poorest and Least Developed Countries.”26 However, for donor agencies that want to incorporate ICTs into their overseas development assistance, the report suggests that the MDGs provide “a welcome compass.” The report specifically identifies the potential relationship between ICTs and the MDGs’ challenges. We excerpt this part of the report:

...In practice, any blueprint for a national e-development strategy will comprise a number of essential elements: a clear e-strategy vision championed at the highest political level; a multi-stakeholder approach to enhance results; a cross-sectoral holistic strategy; realistic priorities for e-strategy actions and programs; simplified implementation modalities; national and international cooperation and partnerships for a prioritized and nationally-owned e-strategy; global inclusion of developing countries and ICT in ODA; ICT to facilitate regional integration and regional integration to facilitate ICT deployment; telecommunication and information technology policy cohesion, convergence and low-cost cutting edge solutions; and, an overarching focus on achieving the MDGs themselves.27 So what is the critical role of knowledge and information to economic and human welfare with respect to the MDGs? How can ICT and the MDGs practically contribute to empower stakeholders in the PRSP process, to improve the efficiency of public and private service delivery, and to enhance livelihoods? To what extent should ICT for Development priorities, policies and practices differ with respect to “off-track” versus “on-track” developing countries? While these key questions should have been posed far earlier by the development community, it is in direct response to the MDG challenge of scaling up and replicating that they are now being addressed.

The MDGs provide a robust platform whereby government, business, civil society and international organization initiatives and interventions can coalesce. Yet resistance by government and business to full acceptance of the critical role to be played by ICT in support of

25 Wikipedia notes: “The Philippines sends around 350 to 400 million SMS daily, more than all the SMS volumes of European countries, America, and China combined. SMS is a part in almost all marketing campaigns, advocacy, and entertainment. In fact, SMS is so inexpensive (messages cost PHP 1.00 (about USD 0.02) to send), influential, powerful, and addictive for Filipinos that several local dotcoms like Chikka Messenger, GoFISH Mobile, and Bidshot now fully utilise SMS for their services.” Downloaded August 2006 from http://en.wikipedia.org/wiki/Short_message_service#Popularity.
the MDGs must quickly be diffused by hard data on development impact and the real potential to scale up and replicate. While significant anecdotal evidence has already been amassed in this direction, major efforts are now underway to produce systematic measurement criteria by the end of 2005. For the moment, mainstreaming ICT for the achievement of the MDGs remains very much work in progress, and the following describes the generic development impact across the first seven MDGs.

2.1 - ICTs & Poverty Eradication and Hunger (Goal I)

The multi-dimensional nature of poverty has complex causes. Apart from lack of material wealth and possessions, poor people are often deprived of basic nutritional, educational, and healthcare needs. In addition, they are denied access to knowledge and information, a primary source of economic opportunity and political empowerment, rendering them vulnerable and prey to social exclusion. Though lack of access to ICT is not a primary problem of poverty compared to the basic, urgent needs of the poor like food and shelter, ICT can be seen as both an accelerating and driving force for progress as well as an outcome of human development itself.

Promoting opportunities for the poor is an essential element of poverty reduction. Consensus is building in the development community on the need to focus attention on ICT interventions that match local needs and conditions and concentrate efforts in four principal areas:

i. stimulating macroeconomic growth, with the contribution of the ICT sector to the economy and of ICT investments to economic growth and job creation;

ii. increasing market access, efficiency and competitiveness of the poor, with micro-level and people-oriented interventions (for example, via the use of village payphones and knowledge centres that improve agricultural practices through access to information on crop selection, irrigation, fertilizers, and fishing and livestock conditions, thereby raising yields and reducing poverty and hunger;

iii. improving social inclusion of isolated populations; with the interactivity, permanent availability, reduced cost and global reach of ICT making social inclusion of poor and disadvantage groups more feasible;

iv. facilitating political empowerment, with improved planning in the local and PRSP processes through ICT via inclusive, informed priority setting, increasing accountability and good governance. Here, key processes that will inform MDG outcomes include institutional planning, service delivery and efficiency, and direct livelihoods impact, all enhanced by an essential empowerment filter at the local and PRSP levels.

One of the most compelling examples of the importance of moving from anecdotal to empirical evidence to demonstrate development impact, as well as the necessity of adopting a long term investment and partnership perspective, is Bangladesh’s village payphone operator, GrameenPhone. At one stage almost a cliché within the ICT for Development community as a stalwart for pro-poor business models, GrameenPhone has recently undergone a surgical re-evaluation by the OECD. While originally held back by local regulatory constraints, over-ambitious growth forecasts, and creative tensions among its multi-stakeholder partners, the venture has since taken off only as a result of openness to innovative and pro-poor business models, and long term investment commitment.

Since 1997, GrameenPhone has provided some 45,000 telephones to 39,000 villages in Bangladesh, bringing access to the telephone to some 70 million people. By 2003 GrameenPhone was the largest source of foreign direct investment ($230 million) and second largest corporate taxpayer ($280 million) in the country. The Village Phone model has now been replicated in Uganda with a like degree of success, while in Bangladesh the company is now


leveraging its market power to lobby government to ease punitive tax rates to boost network investment. With its indispensable role in flood disaster relief the company has also assumed the mantle of a national public good. And with radical innovations such as 50c prepaid scratch cards (in contrast to conventional $10 cards), it is pioneering the stimulation of pro-poor economies of scale. In practical poverty reduction terms, a 24 percent increase in income of Bangladesh village phone owners.

2.2 - ICTs & Primary Education (Goal 2)

There are many hurdles to achieving the MDG target of all children receiving primary school education. Of the 680 million children of primary school age in developing countries, 115 million do not attend school, with 60 percent of these children girls and 74 percent living in South Asia and sub-Saharan Africa. ICTs can help overcome the chronic shortage of facilities and teachers in an efficient and economic manner for many countries facing budgetary constraints. UNESCO estimates that an additional 15-35 million educated and trained teachers will be needed over the next decade if all countries are to achieve the MDG of universal primary education by 2015. ICT-based distance training can overcome the shortage of primary school teachers by accelerating instruction. ICT can also supplement primary school teaching thereby helping to overcome shortages. And via the traditional ICTs of radio and television ICT could also be used to emphasise the importance of primary school attendance, particularly in areas with strong social or cultural barriers. Based on extensive interviews in Bolivia, Ghana, India, Namibia and South Africa, the Global eSchools and Communities Initiative (GeSCI), backed by the United Nations and governments of Canada, Ireland, Sweden and Switzerland has recently identified five education building blocks with respect to key educational challenges and ICT solutions desired by schools:

i. teachers, with inadequate training and ICT-based (TV or computer) teacher training;

ii. infrastructure, with long distance to schools in some areas and remote distance learning via ICTs;

iii. curriculum and content, with outdated curricula and inclusion of ICT skills in curriculum, and ineffective distribution of content for teachers and ICT-based delivery of traditional and rich content;

iv. teaching and learning tools, with under-equipped laboratories and insufficient tools and materials for project work and ICT-based education tools for classroom teaching and for project work by learning;

v. administration, with high volume of manual administration and for teachers and principals with basic ICT applications for administration.

The GeSCI also notes that ICTs in schools also deliver enormous benefits to their local communities in employment, adult education and skills making, health, business services, communication and e-government. It is currently pioneering an end-to-end e-School system with developing country and private sector partners that is claimed to reduce costs by a factor of eight. Based on the 2.5 million schools in the developing world, it is estimated governments spend approximately $250-300 billion on education annually, or about $100 000 per school. ICT spending in developing countries is about $150-200 billion per year, compared to $6-8 billion needed to deliver ICT solutions to all schools.

2.3 - ICTs & Gender Equality (Goal 3)

The MDG on gender equality has the specific target to “eliminate gender disparity in primary and secondary education preferably by 2005 and in all levels of education no later than 2015”. It is also widely recognized that gender equality is a critical factor for the achievement of all the MDGs. As ICTs represent a global phenomenon with large potential impact on economic and social realities, and if gender equality is central to the achievement of the MDGs, it is then critical to ensure that women and men benefit equally from the opportunities ICTs can provide. Women around the world face a complex web of obstacles in their access and use of ICTs, ranging from literacy and education, to language, time, income and socio-cultural norms. However, ICTs can be used to influence public opinion on gender equality, increase economic opportunities, improve women’s education, create opportunities for women as educators and activists, and enhance opportunities for networking and organizing for gender equality, and for participation in
political processes. For example, “womenaction.org” was a global initiative connecting hundreds of networks of women’s organizations, to strengthen women’s participation in the five-year review of the Beijing Platform for Action.

ICTs can promote gender equality by providing online opportunities that are not always available in the “off-line” world, by providing virtual spaces and linkages that favour small-scale entrepreneurship, a sector where women are usually more numerous. ICTs have the potential to assist poor women to improve the economic return of their traditional activities, by providing information and training on methodologies to improve their productivity and their quality of life. Using methods such as the Internet, mobile telephony, satellite based radio, CD-ROMs and distance learning, women can share valuable knowledge, exchange market information and be exposed to new educational opportunities. For example, ICT can help women entrepreneurs, even at grassroots level, to reduce transaction costs, increase market coverage, and even expand across borders. In Guyana, a women weavers’ cooperative has used the Internet to market and sell hand-crafted hammocks, resulting in a very high income for local standards. The Self-Employed Women’s Association (SEWA) of India, that employs a mix of mobile village phones, Internet, satellites and television ICTs to promote their artisan handicraft network, comprises 5000 women who have used their life savings to access village mobile phones for garnering market information.

ICT can also offer new opportunities for women to be employed in innovative and non-traditional sectors, such as e-commerce and other ICT-enabled businesses, such as marketing of telecommunications and Internet services. For example, in Ghana, a large number of women-owned businesses sell fax, e-mail and telephone services to a largely female clientele, due to the fact that many women in the country are small entrepreneurs and traders.

In education, women’s traditional roles as mothers and providers of care, with responsibility for child-care, food and other household tasks, along with context-specific cultural and economic constraints, have hindered girls’ access to the formal education system. In some cases, female school enrolment declines after childbearing age. ICT can help overcome some of the social and cultural barriers to girls and women’s education through the application of distance learning. Likewise, women have outnumbered men in ICT-based training for teachers via distance learning in many countries. In this context, ensuring that girls and women are properly included and encouraged to participate in formal ICT education programmes has enormous potential for gender equality in the labor market, particularly in a global context where the IT sector has the greatest potential for job creation globally. For example, women are already active as software developers in many emerging markets for software development for export, and many employment opportunities exist in the field of network administration and maintenance, as well as in IT education and training, given the traditionally high representation of women in the education sector in many countries.

The design of gender-sensitive ICT policies and education policies is key to ensure that ICT be a driver for gender equality. In terms of ICT policies, it is widely recognized that the social aspects of ICT should be included in policy-making processes, and important gender implications are embedded in technical policy choices in network architecture and deployment, pricing and tariff issues. As for education policies, women’s globally lower levels of literacy and education are one of the most powerful barriers for women’s full access to ICTs. To address this, technology could be integrated into girls’ education and women’s literacy programs, and gender balance should be encouraged in science and technology higher education programs.

2.4 - ICTs & Health (Goals 4, 5, 6)

The influence of ICT on healthcare in developing countries has already been immense. In the field of prevention and treatment for HIV/AIDS and other infectious and communicable diseases, however, it has barely scratched the surface. ICT has enabled healthcare workers to perform remote consultation and diagnosis, access medical information and coordinate research activities more effectively in the past two decades than in the history of medicine. ICT is an essential component in providing remote healthcare services, storing and disseminating healthcare information, and research, training and networking of and for health workers. Through both traditional (radio, TV, video, CD) and new (wireless, Internet) ICT media, ICT can
also provide an effective and cost-effective channel for the distribution of healthcare and disease prevention information to the general public.

The role of ICT in achieving health-related MDGs is indispensable. ICT are an invaluable tool for both healthcare workers and the international development community for their combined efforts in the reduction of child mortality (Goal 4), improvement of maternal health (Goal 5), and combating HIV/AIDS, malaria and other diseases (Goal 6). Diseases of childhood accounted for nine percent of children not living to see their third birthday. ICT can be used by healthcare workers to establish databases to track vaccination programs, to coordinate antibiotic shipments and to inform communities of medical services that can reduce child mortality. Maternal death is the leading cause of death for women of reproductive age in the developing world. ICT can critically reduce the incidence of maternal death by facilitating access to information and healthcare services.

In the battle against the HIV/AIDS pandemic, ICT can enhance disease monitoring and management, drug distribution systems (for generic anti-retroviral drugs), training of care givers, patient education and monitoring and facilitation of the development of support networks for people living with HIV/AIDS and their care givers. Yet the potential to enhance HIV/AIDS response is yet to be fully leveraged in developing countries most affected by the crisis. In many cases, these countries are lacking in both the infrastructure and human capacity (further weakened by the toll taken by brain drain and HIV/AIDS) required to implement comprehensive ICT strategies that could add real value to prevention, treatment and policy support. In addition, the potential of ICT as a cross-cutting tool spanning all the MDGs that can add value in addressing the pandemic is not widely recognized.

A number of ICT initiatives against HIV/AIDS are currently underway, at varying levels of sophistication, scale and range. These initiatives encompass networks aimed at enhancing access to knowledge on HIV/AIDS treatments to the use of geographic information systems (GIS) to map the spread of the disease in relation to socio-economic variables and treatment. In some cases, clinical information infrastructure systems and simpler mechanisms have been used to address the logistics of distribution and monitor the use of essential drugs. Virtual forums and lists have facilitated the discussion of access, treatment and enhanced advocacy and awareness raising. Evaluations of effectiveness, identification of good practices and mechanisms to scale productive intervention and systems is yet to happen. Further, to the extent that HIV/AIDS response needs to be cross-sectoral to address the pandemic’s multiple dimensions, a more widespread coordination and strategic deployment of ICT that create new synergies and enhance overall response effectiveness is critically overdue.

2.5 - ICTs & Environment (Goal 7)
This MDG proposes integrating the principles of sustainable development into country policies to reverse the loss of environmental resources, halving the proportion of people without access to safe drinking water and achieving a significant improvement in the lives of slum dwellers. Managing and protecting the environment contributes to improving human health conditions, sustaining agriculture and other primary production sectors, as well as reducing risks of natural disasters such as flood, mudslide and wildfire.

The effects of ICT on sustaining the environment are multidimensional. ICT enables greater participation by the population in activities to protect the environment through networking and information exchange. ICT also provides researchers with critical tools for the observation, simulation and analysis of environmental processes. Environmentally friendly work habits are also increasingly the cultural norm in many countries promoted through ICT in areas such as reduction of paper consumption and facilitating telecommuting; raising awareness of the environment through knowledge sharing; facilitating environmental monitoring and associated resource management and risk mitigation; enables greater environmental sustainability in other industries, commercial and agricultural sectors; and improves communications and developing and enforcing policies.

ICT plays a key role in environmental management in activities ranging from optimizing clean production methods to decision making. Spatial information is information related to a particular
geographical location or area. It allows analysts to view the distribution of income across a country as a grid in order to target areas for action, understand demographic trends, and monitor progress. Spatial information collected by satellite or airborne remote sensing can be used to understand the capability of the land to support economic activity and water use efficiency. This information can help ensure that natural resources are used efficiently and in a sustainable manner.

New technologies are being developed that provide more accurate and timely estimation of risk. Spatial information about fire, rainfall, wind, and salinity may help countries identify and estimate risk more accurately. A great deal of information is currently available to developing countries for use in making policy decisions. Some of this information (such as that obtained from satellites) is not released. Often the systems or skills needed to manage the data are lacking. Capacity building and information donation or exchange would address this issue.

(For the full document see: http://195.218.115.39/pport/pdf/925798971.pdf.)

Thus, with at least some agencies giving priority to ICTs to fight poverty and accelerate progress toward the MDGs, the issue of universal access to technologies beyond the telephone becomes highly relevant. Implicit in the concept of universal access is the idea of sharing a connection or facility as compared to each household having its own. The most obvious example is the public telephone booth or telephone calling center. Originally the concept of universal access was applied specifically to telephone use. However, the process of providing access and sharing facilities has been used in other areas of telecommunications. For example, community television viewing has been institutionalized in some countries such as India where Government policy allowed Government agencies to provide television sets for communities to be managed by local bodies. Some international and national agencies are applying the idea of access to other communication technologies, in particular, the Internet. As noted earlier in this chapter and in Chapter 1, one approach to providing universal access to information technologies has been the establishment of cybercafés and community-based communication centers, or telecenters, where the idea of sharing ICT facilities is a dominant feature.

In the following excerpt we review some of the general concepts and developments in the ICT environment and especially the emergence of telecenters.

### TECHNOLOGY TRENDS: A CHALLENGING OPPORTUNITY

The proliferation and use of ICTs presents opportunities and challenges both to the mature service-oriented economies of Europe, Australasia and North America and to developing countries. Current technology and market trends fall into four main categories:

- **Convergence** - Increasingly, information, communications and media technologies are coming together, offering seamless access to a full range of multimedia resources.
- **Internet** - Its proliferation in many aspects of daily life is widespread and it is transforming business through e-commerce.
- **Wireless and satellite** - These new, go-anywhere technologies also promise lower costs.
- **Privatisation and liberalisation** - These are the twin vehicles for accelerating and facilitating technological advance and access to the wide range of options.

Even in advanced economies, there are rural and remote communities that have been left behind in terms of educational and technological equity and access. The technological revolution that is transforming our economies and societies into information economies and information societies meets with many obstacles in developing countries and is in danger of widening the now well-known "digital divide." Conversely, the technological advances provide the means for "leapfrogging"--that is, the opportunity for developing countries to jump to a new paradigm before problems of delivery have been solved by traditional means, both in technical and economical terms.

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Even allowing for the rhetoric and hype about the new technologies, developing countries and rural communities could generally take advantage of the benefits available through the following:

- **The Internet and Web** - the benefits: new and enlarged sources of information and knowledge;
- **E-mail and chat rooms** - the benefits: new forms of communication and "virtual organisations";
- **The extraordinary pace of software development** - the benefits: generic and locally produced teaching, training and information material, with enhanced graphics, animation and interaction;
- **The lowering of bandwidth costs and emergence of enhanced cable, wireless and satellite systems** - the benefits: greater opportunities for videoconferencing, online learning, etc.
- **Public access schemes** - the benefits: greater assistance to lower income groups and disadvantaged communities. However, realising this potential calls for political will and support, and for solutions to four key obstacles:
  - access to technology;
  - affordability and financing;
  - inappropriate regulatory frameworks; and
  - shortage of knowledge and skills to develop and implement ICT-based systems.

### THE TELECENTRE CONCEPT

Telecentres may be defined as strategically located facilities providing public access to ICT-based services and applications. They are typically equipped with some combination of:

- telecommunication services such as telephony, fax, e-mail and Internet (via dial-up or ISDN, high-speed telecommunications network);
- office equipment such as computers, CD-ROM, printers and photocopiers;
- multimedia hardware and software, including radio, TV and video; and
- meeting spaces for local business or community use, training and so on.

While facilities and usage vary across telecentres, all reflect the intention to address the issues of access by providing technology, develop human capacity and encourage social and economic development. Depending on the size and extent of the services provided, these centres are usually operated by a manager and a small number of staff who may be part-timers or volunteers.

Originating in Sweden around 1985, telecentres (also known as "telecottages") experienced fairly rapid growth in Western Europe and other industrialised countries where rural isolation, lack of purchasing power and low-quality telecommunications and information technology facilities were seen to be a hindrance to participation in the information economy. By 1994, there were more than 230 telecentres in Australia, Austria, Canada, Denmark, Finland, Germany, Ireland, Japan, Norway, Sweden, the UK and the USA. The idea then spread and has become adapted to the needs of emerging markets and developing countries. Hungary is the first country in Central Europe to establish a large number of rural telecottages (more than 150).

Telecentres vary a great deal, especially in their size, facilities and services, according to whether they are rural or urban and whether they are located in the developed or developing world. Some provide only basic telecommunications services and are best referred to as "phone shops" or "public call offices" (PCOs). Such countries as Peru, South Africa, Morocco, Senegal, Indonesia, India and Bangladesh have independently developed these, starting in urban or larger rural communities with a low level of private telephone penetration and/or a large enough market for public access businesses to be commercially viable. Well-known examples are Senegal’s Sonatel with about 10,000 PCO franchisees, or approximately 5% of all telephone lines; Indonesia’s 7,000 or so Wartels; the Grameen "phone ladies" in Bangladesh; the PCOs in India (about 10,200 such centres in 1996); the PCOs in South Africa franchised by the mobile operators Vodacom and Mobile Telephone Network (MTN); and MTN in Uganda. By 1998, there were more than 9,000 such centres in Africa alone. These PCOs or phone shops often comprise just a telephone and fax, but more and more are adding personal computers, Internet connection and peripherals. Africa Online, an Internet service provider operating in nine African countries, has offered PCO owners a franchise agreement to provide public access Internet. To date, this has resulted in more than 600...centres, mostly located in urban areas.
Other telecentres have become a vehicle for a wider variety of ICT services and applications, taking advantage of the growing availability and access speed options for Internet service. The advanced concept, as developed and promoted by the International Telecommunications Union (ITU), called Multipurpose Community Telecentres (MCTs), may include facilities such as libraries, training workshops, seminar rooms and office space for local enterprises, and provide services such as videoconferencing, distance education, training in ICTs, telework, telemedicine, telehealth and even telebanking and e-commerce. Telecentres can also function as community information centres, providing access to databases and receiving and posting information of general interest to local people (e.g., government notices, information on the spread of diseases, weather information, prices of farm products, educational opportunities). Telecentres therefore go beyond mere access to telephony. Their purposes are to:

- expand access to rural-based ICT services;
- extend the reach of public services such as education, health and social services;
- provide information of general interest to the local community, including government information, and of special interest to specific groups such as farmers, local businesses; and non-governmental organizations (NGOs); and
- provide access to infrastructure, technology support and advice for the development of businesses.

Telecentre projects have been initiated in at least 21 developing countries, namely: Suriname, South Africa, India, Mozambique, Uganda, Philippines, Egypt, Ghana, Mali, Bhutan, Benin, Honduras, Tanzania, Mexico, Brazil, Hungary, Estonia, Romania, Haiti, Maldives and Vietnam. Many telecentres are still in the planning or pilot stage [and many more have been started since this was originally written, including those in Nepal, Taiwan and elsewhere].

One of the advantages of telecentres is that they provide a means of delivering public and private services to rural and remote locations without incurring immediate large investments. In fulfilling these goals, they are expected to have a positive impact on the socio-economic development of the communities they serve, helping to:

- develop rural and remote infrastructure;
- provide rural regions with better public services and improved local administration;
- generate employment and foster socio-economic development;
- integrate relatively isolated communities into the national and international information network and thus accelerate exchange of private goods and services;
- transfer expertise in a number of areas, such as agriculture, to and from the community; and
- give local producers access to market information, thus reducing the need for middlemen and increasing rural incomes.

TELECENTRE EXPERIENCE AND EVALUATION

Experience with services, usage and the problems, issues and achievements of telecentres are reviewed in this section, with a particular focus on developing countries and emerging markets. Evaluation of telecentres in developing countries, especially in terms of socio-economic impact assessment, is scant so far. This can be attributed to the very early stages of most of the projects. However, evaluation frameworks and methodologies are emerging....

Evidence of performance in developing countries is also still very limited. It must be borne in mind that cases vary according to the nature of the location, the year of development and the regulatory environment, among other factors. Thus, generalisations can be made only cautiously at this stage. Nevertheless it is possible to observe key trends.

Service and usage

Services provided by telecentres vary according to the degree of development of the country. For example, a summary published by the ITU on MCTs in Ireland indicates that 50% or more of the centres offered access to computers and the Internet, word processing, photocopying, desktop publishing and computer and Internet training (Ernberg 1998). More than 20% offered some Web site development. Telecentres in Ireland are clearly geared towards assisting small business development and providing higher-end information technology equipment. Access to basic telecommunications is not the main objective.
In contrast, centres in developing countries virtually all have basic telecom and office equipment for public use, which represents the primary demand. A recent study (Roman 2000) of eight telecentres established by the Universal Service Agency in South Africa shows that the strongest demand and usage is for the following basic services:

- phone calls and faxes
- photocopying
- printing
- typing services
- bookkeeping for micro-businesses

There is also considerable demand for ICT training which is seen as increasing employment opportunities. However, many telecentres are not yet able to cater effectively to this market. For example, because they do not provide certificated programmes, the courses are of limited use for people looking for employment.

Telecentres need to provide services beyond basic access to telecom and office equipment, which can be (and mostly is) better provided by simpler phone shops. Evidence for this is the increasing number of PCO-type operations in emerging markets and developing countries.

Although telecentres are praised as a crucial development tool and have considerable potential, the data available on rural demand and usage of the Internet in such centres suggest that this is not sufficiently realised. A survey of telecentres supported by the Universal Service Agency (USA) in South Africa found that personal computers and the Internet were severely underutilised.... The reasons are thought to be:

- illiteracy in general and computer illiteracy in particular;
- language problems resulting from the fact that the Internet is mostly in English though there are many local languages;
- lack of awareness and culture about the use and benefits of ICT;
- the high cost of Internet connection through long-distance calls due to lack of local points-of-presence (POPs); and
- poor quality telecom connections.

It would also appear that computer training has increased Internet and personal computer usage in South African telecentres only minimally.

**Local content**

Another major issue that may explain the under-utilisation of the Internet is that there is limited content on the Internet relevant to the needs of rural users in developing countries. More recent telecentre initiatives are therefore including local content development in their plans and actively seeking partners who can contribute to this, such as local farmers’ organisations, educational institutions and NGOs.

An example of local information demand and local content creation can be found in four “infoshops” in Pondicherry, India, a rural area of around 20,000 inhabitants (Shore 1999). In response to a list of information requirements identified during the trial period, volunteers in the villages created a local database that comprises:

- details of government programmes for low income rural families;
- cost and availability information about farming inputs, such as seeds and fertilisers, as well as information about grain prices in different local markets;
- a directory of insurance plans for crops and families;
- pest management plans for rice and sugar cane;
- a directory of local hospitals, medical practitioners and their specialities;
- a regional timetable for buses and trains; and
- a directory of local veterinarians and cattle and animal husbandry programmes.

Without consideration of such local content, attempts to encourage greater Internet usage in telecentres may meet with limited success.

**E-commerce**

Examples of e-commerce applications in telecentres, especially in rural regions, are limited to date, but the development of Internet-based transactional services is coming more into focus.
One example of such applications in rural areas in developing countries is the online ordering of vanilla from rural Uganda. With support and funds from the U.S. Agency for International Development (USAID) and its Agribusiness Development Centre, a Web site has been developed for the Uganda National Vanilla Association (UNVA), a private sector association of small farmers and processors who grow vanilla beans in addition to other crops to supplement their usually low income. This Web site has an online store where it is possible to order the vanilla with a credit card. The proceeds go back to the UNVA, but are currently more a means of supporting the further development of the association than a serious business. However, the Web site also provides contact for commercial importers with an interest in purchasing larger quantities.

Other e-commerce-related activities include several Web-based retailers of crafts and artwork from developing countries, both non-profit and commercial (see, for example, www.el vouk.com initiated by the World Bank and www.viatru.com from a Seattle-based company formerly known as World2market). There is some evidence that these activities increase the income of local craftsmen and artists and help preserve and showcase centuries-old traditions. However, the logistics of shipping and managing financial transactions presents a challenge.

In summary, while there can be considerable potential benefits and business opportunities in such value-added ICT-based services for rural and remote areas, in many developing countries the more advanced services and applications of telecentres are still often underutilised and underperforming. In addition to the reasons given above, these services and applications are also sometimes severely hampered by technical problems, infrastructure restrictions such as bad telephone connections and bandwidth limitations, and insufficiently trained and experienced staff. Moreover, it is clear that services and applications must be tailored to local needs and conditions if they are to generate and meet demand.

FINANCING AND SUSTAINABILITY
The financing of telecentres varies according to whether the centres in question are being implemented in developing countries or in the developed world. In the latter, telecentres are often initially or partially funded by state or provincial governments, as is the case with the Canadian and Australian telecentres..., and/or through the national government, as in Australia where the federal government is now helping to fund the establishment of telecentres in New South Wales and Tasmania through its Networking the Nation fund.

In developing countries, telecentre initiatives are most commonly financed and supported by external agencies, often in partnerships. Such agencies include:
- international and regional (development) organisations such as the International Telecommunications Union (ITU), United Nations Development Programme (UNDP), the World Bank, the Food and Agriculture Organization of the United Nations (FAO), and the Organization of American States (OAS);
- national international development agencies such as the Canadian International Development Research Centre QDRO, Canadian International Development Agency (CIDA), USAID, the Danish International Development Agency (DANIDA), the Swedish International Development Agency (SIDA); and
- educational and cultural institutions such as UNESCO, The British Council and the University of West Indies. International and local NGOs also play a considerable role in implementing telecentres. Private sector involvement in telecentres so far is fairly limited [except in Latin America] and comprises mostly in-kind contributions or donations rather than an active entrepreneurial role, as with the telecentre in Maseru, Lesotho...which was sponsored by DaimlerChrysler.

In contrast, small-scale phone shops or PCOs are overwhelmingly privately financed and run. Sometimes a form of licence or franchised brand name is introduced to standardise appearance or regulate the number of outlets, although this is sometimes more of a hindrance than a help to the development of the market, imposing more opportunities for official control than are necessary.

In general, PCOs tend to emerge where a sustainable and profitable market exists. It is
noteworthy, though, that many PCO-type operations have been induced by specific obligations on operators - on the incumbent, the second national operator or even cellular operators. Examples of this are Vodacom and MTN which run PCO franchises in South Africa, PT Telkom's Wartels in Indonesia, Sonatel in Senegal and teleboutiques in Morocco. But it is not only these obligations that have created a favourable market and furthered the expansion of PCOs to provide access to telecommunications for the poor and rural populations. Through such means as "rural funds" (or universal service obligations or universal access funds), commercial operators have been encouraged to provide services to rural and other under-served areas. Operators can receive (sometimes through competitive bids) subsidies to provide services to areas that would not otherwise be commercially viable to serve. Rural funds are often financed from a 1% or 2% levy on the revenue earned by certain telecommunications providers in a country. In other cases, government provides the funds. Successful and prominent examples of such funding approaches are found in Chile and Peru. Currently, there are also five additional rural funds in existence in developing countries and emerging markets, and eight more are planned....

Telecentres are expected to be sustainable in the long term as their socio-economic impact and the opportunity cost of alternative modes of delivery are realised. Thus, almost all telecentres involve public/government support, but with an eye to eventual self-sustainability. Most also charge for their services, but not always at full cost.

Some telecentres also have the potential to be commercially viable in the medium- to long-term. Contrary to common perception, rural people in developing countries are usually able and willing to pay between 1% and 3% (or even higher) of their community income on telecommunications because it saves them more money than they would pay (e.g., on travel or selling their produce at lower costs to middlemen) if they did not have access to a telephone.... In the early stages, however, telecentres require public or private investment to offset the high start-up costs and piloting of new ideas.

Telecentres allow public agencies and private telecommunications and information technology companies to assess the demand for products and services while creating the market through exposing the public to the applications. They thus provide a means to explore rural locations as potential markets for those companies.

Experience in the UK suggests that profitability in the developed world is possible, though universally that has not been the case. Many telecentres have not been able to move beyond dependency on institutional or volunteer support and donations of equipment (Figure 1.1).

As Figure 1.1 shows, about one-quarter of the UK telecentres and telecottages are profitable and about one-third have experienced losses. This has also been the typical experience of telecentre projects in other European countries.

Experience on sustainability of telecentres in developing countries is very limited, as most of the projects are recent and not expected to be self-sustaining until after three or four years of operation. However, telecentres in developing countries may enjoy certain financial advantages over those in developed countries. For example, they may:

- generate a larger income from basic telecommunications access because they are the only provider in an area or can extend the infrastructure to as-yet unserved areas by, for instance, using satellite or wireless technology;
- receive block funding from the education, health and administrative ministries and other government agencies if they are recognised as a cost-effective means of delivering public services to rural and remote areas; or
- because of the low residential computer and Internet penetration of small businesses and
households in developing countries, capitalise on the higher and more essential demand for public access to those services.

In a report to the ITU, Ernberg (1997) suggested that after initial investments are made, telecentres could provide annual pre-tax profits of US$71,300, or about 60% of total annual revenues. However, some caution is necessary here, as any projections depend on specific local conditions, and the few financial analyses carried out by international agencies use sometimes hypothetical or optimistic revenues that cannot be achieved unless managers are astute commercial entrepreneurs. Some of the analyses also do not take full account of service take-up rates, the affordability of communities, and the need for rapid depreciation and amortisation of equipment common to the commercial ICT environment. Public access by inexperienced users in the harsh conditions of many developing countries may very well call for even more accelerated depreciation. In summary, there is no general business plan for telecentres. Each must be tailored to local conditions - and profits will be determined by those same conditions.

Currently, there is no multipurpose telecentre in a developing country that has proved to be self-sustaining when all the financial factors are taken into account. Many of those centres have been operational for only a short time and challenged by many teething problems. Still, judging from what limited data are available on the financial performance of the telecentres, and from what practitioners and experts have said, the prospect of the centres becoming self-sustaining is rather questionable. A look at the ownership and operating models (below) sheds some light on the reasons for this not-so optimistic outlook. It also shows emerging trends and suggests other approaches that promise to be financially more viable.

OWNERSHIP AND OPERATING MODELS

While telecentres vary in many aspects, one common characteristic is that they are virtually all initiated by development agencies and run by local NGOs. Thus, for example, the info-shops in Pondicherry, India, are funded by IDRC and implemented by the M.S. Swaminathan Research Foundation; the South African Universal Service Agency's telecentres are awarded to "community-based organisations"; the Uganda National Council for Science and Technology (UNCST) manages the telecentres in Nabweru and Buwama, which are funded by the IDRC; and the Nakaseke telecentre in Uganda is supported by the U.N. Educational, Scientific, and Cultural Organization (UNESCO), U.N. Economic Commission for Africa (UNECA), IDRC, ITU and the World Bank.

This mode of ownership is naturally reflected in the operating model - and accounts for some of the problems accruing from it. The objectives of many of the NGOs responsible for operating the telecentres are to foster and facilitate specific development activities. Therefore, the local owners or managers, as non-profit bodies, are not driven primarily to make a commercial success of their centres, nor are they often business-minded or skilled in generating business and revenue. As a consequence, although exceptions exist, there are commonly problems with:

- **Pricing** - Pricing strategies and guidelines are often lacking, and the prices do not reflect the cost of providing the services.
- **Market analysis and business planning** - Proper demand studies and business plans carried out before the establishment of telecentres are often missing.
- **Competition** - Where there is existing infrastructure, local entrepreneurs who provide telecom access and business services are likely to compete with the telecentres. Many telecentres are not prepared for this and, if they provide subsidised services, they distort the market for emerging local entrepreneurs.
- **Human resources** - Many telecentre managers and staff are not appropriately compensated for their work. As well, the centres typically rely heavily on volunteers. Both factors lead to difficulties in motivating and retaining staff.
- **Training** - Managers and staff are often untrained in advanced operations, financial management and customer service.

In summary, telecentres are often seen as supply-driven rather than demand-driven because of their ownership structure and operating model. There is an emerging trend that calls for more demand-driven models, supported with private sector involvement and entrepreneurship. This
trend is also reflected in some [telecenters] notably those located in South Africa, Canada and Western Australia.

CONCLUSIONS AND RECOMMENDATIONS

Many different models for telecentres exist, but the same is not true when it comes to models of ownership, management and financing. Telecentres in developing countries are almost exclusively funded by international aid agencies and are owned and/or managed by national or local NGOs. The private sector is usually only asked to sponsor equipment; it is not offered any other possibility for attractive involvement.

There is great scope for exploring new models of telecentre ownership and financing, and interest in doing that is growing among private-sector telecom and information technology players. This is not to say that telecentres funded by government or aid agencies and managed by NGOs do not have their place. Such centres, although struggling with issues of self-sustainability, are pioneering in this field and will continue to play an important role in testing new services and applications, creating awareness, and incubating ideas and opportunities for rural communities. But they may not provide the model for large-scale replication that is needed for widespread socio-economic development in developing countries where government funds are limited. Only economically successful models are likely to replicate themselves in larger numbers and spread the benefits beyond single locations. New approaches, involving the private sector, are required. But how can commercial telecom and ICT players be attracted into serving the technology-based needs of rural communities and developing countries? The solution is not simple and several avenues may need to be explored.

The PCOs have been encouraged to reach beyond urban areas through a mix of obligations and incentives that offer private sector players an attractive investment opportunity. Similar options and guiding principles for telecentres might be considered. For example:

Demand-driven models – Instead of starting with huge investments and the whole range of possible equipment, services and applications, smaller telecentres could be designed, which would expand and grow only if and when demand and affordability allowed this. Large visions should not be imposed from outside, but astute local business people should be able to sense where good opportunities exist and help maximise both the scale and viability of a telecentre.

Commercial models – Such telecentres could be planned and run on a commercial basis and managed by local and "highly spirited" entrepreneurs capable of developing a business and management system. Preference should be given to telecentre solutions which have a franchise element and can establish a network of telecentres through the involvement of national telecommunication firms and Internet players. The success of the telecentres in Western Australia and Hungary...is partly due to the fact that they are made up of large networks and represent economies of scale for users and providers alike. A network of telecentres under a single management carries the advantage of providing quality standards and support - such as a startup package, an operating manual, recruitment and training guidelines, name branding, and standard payment vehicles (e.g., pre-pay cards) - that increase the centres' recognition nationally and their presence in urban and rural localities. Such support tends to raise the quality of the centres and increase the chances that urban dwellers will purchase pre-pay cards or otherwise finance the participation of their rural friends and relatives.

Rural funds for telecentres – This policy instrument (similar to the universal service obligations, universal access funds or rural funds used around the world to ensure access and services for the rural, poor or otherwise disadvantaged) could provide "smart subsidies" for commercial telecentres in rural areas to help offset the large start-up costs or to subsidise telecentres on an ongoing basis in areas that are truly beyond commercial viability (Intelecon 1999 and 2000).

Other funding options for telecentres - Two examples of options that might be offered by international aid agencies and organisations:

• Micro-loans (say, of up to US$15,000) for local franchisees, entrepreneurs or phone shop operators wishing to start a telecentre business and purchase computer equipment and other advanced ICT equipment to establish small privately owned and operated telecentres.

• Seed finance on matching basis for qualifying national or regional private sector players
wishing to establish or extend a larger-scale telecentre operation into rural areas.

**Multi-sector support**: International development NGOs or agencies aligning themselves with a national telecentre operation could sponsor services and applications that are not self-supporting while the profitable services are commercially run and managed.

**Contracting telecentre facilities** – International development NGOs and institutions, as well as local governments, can be major users of telecentre facilities and services if they involve the telecentre in, for example, an educational outreach, rural development, public governance or health programme. Contracting the telecentre to provide certain public services brings these agencies cost-efficiency gains while at the same time providing the centre with additional revenue. This is being successfully achieved in the Hungarian telcottage network....Basic telephony services can be delivered commercially without major outside investments, if the basic telecommunications access infrastructure exists. Telecentres should not compete with (or be planned in such a way as to reduce the viability of) an existing basic telecommunications retail business that involves local agents and entrepreneurs.

All around the world, the liberalisation of the telecom sector has shown that, with the introduction of private players and market competition, telephone access and services have increased and tariffs have been reduced. That such benefits are also available for the disadvantaged and rural population can be ensured by smart policy and regulatory instruments such as rural funds that entice private players to bid competitively to serve rural areas with the least amount of subsidy.

A similar approach to telecentre development should be explored: one where the private sector and local entrepreneurs are supported and encouraged by favourable policy and regulation to provide to rural areas a range of ICT-based services and applications on a for-profit basis. Such an approach needs the support of international development banks and institutions to kick-start larger-scale deployment with smart subsidy and seed finance. It also needs the involvement of the local community and NGOs who can enrich telecentre services by adding their development assistance. A true public-private partnership is required.

In this spirit, we close by sharing an excerpt from a piece by C.W. Dugger that appeared in *The New York Times* (May 2000), describing a project in rural India where initial steps have been made to involve local entrepreneurs:

One such public-minded civil servant is Amit Agarwal, the creator of the model computer project in the state of Madhya Pradesh. It is Mr. Agarwal who has taken power out of the hands of bureaucrats and given it to village entrepreneurs.

Mr. Agarwal, 29, the chief executive of the Dhar district council, said he believed that while low-level bureaucrats might be tempted to demand bribes, an entrepreneur being paid to provide the records retrieved on a computer would be more inclined to work hard.

He has set up a model project in his district, one of India’s poorest, where young men have a franchise from the state to distribute daily crop prices and commonly needed state records for a small fee.

Mr. Agarwal predicts that revenue-generating computer projects like his will spread more quickly than those that depend on scarce state funds. "This is the paternalistic welfare model that the country has been slowly discarding over the past decade as not having worked," Mr. Agarwal said. Since the project was set up in January, 22 villages have each bought a computer, a modem, a printer and a battery for $1,500 with their own money and agreed to provide a small booth to house the setup. In each case, the state then picked a young person from the village with at least a 10th-grade education to operate the computer and gave him a franchise to sell information from the state’s computer network.

For 25 to 35 cents, villagers buy printouts of documents that they might have spent days trying to get from local bureaucrats: land records, caste certificates and proof of income, among others. For another 25 cents, any citizen can send a complaint to the state by e-mail - my pension didn’t arrive, my child’s teacher didn’t show up, my village band pump doesn’t work - and the state guarantees a reply within a week. And for 10 cents, a farmer can get a printout listing the prices of any agricultural commodity sold at surrounding markets.
At Bagdi village, wizened, sun-beaten farmers filed in to collect the day's price lists for wheat, garlic and whatever other crops they had to sell. They all said their knowledge of the rates improved their negotiating leverage with middlemen. "If the price he offers suits me, I'll sell it to him," said Satya Narayan Khati, who grows wheat on his three acres. "Otherwise, I'll take it to market myself."

In Bagdi, the computer booth is operated by Deepak Patel, 20, a gaunt, lanky son of a farmer. Mr. Patel still helps milk the cows and bring in the harvest, but he prefers his computers. After just a few months, he is already making a good living from the long hours he spends selling printouts. When people come in to e-mail a complaint to the state, Mr. Patel writes out their grievances for them, since most residents of the district are illiterate. In his booth, as in every computer centre visited in Madhya Pradesh and Pondicherry, children crowd in, clamoring for a chance to play on this machine that their elders call a magic box.

TELECENTER CLOSE-UPS
As we discussed earlier, momentum began building since the mid 1990s toward the development of the community-based communication centers as a means of providing access to information technologies. The emphasis among foreign assistance organizations was particularly on reaching rural people in Africa and Asia. So on the brink of the 21st century, communication centers of various kinds were springing up around the world. The principal types as we characterize them include:

Multipurpose Telecenters. Telecenters tend to be in the public sector, operated by governmental bodies or non-governmental organizations (NGOs). Generally they serve a low-income clientele, and have a community development mission. Typically, telecenters offer a broad range of communication services related to the needs of the community, some of which are free or subsidized by external bodies such as governments or NGOs. Examples include the Community Learning Centers in Ghana and the Universal Service Agency's telecenters in South Africa (see accompanying box). Along with computer and Internet access, services might include: desktop publishing, community newspapers, sales or rental of audio and video recordings, book lending, training, photocopying, faxing, and telephone services. Some – like the Hungarian telehouses and the Western Australia's rural telecenters – provide postal, banking, employment and other services. The following case study from Making Waves provides a close-up view of a rural telecenter in Africa.

THE NAKASEKE MULTIPURPOSE COMMUNITY TELECENTER IN UGANDA
Snapshot
After the 60 kilometre drive up from Kampala the last 16 kilometres along a dusty gravel road it is quite soothing to enter the cool and spacious library hall, the largest room in the Nakaseke Multipurpose Community Telecentre and Library.

A young primary school pupil is writing an exercise in English, equipped with a huge dictionary; a secondary school student is preparing a thesis on agriculture and has borrowed a book on sustainable agriculture in the tropics; a young man has come into the library to read yesterday's newspaper a few months ago there were no newspapers in Nakaseke at all. In a corner of the library hall two young women, assistant librarians, are crouched in front of a computer. They keep track of the more than 3,000 books from the library; the service is used by an average of 45 people every day.

There are other computers for the users of the centre. Crammed together in a small room I find three computers and three young persons all very busy practising Microsoft Excel. These young people belong to the group of "volunteers", from the local community who have agreed to train the villagers in computer use after having received free computer training themselves.

Part of the training is in Internet use, e-mail and Web browsing. This training has a slightly "artificial" touch to it, since there is no connection to the Internet. The telephone line, which is supporting the telephone and the telefax machine in the centre, is not of a sufficiently good quality to support data transmission.
As I am talking to the young and ambitious people about the computer training there is a power cut and the computers go "black", the back-up power supply is not yet in place. Thus, my visit to Nakaseke does indeed testify to the necessity of the supporting infrastructure in terms of electricity and telecommunications before a rural community can be adequately equipped with computers.

On my way out through the library hall I notice that the students are still busy working the books have not stopped providing information, power cut or not!

— Mona Dahms, discussing a visit to the Nakaseke MCT Pilot Project, July 1999.

DESCRIPTION

Life has changed in Nakaseke, which is 64 kilometres north of the Ugandan capital Kampala, and 16 kilometres from the nearest town, Wobulenzi. Now a modern telecentre and library, complete with textbooks in English and the local language, Lugandan, serves not only the local people, but also the 24 neighbouring primary schools, four secondary schools, a primary teacher's college and the nearby hospital.

The Nakaseke Multipurpose Community Telecentre started in December 1997 as a project aimed at introducing new information services to the rural areas of Nakaseke and Kasangombe in the Luweero District of Uganda. The project aims to demonstrate that providing information and communication to rural communities catalyses the development process and results in improvement of the quality of life of rural communities. The Nakaseke Telecentre is part of a chain of five UNESCO/IDRC/ITU-supported telecentre projects initiated in Benin, Mali, Mozambique and Tanzania.

The services offered by the multipurpose telecentre include computer applications, training, Internet, e-mail, photocopying (the most popular), telephone, fax, a library, video shows, newspapers, audio recordings, and community listening areas.

The Nakaseke MCT and Library Pilot Project is equipped with eight computers, two telephone lines, one fax and a photocopier. A land telephone line was brought from 16 kilometres away. The building was donated by the community and renovated to an acceptable level for project work. Power was never supposed to be any problem if it were not for frequent load shedding; an inverter and a set of deep cycle batteries were, therefore, installed to provide power back up. A generator was not favoured for this purpose because of its relatively high running costs in terms of fuel.

To ensure that the core group of trainees who were selected to learn the computer programs so they could in turn train the rest of their community had the backing of their community, community members were first asked to approve the selection of the 24 people for the free-of-charge programme. The language of instruction was a combination of Lugandan and English. The trainers were a group of very young people from Uganda Connectivity, a group concerned with Internet access.

The telecentre aims at serving the entire communities of Nakaseke and Kasangombe but most particularly the following core user groups: women, youth, children, the medical community, workers, teachers, students, farmers and local leaders. The content and programming for the telecentre is therefore primarily tailored towards meeting the needs and aspirations of its core target groups.

The early users of the telecentre services were teachers and students who wanted photocopy services and a good resource centre; health officers who often need a reference library; business people with the interest of communicating with others in the capital city; women in development groups who wanted to enhance their work by getting information on videos; community members, elders and opinion leaders with the interest of reading newspapers. Following specific requests by users, other services have been introduced like feature films every Friday afternoon, game facilities in the evenings, functional adult classes and radio listening for particular groups.

In addition, preparations commenced with UNESCO for a pilot teledmedicine application within the TeleInViVo project of the European Commission, involving an inexpensive, light and mobile teleconsultancy station able to support a large range of radiological applications. Data collected
Advocacy And Interventions
by Royal C. Colle

BACKGROUND & CONTEXT

Nakaseke is located approximately 50 kilometres north of Kampala and 16 kilometres from Luweero. It has a population of 31,004 (1991) out of which 15,617 are women. The Nakaseke town centre itself has a population of 3,000 people.

Most of the people are Baganda, the biggest tribe in the central part of Uganda. The community is largely oral and doesn’t have a credible reading culture. Until the telecentre started, there were no newspapers available, they were available at the next town which is 16 kilometres of a rough road away.

Farming in coffee, bananas, livestock raising, small-scale swamp fishing and horticulture is the main economic activity, and Kampala offers the biggest market for local produce. About 90 percent of the farmers use traditional farming methods and techniques.

There are 23 primary schools and four secondary schools in the subcounty. Nakaseke subcounty has a total enrollment of 2,935 boys and 3,329 girls in 79 classrooms according to 1999 local administration records; 59.2 percent of the Nakaseke community is literate which is largely limited to local Lugandan language. Many schools in the area have neither adequate educational facilities nor a library. A Primary Teachers’ Training College has been built in Nakaseke.

Nakaseke has 7 health units including a 100-bed hospital, 5 doctors, 6 medical assistants, 23 midwives and 33 nurses. The hospital is connected to other health units by a radio. Access to clean water is possible through a network of 28 bore holes and a protected spring.

ASPECTS OF SOCIAL CHANGE

The Nakaseke MCT and Library Pilot Project has revitalised the life of this rural community in Uganda. The community (42 villages and 3 households) is gradually understanding the importance of information, as evidenced by the growing number of people inquiring about a variety of issues. Farmers are now requesting market rates and general trends on crops they grow. The daily newspapers at the telecentre have also helped to keep the community up-to-date with what is going on in the country. The obvious purpose of the pilot project isn’t to test out a new technology but rather to test a new service.

Computers in Nakaseke are no longer strange and mysterious machines. The telecentre has demystified computer communications to some extent through training and general awareness programmes. Over 6 community members have now been trained in computer communication services at the telecentre, which has led to the growth of a core group of skilled people within the local community.

There are a number of lessons learned and documented for future telecentre development. Management systems have been tried and established for sustainable telecentre operations. The telecentre has proved that MCT in rural areas is useful for development. A good number of development groups have visited the multipurpose telecentre with a view of establishing similar ones in other areas.

MEDIA & METHODS

The community has been at the centre of the planning and execution of the activities of the multipurpose telecentre. A local steering committee representing each of the core target groups was elected by the community to supervise the telecentre’s daily activities, liaise with the management committee and mobilise the community.

The telecentre is governed at the top by a management committee chaired by Uganda National Commission for UNESCO; other members include the Uganda Telecom Limited and the Public Libraries Board. The Committee is responsible for overall policy and planning, for staffing and as a liaison with international partners.

Information materials such as brochures and posters, translated in Lugandan to ensure maximum comprehension, were printed and distributed. Traditional communications systems were used during the awareness and consultation process. To ensure that the community
opinion leaders send the right message to the community, "A Guide for Community" was developed, complete with illustrations and all the information that a mobiliser should know about the telecentre.

Advertisements were aired at timed intervals on "Radio Nakaseke": a simple combination of an amplifier and two low-watt loudspeakers tied up on a limb of a tree raised a few metres above the host shop.

**CONSTRAINTS**

The telephone connection was the most problematic component. The land line telephone system stopped 16 kilometres away from the telecentre site. Although the project provided for a special telecom system, it would not be envisaged in a short period. It was decided that a landline be established to run 16 kilometres to the telecentre. The plan provided limited voice connection to the telecentre, but data application has remained difficult to get through because of the poor quality of the telephone line.

Internet and e-mail are the least utilised services at the multipurpose telecentre. People do not use the Internet because it is not yet relevant to their daily life; there is a critical need to develop content specifically for Ugandans. Telecentres should not be looked upon only as places to make a phone call or make photocopies. There is a need to tailor smart attractions for users and get them interested in the new services with a mix of information materials, both print and electronic.

According to Mona Dahms, telephone and photocopying are the only services offered by Nakaseke MCT which can be used by the "target population", the "uneducated" farmers who constitute the majority of the community population. Thus, a reflection on just who the actual beneficiaries are of the telecentre seems justified, she adds.

**REFERENCE**

*Tracing How Far We Have Come* by Meddie Mayanja, Project Officer, Uganda National Commission for UNESCO.


**Cybercafés**

The commercially-oriented cybercafés that are found on streets adjoining China's Tiananmen Square to communities in Senegal and Zimbabwe have been an equally energetic movement. They are usually in the private sector and focus more narrowly on providing customers with the use of computers and connections to the Internet and the Worldwide Web. Often the principal attractions at the cybercafés are computer games and e-mail. In Senegal, Nigeria and many other countries computers are being added to private sector phone shops and public call offices. Cybercafé clients tend to be more urban, more educated, and more economically well-off than the clients of community telecenters. The Internet service provider mentioned earlier called AfricaOnline built a franchise system of more than 700 cybercafés spread across Cote d'Ivoire, Kenya, Uganda, Tanzania and Zimbabwe before discovering that they could not generate enough income to survive.

**IAP.** Information access points fall between the cybercafé and telecenter approaches. As they focus on Internet and network services, they emphasize the opportunity for the community to seek information. The most dramatic example is Canada's Community Access Program (CAP) that established 10,000 access points in rural and urban areas across the country between 1994 and 2001. Computers and network connections were placed in community centers, libraries, schools, and other public places in order to make Canada “the most interconnected country in the world.”

Canada's success energized other national IAP initiatives: in 2002, the Government of México designed a network of Centros Comunitarios Digitales (DCCs) as part of its Sistema Nacional e-México. The Government's plan was to have more than 12,000 DCCs by 2006, covering 75% of the nation's population. Across the world, IAPs play a substantial role in India's program to bring ICTs to all its 600,000 villages and in the

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ITU-led initiative to Connect the World, an effort to connect about one billion people in 800,000 villages or 30% of all villages worldwide who are without any kind of ICT connection except possibly through radio broadcasting. In India's state of Tamil Nadu, the project called Sustainable Access in Rural India (SARI) initiated a plan to establish "tele-kiosks" in up to 100 villages in Madurai District as the first phase of an initiative that will see thousands of IAP kiosks flooding villages all over the state. With a view to ensuring greater citizen-Government interface and facilitating public access to Government information and e-Services, the state government of Orissa in India is implementing a scheme that would entail the setting up of 1,000 information kiosks in urban and semi-urban locations spread across all the 30 districts of the State.

IAPs sometimes are reinforced by sectoral organizations such as those in health and agriculture that build special information systems. An example is the World Health Organization which has set out a seven-year plan to establish the Health InterNetwork Project. It is an initiative to facilitate the flow of health information worldwide using Internet technologies. Among its provisions are (1) making available reliable and relevant local and international public health content and (2) establishing 10,000 to 14,000 new public health information access points linked to an Internet-based HealthInterNetwork portal. Similarly, we are beginning to see kiosks and terminals devoted to linking citizens more closely to government information and communications—a service we noted earlier as e-Governance—and illustrated by a system in India where once hard-to-get land records are now easily available in Karnataka state via self-serve computer and net-equipped public kiosks.

All three of these approaches to shared facilities depend for their ultimate success and sustainability on being demand-driven. Whether it is the situation reflected in the assertion that "Widespread rollout of telecenters...can be achieved only by mobilizing private sector entrepreneurship and investment" or that telecenters should get the same kind of public support (funding) given to libraries and other "public goods" kinds of community institutions, telecenters, cybercafés and IAPs must serve the needs of a substantial portion of their host communities’ population. As we have learned from the general demise of public extension systems around the world, even government support is not likely to be sustained, especially in difficult economic times, if there is not visible evidence of community patronage and benefits from these community enterprises.

Driving the movement

Several forces have been driving this telecenter movement. These include:

(1) Communication helps rural development. The assumption that information and communication technologies contribute to development is widespread. Many influential people and organizations believe that both evidence and logic point to the important role that communication plays in rural development. We reported on some of these earlier in this chapter. Linked to this assumption is the hypothesis that communication centers contribute significantly to providing the information exchanges that contribute to a community’s development. We use the word hypothesis, because, as we shall see below, some major international organizations such as the International Telecommunications Union (ITU) are approaching the establishment of these telecenters as a research-and-development activity.

(2) Being part of The Information Society is an important goal for nations. Many leaders believe that access to ICTs is essential to becoming part of the Information Society, which some believe is a sign of a 21st century nation. For example, a Government of India Action Plan proclaimed:

The Government of India, recognising that the impressive growth the country

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34 Warschauer, pp. 175-177.
has achieved since the mid-Eighties in Information Technology is still a small proportion of the potential to achieve, has resolved to make India a Global IT Superpower and a front-runner in the age of the Information Revolution. The Government of India considers IT as an agent of transformation of every facet of human life which will bring about a knowledge-based society in the twenty-first century.

One of the ways to become part of the Information Society is to join computers, telecommunications, and the Internet — and telecenters represent one highly visible and public mechanism for doing this. And telecenters are a place where people can use the newer technologies such as computers and mobile phones along with recordings, books and various traditional media.

(3) Information technology is a new opportunity for creating small telecommunications business enterprises. Thousands of small entrepreneurs, some with hardly more than a telephone receiver and a small shelter, have set up businesses for selling telephone service. In Bangladesh, the Grameen Bank mentioned earlier has funded systems that provides cellular phone technology and encourages low income women to start their own telephone service enterprises. The IDRC’s Gaston Zongo reports having counted 9,000 quite sparse telephone kiosks just in Senegal, where, he says, they have opened up job opportunities for some 20,000 people.” In some cases these small ICT enterprises are the forerunners of more comprehensive communication centers, and they introduce communities to the benefits of using information and communication technology.

In an October 1999 meeting in Addis Ababa of a special interest group in the African Development Forum, concern was expressed over the larger “donor-funded telecenters” which are seen as too large and unsustainable. “Certainly,” it was reported, “they are not a model that can be reproduced across Africa. The report went on to suggest that there are many thousands of smaller phone shops that are generally entrepreneurial and quite successful. One means to providing greater access to ICTs across Africa, the report says, would be finding ways of supporting ‘migration’ of phoneshops to include fax, then computers, then email, then Internet, then other information services as required. (Discussion summarized by Peter Benjamin, email November 11, 1999.) This appears feasible because of the dramatic technical advances in communication and computer hardware in the last decade, along with the interest of many governments in privatization and micro-enterprises.

(4) The market potential. The market for computers and other information technologies in Asia, Africa and Latin America is enormous. Computer and telecommunications companies are working with governments to promote the ICT invasion of the developing world. This builds, for example, on government policies such as those in China where the year 2000 was the target for having a telephone in each of its 730,000 villages.37

(5) Universal access is a step toward universal service. National governments and international agencies such as the ITU recognize the difficulty in providing each Third World home with a telephone or other telecommunications connection in the foreseeable future. However, the need for information services makes it vital for governments to seek the universal access alternative through such devices as telecenters. Even where the Internet is perceived as a potential political liability, governments such as China recognize that the Internet is too important to their economic modernization to cut it off.38

Van Crowder notes that services offered by telecenters are a part of the solution to problems that rural communities and partner organizations aim to solve. By providing access to accurate and timely information “telecenters offer communities opportunities to:
• reduce the isolation and marginalization of rural communities;
• facilitate dialogue between rural communities and those who influence [them], such as government...planners, development agencies, researchers, technical experts, educators, etc.

• encourage participation of rural communities in decision making which impacts their lives;
• coordinate development efforts in local regions for increased efficiency and effectiveness;
• share experience, knowledge, and ‘lessons learned’ with other rural communities to address
  issues within local contexts;
• provide information, training resources and programs when needed in a responsive, flexible
  manner; [including, for example, resources related to agriculture, health, nutrition, and small
  business entrepreneurship];
• facilitate ongoing development initiatives aimed at solving a variety of problems;
• improve communication among stakeholders, thus overcoming the physical and financial
  barriers that often prevent researchers, extension workers, farmers and others from sharing
  knowledge and competence.”

In addition to the development-oriented roles suggested by Van Crowder, communication centers might provide contact with distant friends and relatives, and recreational opportunities through videotapes and other entertainment media. Also, a common function of telecenters has been to familiarize people with ICTs and train them in their use.

Telecenter Innovations
With telecenters emerging daily around the globe, it is difficult to monitor the many innovations that are being explored. However, here are some examples.

1. The LearnLink Project
The US Agency for International Development funded communication centers through its LearnLink program whose activities range from improving girls’ education in Egypt to various applications of the World Wide Web for education. Between 1996 and 2003, the Academy for Educational Development in Washington implemented nearly 20 information, communication, and technology activities globally to support socio-economic development. Activities spanned 17 countries in three continents and strengthened work in sectors ranging from basic education to teacher training, professional development, participant training, lifelong learning, economic development, municipal networking, health, and institutional and organizational strengthening. Its web site (http://learnlink.aed.org) provides lessons learned from the field including the models of use, case studies and concept papers. LearnLink used culturally appropriate communication and educational technologies to strengthen learning systems essential for sustainable development. This included using technologies to link individuals, groups and organizations, and to build the capacity of people to access the resources they need to meet their learning needs, particularly those associated with basic education. Of particular significance to this chapter is LearnLink activity in the development of Community Learning Centers (CLC) in Ghana and Paraguay, and Community Networking Services Centers (CNS) in Benin – all operated by NGOs.

In Ghana, the NGOs use the name Community Information Center (CIC). CICs provide public access to information on the Internet as well as training to use the computer and other ICTs. Each of Ghana’s three pilot centers operates under the auspices of a community development and training NGO. One CIC is in Kumasi, operated by the Center for the Development of People. A second is in Cape Coast, operated by the Central Region Development Commission, and the third is handled by Partners in Internet Education, a group originally organized by teachers to promote the use of computers and the Internet for education.

In its design, each CIC was equipped with a local area network and shared high-speed access to the Internet. Each CIC also contains a library of printed materials and a room for the public to improve computer literacy and learn about information resources available on the Internet. Staff is available to help visitors learn to use the Internet. NGOs are expected to operate CICs on a cost-recovery basis. The Centers organize training programs for the public and they organize public seminars on topics related to the Internet and ICTs. This consumer-oriented approach is important in developing a steady clientele whose use by customers will influence the sustainability of the Centers, which are expected to be

In Benin, a CNS Center was established in a facility for agricultural training. This center is sustained, in part, by the profits of a restaurant that is associated with the training center. Two additional sites will be established in Benin.

For a perspective outside of Africa, in Paraguay, the Municipality of Asunción was seeking to provide basic education along with communication and information services to less advantaged citizens through 12 CLCs housed in public buildings and municipal centers throughout the city. Built on the idea of simple business centers which offer a variety of electronic and communication services, the CLCs emphasize the educational and civic development benefits of computers and communication technology, and, more specifically, their ability to increase access to basic education resources, life-long learning opportunities, and information and services from municipal sources.

Among the questions raised by project leaders in these projects are:

- How can these kinds of centers for community outreach and training be made relevant and useful?
- How can monitoring and evaluation be most effectively carried out?
- What are the appropriate base-lines and evaluation data?
- What impacts should be measured?
- And, what are the most feasible means for assuring economic sustainability of the centers?
- What kind of training is appropriate for the centers' staffs? (Personal communication from Steven Dorsey, AED)

Digital Opportunities for Development: A Sourcebook for Access and Applications

This sourcebook is a culmination of LearnLink’s key lessons and results. Its purpose is to share the project's experiences and insights broadly with development partners, planners and practitioners and with USAID and other donors around the world. Featuring six "models-of-use" that describe technology applications, it provides practical guidelines and strategies for assessing, implementing, monitoring, evaluating, and institutionalizing ICT-based activities supported by illustrative examples within each model.

The book can be downloaded free at [http://learnlink.aed.org/Publications/Sourcebook/home.htm](http://learnlink.aed.org/Publications/Sourcebook/home.htm).

2. Schools and telecenters

The World Bank Institute pioneered a program in the late 1990s to link students and teachers in more than 20 developing countries via the Internet for collaborative projects and integration of technology into learning and, as part of the process, help teachers and students learn to use information and communication technologies. An important complement to this activity, identified officially as World Links for Development (WorLD), was the creation of school-based telecenters that would be open to the community after the close of the school day and on holidays. The project established some 800 Community Learning Centers (CLC) across the developing world.

In Africa, the first CLCs appeared in Zimbabwe in 1999. In Bindura's Center, one of 13 in the country, there are 10 networked computers, a printer, modem and Internet dial-up connection. The dual-use character of the Center is important to Bindura because the small fees paid by the community for services help support the recurrent costs of hardware maintenance, power, supplies and connectivity.


[Note: While TechKnowLogia has discontinued publication, its archives are still available on line and are worth exploring for a wide variety of topics related to information technology and development.]

41 In 2003, approximately 200,00 students and teachers in those countries were collaborating over the Internet with partners in 22 industrialized countries on projects in a variety of disciplines (WorLD 2003a).
Dual-use telecenters in Africa

You can get to the Bindura-World Links for Development (WorLD) Internet Learning Centre by driving 100 kilometers north from Harare, Zimbabwe and then walking up two flights of stairs within the Ministry of Education, Sport and Culture’s regional offices. ... Established as a successful partnership between the Zimbabwe Ministry of Education, Sport and Culture and the World Bank-sponsored Zimbabwe-World Links for Development Program (WorLD), Bindura is one of a series of thirteen school- and community-oriented centers that were opened in 1999. Each center is equipped with Windows and Office ‘95/98 software, 10 networked computers, server (running Windows NT software), printer, modem and Internet dial-up connection.

Of the thirteen sites selected, three are located within secondary schools, nine in educational resource centers, and one is a mobile van. At least one center is located in each of the country’s nine provinces. Bindura’s center is located in the provincial capital of Mashonaland Central, a relatively large region that includes several mines.

Similar to the model adopted by the other Zimbabwe-WorLD sites, Bindura’s is a successful model of a dual-use telecenter – i.e., serving students and teachers in the surrounding schools during the day, and the general community and adult learners in the evenings, weekends, and holidays. The latter audience is an important source for the center’s financial sustainability. By paying a nominal fee for training and access, they are underwriting the recurrent costs of hardware maintenance, power, supplies, and connectivity.

The Users

The approximately 180 pupils and teachers served over a 12-week term at the center, arrive either by foot or bus from nine surrounding primary and secondary schools. Jingo and Felix [the telecenter leaders] then provide these earnest learners with instruction in computer literacy, software applications (e.g., Word, Excel, PowerPoint, desktop publishing) and online collaborative projects, which will link these students with their peers around the world via the Internet. Because so few students in this low-income community have received computer training, it was decided that during these school hours, there would be no charge for student tuition.

Adult learners are also important center beneficiaries and constitute 50 percent of the total clients served. They arrive as individuals or in groups in the after school hours – evenings, weekends and school holidays, and receive instruction in operating systems, software applications and to do research via e-mail and the Internet. Specific client groups served include education officers from the Ministry of Education, lecturers from the nearby Bindura Technical University, and students from the Zimbabwe Open University (ZOU)....

The 300 Zimbabwe Open University (ZOU) students who have accessed the center so far are part of an exciting partnership between ZOU and Bindura-WorLD. A memorandum of understanding signed between the two allows all locally enrolled ZOU students who are taking a course which has a computer component, typically those doing B.Sc. Agriculture, B.Ed, B. English and Communication, to receive instruction and use the center for their research and communication. In exchange for ZOU paying the student’s tuition, the center stays open from 9 – 4:00 on Saturdays and Sundays. In the future, ZOU hopes to use the center for their students to receive and submit their assignments using e-mail and Internet.

Surprisingly perhaps, but borne out by other WorLD country assessment studies, a majority of these users, approximately 70%, are women.


projects,\textsuperscript{42} gives us a close-up look at the service and the clients of the Ugandan as seen shortly after the School Based Telecenters opened there in 2002.

\textbf{School-Based Telecenters in Uganda}

The School-based Telecenter (SBT) approach developed out of a combination of motivational factors. In Uganda’s rural communities like most parts of Africa, there is general lack of basic ICT infrastructure. By the end of 1998, Multi-purpose Community Telecenters (MCT) pilot projects had been launched with the support of IDRC/ITU/UNESCO at three different sites in Uganda. The broad mission of the MCTs was to study the efficacy of use of ICTs to promote rural community development.

Early impact assessments and studies about the MCTs indicated steep challenges in management, content generation and sustainability, among others. It had also become clear that ICT community access points were more relevant to the community if the target community was allowed to participate in planning and implementation in appropriate means. Connectivity for MCTs deep in rural areas had by 2000 proved a serious challenge to overcome through ordinary technologies.

In Zimbabwe, the World Links program\textsuperscript{1} was at the same time experimenting with another approach -- School-based Telecenters -- with a twin objective of introducing ICTs in the process and delivery of educational content and also providing communities with access to communication facilities and ICT training in the after-school hours, evenings, weekends and holidays....

A national SBT project was formally started in Uganda in September 2001 with a revised week-long training program. This training, delivered to headmaster representatives from fourteen secondary schools and one national teachers’ training college, was partly built on the Zimbabwe experience but also crafted to accommodate a different national setting, local MCT experiences, and an innovative technological pilot opportunity – a national satellite network to deliver high-speed Internet to schools in peri-urban and rural areas.... The schools raise funds [to support the network] from charging students termly tuition fees and other community user fees. On average, each student pays US $18 per year. A typical secondary school has between 800 and 1000 students around the year.

Lowering the “student” user cost is one of the principal objectives for establishing a school-based telecenter. These sites will traditionally provide computer and Internet-oriented training and services rather than the basic telephony or other client facilities (e.g., photocopying, fax) featured at most MCTs. The principal differences: the site location within schools, whose fundamental mission is to enhance educational outcomes, supporting income from government and student fees, and the principal donation of hardware and software by project partners to achieve these goals. The attractiveness of the school-based telecenter model is building upon these foundations – and then reaping the added benefits: maximizing resource use in after-school hours, greater community-school linkages, additional income to meet recurrent and expansion costs, and the ability to sustainably add further technology-based services over time.

Generally, the computer- and Internet-based services vary depending on the needs and sophistication of the community. All these telecenters train students and teachers in the use of the computers and Internet supported facilities as tools for learning and teaching. Lango College Telecenter in Lira District and Kigezi High Telecenter in Kabale also receive a number of community users for Internet supported services.

At Duhaga Telecenter of Hoima District, the user records for the last month indicate that there are clients from the community who have used the Internet to search on health, farming and business issues (e.g., rice prices; the area is known for upland rice growing). Ndeje Secondary Telecenter in Luwero district provides access to community institutions. For example, Ndeje University is one of the principal users....

In addition to general community users, selected SBTs will pilot high impact knowledge services

\textsuperscript{42} These were supported by Canada’s International Development Research Center, UNESCO, and the International Telecommunications Union.
for specific client groups. These include Telemedicine for the Moroto High Telecenter and E-commerce for Kigezi High Telecenter....

At the school level, every SBT has a local ICT Coordinator who also doubles as a classroom teacher. A few telecenters have ICT Coordinators who are not teaching staff. The role of the coordinators is to oversee the daily operations (both technical and pedagogical) of the Telecenters and keep communication with other partners open at all times. All SBTs have management committees charged with the task of designing broad program direction. Different users are represented on this committee and particularly teachers, Board of Governors and Parent Teachers Associations (PTAs). The Head teacher is normally an ex-officio to the management committee....

School-based Telecenters have overcome one of the biggest challenges of the Community Telecenters -- administrative stability. The SBTs take advantage of the host schools’ administrative detail, which have contributed to sustainability planning.

This approach helps to provide the community with access to ICTs facilities without necessarily carrying directly the total burden of management and operation of the facilities. Instead the community meets the cost indirectly but also collectively through the tuition fees of their children. The host school transfers such fees to the operation of the Telecenter and charges some user fees at the point of service to augment the operational budget....

Regarding community access to the Telecenter, the IT coordinator at Kigezi High Telecenter, Ms. Gloria Akatukunda reported in April 2002 that “…Our out-of-school market still remains for people who want to send and receive email although there are some few people who do research....” While in Duhaga, the clients include doctors, nurses, accountants, forest officers, pastors from various churches, students on vacation and farmers....

Personnel who double as class teachers manage most of the planning and implementation of the SBTs. This often puts a lot of pressure on them, which can subtract from their traditional teaching loads and leave inadequate time for the effective management of the telecenters in the after-school hours. Further reducing teaching loads and/or underwriting full-time managing staff to alternate between day and after-school use are possible solutions being explored to this problem.

An early challenge has been fitting relevant services for the community within the context of the school-based Telecenters. World Links and SchoolNet-Uganda staff will continue working with the schools to help them identify client and service opportunities, particularly those unique to their location and communities.

Source: *TechKnowLogia*, July-September 2002

http://www.techknowlogia.org/welcome.asp?IssueNumber=17

### 3. Radio broadcasting and community multimedia centers

Community radio has begun to emerge as a newly discovered medium in parts of the world that have historically had centralized, government run radio systems. Recognizing the surge of activity related to democratization and decentralization that marked the 1980s and 1990s, UNESCO produced a *Community Radio Handbook* that shows how to get a station started, and the technical, programming and legal aspects of operations. It can be downloaded from the web at no cost.43 The distinguishing aspect of these stations is their emphasis on local affairs and on reflecting the local cultural context. The character of community radio outside of the highly commercialization local radio in industrialized nations can be seen in case such enterprises as Radio Olutanga (Philippines), Radio Sagarmatha (Nepal), Radio Ada (Ghana), Bush Radio (South Africa) and Radio Chaguarurco (Ecuador). Each of these is described in case studies in *Community Radio Handbook*. An excerpt of the Radio Ada case study appears at the end of this chapter.

43 [http://www.unesco.org/webworld/publications/community_radio_handbook.pdf](http://www.unesco.org/webworld/publications/community_radio_handbook.pdf). The authors are Colin Fraser and Sonia Restrepo Estrada. The handbook has been published in several languages including Thai and Arabic.
In a closely related development, UNESCO is leading an effort that combines telecenters and community radio to offer communication and information support for grass-roots development. “Radio browsing” is a feature of this system. The first Community Multimedia Centres (CMC) opened in mid 2001 offering computer training, email and office services such as scanning, fax, and document binding. Radio programs promote the telecenters’ services. At a 2-day roundtable meeting in Dakar in mid-2003, a group of bilateral donors, foundations and development agencies committed some US$1.2 million for the program, an approach that built on the strategy of the New Partnership for African Development (NEPAD). Now there are CMCS in about 50 countries on three continents, and, according to UNESCO, since October 2004 with support from the Swiss Agency for Development and Cooperation, 21 CMCS have been established in Mali, Mozambique and Senegal. More than 40 additional ones were planned for start-up before the end of 2006. Networks of at least 50 CMCS will be established within national ICT frameworks in each of these African countries by the end of 2008. As the centers mature, they are expected to offer a range of learning opportunities and services specifically designed to meet local development needs. To support the CMC movement, UNESCO has produced the booklet *A Guide to Community Media Centres, How to Get Started and Keep Going* which is mentioned in footnote 42. In the accompanying box we get a picture of the start-up operation of a CMC in Africa.

### A Visit to the Vakon Community Multimedia Centre in Benin

Project description: This project aims to create an Internet access point for the rural population (farmers and, above all, students) of the administrative district of Vakon, Benin. This cybercafé with a minimum of 20 computers connected to the Internet will also serve as a training centre for the rural populations. In addition to reducing the area’s isolation, the cybercafé will contribute to agriculture & rural development by providing opportunities for local people to enter into contact with other farmers, exchange seeds, and seek partners around the world.

CPAAD-BEN, the body implementing this project, also plans to create a community radio that will facilitate communication and the exchange of ideas within the rural community concerned, as well as with the rest of the world. The programmes broadcast will focus essentially on rural and community development issues. They will include civic education-related programmes, but also programmes on new farming techniques and other methods of development, programmes aimed at promoting literacy, and information campaigns on STDs and HIV/AIDS.

The preparation of the CMC building was originally planned to take between 1-2 months, but it has taken longer, and this may delay the overall implementation of the project. This is not unusual since communities usually need time to mobilize and to contribute to this kind of projects. However, close monitoring will now be necessary. Additional computer equipment from other donors, such as La Francophonie has not yet arrived. The late arrival of this equipment will not affect the establishment and functioning of the CMC, as its purpose is only to increase the CMC’s capacity.

The broadcasting frequency has not yet been allocated; it is expected that this will be done when the suitcase radio is delivered, as the relevant Ministry needs to inspect the equipment as part of the licensing process.

On the whole the project is on track with slight delays. (December 2005).

Source: [http://www.unesco.org/cgi-bin/webworld/ipdc/cgi/page.cgi?q=Detailed%2F2F891.shtml&d=1](http://www.unesco.org/cgi-bin/webworld/ipdc/cgi/page.cgi?q=Detailed%2F2F891.shtml&d=1)

Especially significant in the CMC movement is the incorporation of the “Kothmale model” into some of the centers, including the idea of “radio browsing” that combines the potential of radio broadcasting and browsing of information resources on the Internet. The Kothmale model, which was introduced in Chapter 1, comes from a project in Sri Lanka, where UNESCO supported an effort to link radio, the Internet and community centers. Here is a brief description of that innovative project as presented in Alfonso Gumucio’s *Making Waves*.

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Much poverty in Asia is concentrated in rural areas that have very limited access to information. New technologies can help alleviate poverty by providing access to development related data; a combination of traditional community radio and the Internet helps optimise the information services in rural areas.

The Internet is increasingly used for broadcasting radio programmes. The Kothmale Community Radio Internet Project (KCRIP) in Sri Lanka, which aims at assessing the potential benefits of new communication technologies to remote areas, is implemented by UNESCO in collaboration with the Sri Lanka Broadcasting Corporation, the Ministry of Posts, Telecommunications and the Media, the Sri Lanka Telecommunication Regulatory Commission, and the University of Colombo. Kothmale is located in the central part of Sri Lanka. It takes a three hour bus ride from Colombo to reach the location. *Kothmale Community Radio* serves an area of 25 kilometres radius, which includes a number of rural towns such as Gampola, Nawalapitiya and Thispane, with an estimated population of more than 350,000. The project uses community radio as an interface between the Internet and rural communities. While UNESCO provided computer equipment and training, the Sri Lankan government, through its Telecommunication Regulatory Commission, provided the Internet connectivity to the community radio station through a dedicated 64 kilobyte line.

Three computer access points were established at different community centres. The telecommunication costs for dedicated Internet access at the community radio station and the other two access point are absorbed by the government for a two year period within which community radio will have to develop an income generating strategy to sustain the facility. This would mean that the community radio station would have to generate additional income of US$1,000 per month.

The project has incorporated computer classes and Web design with the assistance of Institute of Computer Technology (ICT), a volunteer worker from Australian Volunteers International (AVI) and radio staff at Kothmale FM. A Web design team has built the *Kothmale Community Radio* Web site in three languages; it will also include a live stream of the radio broadcasts.

There are three basic features of this project which combine new information technologies with the conventional radio medium:

**Radio programme to Radio Browse the Internet:** Broadcasts a daily one-hour radio programme, in which community broadcasters interpret information from selective Internet Web sites. Listeners direct queries to the radio station to find specific information, which is returned in local language for those who do not understand English.

**Community radio functions as a mini Internet Service Provider:** The community radio station has provided two free of charge Internet access points at Gampola and Nawalapitiya community libraries. Access points are also used as a direct link to the radio station to produce and air live programmes.

**Community database development:** Kothmale develops its own computer database deriving information from the Internet that is often requested.

**BACKGROUND & CONTEXT**

*Kothmale Community Radio* began broadcasting in February 1989. At the time Mahaweli Authority (a governmental development body operating in the central region) had relocated more than 2,900 families for Sri Lanka’s second largest damming project. Mahaweli Authority set up the station with the objective of giving information to people who had been relocated. Many people in the region lost their crops and farm land. The station was also used to provide information about self-employment and health.

By February 1991 the station was on-the-air only three days per week with three hours of transmission per day. In 1999 the station moved to its larger, current location in Mawathura and broadcast time extended to 8 hours per day. The morning broadcast was commercialised so the station would collect approximately 75 percent of its operational costs from commercial revenue. Financial management remained with the Sri Lanka Broadcasting Corporation.
By 1998 UNESCO provided US$50,000 to start the implementation of the Internet component. Thus the *Kothmale Community Radio* Internet Project (KCRIP) was born. KCRIP has aspired to provide extensive Internet access to remote and rural regions of Sri Lanka using only a few computers and a regional radio broadcast.

The station is located at the top of a mountain in the central region of Sri Lanka. The area is mostly rural with small farms, rice paddies and tea plantations scattered between dense rich green forest and small friendly villages.

**ASPECTS OF SOCIAL CHANGE**

Students of the access centres are designing their own Web sites, using the Internet for research and school projects, and obtaining information regarding educational grants and institutions.

Other members of the community have been able to directly access information regarding health, human rights, agriculture and other issues affecting their daily lives. Australian volunteer Tanya Notley, provides some examples: One man came here recently extremely upset and confused as a local doctor had diagnosed his son with Hirschsprung disease. He was able to get information and advice from experts in other countries. A local schoolteacher was able to interact with teachers around the world about short-wave radio teaching and apply this knowledge to a very remote school, which operates without electricity. A local farmer who hoped to expand his market by raising geese was delighted with the housing diagrams and feeding information he was able to gather from the Internet.

A campaign to increase blood donations, an exhibition for people interested in self-employment, a public health campaign aimed at preventing a cow disease epidemic, a fundraiser for local hospitals, and a campaign to donate books for the local library... are some of the ventures supported through Kothmale radio. Information on human rights has benefited from the convenient access to information on the Internet. Madhushini Nilmabandara and Nima Samarakool do a weekly programme on human rights; the University of Colombo's Human Rights Centre funds their programme: "People were not aware of their human rights. So we give them information how to take action to protect it. Now we have set up human rights clubs in schools and do programmes with them (on radio)", she said. The local school students come to the station to produce programmes. They perform dramas about children's rights and women's rights and discuss issues related to war in Sri Lanka.

**MEDIA & METHODS**

The project works in two ways. It allows for direct Internet access, mostly used by young people, and indirect access where listeners of Kothmale FM Radio are able to write in questions or provide topics for the radio station to broadcast. Trained volunteers research and gather information from the Internet and CD ROM's, and translate the information into Sinhala and Tamil. All but three of the weekly broadcasts are in the Sinhala language; the area has an ethnic breakdown of around 70 percent Sinhala. There are also large Tamil and Muslim communities. In January 1999, the station included Tamil broadcasts in its weekly programmes.

The questions are responded to within various radio programmes including: human rights, women's programmes, children's programmes, health programmes and international news programmes. Gradually all the data will be available for other community radio stations and citizens via the Web site. Furthermore, the station intends to broadcast online so to be utilised by other community radio stations throughout Sri Lanka.

A Friday evening programme is particularly popular. A local lawyer hosts it and volunteers do the research during the week. His topics have included international cultural belief systems and practices, world leaders and social movements, law and change, scientific masters throughout history. The staff and volunteers frequently visit the communities to do field recordings and live broadcasts. This direct communication is important, as many people are geographically remote. The station is able to bridge the communication gap by interacting with the community through live and recorded broadcasts. Music is a very important aspect of Sri Lankan culture; each day traditional songs are aired. Buddhist prayer is also broadcast every evening and on full moon Poya days.
Letters to the station average 50 per day (more on weekends). These letters include poetry, drama, history, songs and local event information. Members of the Kothmale FM listeners club deliver news summaries each day.

CONSTRAINTS
The initial Kothmale radio project, which started in 1989, seems to be the one still addressing the problems of the rural population. The Internet component that was added by 1998 is benefiting mainly those that either own a telephone line and can call in, or those that speak English and can browse the Web by themselves.

The domination of the Web by the English-language is a barrier to access, though at KCRIP they have enlisted bilingual speakers from the community to help programme producers. Doctors, lawyers and teachers get involved in the programme; they extract information from the Internet and interpret it for the listeners.


TEN CHALLENGES IN THE TELECENTER MOVEMENT

Much of the attention in the past 10 years has been on the connectivity side of making ICTs accessible to individuals and communities. While these issues have not yet been completely solved, we recognize that there are other challenges that need addressing if ICTs are to be significant forces in reaching the Millennium Development Goals and the Vision of the African Information Society Initiative. (See the box in item 2 below.) We have built our discussion around telecenters because they – and their close relatives, cybercafés and Information Access Points – represent the starting place for much of the world's population for using computers, digital data banks, and telecommunications networks, as well as telephones, DVDs and various newer technologies.

In the next stage of the telecenter movement, initiatives will need to concentrate on how to use ICTs and telecenters most effectively for development. This question of telecenter effectiveness merges into a discussion of content, demand, sustainability and viability – significant issues that are woven throughout efforts to use telecenters to provide people with the advantages of ICT access and other communication services. The remainder of this chapter examines the challenges related to these issues. While there are many, and they involve complex technical and political issues, we start with ten challenges that appear common to telecenters in many countries particularly across Africa and Asia. Some of these challenges have been foreshadowed in earlier parts of this chapter.

Challenge 1. Concerted efforts to make telecenter content relevant to local needs

There are probably more than 2.1 billion Web pages on-line, and Africa probably generates about 0.4 percent of these. For African nations outside of South Africa, the estimate is 0.02 percent. A general judgment about Africa involvement with the Web is that it is not being fully exploited as a new and interactive medium, and there is very little original content commissioned especially for the Internet. These facts relate directly to the amount of demand there is from communities for the services offered by their telecenters.

Telecenters need to be demand-driven, whether they are publicly funded or supported by user fees. A demand-driven telecenter translates, among various factors, into the need to provide people in host communities with access to relevant and useful content. Some organizations – such as the Country Gateways promoted by the World Bank – are working on the content issues but much of the information available via electronic networks may not meet communities' needs for local and localized information on agriculture, health, entrepreneurship and jobs, and nearby markets. A telecenter may also have low relevance if information is in unfamiliar or inappropriate language or dialects. For example, while there are more than 100,000 web page listings under “health” on the Internet, the material is useless to many

because most of it is in English, and much of it is expressed in ways unfamiliar even to English speakers. Most of those 17 million people in Nigeria whose language is Igbo cannot use that health information directly, because Igbo is rarely found on the Internet.

Even where the mainstream language is English, there is evidence that this is not sufficient to attract people to ICT information resources. A study by the Children’s Partnership in the United States looked at the extent to which currently available content met the needs of diverse communities. The study reported that the greatest barrier keeping low income people away from information portals was a lack of locally relevant information. Low income persons needed such practical content as adult literacy programs, information on public benefits, easy-to-understand health encyclopedias, consumer and credit information, and information related to employment and training.46

Although ICTs and web sites provide an enormous volume and variety of information, it is the quality of information that matters most in community development and poverty alleviation. The quality of information refers to its credibility, validity, trustworthiness, relevance, and usefulness. While a web site called One World (www.oneworld.net) and its off-spring Digital Opportunity Channel (www.digitalopportunity.org) focus on sustainable development and on providing a way for organizations and community leaders from developing nations to express themselves, the need for local targeted information (such as the name of a local veterinarian or the schedule for the local buses) remains a major challenge. One study suggests that the following kinds of information are most needed by the poor. Information related to –

- looking for jobs
- finding markets (both finding good markets for selling produce and finding items for purchase)
- resource mobilization for a range of development activities;
- government programs and services;
- friends and family who have moved to cities or overseas;
- facilitating cash remittances from friends and family.47

A 2002 multi-nation study by the International Institute for Communication and Development (IICD) in The Hague suggests that “easier access to globalised knowledge is fast turning us into ‘consumers’ of distant and potentially irrelevant information”48 (emphasis added). Local content, the report says, faces intense competition because big content initiatives tend to push their external content onto local communities. Another IICD report suggests that “More worrying perhaps [is that] developing countries are being ‘invaded’ by foreign ideas and values that may undermine or overwhelm local cultural heritage and economic livelihoods.”49

Commissioned by the United Kingdom Department for International Development (DFID), the first IICD study mentioned above was carried out in association with the Tanzania Commission for Science and Technology and focused especially on the issue of developing appropriate local content. The report indicates the need to:

- Stimulate all kinds of local content expression for local application and use.
- Stimulate e-Content creation and communication for local and global use.
- Develop e-Content exchange and broadcast systems.
- Strengthen the "synthesis and adaptation" capacities of organizations working with both "global" and "local" content.

These priorities can be addressed, the report suggests, by actions directed toward: Valuing local content, motivating local content, making local content visible,

46 Warschauer, pp. 88-89.
49 Batchelor, 2002.
addressing local language issues, connecting with traditional knowledge, building local adaptation skills, engaging in joint action, promoting local ownership and participation, and by strengthening the local skills base.

Most of the content offered by African telecenters is in English. This affects who accesses and uses the content services offered by the telecenters. For example, in a report conducted by Acacia, a Canadian Government ICT project in Africa, the researchers report that “telecenters are perceived as places providing services for the educated on account of the language of the content, most of which is in English. Nonetheless, the main purposes of telecenter use in the African context are to contact family and friends (principally through the telephone), prepare documents for social events (using telecenter printing services), obtain computer training, and find sources of personal entertainment (through television and video, radio, and newspapers). There is hardly any use of telecenter resources to find professional or practical information for economic or educational purposes. There are at least two factors accounting for this situation: (a) on one side, there is a general lack of community awareness about the potential of new information and communication technologies; (b) on the other side, there are inadequate human resources (including skills and motivation) to provide localized content in telecenters.

However, there are some cases of successful telecenter content creation and dissemination in developing nations. In the year 2000, the manager of a telecenter in the township of Mamelodi, South Africa, put together a database that contains useful information about the community: the Mamelodi Directory of Services, a publication of 22 pages, updated on an annual basis and sold at an affordable price. The second edition offered a wide range of community information on private and social services such as ‘Supermarkets’, ‘Pharmaceutical and Healthcare’, ‘Adult Education’, ‘Legal Assistance’, or ‘Trade and Industry.’ This database was constructed by asking neighbors about community resources and by visiting local businesses and organizations.50 A telecenter in Nakaseke, Uganda, presents a different approach to content dissemination. The Nakaseke telecenter provides a library and document service for community use, and has become the most important library facility in the area. Additionally, Nakaseke telecenter managers have created some educational videos on issues such as agricultural practices.

A case in India shows how the staff of a “village knowledge centre” dealt with the issues of local, relevance and language. The centers, established in Pondicherry on the southeast coast of India by the M. S. Swaminathan Research Foundation (MSSRF), demonstrated ingenuity, creativity and sensitivity in developing their information products. In one case, coastal villages were highly dependent on weather and tides information. Because many fishermen there were not literate, digital network information such as weather reports was downloaded and converted to audio by the village knowledge center. The audio versions were then played on loudspeakers in the open air. In addition, project volunteers in the villages built their own information resources in the center to complement the external databases thereby providing local and localized information on agricultural, health and government programs for low-income people.51 With the project staff, many locally useful databases were designed and developed, including, for example, a directory of general and crop insurance schemes; a list of about 130 schemes available as entitlements to rural families; a directory of hospitals and medical practitioners in Pondicherry – grouped according to their specializations; bus and train schedules covering Pondicherry and two nearby towns; and pest management information for the sugarcane crop.52

**Challenge 2. Policy and political leadership.**

It is useful to have a policy framework that can serve as a support and reinforcement for...
senior political leaders at the national, state and local level whose endorsement may be critical to mobilizing government officials, NGOs, business groups, and important resources to support telecenters. Governments may need to create the regulatory environment for investment. An appropriate policy and a regulatory body that implements that policy are important preconditions for successful and sustainable telecenters and to make their services affordable to the population. The support of the international community is useful in developing decision-makers’ awareness of the need to adopt policies that promote the building of an information society. Such policies include license obligations to serve rural communities, subsidies by means of rural telecom development funds, variations of build, operate, and transfer arrangements, low interest loans, etc. The World Bank supports regulatory arrangements that promote communications in rural areas, appropriate licensing, interconnection, revenue sharing, and tariff arrangements. It is trying to promote solutions that have the capability of attracting private investment and expertise into rural areas. The ITU and others have been organizing regional seminars and workshops to raise awareness among decision-makers and policy-makers about the potential of ICTs to promote economic and social development in rural and remote areas.

The UN Economic Commission for Africa (UNECA) produced an Action Plan in 1995 whose “overriding goal is to realise the African Information Society Initiative (AISI) for a sustainable information society by 2010.” The UN Economic Commission for Africa (UNECA) produced an Action Plan in 1995 whose “overriding goal is to realise the African Information Society Initiative (AISI) for a sustainable information society by 2010.” (See the “vision” of the initiative in the accompanying box.) UNECA has also created an Information Policy Development and Implementation unit that assists member states in the development of sectoral, national, village and regional policies, plans and strategies related to ICTs. The Information and Technology Centre for Africa (ITCA) demonstrates to African policy-makers and planners the value of ICT for development.

The African Information Society Initiative (AISI) Vision of the Information Society

- Information and decision support systems are used to support decision-making in all the major sectors of the economy in line with each country’s national development priorities.
- Every man and woman, school-age child, village, government office, and business can access information and knowledge resources through computers and telecommunications.
- Access is available to international, regional, and national ‘information highways’ providing ‘off-ramps’ in the villages and in the information area catering specifically to grassroots society.
- A vibrant business sector exhibits strong leadership capable of forging the build up of the information society.
- African information resources are available which reflect the needs of government, business, culture, education, tourism, energy, health, transport, and natural resource management.
- Information and knowledge are disseminated and used by businesses, the public at large, and disenfranchised groups such as women and the poor, in particular, to make rational choices in the economy (free markets) and for all groups to exercise democratic and human rights (freedom of speech and freedom of cultural and religious expression).

Many countries are in the process of developing policies to improve their positions in the Information Society. Guided by the AISI vision, most African countries have started on their “national information and communication infrastructure” policies. The following table shows the progress between the years 2000 and 2005. Typically, high on countries’ lists of priorities is improvement of access to ICTs in rural areas through the use of telecenters. As an example, Namibia’s policy includes reference to rural access to information, developing the ICT professional community, strong ICT public education in schools, strengthening the nation’s ICT infrastructure, and attention to e-commerce, e-business, and e-government.

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54 In 2003, these included: Benin, Burkina Faso, Cape Verde, Cote d’Ivoire, Egypt, Gambia, Mauritania, Mauritius, Morocco, Mozambique, Rwanda, Senegal, Seychelles, South Africa, Sudan, and Tunisia. See: Etta & Parvyn-Wamahiu.
Development of National ICT Policies in Africa

<table>
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<tr>
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<th>Countries where there is no policy development process</th>
<th>Countries in the process of developing a policy as of 2005</th>
<th>Countries with an ICT policy</th>
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<tbody>
<tr>
<td>2000</td>
<td>30</td>
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<td>2005</td>
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In its domestic program, the Canadian Government went beyond the rhetoric of an Information Society and committed people and funding to making the Internet affordable in rural and urban communities across the nation through Community Access Points. It made a six-year commitment, providing start-up money and an infrastructure to help local organizations make it work. While the resources offered were not enough for complete comprehensive multi-purpose telecenters, the imprimatur of the national government combined with some serious money significantly motivated a nation-wide community-based effort to create 10,000 Community Access Points that commanded provincial, regional and local participation.

Besides the direct funding available and the administrative push, a national policy can also be instrumental in providing a favorable regulatory and tariff climate, and in producing the human resources that are vital to a telecenter movement. Some telecenters in Uganda and Senegal, for example, had to go through considerable bureaucratic hurdles simply to have imported equipment released to projects or simply to be repaired.

To support its policy goal of becoming an Information Society superpower, the Indian government doubled the number of persons it would graduate from its technology training institutes. The Egyptian Government’s plan for incorporating ICTs in its business and socio-economic development includes – besides Technology Access Community Centres in rural areas – creation of facilities in all its 27 provinces that can train 30,000 people annually in computer uses.

In Taiwan, the government has taken a variety of steps to implement a policy designed to reduce the territory’s digital divide (principally between its northern and southern areas.) These included speeding up the construction of fiber telecommunication backbone, building wide-spread public information centers/kiosks, establishing Internet-connected computer labs in every elementary and junior-high school, promoting telecommunication universal services, enhancing information education and training, developing digital content industry, and strengthening services for disabled people on learning, working, and living.

Charles Kenney, an economist at the World Bank asks whether advocates and policy-makers are overselling the promise of the Internet. In introducing his 2006 book about the Internet and development, he points to the “Okinawa consensus” where, in 2000, the leaders of the industrialized nations affirmed the importance of information and communication technologies in improving government services, education, and income-earning opportunities “even for the world’s poorest people.” Kenny’s skepticism focuses on the lack of evidence to support policies and investment in support of major ICT projects.

This book examines the Okinawa consensus, the policies suggested, the rationale behind them, and which ones might make sense. Suffice it here to say that we were and are acting in a relative vacuum of knowledge regarding those policies. The technology of the Internet is very young, and its use in the poorest, or least developed, countries even more recent. We can have, perforce, very little evidence on the effectiveness of Internet policies or of the Internet in development more generally….As of December 2005, for example, there had not been survey-based, academically rigorous study of the economic impact of an Internet access program in any developing country (pp. 5-6).

56 S. Kamel, "Egypt goes online," Information Technology in Developing Countries, 10/32, December, 2000, pp. 8-10.
The dominant source of evidence consists of preliminary success stories or anecdotes, often reported by the organization or person who championed the initiative. Kenney cautions that although anecdotal experiences are a "perfectly valid form of evidence," such an approach to policy formation needs to be pursued with caution. From an economic point of view, which will often influence policy decisions, the question of relative return on investment may help explain the minor attention given to information technologies in Poverty Reduction Strategy Papers, the policy papers drawn up by developing nations as planning documents for encouraging broad-based growth and easing poverty. Meanwhile, the International Telecommunications maintains a web page for ICT success stories. The page leads to successes related to e-Education, e-Health, e-Government, e-Environment and other parts of the e-World.

**Challenge 3. Partnerships for translating national policy into action through governmental and non-governmental bodies at the regional and local levels.**

National policy and national government funding do not necessarily translate into centralized planning and operations. Hungary has demonstrated that a former socialist country steeped in centralized planning could develop a "telecottage" system built on local non-governmental organizations (NGOs) with community ownership and management. It is called a "civic initiative" with its emphasis on local NGOs applying for government telecottage grants and showing that they have the support of local governments or private organizations.59

A 2005 report on lessons learned from field visits in Uganda and South Africa in 2003 suggests a strategy of linking telecenters with other enterprises.60 Access centres were included in the study and 370 households were surveyed, augmented by primary and secondary research on national policy, regulation, ICT-related service providers, national government programmes and NGOs. Researcher Sarah Parkinson concludes that "stand-alone" access centers are difficult to maintain in rural areas and tend to have limited market demand, with the exception of phone services. She suggests that integrating ICTs into larger rural development projects helps provide an "anchor market" by stimulating demand and helping people locate and apply useful [relevant] information. Another model is linking access to ICT facilities through phone shops. She cites South Africa's Vodacom approach in which Vodacom gives preferential digital network access rates to its phone shop franchisees – an important concession because of the struggle access centers have for sustainability.

Intermediary organizations are also important potential partners. Richard Heeks of the Institute for Development Policy and Management in the UK's University of Manchester suggests that intermediaries are organizations or individuals "who own ICTs and who can act as gatekeepers between cyberspace and the organic, informal information systems of those on the wrong side of the digital divide."61 Heeks suggests that good intermediaries bring more to the process than connection to information and communication data and hardware. Motivation is a key element. Heeks asserts that too often projects assume motivation is present and too often it is not. In designing ICT systems within development projects he indicates that it is critical that someone have an answer to the "Why should I?" Why should I learn ICT skills? Why should I access ICTs? Why should I use ICT-borne information? It is widely accepted that one of the basic lessons related to maximizing the benefits of ICTs is that they be embedded in broader development issues.

Expansion of the intermediaries concept is important in the demand-driven approach to telecenter community service. Various community organizations and institutions have the opportunity to build demand among their constituents for telecenter services. Schools, health centers, agricultural extension agents and input suppliers, community leaders, and cooperatives could be partners with telecenters in identifying what specialized needs exist, and

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in encouraging their constituents to use telecenters. As sometimes happens with the Internet Access Points mentioned earlier in this chapter, the intermediary organization may take on the role of a multi-purpose telecenter.

As noted in Chapter 2, government agricultural extension services around the world are faced with problems of inadequate funding, transportation and other resources for serving agricultural workers. Because the function of extension is vital to a healthy agriculture, nations are seeking alternatives to the traditional systems. An example in China probably represents many other countries that have a substantial number of small farmers. These farmers need new skills, knowledge and market information to meet the challenges of modern agriculture. Among the alternatives to the central government system are private and commercial extension systems. And within the past 10 years in China, farmers’ associations have grown in number to more than 150,000. These help farmers where a public extension system is lacking. The associations provide technical and marketing services to farmers. Telecenters in rural and agricultural areas can contribute to agricultural development by becoming an extension partner. The telecenter can support the associations by finding out what their information and communication needs are, as well as those of their farmer members, and discuss with them how best to serve those needs. Then, the telecenter can

1. help build a collection of specific localized agricultural information and publicizing among the farming community its availability.
2. train and assist representatives of the associations in using the telecenter’s ICT resources – from the Internet to publications – for its members communication and training needs, including group training via distance learning facilities.

**Intermediary organizations**

One cannot expect poor farmers and food insecure residents of rural communities to list computers and digital telecommunication services as high priority items for improving their lives. However, there exist various intermediaries that serve these populations which, together with small and medium enterprises (SMEs) in rural areas, can take advantage of these technologies to improve their work, improve communication capacity, gain efficiencies and reduce telecommunication costs. An integrated approach that fosters horizontal and vertical channels of communication is key to insuring that such benefits are realized. Intermediary organizations such as extension field offices, rural NGOs, health clinics, government offices, and church organizations together with SMEs, can offer benefit to their rural client groups in numerous ways. Strategies for improving Internet access and use for rural and agricultural development will necessarily involve full participation of intermediary organizations and other rural stakeholders. — Don Richardson, *The Internet and Rural and Agricultural Development*, FAO

As we will contend in Chapter 7, women farmers are especially in need of extension services. This is another situation in which a telecenter can work with small groups. For example, Chapter 3 included the case in India where a veterinary university organized ICT training programs for representatives of Self-help Women’s Groups and made a special effort to have relevant information and communication facilities available for them.

In the short term, telecenter managers need to reach out to community groups and demonstrate how telecenter resources and facilities apply to their development activities. The Millennium Development Goals which will be timely for the next decade provide a convenient policy-level rationale for forging partnerships that will arouse demand for telecenter resources. Meanwhile, agricultural extension, community health workers, school teachers and government officials will need to re-examine how information technology can contribute to their work. For example, traditionally, supervision of community development workers and paraprofessionals has implied face-to-face contact, which is quite labor (staff) intensive. However, if one dissects the concept of supervision into its specific activities (education, training, counseling, technical

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assistance, monitoring, evaluation, etc.), it is clear that ICTs (including computers and networks) can replace some of the labor-intensive and traditional face-to-face contacts.63

Where are the higher education institutions? One of the oddest characteristics of the telecenter movement is the absence of universities as partners in the production and packaging of research-based and factual information, even though many have been very active on the technical side, including, for example, India’s Institutes of Technology and the Massachusetts Institute of Technology’s Media Lab. The social role of the university historically has been to create, store and diffuse knowledge, a collection of activities that partially parallels some telecenter operations. Yet, few major programs link universities to telecenters as an institutionalized source of information.

To argue a case for involving universities, we take a quick digression to China. In Tongnan we discovered a peanut farmer visiting a telecenter to get information on the market prices for peanuts. Another farm woman there used the Internet to learn the latest technology related to silk worm production. In both these cases and others we see a place where people can go to gain access to information technologies – to computers and networks. To the digital world. But especially to information and communication resources. We say “resources” because telecenters are more than digital connectivity points. To be fully effective, they need to become information and communication institutions in their communities. To do this, besides having the digital connections, telecenters need at least the following:

• Research – Telecenters need to find out what kinds of information and communication resources their communities want and need. This is what helps telecenters become demand-driven – a vital issue in their sustainability. Telecenters need research also to evaluate continuously how well they are serving the needs of their communities.

• Local and relevant content – As we suggested earlier, little of the content on the web is relevant to farmers and rural people. It is a common problem around the world, where external information dominates locally-tailored material. This is where scientific but user-friendly information related to MDGs needs to be crafted. The UNDP has suggested that the most important reason for telecenters failing is their lack of suitable content.

• Training – People in telecenters need to be trained in how information can contribute to development. We have found telecenter managers who know about computers but don’t know how to link telecenter potential to health clinics, schools, agricultural extension, or local government.

• Community awareness – Telecenters need to make their communities aware of the value of information, such as peanut marketing information and technology transfer in silkworm enterprises, or the chances for more education through distance learning. Awareness of the value of information will help the communities realize the value of the telecenter.

• Human resources – Telecenters need volunteers who can help make telecenters good places to visit – volunteers who can help people search and understand the basic rewards of a digital experience. And who can welcome special groups such as women and the elderly who are frequently shutout by culture.

Significantly, universities in developing nations could play an important role in strengthening these ICT resources, and this is especially evident in the case of community telecenters. First and most important, universities are in the knowledge-building and knowledge-transfer business. Conceptually, that is not very far away from what telecenters are trying to do. We talk these days about “knowledge societies.” Whether it is a telecenter in Rwanda or a university in Yangling, the common elements in these parallel institutions are knowledge, learning and information. In the telecenter world, what are the relevant university resources that match the vital needs of telecenter? Here are some of them:

• Research – Many universities have research capabilities that could be applied to the telecenter research needs we mentioned. And universities could use telecenters as social research labs for their faculty and students.

• Content – Universities such as agricultural universities have access to science-based information that could be tailored to regional, provincial and local social, linguistic, and cultural characteristics, and could be matched with many of the Millennium Development Goals.

• Learning resources – Naturally, universities have the capacity to teach and train, but equally important, they have the cultural credentials to give credibility to their knowledge resources.

• Human resources – And universities have human resources such as students who could serve as telecenter interns, and faculty members who could serve as content and development advisors.

What makes an institutionalized partnership so logical is that the universities can gain a learning and research laboratory via a telecenter, while a telecenter can fill some of its important operational needs via the university.

Building Universities e-Readiness

“eReadiness” is a word often used to describe or measure a nation’s possession of the ingredients that make the nation a candidate for being part of the Information Society. We can apply this term to universities that perceive a mandate to reach out into the world beyond and make a difference. It could be called "capacity-building. We can start with five parts of a university's structure and culture that could be used to measure its eReadiness. These five parts can also be used as an agenda for building eReadiness.

• ICT facilities – This is the most visible aspect of capacity-building. It is the connectivity issue. Are there computers and network connections to take advantage of the existing digital resources and to create new digital resources? Are there media production facilities for recording simple audio and video materials? There are currently efforts to increase affordable bandwidth for African universities.

• Academic programs – Are there academic programs that invite students to study and apply ICTs to the challenges that face the community and its development? And are there research and internship opportunities that thrust them into the ICT-for-development environment? This goes significantly beyond training students in a computer lab.

• Outreach policies – Does the university allow, encourage or reward members of the faculty to become involved with appropriate communities so that professors and lectures can contribute to the sustainability of community-based institutions such as telecenters, or extension systems?

• Human resources – Does the university have a personnel (staffing) system that supports ICT outreach initiatives, personnel such as programmers, media production people, web page designers, and digital technicians?

• Faculty "posture" – Does the university have a faculty (professors and lecturers) who are in-tune with the new digital world; do they have the inclination to be innovative and aggressive in the application of ICTs to learning and outreach; is there an ICT "champion" in the institution?

Universities could play a significantly broader role in the world’s efforts to employ ICTs for sustainable development and poverty reduction. In summary, universities could:

1. Conduct continual research on community information needs so that appropriate information resources can be developed.
2. Conduct on-going e-Readiness studies at the regional and community level and interpret their results for regional and local policy formulation and action.
3. Convert its own research and "academic" knowledge into education, information, and training packages suitable for community use.
4. Mobilize, interpret, integrate, and package information from external authoritative sources and tailor it to the needs of populations in surrounding communities.
5. Train students in the application of ICTs to development problems by: assigning them as student interns at community telecenters, having them collect indigenous case studies and "lessons learned" related to development initiatives, involving them in data collection and processing related to e-Readiness and information needs analysis studies, and training them in

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the process of information packaging.
(6) Design and execute ICT training programs for various community groups, especially those that are likely to be by-passed by conventional ICT training.
(7) Through their participation as students in this program, prepare a new generation of professionals in various sectors to use and support the application of ICTs and telecenters for community development and poverty alleviation programs.
(8) Provide on-going monitoring and evaluation support to the initiative.
(9) Actively contribute to the Country Gateway (information portal) system.
(10) Orient university officials and faculty to ICT-for-development so they can support ICT initiatives and be opinion-leaders in this area.

Universities can benefit from an affiliation with telecenters in at least three ways:
(1) Telecenters provide universities with a means for reaching beyond their "ivory tower" to extend their knowledge and learning resources to the surrounding communities and to other populations in the region. This includes translating, adapting, localizing and re-packaging information from external sources to fit the agronomic and cultural characteristics of those local communities. This function is especially vital to the worldwide priorities identified in the Millennium Development Goals. Ultimately this makes universities and their faculties more relevant and better candidates for financial support from the public and private sectors and donors.
(2) Telecenters provide a laboratory for faculty and researchers to carry out ICT and extension-related research and development (R&D) projects especially involving issues ranging from HIV/AIDS to small business enterprises and poverty alleviation. Telecenters as extensions of the classroom can also strengthen student understanding of issues ranging from computer applications in community development to e-Government and e-Commerce. Graduates will be better prepared to enter a world that will increasingly be permeated with information and communication technologies.
(3) Telecenters provide a learning environment for students as telecenter volunteers where they can gain practical experience in helping people in the community. In some countries (for example Taiwan and Ghana) youth have a public service obligation for one or two years. While it is often associated with military service, consideration might be given to adding community service in telecenters as a means for discharging this obligation.

Most African universities themselves are just beginning to get organized for the ICT environment. In fact, one observer contends that the weak state of most African universities accounted for the lack of good educational content from African universities on the Web. A two year study commissioned by the World Bank and UNESCO concluded that the contribution of higher education to social and economic development in developing countries has been "disappointing to date" – including the failure to advance the public interest. It suggested that one of the major obstacles was that "the social and economic importance of higher education systems is insufficiently appreciated (Task Force, 2000:93). However, a 2006 Harvard University study commissioned by the World Bank suggests a shift toward higher education. The authors note that the international community has come to recognize higher education's value for development. It urged donors to increase investments in Africa's capacity beginning with higher education, particularly in the sciences and technology.

Telecenters and libraries have a synergistic relationship in providing information, communication and learning resources for rural and marginalized populations. One of the goals in the 2006-07 Strategic Plan of the International Federation of Library Associations and

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Institutions was to promote the use of ICT and the creation of local electronic resources. A significant amount of IFLA’s focus has been on activities in developing nations. In many communities libraries have become important places for using computers and accessing conventional digital networks without charge. In Vietnam, with university-supported community telecenters and a major Learning Resource Center at a take-off point in the Northern Mountainous Area, there is an extraordinary opportunity to demonstrate the power that a partnership of higher education institutions, libraries and modern information technology together can bring to a nation’s community and rural development. Not only can libraries provide telecenter-type access within their conventional four walls, but rural telecenters themselves can become outposts of conventional libraries.

**Challenge 4. Local “champions” (innovators) who can mobilize others (early adopters, opinion leaders) to accept the vision of an ICT telecenter initiative.**

The main reason for the extraordinary reputation of the Gasaleka Telecenter as one of the most active and vibrant in South Africa is Masilo Mokobane, director of the project. In spite of nagging infrastructure and economic problems, we discovered him to be a telecenter visionary. He personifies what we call a “champion.” In the accompanying box, we capture some of the spirit that marks a champion of innovations such as ICTs and telecenters.

**A PERSONAL SNAPSHOT AT GASLEKA**

There are no roads to Gasaleka. The outside visitor spends two hours carefully and slowly driving on a path of swamped holes, stones and sand, surrounded by infinite extensions of palm trees, before reaching the first hut of the village near the borders of Botswana. This remote village of mud huts and red sand lanes accommodates the first telecentre established by the Universal Service Agency.

In spite of some infrastructure and economic problems, Gasaleka Telecentre remains as one of the most active and vibrant in South Africa. The main reason for that vitality in the midst of daily adversity is Masilo Mokobane, the director of the project and a genuine telecentre champion. Mokobane is a telecentre visionary. From the first day, Mokobane has not only been fighting for the survival of the telecentre, but he has been entertaining new ideas to better serve his community through the use of new communication technologies. He remembers the day the Gasaleka Telecentre was inaugurated. “It was a great day for us. Everybody came to celebrate it”.

The early success of the centre is partly explained by the computer training offered. Another factor is that there is no other place in the area to make a phone call. However, according to Mokobane, “the business is going down due to the problems we have with the telephones. Sometimes the phones are not working. And the customers say the calls are very expensive”. When I arrived in Gasaleka, the three telephones were not working due to days of heavy rain.

Mokobane is nevertheless optimistic about the future of the project. Hardships do not shadow his enthusiasm. He is full of new ideas, and he explains them with a wide smile. One of his most innovative plans is the publication of a community newsletter. The villages that integrate the Gasaleka community are not reached or covered by any news service. We have many news in Gasaleka, but they are not reported to the community, says Mokobane. The telecentre will not only work as a reference resource centre offering access to information and communication technologies, but it will take on a new role as an organization for the production and dissemination of local information. The telecentre can become the memory, the history of this community”, explains Mokobane.


The obscurity and abstractness of the “Information Society” requires the missionary zeal of individuals who can translate and demonstrate the relevance and application of these kinds of concepts to the realities of the community. And for the innovator to be from the community itself increases the credibility and potential diffusion of the telecenter initiative. From Canada to Vietnam, we have seen volunteers and representatives of local governments motivate the population mainstream toward confidence in navigating the Information Society.

**Challenge 5. The significant value of community volunteers in operating telecenters**

In most communities, volunteers offer a variety of benefits to multi-purpose telecenters. They contribute to the day-in, day-out supervision of the facilities – a potential personnel expense that many could not otherwise afford. But the volunteer has deeper significance: the variety of volunteers in a system provides telecenter clientele with personal models with whom they can identify and feel comfortable. In telecenters throughout the world, one can find high
school and college students, retired business people, active and retired school teachers, and others providing one-on-one and group training and assistance. In some places, women do not feel welcome in a telecenter because of the “malesness” of the environment and the accompanying intimidation. The presence of self-confident women volunteers helps overcome some of these obstacles. For example, as part of a strategy to attract women to participate in telecenter activities in Pondicherry, India, the Swaminathan Foundation requires that at least one woman is engaged in the management of each center (for instance, the telecenter in the village of Enbalm is ruled by four female volunteers).

Volunteers can also contribute to enlightened decision-making in the telecenter because they reflect a variety of community constituencies. One of the most important results of the needs assessment activities in India as part of the TANUVAS project mentioned above was the creation of a local steering committee for each telecenter site. These committees, formed by a diverse group of villagers (including people of both sexes, youth and elders) are in charge of monitoring the economic and social sustainability of the telecenters – in close contact with personnel at TANUVAS. For example, these committees decide about new services by taking the pulse of village needs, and they administer existing resources and look for new ones (including looking for volunteers in the community interested in collaborating in telecenter activities). The steering committees act as local telecenter champions and agents of demand actualization. The challenge for telecenters is to move from largely spontaneous use and management of volunteers to developing an explicit strategic plan for recruiting, training, and rewarding volunteers. The important issue is to find incentives to fit the kind of volunteers available. For some it is the recognition they receive; for others it is free time on the computers; and for others it may be college credits in the local university; or discounts contributed by local merchants.

The Acacia survey of African telecenter reports that telecenter staffs and volunteers are usually poorly trained to carry out their daily tasks. Additionally, telecenter personnel often lack incentives to remain in their jobs. Deficient or nonexistent economic remuneration, together with a lack of professional training on how to properly administer telecenters, constitute serious obstacles to the managerial stability and quality of telecenter staff in rural Africa. Architects of telecenter programs can build support components into their systems that professionalize training resources for groups of telecenters, and devise methods for funding them, such as membership fees. One of the major recommendations to the Government of India that came out of a 2001 national ICT workshop in Chennai was that the GOI foster the establishment of an NGO National Association of Telecentres, similar to those successfully functioning in Hungary and Australia. The recommendation included the following list of tasks for such an association.

(1) Coordinate content supply with developers and suppliers.
(2) Negotiate with resource suppliers such as companies selling computers and related equipment.
(3) Arrange public relations advocacy and awareness campaigns for ICT and telecenters.
(4) Provide liaison with government departments and NGOs.
(5) Train telecenter personnel and organizational users of telecenter facilities.
(6) Promote and support practical research and evaluation for telecenter operations.
(7) Provide liaison/negotiating with other communication enterprises (for example, cable television operators, radio broadcasting organizations).
(8) Provide leadership and enforcement of minimum standards of service and professional codes of conduct.

An addition to this list could be: (9) collecting, archiving and diffusing information on telecenters (possibly in collaboration with a national web-based gateway).

**Challenge 7. A systematic, persistent effort toward community awareness about information and ICTs as a valuable resource.**

Stories abound about the difference that access to information technologies make in

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the lives of individuals and communities. A woman in India complained about her vision (she said it was like having a sari over her eye) and then learned at a telecenter about a traveling health team visiting her area. She had a simple operation and the “sari” (actually eye cataracts) was removed. Another story is about the farmer in northern Shaanxi Province in China who traveled 500 kilometers to an agricultural information center where he found information online that helped him profitably market his apples and start up a pumpkin export trade. Despite the anecdotal success stories about ICTs and telecenters, there is still widespread lack of understanding about the role and benefits of information technologies. And skeptics have been reinforced by computer-giant Bill Gates who startled many in the information technology field when he declared in the Guardian newspaper that “the world’s poorest two billion people desperately need healthcare, not laptops.”

The Acacia study of 36 telecenters in five African countries indicates that only a small percentage of the population uses the telecenter facilities, and most of them are youth and young adults. Also, fewer women than men use telecenter services in practically all the centers surveyed by the Acacia researchers in rural Africa. Socio-economic-based differential access to telecenters may have multiple causal explanations (including literacy level, education, age, gender, and cost of services), but community awareness about the value of information and communication services available at telecenters (and even awareness about the location and existence of telecenters) appears as one of the key factors pointed out by Acacia researchers.

Malaysia’s National Information Technology Council recognizes the challenge in establishing a community’s awareness of the benefits of information. Its vision is “to evolve a value-based knowledge society in the Malaysian mould where the society is rich in information, empowered by knowledge, infused with a distinctive value-system, and is self-governing.” So, high on its strategic agenda is an effort to develop a national mindset that includes making Malaysians aware of the emerging e-World and to enable the diffusion and acculturation of ICT at the grassroots level. (See http://nitc.org.my/)

Government or private sector initiatives targeting popular participation in the Information Society will need to consider carrying out vigorous campaigns to illustrate the benefits of information as an important resource for daily living — assuming they, themselves, are reasonably convinced. As the Malaysians suggest, the target includes producing “ICT-fluent” professionals, including leaders in education and government.

The importance of awareness-raising was illustrated in Korea. In November, 2001, a conference was held there related to gender and ICTs. Following the release of a major study indicating the importance of ICTs and telecenters for women in developing nations, we asked a participant to report to us on the outlook of women attending the program. She commented:

The thing that was wonderful was that the women suddenly realised that the Telecentre Movement was so powerful, not just another project but a movement that they could collectively use to make their voices heard while assisting their communities. They realised that this was a tool which was readily available to change things and make a difference and that they could be a part of it.

Information and public relations campaigns promoting telecenters is part of the solution but the parallel challenge lies in the appropriate development of services. Telecenters can systematically assess community information needs and the communication needs of various local organizations, and be creative and entrepreneurial in dealing with these needs. It is this more comprehensive community service approach to the Information Society that helps centers become more firmly woven into the fabric of the community and on the road to sustainability.

**Challenge 8. Research as a telecenter management tool**

Research for needs assessment and project evaluation is an important component of telecenter operations because a research program provides the tools to meet community needs and monitor the financial viability of the telecenter. However, research is not a common practice.
in telecenter deployment. Even though many telecenter initiatives are self-labeled as "research and development" or "pilot" projects, not many of these projects carry on rigorous research programs. The consequences of this are evident in the questions raised by Kenney earlier.

Research for needs assessment and evaluation should be integrated as a natural component of any telecenter project, not just internationally-funded initiatives that have a mandate to produce feasibility studies, evaluation reports and lessons learned. Telecenter personnel should have simple, reliable tools to use in ongoing operations – tools that (1) help them discover and continuously monitor the needs of the community, (2) get a reliable picture of the demographics of the area, (3) systematically monitor ongoing operations, and (4) check on outcomes and consequences related to telecenter services. This goes beyond counting the number of users, although this is an important statistic.

Harris describes a research activity in Malaysia that is essential to creating a demand-driven telecenter. Prior to the establishment of a telecenter in the small settlement of Bario in Borneo, the project collected data on the information needs of the community. The data reflected the type and amount of information members of the settlement would like to receive, what they were currently receiving, the type and amount of information they were sending, and the sources and channels used. The survey data revealed that the community placed most importance on information relating to agricultural, medical and religious practices with information technology, job opportunities, government policies and family matters rated slightly less important. In addition, using Participatory Action Research (PAR) methods, project leaders and the community were able to agree on a prioritized set of information needs. This resulted in one person assembling and documenting best practices for the production and treatment of Bario rice for which demand outstripped supply - thus not only responding to an information need but also providing a local information resource.

Research is important in identifying needs that can be factored into decision making about content made available through various ICTs at a telecenter. However there is another role that research should play in a demand-driven telecenter approach. Although much is written and said about the potential of ICT for rural development, to this date there is a very small inventory of well documented development outcomes resulting from telecenter initiatives. Research evidence on impact is at best sparse and anecdotal.

Early in the short history of the digital revolution, Heeks noted that “there are far more one-line, rose-tinted vignettes of claimed success with ICT than there are long-term analytical studies by independent researchers.” At the macro level, there are many analysts studying economic changes (such as growth of ICT sector, number of computers and users, and GDP) but even leaving aside the major difficulties of measurement, these economic indicators do not gauge what is happening in the field (how is the technology being used, if used at all, by whom, and for what, and what are the social constraints and opportunities for equitable and effective use?). Many of these studies are self-labeled e-Readiness assessments and often concentrate on national structural factors.

At the micro level, there are several international research- and-development projects that are testing ICT uses and applications for rural development. Although there are some efforts underway along with serious awareness about the importance of research, there have been few scientifically-based reports about the viability and functions of rural telecenters.

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73 Harris, p. 106.
76 R. Roman & C. Blattman, "Research for Telecenter Development: Obstacles and Opportunities", The
However, now we were beginning to see more concrete reassurance of the value of ICTs. Some of the evidence (yes, anecdotal) appears throughout this chapter and in other parts of the book, and among the many footnotes provided. Other publications that add to the optimistic testimony include:

1. **ICT4D – Connecting People for a Better World** (2003), a report of an ICT for Development Platform organized by the Swiss Agency for Development and Cooperation and the Global Knowledge Partnership (GKP), with a comment in the Foreword: "The Platform – reflecting many years of conceptual and implementation experience – left no doubt as to the relevance of ICT for effective development." 77

2. **RESEARCH, ICT Innovations for Poverty Reduction** (2004). 78 This document presents comparative research findings of local ICT initiatives spread across a series of sites in South Asia. It reports on a variety of situations in which communities benefited from different information and communication technologies.

3. **eDevelopment, from Excitement to Effectiveness** (2005). According to the World Bank which published this collection of articles by an international team of experts: "Payoffs of successful e-development projects are huge and can produce dramatic returns across a range of sectors in countries poor and rich alike if the risks involved are managed properly. This report urges both developed and developing countries to learn from past lessons in order to increase the impact and sustainability of e-development projects." 79 World Bank Vice President Katherine Sierra says in the Foreword: "We have reached a critical point where the social benefits of ICT are becoming apparent and many governments are overcoming the inertia that previously prevented them from seizing the development opportunities of ICT."

Regarding research on telecenters and its potential for affecting management and success, some would argue that it is too early to assess impact. Community-level research for needs assessment and evaluation is the first step toward meeting community needs, designing locally relevant applications, fostering community participation, and monitoring the financial and social sustainability of a telecenter. However evaluation studies related to telecenter activities are appearing in various reports. The research conducted by the Acacia Initiative is a positive sign that research is valued. 80 Acacia’s evaluation of the telecenters it supported in Africa is a good example of how research can have a practical application: the recommendations based on the evaluation will serve to improve the telecenters studied – as well as new projects such as ITU’s effort to establish more than 100 telecenters to be managed by women in Africa. (See Chapter 7.) In another research program, the Georgia Institute of Technology undertook a study of various USAID Last Mile Initiatives “to provide fresh and dynamic new perspectives into LMI programs in Africa, S.E. Europe and Latin America.” 81 A multi-disciplinary Georgia Tech research team produced “a wide range of insightful, passionate, and often provocative research outputs, including:


77 G. Weigel & D. Waldburger (Eds.), available at: [http://www.globalknowledge.org/ict4d/](http://www.globalknowledge.org/ict4d/).

78 D. Slater & J. Tacchi are the authors. For information (not the text) see: [http://www.comminit.com/strategicthinking/st2005/thinking-1156.html](http://www.comminit.com/strategicthinking/st2005/thinking-1156.html).


80 See a collection of telecenter evaluation studies, including those of Acacia’s African telecenter experience at the Development Gateway, [http://www.developmentgateway.org/evaluation/rc/BrowseContent.do~source=RCCContentUser~folderId=5023](http://www.developmentgateway.org/evaluation/rc/BrowseContent.do~source=RCCContentUser~folderId=5023).

81 M. Best (ed.), *Last Mile Initiative Innovations, Research Findings from the Georgia Institute of Technology*, 2006, p. 1. The electronic book with complete reports from each study (206 pages) and the abstract (26 pages) can be accesses at: [http://www-static.cc.gatech.edu/~mikeb/LMI.htm](http://www-static.cc.gatech.edu/~mikeb/LMI.htm). An inventory of telecenter initiatives can be found at: [http://www.developmentgateway.org/evaluation/rc/BrowseContent.do~source=RCCContentUser~folderId=5023](http://www.developmentgateway.org/evaluation/rc/BrowseContent.do~source=RCCContentUser~folderId=5023).
A new typology of cyber cafés in Abuja, Nigeria.
An assessment of the soft-power relationships within aid funding of LMI programs in Macedonia.
An assessment of existing work flow networks, and the possibility of new digital networks, for coffee cooperatives in Rwanda.
An evaluation of ICT needs amongst rural health providers in Peru.
An evaluation of the needs, and the independence, of telecommunications regulators within the West African region.
A study of the prospects, and the impediments to, liberalization of the Internet market in Ethiopia (p. 1).

**Challenge 9. Long term financial sustainability and business plans that fit the culture of the community**

Factors influencing long-term financial sustainability of telecenters are diverse. Telecenter sustainability is closely dependent on the list of other factors presented in this chapter (i.e., content relevance, community awareness, participation, well-trained staff). However, an essential aspect of financial sustainability has to do with the cost of the equipment and its maintenance. The high cost of technology, supplies, and maintenance often affect the financial stability of telecenters in rural Africa. (Note our earlier description of the WorLD project efforts to deal with this challenge.) Sometimes technical problems (from power failures to computer breakdowns) may result in discontinuity of services. From the point of view of economic sustainability, the high costs of technology and maintenance usually reflect in service charges that many community members cannot afford to pay. Thus, most telecenters face the challenge of being sustainable while providing "public goods" for poor people whom they are expected to serve. Some telecenters use the income from user fees and other income services to make public goods more affordable or free. Out of the 36 telecenters studied by the Acacia project researchers, only two of them were found to be solvent: the Phalala telecenter in South Africa, and the Guédiawaye telecenter in Senegal.82

Other than urban cybercafés, most telecentres operate in a not-for-profit mode, but that does not mean they operate in a not-for-income mode. Typically donor agencies reduce or discontinue financial support for telecenters after an initial incubation period. In opinion pieces at the end of this chapter, Gumucio Dagron (later in this chapter) argues that telecenters that have a mandate to contribute to a community’s welfare should not be responsible for their own full financial support any more than a community library is; and Francisco Proenza (also in this chapter) offers a contrasting view in suggesting that telecenters should be more rigorous about adopting business models. In either case, telecenters need to have a financial plan for whatever the sources of support will be.

Telecenter systems have been innovative in developing income-producing activities to support telecenter operations. Among the telehouses in Hungary, there are more than 50 different services offered to the community. A major source of support for telehouses are the contracts that they obtain from government agencies, thus becoming (for a fee) extensions for government services.83 The Queensland (Australia) Open Learning Network’s Learning Centres offer training courses which are paid for by trainees’ employers or by the individuals themselves. Businesses and industry groups pay for use of the teleconferencing facilities, and institutions in the community pay membership fees to the Centres. There is need to explore other sources of income for telecenters. We have seen very few instances of telecenters soliciting individual memberships, or linking up with e-Commerce enterprises. It may be useful for telecenter projects to investigate the micro-enterprise movements in developing countries, and also explore the “bottom of the pyramid” opportunities for telecenter-mediated marketing.84

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Jo Noble from the organization Partnering for Africa’s Future suggests that local people can participate directly in community-based telecenters by establishing micro-enterprises. Based on her involvement in Uganda, she wrote in a 2007 chat piece:

My dream? Create village businesses where a geeky guy owns an internet service, but also acts as a resource person who helps people do searches, join chat groups, and expands the possibilities of the region. And, yes, even in very poor villages, I think there is money amongst the people to do this. It wouldn’t take but a few farmers getting info about banana wilt, etc. to excite the whole area. Has this been done? Probably, but not that I know of in Uganda. I think there would be a certain pride and prestige for someone to be the data queen/king in an area. The possibilities, indeed, are limitless and very possible.85

In our research on telecenter training (in which we surveyed a panel of experts from around the world), one of the most frequently suggested areas of training for telecenter managers was in the area of business planning aimed at making telecenters self-sufficient and sustainable.86

**Challenge 10. A strategic approach for gaining community participation**

With widespread interest in the “digital divide” issue, broad-based community participation may become part of a telecenter’s mandate. This may present a challenge in reaching out to ethnic minorities, women, children and the elderly who are often on the minus side of the divide. Sometimes the “learning” label on a center, or the technology, or its location in a library or school intimidates those who might benefit from the services. So physical connectivity may not equal *sociological* access.

Building an atmosphere of community participation and ownership (though not necessarily in the literal sense) is an important consideration in the demand-driven formula. Yet, one of the most under-appreciated aspects of the participation issue is that participation is not a spontaneous phenomenon. Once we get beyond the rhetoric of participation, we discover that participation has very practical value for telecenters. It is generally accepted that conscientious attention to participation can yield benefits in such activities as assessment of information needs, planning, and operations. Participation comes in various forms including participants as telecenter users, participants as telecenter staff volunteers, and participants as telecenter advisory groups.

Participation of community members in telecenter activities is problematic unless they are aware of what a telecenter is and understand its potential to improve their lives. Our research in India reveals that most villagers do not know what a computer or Internet can do for them. Most importantly, they do not know what a computer or the Internet is. From lessons learned in development communication projects, it is clear that people most in need of a specific information or communication service may not necessarily respond to simple service availability. Applying a ‘field of dreams approach’ (“build it and they will come”, or “provide the content and they will use it”) is unrealistic. And it can also be dangerous: our focus group research in India reveals how village elders and leaders traditionally act as a main source of information and communication, and if a telecenter ignores this tradition, it may bring power clashes and conflicts that hamper any ICT-enabled development initiative. This indicates the importance of raising awareness about the role of the telecenter, while also exploring every opportunity to sensibly integrate the telecenter in the existing local communication and social structures. In the accompanying box, UNESCO reports how a group in Bangladesh used a practical method for raising community awareness about an ICT initiative.

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**Forum Theatre popularizes concept of Community Radio in Bangladesh**

What does one do when communities have not been exposed to the potential of community media? The UNESCO-supported Youth Community Multimedia Centre (YCMC) in Sitakund sub-district of Bangladesh adopted an innovative approach to find answers. After a ten-day training workshop on ‘Forum Theatre’, volunteers of the CMC produced two interactive plays explaining the role of community media and contextualizing it to the lives of the rural poor.

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These plays are now regularly being performed in different rural areas to raise awareness and public demand for community radio legislation in Bangladesh. Unlike other theatre approaches which follow a one-way message delivery mechanism or collects feedback after the performance, Forum Theatre follows a live and runtime feedback mechanism that allows viewers to express opinions during the play and for characters to change their roles according to public reaction. This unique characteristic of Forum Theatre was explored to create a virtual community radio platform in many villages in Sitakund. Each play begins with a story on a local issue and in the local language. The first performance ends with a negative conclusion followed by an interactive discussion on rural problems and the lack of local community media in which such issues could be raised and addressed by the community. Then the same play is performed again, but this time the audiences have access to a virtual community radio that gives them the opportunity to interrupt during the play, protest or demand changes in the roles of the characters. Audiences have to justify with substantive reasons their demands for change and final decisions are taken based on group consensus. Finally it is the local community that gets to determine the end of the story and in most cases; the negative story becomes a positive one.

YCMC has discovered that the importance of this kind of an approach is manifold: first, it reminds people of existing local negative practices; secondly, it raises awareness about the lack of access to mainstream media and demonstrates how local communities can use community radio and other media to change their society.

Following his involvement in one of the performances, Ashraf Ali, a sixty-nine year old farmer, says “I now understand that community radio is a medium that I can use to help people to change their negative attitudes towards poor people”.

Bangladesh at present does not have a broadcasting policy favoring community radio. After a long period of advocacy by development organizations, a draft broadcasting act recognising community broadcasting has recently been proposed; however it is yet to meet with official approval. To advance the community radio movement the Youth CMC in Sitakund has involved itself in initiatives to strengthen the ‘demand side’ of community media in Bangladesh. The Youth CMC in Sitakund developed out of a UNESCO supported network on ICT innovations for poverty reduction, part of a cross-cutting theme on the eradication of poverty. The establishment of the community multimedia centre has been supported by UNESCO’s International Program for the Development of Communication (IPDC) and the International CMC Initiative, supported by the Swiss Agency for Development and Cooperation. The CMC uses the local cable network for content dissemination reaching about one thousand households in Sitakund. For those without television sets, the CMC plans to set up loudspeakers directly from the studio. YCMC volunteers will generate locally relevant content in the local language (Bangla) daily for one and half hours.


In Australia, Clark describes how her organization used various techniques to change the mindset of people who thought that “the telecenter is only about computers.” The small Boyup Brook Telecenter, one of approximately 100 in the province of Western Australia, uses a variety of community activities to attract people to diverse telecenter-sponsored activities. These include cultural events, workshops ranging from Belly Dancing to tractor driving for women, and other activities that put the telecenter into the mainstream of community life, rather than an oddity on the fringe. In the process, the telecenter and its ICTs are perceived as supporting the needs of the community. Similarly, among the telehouses in Hungary, there are more than 50 different services offered to the community. (See the article by Proenza at the end of this chapter.) In fact, major sources of support for the country’s telecottages are the contracts that they obtain from government agencies, thus becoming (for a fee) extensions of government services.

A very obvious point (though frequently ignored or overlooked) is the importance of making a telecenter a nice place to be. Telecenters can learn about this from some of the better cybercafés. We studied one of Canada’s community access facilities and found that separate times had to be scheduled for adults and young people because each was intimidated by the other. This made each group more comfortable.

The BusylInternet (BI) telecenter in Accra (Ghana) takes seriously the issue of atmosphere. To attract people who might not otherwise be interested in technology, BI shows movies at the center on weekends. Another magnet is Liquid, the BI Accra restaurant and bar with its cool-blue bubble design. This is where the local cyber crowd hangs out to network and dream up ideas. The BI philosophy is that creating a social scene around technology will help spark an innovative technology culture, and it places equal importance on both social and financial return. For example, to raise awareness about national ICT policy, the telecenter may host debates and organize experts’ lectures. Low or no-cost Internet access is offered to those attending HIV/AIDS workshops and other socially oriented programs. Those who cannot afford the normal daytime prices of fee-based services can pay half-price at night. The frivolity of the Korean *baang* (a very social cybercafé) may be a bit too much for a rural telecenter (and is sometimes criticized by Koreans themselves for being a negative influence on young people), but the cheerlessness and sobriety of the rural or small town telecenter is not the answer.

### The Korean Baang: Craze for Broadband

PC *Baangs*, literally meaning "PC rooms", are a unique Korean, a phenomenon engulfing and strengthening the base of the information society in Korea. These Internet cafés are popular, especially among youth and students, because they are inexpensive, convenient and provide faster Internet access. Says Lee Yong Tae, chairman, Thrunet, "In my days as a university student we had tea rooms. Then came the beer parlors, video gaming parlors, and Western fast-food joints. Now the latest fad in Korea is *Baangs*." These busy *Baangs* are part Internet Café, part video game parlor—the distinguishing characteristics being the rows of latest-model computers hooked up to the Internet over super-swift broadband network connections—mostly with 24 hours-a-day access. Here, the youth pay about $1 an hour to match reflexes with each other, playing the latest multiplayer computer games such as Rainbow 6, Starcraft or Quake. Others cruise growing mass of broadband Internet content such as music and streaming video. The PC *Baangs*, bonding the new generation of Koreans to the machines, are road-testing the future networks.

There are presently an estimated 16,000 *Baangs* in South Korea, up from about 4,000 in June 1999. Industry insiders say there could be 40,000 by the end of 2001. According to one survey, 25 percent of all Koreans access the Net from a public establishment, each person spending about two hours online every session.

A story by Assif Shameen in Asiaweek goes thus: "Off a cramped, congested alley in Seoul’s Shinchon district, an unlit concrete staircase leads down to a subterranean den. Behind a metal door, marked only by a poster for a computer game 'Diablo! Evil Has Survived!', dozens of young men slouch in front of rows of PC monitors as they engage in mock combat with fellow gamers. The floor is sticky with spilled soda and beer. A large model aircraft hangs from the grimy ceiling, so low that you can crack your head on it. In a corner, three women in their early twenties huddle together and giggle as they surf Internet entertainment sites. It is 8 p.m. on a Saturday night, and in South Korea, this is a hot spot." The students find *Baang* a cool place because there is broadband access, there are games and the interiors are just right to make them feel at home away from home, and log on for hours for high-speed Internet experience.

The nation’s embrace of all networked things makes turning a profit with a PC *Baang* almost as easy as point-and-click. Analysts estimate that these rooms are raking in combined revenues of about $6 billion a year. In upmarket districts, PC *Baangs* have thick carpets and velvet sofas,
and access costs as much as $9 an hour. In the not-so-privileged areas, rooms may be average and crammed with up to 100 machines. Running two PC Baang is considered better than running 10 restaurants. Overhead is low – the recent recession leading to heavy decline in space cost – and traffic is heavy. Profits from a PC Baang are believed to be more than double that of a big video game parlor. The preferred customers are students who play games, send e-mails, surf the Internet and do not make trouble, quite unlike the stock players and gamblers who tend to lose control as they lose money.

Source: [http://www.angelfire.com/nd/ramdinchnacha/NOV00.html](http://www.angelfire.com/nd/ramdinchnacha/NOV00.html)

Do community members have problems in accessing the center? How well is the telecenter located? It is clear that if the telecenter is away from the usual community meeting points, it might hinder participation. In South Africa, the telecenter in the township of Mamelodi, in Pretoria, was originally located in the local library. Shortly after it started up, it was decided that the telecenter should move to an independent location. Esme Modisane, the telecenter manager, told a researcher the reason why: “The library location was not appropriate because it appeared to the community as an official or government site. People were intimidated by the library and what it means; they think it is for ‘intellectual people.’ They do not feel it as their own community center if it is located within the library.”

One way of promoting community participation is through the constitution of telecenter management committees. This is often the case in rural Africa. However, Acacia researchers report that the responsibilities of management committee members are not always clear. Usually committee members are just in charge of mobilizing resources for telecenter sustainability, while most of the control of telecenter activities rests on executing and funding agencies. Telecenters are often owned by these agencies. According to the Acacia report, “ownership ought to confer control, and evidently the local communities were not in control.”

It is important to look at efforts to help women express and execute their demand for relevant information and communication resources. The cultural barriers that hinder women’s access to ICTs, and especially computers and the Internet, are more problematic and complex than simply making computers available in a library, telecenter or other public facility. (See Chapter 7.) Those barriers include literacy, education, language, cost, locality, the perceived role of women, and technophobia. These are not inherent in the female condition as we can see in thousands of offices across the world where men are often less competent in dealing with computer programs and putting the toner in the office copy machine. Nor are they barriers uniquely experienced by females. But they are barriers that exist widely and more severely for women particularly in Africa, Asia, and Latin America. A recent study of telecenters in Africa focused especially on their approach to gender and found that a women’s perspective was largely lacking in their operations. Some of these obstacles are as resilient to change as traditions such as female genital mutilation. They are deeply embedded in cultural practices such as denying school opportunities for girls, which is where the computers are likely to be and where the girls are most likely to learn to read and also become familiar with the computer culture. All these factors can influence women’s participation in community telecenters.

**PERSPECTIVES**

The last part of this chapter includes two contrasting perspectives on telecenters. The first is by Francisco Proenza, a communication specialist who has served FAO in Rome and the Inter-American Development Bank in Washington. The second is by Alfonso Gumucio Dagron, the Latin American communication expert who edited the *Making Waves* report for the Rockefeller Foundation.


TELECENTER SUSTAINABILITY: MYTHS AND OPPORTUNITIES

Telecenters are "shared premises where the public can access information and communication technologies" (Colle and Roman 1999:1). A center offering only telephone or computer services is valid under this definition, but here we focus on those providing access to the Internet. The Internet opens up opportunities for networking and access to information and services previously unavailable to low income people on account of distance and cost. Voice over the Internet Protocol (VoIP) is gaining importance - even if there are still institutional obstacles and latency limitations (Minges and Kelly 2001). The Net may also be used in combination with traditional technologies, like radio, to broadcast information over a wide area at low cost. The dominance of the Internet through computers as the standard telecenter equipment-service configuration may change as technologies converge (e.g. as 3rd generation cellular telephony becomes ubiquitous), but access to the Net is the standard feature of today's telecenter. Countless other services are often offered, but the most common service and source of revenue is the sale of Internet-computer time.

A successful telecenter experience requires familiarity with computers. This is not an insurmountable barrier: children and young people adapt to the technology more rapidly than mature adults. This is important both from a market and a development perspective. Countries with young populations have potentially large markets for telecenters. Furthermore, the use of telecenters to introduce the technology to young adults and children for educational and productive purposes makes social and economic sense, because they have a longer horizon in which to make productive use of these skills. [In part reflecting these considerations, the presence of school-age children (aged 6 to 17) in US households increased the % of computers in the household (August 2000) from 45% to 67% and the % of Internet access from 37% to 53% (US Census Bureau, 2000:3).

The rules governing telecenter economics are not complex but they are unforgiving. If a telecenter revenue inflow does not cover expenses and generate a surplus to replace equipment - i.e. if it cannot achieve full financial viability, inevitable equipment breakdowns and obsolescence will eventually force the telecenter to shut down. If the telecenter does not generate sufficient income to cover operation and maintenance costs - operational viability - the telecenter may have to shut down even sooner.

Donors sometimes fill a part or all of the financial gap. It is common for developed countries - e.g. U.S., Canada, Japan, Finland, Australia - to make telecenter services available for free in libraries, albeit usually with restrictions on the amount of time allocated to individual users. The Government of Australia, a country with a per capita income of US$ 20,500 (in year 2000), gives recurrent support to most of an estimated 150 telecenters. Less developed countries that try to follow a highly subsidized approach to telecenter development will find it an unsustainable drain on resources. They are eventually forced to stop funding or to limit the extent and reach of their telecenter programs.

We are interested in telecenters that meet our definitional criteria and are sustainable; either operationally or fully viable. We would also like for telecenters to have a development impact. They should: (1) improve the welfare and living conditions of large numbers of low-income users (scope of outreach), and (2) benefit the very poor segments of the population (depth of outreach). The development impact of a telecenter is thus a very important consideration, even if it is a dimension that is distinct from sustainability.

Sustainability is itself many-sided. Structural conditions – e.g. telecommunications infrastructure – are critical determinants of sustainability. At the individual telecenter level, its governance structure or constitutional rules help shape how decisions are made and resources procured and used. A country's policy and regulatory framework may influence telecenter development in many ways, not all of them salutary....

Myths

1. A cybercafé is not a telecenter

It is an unfortunate but common mistake to disregard cybercafés, because they are "not development oriented". These small businesses have been expanding very rapidly worldwide,
are sustainable as a system, and there is much to learn from their experience. When we discard cybercafés we are ignoring the most replicable and sustainable governance structure known — i.e. the privately owned business, and narrowing the range of possibilities. Telecenters operated by institutions using perhaps the second most commonly used governance structure, i.e. not for profit non-governmental organizations (NGOs), by tradition rely on donor funding, at least to cover investment costs. No wonder we have a hard time finding telecenter models that are sustainable!

Cybercafés often provide as many services as other types of telecenters. They train their clients (for example, in basic computer skills and office applications) - either in response to local demand or to stimulate demand for their services. On the other hand, many NGO run telecenters are in practice "cybercafés in disguise; they do not offer any more valued services than a typical cybercafé, and any excess revenues (from donor funding or fees) are distributed to operators as staff salaries.

By ignoring cybercafés we also miss an opportunity to learn important lessons about policy and managerial approaches that contribute to sustainability. Why, for example, have cybercafés spread rapidly and extensively throughout Lima, Peru, where they are known as cabinas públicas, whereas the same does not happen in other countries - e.g. Brasil and Jamaica? Mainly because Lima offers a combination of important features that facilitated telecenter development; that are not always present elsewhere, and that can help guide policy design in other countries. The features include:

1. enormous and densely concentrated demand, in the form of young low-income people with limited access to affordable telecommunications facilities;
2. large number of well trained engineers with limited employment opportunities enabled the development of low-cost repair and supply of parts industry based on PC clones and pirated or low-cost software;
3. imminent threat and eventually real competition, resulting from a privatized telecommunications sector with limited exclusivity period that ended in 2000, resulting in a rapid fall in the cost of connectivity;
4. a major awareness campaign launched by an NGO, the Red Científica Peruana, during the early days of Internet development, helping many young entrepreneurs learn of the potential benefits of ICTs.

At the operator-level, the behavior of cybercafés is also instructive. Donor-driven telecenters have a weak motivation to be economical. They may invest and spend more than they can afford on superfluous services; e.g. fancy buildings, more than one attendant per shift, highly educated costly operators, and products that are not affordable or desired by customers. In contrast, a well-run cybercafé exhibits the following features:

1. The local market demand determines the number and quality of services provided. The service provided is usually the basic minimum, mainly computer-Internet connect time. Refreshments, magazines, diskettes and related supplies, and Voice over IP are other common services. Although there are some departures from the norm, supplementary services seldom account for more than 20% of total revenue.
2. The training given to telecenter attendants is very basic. Whoever sets up the business needs to know about computers and how to set up a LAN, or needs at some point to hire someone who does. But everyday attendants are few in number (e.g. one person per shift for up to 30 computers) and are generally low-salary staff with a suitable but limited level of education.
3. Software provided is minimal, depending on client demand for applications. Either pirated or free software is used, or software licenses are purchased at low-cost, for example through online auction sites.
4. Where competition among telecenter operators is high, as in Lima, prices fall to very low levels - as little as US$.50 per hour of service. Interesting things start to happen: the operators who survive are those who find a way (through location, quality or variety of services) to fill in their cybercafés all of the time (65% or higher occupancy rate), and are in constant search for ways to keep expenses low by relying on special situations like, for example, running their businesses from their own home, or sharing overheads between different business activities.
Cybercafés sometimes have a bad name because they are associated with upscale businesses serving tourists. While these types of telecenter meet a market need, their development impact is limited. In practice, however, where cybercafés are ubiquitous and competition is intense, small entrepreneurs set up shop in areas serving low-income communities. At US$ 0.50/minute in Lima, 20 hours of Internet service every month can be purchased for US$10 or US$120/year. This is hardly an insurmountable obstacle in a country with an average per capita income of about US$2,100. (Per capita income figures are from World Bank 2001.)

2. Success is assured through community ownership
The notion of “community ownership” is vague, yet it is frequently the alleged driving force behind telecenter experiments. Well-meaning donors that provide initial funding but let their projects start running on loose terms regarding ownership and control over resources are courting disappointment and failure.

Like any organization, a telecenter must have working rules to ensure sustained satisfactory operation. Its governance structure needs to be clear, must stimulate the commitment of the operator working at the local level, and must be compatible with the objectives of the center and its sustainability. Someone needs to be responsible and accountable for repairs in the event of a breakdown, hiring and firing staff and paying their salaries or for recruiting and supervising volunteers, opening the center on a regular schedule, helping customers and making sure that their needs and aspirations are met by the center, and protecting the equipment and premises.

The reason commercial telecenters are so resilient, as a system, is that if a telecenter owner is not committed he will surely fail while others take over to serve his market. In contrast, telecenters “owned” by municipalities or otherwise heavily influenced by politicians tend to give headaches because a mayor’s foremost concern is to keep in good standing with the electorate. Financial sustainability is of secondary consideration. This, of course, less of a consideration in high income countries where the political significance of telecenters is not so large.

Grass roots organizations and NGOs are excellent vehicles for reaching the target group. Because they rely on external fund raising, some are able to offer the kinds of specialized services - e.g. geared to the disabled or to women - that disadvantaged people need most from a telecenter, but which would hardly be provided by firms on a for profit basis. Furthermore, the social interaction that occurs through joint action for a common purpose, offers the potential for contributing significant to social and economic development, over and above the direct benefits associated with using the new technologies. These spillover or external benefits will become increasingly important as communities of disenfranchised groups facing common problems expand and develop; i.e. as they learn to trust each other and work together through a combination of face to face encounters and online interaction.

Not-for-profit organizations, however, tend to be most effective in short-lived single-cause action; less so when concerted prolonged effort is required. Because the managerial and financial requirements of telecenters are not complex, these shortcomings may be overcome through training and institutional upgrading primarily geared at improving governance, enhancing staff capacity to keep records and manage resources, and making sustainability a central objective of telecenter operations from the outset.

3. Set up the right policy framework and the market will provide.
A stable macroeconomic environment, competition in the telecommunications sector, and a suitable regulatory environment, are necessary to make ICTs more accessible to the public at large, but other factors may inhibit commercial telecenter development. A key issue is whether there is a sufficiently large market to stimulate entrepreneurship in the cybercafé business. Telecenter markets, however, are highly localized and sensitive to distance. In Peru, customers use 2.3 cabinas on average, and 44% of the time they use cabinas located within 1 km from their home, 70% within 5 km (Proenza, Bastidas-Buch and Montero 2001:23). If a city has no areas with a large concentration of young low-income people having no alternative low-cost
means of connecting to the Net, self-sustaining commercial telecenters will not arise.

Establishing telecenters in rural areas can be a particularly daunting challenge, particularly where the landscape is irregular and the population is scattered. Both of these features make the cost of expanding the telecommunications infrastructure expensive. The low density of population that is typical of rural Africa and Latin America defies the basic premise of sharing equipment within a single facility. It is much easier to keep a 10 - 30 computer telecenter fully occupied in a large city than in a sparsely populated small town where clients are poor and have limited means of transportation.

Even where commercial telecenters are located in urban marginal neighborhoods they are frequented primarily by well-educated young people. To reach the large mass of low-income people, most of whom have limited education, specific measures – promotion campaigns, start-up investment capital, training programs, and demand support during the initial stages while users become familiar with the technology - will need to be instituted. These measures are costly. They yield high social but low private returns. Private enterprise will not bear these costs on its own volition.

Telecenters that help build up social capital in a community create more wealth and value than the market will recognize. Communities of people facing common problems and pursuing action through joint efforts generate externalities that cannot be reproduced or captured by the individual or the firm (Collier 1998; Knack and Keefer 1997). Pure for profit ventures will not engage in these activities. Yet, in order to be effective, the needs of indigenous people, of women and other minorities need to be addressed directly through explicit concerted action. The risk, especially in highly fragmented societies, is that community empowerment through ICTs will at times involve struggles over use and control of resources. A major challenge facing developing country governments is to recognize and provide the leadership and funding necessary to sponsor community networks that help minorities and disenfranchised groups use ICTs to improve their condition and, in the process, build up overall trust in society and forge new democratic all-inclusive institutions.

4. Franchising is a proven and effective strategy.
Commercial telecenter franchises are conceptually appealing, as a way to profit from scale, and to serve large numbers of people through a replicable model. In practice, implementing telecenter franchises has been fraught with difficulties. Franchises have been common in the telephone industry, set up by traditional monopoly operators in many countries, but also by innovative cellular operators like Grameen Telecom. More recently, some countries have established minimum subsidy schemes to encourage the development of telecommunications and telecenter infrastructure in small towns [Colombia]. These subsidized schemes stimulate telecenter franchising: the infrastructure development is undertaken by a large firm, but the service to the client is handled by small local entrepreneurs.

As yet, however, there are no known successful commercial franchising (Internet service) telecenter experiences in a competitive (e.g. urban) unsubsidized setting serving a low-income population. For several years the Red Cientifica Peruana advertised a telecenter franchise project in its web pages. In practice, it never managed to put together a marketable plan of services or assistance of value to prospective franchisees beyond what an independent operator could purchase in the open market.

Beginning in 1999, S. Kumars Ltd. started promoting in India what a promising service package. It seeks to connect small towns and villages through a network of 1-computer Internet kiosks using VSAT technology. What sets the S. Kumars model apart from other franchising schemes, are its provision of infrastructure and network economies associated with a large network of franchisees and a comprehensive service package (connectivity, equipment, credit, cash based e-commerce). Plans provide for the establishment of a total of 50,000 kiosks spread throughout the country. In practice, however, the company has experienced serious difficulties while implementing its model. Out of a total 53,000 franchise applicants in the first quarter of 2000, only 1,400 franchisees paid the required investment and, as of 14 July, these were still waiting for their kiosks to be set up [Chatterjee 2001].
Some franchising efforts have tended to focus on the high end of the market. The investment cost of a TeltecGlobal telecenter, for instance, ranges from US$ 350,000 to 750,000. These are intended to be a combination of “Super Kinkos, Internet café, virtual classroom, internet service provider and small (electrical appliance and equipment) showroom under one roof”. A number of Internet connected kiosks are also being launched, for example, in Mexico, in the U.K., in Jamaica. These are still experimental risky ventures, geared primarily for businessperson on the run.

Companies, however, are beginning to focus on a broad expansion of the service. The most extensive urban franchising telecenter scheme appears to be emerging in Argentina, where computer terminals providing internet service have been added in an estimated 300 (Telefónica) and 450 (Telecom) Locutorios that previously only offered telephone service [Davidziuk 2001]. The provision of Internet service through the McDonald's chain is being tested in Israel (Heller) and Brazil (DiarioTi) and could significantly increase access to the technology.

Developing profitable franchising schemes has proven difficult and their impact on low-income people is an open question. Yet time and again, public or quasi-public institutions take up franchising as a suitable way to provide easy access to the masses expeditiously. In fact, these initiatives end up trying to control from their “headquarters” office very critical aspects of the telecenter operations (e.g. prices) that can only sensibly be provided by a local operator responsive to a community’s needs. The “central office” hires overqualified expensive staff that presumes they know better than the people on the locality when in fact just the opposite is true. There are tremendous economies of “decentralization” in telecenter operations that far outweigh any advantage from say “bulk purchase” of equipment and software. Hence, the importance of letting the local entrepreneur run the show; to give him the power and flexibility to operate the telecenter according to the needs of his clientele, and to address the problems he faces with the resources he has within reach.

Opportunities
Commercial telecenters are fully sustainable in many urban areas where a number of specific conditions apply. In sparsely populated rural areas, sustainability is difficult to achieve because infrastructure may be lacking and because local demand is scattered and has limited purchasing power. Even in urban areas commercial telecenters cannot afford to provide public service goods, like informal adult or remedial education, to serve the special needs of low income people and disenfranchised groups. For telecenters to reach and procure tangible benefits for the poor, either in rural or urban settings, state subsidies will be required for the start-up phase, and subsequent governmental funding of public services will be needed.

State Supported Systems
For the investment and start-up phases subsidy mechanisms should be transparent, prudent and conducive to sustainability. Two systems meeting those criteria have proven successful in the Americas: These are:

(1) Telecommunications Development Funds. This system has been very effective in encouraging private investment in rural telephony in low profit areas and has recently begun to be applied to telecenter development in Colombia, Chile and Perú. These programs grant a concession and a “minimum subsidy” to a centralized operator or consortium that agrees to establish a given number of telecenters in specific localities and following predetermined service specifications (e.g. bandwidth, content development and training). The contract is awarded to the firm or consortium that proposes to fulfill the service requirements for the least subsidy amount. The competition is open to any kind of “business model”, but the enterprises that have won these awards typically choose a commercial franchising scheme. Actual subsidies granted have varied, for example from an average of US$29,000/center, under Phase III of Colombia’s COMPARTEL program, establishing a total of 270 telecenters, each with 3, 6 or 12 computers; to US$ 9,000/center under the same program’s Phase I, to establish 670 1-computer telecenters. The size of the subsidy award is a function not only of the size of the center, but also of the terrain and difficulty in providing connectivity, as well as market size. The larger telecenters are intended for relatively large towns with a few thousand people, while the...
1-computer centers are for small towns with fewer than 250 inhabitants.

**(2) Community Investment Fund.** Between 1995 and 2001 Canada’s Community Access Program (CAP) helped establish more than 8,000 telecenters using a Community Investment Fund approach. The CAP mobilizes civil society and helps further telecenter development by awarding grants to individual telecenter initiatives led by not for profit institutions that agree to provide a predetermined level of service (hours of operation, access to the Internet, access by disabled persons, etc.), and to “match” grant funding with local resources, mostly in-kind. As the CAP matured, it established procedures conducive to telecenter sustainability and to the transparency of the grant award process. These include:

(1) The Proposal Review Committee is made up of a group of notables that vet proposals independently, albeit with technical backstopping from government;

(2) Proposals must be put forth by a consortium as opposed to a single institutions to avoid competing proposals from the same community for different projects, and to increase the size of the clientele and the intensity of use of the CAP (and thus potential revenue and sustainability), as each institution encourages its own constituents to make use of the facilities;

(3) Some participating provinces also provide technical assistance to communities preparing CAP proposals. A technical unit gives assistance during project formulation and filters bad or incomplete proposals before they are presented for consideration and funding;

(4) Beginning in 2000 CAP started promoting the presentation of proposals by groups of communities in an effort to expedite the formulation and approval process and, at the same time, foster networking economies as well as scale economies in infrastructure development;

(5) The Selection Committee reviews proposals on a periodic basis. Any proposal that is discarded in any one selection round could be revised to rectify any shortcomings and resubmitted during a subsequent selection round. This enabled the Committee to say “no”, without that decision being definitive; thus reducing the pressure bearing on the Committees to approve bad proposals.

Both systems grant subsidies on a transparent competitive basis. Both have some elements of franchising (e.g. bulk purchase of equipment, provision of technical assistance by a centralized unit), but with notable differences. These include:

(1) The State supports the system during an initial start up phase and any suprastructure is temporary. In the case of CAP, support to individual telecenters is for half the cost of establishment, and to cover part of operations for an initial period not exceeding 18 months. Technical assistance is solely during the project preparation stage. COMPARTEL grants are awarded to ensure service for a 5-year period. The subsidy is applied upon establishment of each center. There is no commitment for continued support afterwards.

(2) Both systems encourage local initiative and management. The local telecenter manager controls his resources – e.g. he manages revenues collected and uses them to meet expenses in a timely fashion as the need arises. He is in the best position to identify the needs of his clients and to respond to those needs with new or improved services.

Because scale and network economies may be achieved by providing for numerous access points, the Telecommunications Development Fund approach is most applicable in rural areas lacking telecommunications infrastructure. Community Investment Funds are better at building social capital and addressing the needs of low-income people. They are quite suitable for countries with well-developed infrastructure and robust civil society organizations.

A summary comparison of the two approaches follows. Beyond financial support, to achieve sustainability telecenter programs would do well in offering technical assistance during the investment and start up phases to: (1) strengthen individual telecenter constitution and management structure to ensure accountability, commitment and sensitivity to local needs; (2) cultivate and help develop the market for ICT services amongst low-income people; (3) keep operating costs to a minimum (don’t over-invest, keep staff costs in check, don’t introduce services you cannot afford to provide); (4) promote partnerships that help cover a part of the costs or bring in additional revenue; and (5) help develop networks that share experiences and best practices between telecenters, both online and through periodic face to face encounters.
### Approach

<table>
<thead>
<tr>
<th>Type of institutional arrangement encouraged</th>
<th>Suitability to profit from scale economies associated with infrastructure dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Telecom Development Funds</strong></td>
<td>Commercial franchising is typical: large (usually telecom) private firm in partnership with small businesses located in communities served.</td>
</tr>
<tr>
<td><strong>Community Investment Funds</strong></td>
<td>Lead local NGO in concert with other institutions (e.g. small businesses and Gov.)</td>
</tr>
</tbody>
</table>

### Services

Computer-Internet access – mostly for e-mail, browsing and chatting - is a key generator of revenue practically everywhere. Training in computer literacy, word processing and spreadsheet is a distant second, but nevertheless of prime importance in particular localities. Formal content is widely regarded to be necessary to engage the interest of local communities, but maintaining content updated remains a major challenge. Portals that help build community networks have been the most commercially successful, and their potential importance in building up social capital across the Net is immense. Because they rely on the interested party's initiative, they should also prove easier to maintain.

The provision of multiple services through a single site to attract a large rural clientele and enhance financial viability has been a cornerstone of ITU's Multipurpose Community Telecenters (Ernberg 1998) The financial viability has proven elusive in practice. ITU's present telecenter showcases in Honduras are more promising than earlier experiments. The multipurpose orientation is retained, but the focus is on those services that pay their own way, i.e. that bring in more revenues than it costs to produce them.

**Low cost rural connectivity at the service of local limited markets**

Wireless technology in general and VSATs in particular have significantly contributed to expanding connectivity to rural areas. Most of the least-subsidy competitive tenders to expand telecommunications services to rural areas in Latin America (Chile, Colombia, Perú) have been awarded to firms using VSAT technology.

ITU's telecenters in Honduras are using wireless technology to directly address the issue of the disperse population typical of many rural contexts. The two headquarters centers (one in Valle de Angeles and the other in Santa Lucia) retransmit Internet signals serving as ISP for neighboring residents, and data at a lower rate (using spread spectrum and radio packets) to low-cost and low-maintenance 1-computer mini-centers located in neighboring villages. The ISP service in particular has become a key revenue source that helps cover costs for the mother center, while keeping the cost of servicing satellite mini-centers at affordable levels. These experiments and similar initiatives in Brazil, India and elsewhere promise to enhance the prospects of rural telecenter viability and deserve greater attention by government and marketing support by the private sector.

### Alliances

Telecenter partnerships are commonplace. The best-documented experience is that of Hungary's (US$ 4,740/capita) telecottages. Each telecottage in Hungary is formally owned by a well-structured not-for-profit organization. The national government funds telecottage establishment, but managing NGOs are required to cover operating costs. NGOs have contracts, for example, with the employment agency to do job counseling, or with local or national governments to provide public services such as providing information and forms, helping applicants submit project proposals, etc.

A total of 220 (as of mid-2001) telecottages located in small rural communities throughout the country offer an impressive array of services.
Hungarian Telecottages - Services provided by more than 50% of Telecottages surveyed
(Survey covered 78 telecottages and was undertaken in 2001)

<table>
<thead>
<tr>
<th>A. Computer-Internet Services (paid for by users on an hourly basis)</th>
<th>% of telecottages providing the service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer games</td>
<td>99%</td>
</tr>
<tr>
<td>Completion of computer work</td>
<td>97%</td>
</tr>
<tr>
<td>Internet access</td>
<td>96%</td>
</tr>
<tr>
<td>E mail for public use</td>
<td>95%</td>
</tr>
<tr>
<td>Multimedia equipment for use by the public</td>
<td>83%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B. Other services for which telecottages receive direct compensation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office services (faxing, photocopying, computer usage)</td>
</tr>
<tr>
<td>Local advertisement, information centers</td>
</tr>
<tr>
<td>Technical advice on computers</td>
</tr>
<tr>
<td>Seek - Offer Information Service</td>
</tr>
<tr>
<td>Editing of local newspaper</td>
</tr>
<tr>
<td>Who does what in the village? - &quot;Value map&quot; (1)</td>
</tr>
<tr>
<td>Assistance on administrative affairs, admin. Transactions (1)</td>
</tr>
<tr>
<td>Teaching, training</td>
</tr>
<tr>
<td>Agricultural information and advisory services (mostly to government. agencies)</td>
</tr>
<tr>
<td>Employment services - aid to job seekers</td>
</tr>
<tr>
<td>Prospectus, information leaflets - production and dissemination</td>
</tr>
<tr>
<td>Edition of local web page (2)</td>
</tr>
<tr>
<td>Almanacs, catalogues and lexicons (including CDs) - production, library of materials</td>
</tr>
<tr>
<td>Local list of programs and other publications - prod. &amp; dissemination</td>
</tr>
<tr>
<td>Counseling - at least in one professional field (2)</td>
</tr>
<tr>
<td>Mediation of commercial and business services (e.g. real estate, commodity)</td>
</tr>
<tr>
<td>Organization and procurement of funding of distance learning programs</td>
</tr>
<tr>
<td>Organization, procurement of funding and provision of accommodations to enable tele-work</td>
</tr>
<tr>
<td>Local sale (books, postcards, gifts, etc.)</td>
</tr>
<tr>
<td>Production and upkeep of database with information of use to the community (3)</td>
</tr>
<tr>
<td>Tourist Information Office (4)</td>
</tr>
<tr>
<td>Distance administration and distance support (3)</td>
</tr>
<tr>
<td>Translation services</td>
</tr>
<tr>
<td>Management of Regional Development Programs (3)</td>
</tr>
<tr>
<td>Café - coffee, tea (3)</td>
</tr>
<tr>
<td>Tutoring</td>
</tr>
<tr>
<td>CD – rental</td>
</tr>
<tr>
<td>Partnership Centre for Small Region Development (3)</td>
</tr>
<tr>
<td>Tele-village centre (3)</td>
</tr>
<tr>
<td>Publication of local telephone directory</td>
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</tbody>
</table>

<table>
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<tr>
<th>C. Services provided by telecottages for free</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information for use by the public</td>
</tr>
<tr>
<td>Center for civil society organizations</td>
</tr>
<tr>
<td>Organization of community programs and events</td>
</tr>
<tr>
<td>Periodicals reading room</td>
</tr>
<tr>
<td>Constant place for exhibitions by community organizations</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>D. Services provided by government agencies using telecottages (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information center for local affairs</td>
</tr>
<tr>
<td>Organization and provision of social services</td>
</tr>
</tbody>
</table>
This is a service often offered by telecottages to third parties for a fee, but sometimes also
by government agencies using telecottage facilities (without directly compensating telecottage).

1. About half the time telecottages get compensated for this service; and about half the time
the service is provided free of charge.

2. These are services given by telecottage to third parties (e.g. government agencies, NGOs,
businesses or individuals) and gets direct compensation from the third party. The service
to the final users is provided by the third party using telecottage facilities.

3. Perhaps 70% of the time telecottage receives direct compensation for the service. The
remaining 30% is provided by government agencies directly, using telecottage premises
but paying no direct compensation.

4. No direct fee is charged by telecottage, but there is usually a quid pro quo arrangement
between government agency and telecottage.

The dominant source of telecottage service revenue is derived from access to the Internet and
to computers (listed under A in the table below.). These generate about 50% of all revenues
collected; the remaining 50% are produced by a broad array of services for which telecottages
receive direct compensation. Nevertheless, service revenues cover only about 30% of
operating expenses. Obtaining the rest is a continuous challenge, up to now overcome through
competitive grants from private sources but mostly from public funding (60%). Given the public
character of many of the services lacking in rural communities and that, in principle, telecenters
may provide these services effectively and at low-cost, partnerships with public and quasi-public
institutions (national but mostly local) is an appropriate means of improving living conditions in
rural areas and enhancing telecenter sustainability. To ensure successful partnerships, two
things must be preserved: (1) the independence of the telecenter from political interference; and
(2) the ability to make decisions at the local level.

<table>
<thead>
<tr>
<th>Hungarian Telecottages – Sources of Funds as % of Total Operating Expenditures</th>
</tr>
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<tbody>
<tr>
<td>Revenue-generating services</td>
</tr>
<tr>
<td>A. Computer-Internet services</td>
</tr>
<tr>
<td>B. Other services</td>
</tr>
<tr>
<td>Competitive grants from private sources</td>
</tr>
<tr>
<td>Public Funding</td>
</tr>
<tr>
<td>Competitive grants – public sources</td>
</tr>
<tr>
<td>Local government support (not directly linked to services)</td>
</tr>
<tr>
<td>National government support (no direct link to services)</td>
</tr>
</tbody>
</table>

These percentages are not based on statistics, but on estimates from experience courtesy of
Mátyás Gáspár, President of the Hungarian Telecottage Association.

Three kinds of institutions present in many rural communities appear to be most promising for
partnerships with telecenter initiatives: schools, post offices and libraries.

School computer laboratories in the service of the public at large are an ideal location for a
telecenter. They arise in many countries – e.g. Canada, Chile, Colombia, Jamaica, US, South
Africa, Zimbabwe – in response to community demand or on account of an individual’s initiative.
The greatest challenge has been convincing administrators and teachers of the value of a
telecenter, and providing for the institutional arrangements to make school facilities available,
staff the center and protect the equipment. Public universities in Peru have perhaps been the
most successful, mainly because internal regulations allow computer labs to keep the proceeds
of any revenues collected from the provision of services and use those proceeds to cover
operating costs.

Post offices are facing a declining demand for traditional services and their use to provide
Internet connectivity is being promoted in many countries. In order to succeed financially,
achieve depth and breadth of outreach, and provide community-oriented public services and
training, they will need to provide greater variety of services, perhaps by partnering with other
local organizations. Libraries have been quite successful as telecenters in many countries. In Jamaica, every one of the country’s 14 parish libraries has a small but lively computer lab with 9-10 computers each.

The establishment of telecenters led by local, well managed (strengthened, if necessary) not-for-profit organizations, in partnership with a variety of public, quasi-public agencies, businesses and other civil society organizations, appear to be the most promising way forward, both from a development perspective and to achieve long term sustainability. These partnerships cannot be forced upon by decree. They may be encouraged and nurtured, but will need to be voluntarily formed at the local level by the local partners.

Works Cited

TELECENTRES AS THE PROMISED FLAME OF KNOWLEDGE
Alfonso Gumucio Dagron
It has become common place to talk about the infamous “digital divide”, the gap between those who have access to new information and communication technologies and those who are excluded. The digital gap is clear between countries in the North and in the South, but even more dramatically explicit within Third World countries (the politically correct name is “developing countries”, though some are actually going backwards). The gap between urban areas and rural areas and the divide between rich and poor are the main causes for the imbalance between those who have access to new ICTs and those who haven’t. However, it would be tricky to isolate the question and reduce the imbalance to only a matter of technology. Unfortunately, this is what is happening most of the time, especially when ICTs are perceived as the “solution” for poverty and underdevelopment, as if social injustice, discrimination, corruption, unfair trade agreements, lack of services, poor education and health systems, etc., were only
mere marginal factors. ICTs entered the development world with enormous strength; suddenly during the eighties and early nineties there was a big push to “provide access” to new information technologies in poverty areas of the world. This push was obviously supported by the emerging computer and Internet industry in need of rapidly expanding its markets.

Development agencies, who seldom in the past supported community radio or other people-centred communication initiatives, suddenly came up with a whole new theory about how ICTs could bring poor rural communities out of their marginalisation. [According] to the IDRC, such a perspective has categorized the rural community as a user of telecentres rather than a manager of knowledge. Suddenly, some governments in developing countries placed at the top of their agenda to provide “universal access to telecommunication services”, often forgetting their own incapability to provide national access to basic services (let alone “universal”). At least, on the sunny side of this trend, telephone lines are expanding to remote areas.

The word “access” became the synonym of bringing the light of knowledge to those who are desperately poor and excluded because they are ignorant. That is what was and still is in the minds of many of those who push ICTs over developing countries: “if poor people could know more of what we already know, their lives could get better.” It is a paternalistic assumption that has lead to a massive parachuting of computers over rural and poor urban areas in the Third World, with little results on social change.

Prometheus takes the fire of knowledge to the people. What knowledge? Whose knowledge? Communities don’t have their own knowledge? It has become a hideous common place to say that knowledge is the answer for development. Having more knowledge will allow communities and individuals to better develop themselves.

Nobody will deny the place of knowledge, but why is the assumption that knowledge comes from outside, graciously donated by the “intelligent” and “cultivated” people in the North, to the primitive and disoriented people in the South? Also, knowledge is just one aspect of development. To say that the lack of knowledge is the main reason for poverty and underdevelopment is an easy way to evacuate from the discussion the social, political and economic causes of poverty. Let’s spell it once more: people are not poor because they are “ignorant” as many would like to pretend, but because they are the victims of a very unfair social and economic system where very few get all the wealth, and the majority just works for the very few that get all the wealth. This is to put it simple, but we could go into numerous examples. However, the purpose of this reflection is to analyse the usefulness of telecentres as we know them today.

Here goes my bottom line statement: only one out of every one hundred telecentres are really useful for the local community where they have been set-up, in terms of supporting development and social change. This may shock many of those who see ICTs as the ultimate magic solution for poverty, but I challenge anyone to show me that I am wrong. Thousands of telecentres have been planted during the past five years and millions of dollars have been invested in buying computers and ensuring Internet connectivity; however, every time we are to mention the successful experiences, the same five or six places come to mind. In other words: something smells very bad in cyberland.

Many of the Promethean ICT enlighteners found on their way to the poor communities that these had no electricity, let alone telephone. Oops! Houston, we have a problem. That was kind of easy to see: there was no socket to plug in the computers or connect a phone line to the Internet. Other things even more important were not as easy to identify by the avant-garde of ICT marketers: many of the rural and even urban communities had no water, no school, no health post and no political representation in the local government. If they were going to promote “access”, these items could not be left aside; they were core to the problem of poverty and underdevelopment.

In many cases, with some level of stubbornness to prove their point, electricity and telephone cables were pulled several kilometres to the places where a new telecentre experience was being created from the vacuum. (Forget safe water or education). Flashy computers were
installed, along with fax and photocopiers, and Internet connections were provided through a complex array of agreements with local Internet providers. Most of this trend focused exclusively on technology, with very little discussion on community participation or the ultimate goal of development and social change. Sometimes the development goal was spelled out in the initial project documents to justify the operation, but very seldom were communities part of the planning process or even consulted about the project.

We know a handful of case studies with successful experiences and several essays on critical issues. Some of the reports of "success" are actually descriptions of good intentions taken from the original project documents, rather than independent evaluations or observations of the project sites. It is true that it may be too soon to evaluate projects that have been on the ground for only one or two years. However, if no one could expect development and social change results in such a short time, at least it is important to monitor participation and community involvement, generation of local contents and general patterns of utilization of telecentres.

We should also look more at numbers: numbers of telecentres that have been installed by the various cooperation and development agencies, costs of these projects, number of telecentres that are actually serving the poor people within the community and promoting social change. In his report from the field in this issue, Peter Benjamin reports on the network of telecentres established in South Africa by the Universal Service Agency (USA). Out of 65, 32% were not operating, 18% were operating without a phone and 3% were operating without computers. He also mentions technical and financial problems, managerial weakness and community conflicts as the main constraints. Gail Short reports that "of the 128 centres established throughout Australia with federal funding, predominantly on the east coast, only 28 remain today."

The result of this kind of inquiry may confirm the statement above: one in one hundred telecentres are having some positive impact on communities in terms of promoting development, social change, cultural values, solidarity, political awareness, community organization and participation. I bet the other 99 (if still open) either have become commercial ventures or are mostly serving the well-off social layers of the community, the intellectual categories, and the rich. I am not implying that students, teachers and liberal professionals -- if any at the community level -- should not have access to the local telecentres; I'm saying that if the telecentres mainly serve the upper layer of society, then the claim of serving the poor and the most needed is simply not true.

Why is it that after the large investments and the efforts of ICT Prometheans to bring the light of knowledge to the poor of the world, the poor of the world still do not take full advantage of it? We don't need to call a council of sage people to answer. It has been said in many reports and informal discussions on the web: the manner most of these projects have been established and run excludes the possibility of prompting more "access", let alone participation from the community. The bottom line is that the availability of computers and connectivity is no panacea for development and social change, because the web, as it is shaped today, is not the ideal tool for the large majority of the world.

Language as an obstacle

A key issue is language. The most conservative figures show as high as 50% of World Wide Web pages are in English (against 5% for Spanish), while the large majority of our "deprived wide world" does not speak English. Other figures put English over 70% of the total. Some still insist that English should be the international language of Internet.

It is amazing how some tend to generalize about the extent of which English is spoken in the World. For example, it is often said that India and Nigeria, the most populated countries of Asia and Africa, are "English speaking countries." However, anyone who is willing to look seriously at this assertion will find that only a minority in both India and Nigeria speaks English, while most of the population speaks only Hindi, Hausa, Ibo, Yoruba or hundreds of dialects. The same for the most populated country in the Arab world. In Egypt, as pointed by Sherif Hashem in his report from the field, the majority of the population only speaks and understands Arabic, the national language.

And what about reading and writing? If speaking English is already a limitation, moreover reading and writing are essential to the current computer technology. In their report in this issue...
The Journal of Development Communication, December 2001]. Thamizoli and Balasubramanian report that in the Samiarpatty region of India (a typical rural setting) the majority of the women cannot read or write. Most of them have not used telephones. They do not read newspapers and very few of them write or receive letters. Substantial numbers of them are members in women's associations that have formed during the last decade. Among men, substantial numbers of males also are not in a position to read or write. Many of them have not written or received postal letters.

A very tiny percentage of the existing ICT settings are making any effort to translate the contents of the web to local languages. However, a good example is Kothmale Radio in Sri Lanka, an encouraging model that combines a community radio with Internet connectivity, responding to the requests of information from the community in their own language. The additional advantage of this model is that the information is not benefiting a few individuals lucky enough to sit in front of a computer screen, but the whole community listening to the radio station. This is a collective effort, as any communication project in the Third World should be.

An additional issue to be considered along with the language issue is computer literacy, which is more than learning to hit a keyboard or to move the mouse. There is a whole cultural background necessary to understand the logic of digital technologies, and the usually short skills training courses that are offered in telecentres may not be enough for a factory worker in Pakistan or a peasant in Ecuador to fully take advantage of the possibilities of a computer and of Internet. In plain words: even we who sit in front of our computers for several hours every day use only 10% of the capacity of our hardware and software. In spite of this we have seen many telecentres equipped with state-of-the-art expensive computers that will need to be replaced in four or five years.

Local content

Next to language, the most important issue is the generation of local content. It may not be enough to translate what is already in the World Wide Web, because the content of the web is, once more, 90% irrelevant to the needs of 90% of the people in poor communities of the world. If a rural woman in Brazil or a shepherd in Mali has the opportunity (and the ability) to navigate the World Wide Web, how much could they get from it that is useful for their daily lives?

“Who is telling the stories? The question that Gerbner (2001) raised to analyse the contents in television programmes in the US could be extended to the contents of the World Wide Web. “Who is telling the stories in the web”? Whose voice are we all subject to? It is amazing that while we have been during decades so critical about the polarization of information generated mainly in the US and some European countries, we are fascinated by the same trend now happening within the World Wide Web. When, during the seventies, UNESCO proposed a New Information Order in the world that would allow developing countries to contribute with their own perspective in the international flow of information, the United States boycotted the international organization and suspended its contributions. Shouldn’t we all in the Third World be worried about the fact that we haven’t been able until now to contribute in terms of contents to the growth of the web? Actually, this question goes also for powerful countries in Europe, which -- in terms of contents and language -- are very marginal in the web.

The generation of local contents should be essential in any ICT project that aims to benefit rural or marginalized urban communities, and it should be built in during the inception of the project, not as a complement that may (or, more likely, may not) be implemented as the telecentre develops. A good example of telecentres that really care about providing appropriate information to their constituency is the network known as Village Knowledge Centres, set up by the Swaminathan Research Foundation in Chennai (India), and described in this issue by Thamizoli and Balasubramanian. The concept is articulated around community needs, not the opposite. “Information shops” have been placed in various villages, and a “value addition centre” is in charge of building web pages with information that is relevant to local needs, such as market prices or local weather reports. The core concept is to build a “local web” that specifically caters the needs of local communities, in terms of contents, culture and language....
The issue of technology, which has actually been the focus for most of the institutional projects, should be also taken into consideration. Critics have said that often telecentres are like Cadillacs in rural areas. The image is meant to symbolize the fact that sophisticated hardware and software are planted in places where no other basic services are available. Is Prometheus riding a Cadillac instead of a bicycle? Haven’t we learned anything from the barefoot doctors or the Green Revolution? It seems that appropriate technology is only in the jargon of those involved in rural development, and not well acknowledged by the ICT newcomers.

The world of development has known too many failures during the past 50 years and we should learn from them at least in relation to appropriate technologies. Sometimes technology that is not appropriate can do more harm than good to development and social change. What kind of technology is necessary and justifiable in rural telecentres? Should rural telecentres be equipped with the same technology as urban telecentres? Should telecentres oriented towards community participation, development and social change be equipped with technology similar to commercial telecentre initiatives? Why is it that while there are efforts to develop the Simputer (a computer that will cost less than US$200), the investments in new rural telecentres are so high? What kind of technology can be locally maintained and sustainable over the years?

The issue of community participation adds to the above as a key component of telecentres for development and social change. As it happens with any development project that is originated with external inputs, sustainability can only be assured through the commitment and participation of the community of beneficiaries. This is not related only with the issue of funding. Many development projects have failed in spite of having external support during many years, because the community never developed a sense of ownership over the project or programme, and remained alien to it. Community participation is not something you can build after a telecentre has been already planted: it should be an essential condition to start a telecentre.

A good example of this are the telecottages that CREST has supported in rural areas of North-western Romania. CREST won’t start a telecottage if the community has not proved full commitment, which often translates into providing the land, constructing the building to house the telecottage and organizing groups of volunteers to run the activities. It is interesting to note that several countries of Eastern Europe are using the term telecottage to establish the distinction between telecentres as commercial ventures and those that have development and social change objectives.

The experience of Telecentros Brasil shows how much the whole concept had to evolve to meet community needs. Kyle’s report from the field in this issue acknowledges it: “We did not understand about the rhythm and pace of the community.” While reporting on the Western Australian Telecentre Network, Gail Short underlines the importance of community ownership: “Telecentre members were running working bees, doing up buildings, raising money for their centre. There was a pride, which came with ownership.”

**Sustainability**

Last but not least, the issue of sustainability is frequently raised when referring to community based experiences in general and telecentres in particular….The same international agencies that have supported development projects (too often development failures) during five or ten years, now seem very eager to see their investment in telecentres (and other community media projects) becoming “sustainable” in only one or two years. The “certificate” of financial sustainability seems more important than the accomplishment of the objectives of community development and social change. Moreover, it looks like if a telecentre is financially sustainable, it is then considered a “success” regardless of its social impact. This wave of making telecentres profitable in the short term is pushing many of them to becoming commercial ventures, and it subscribes to the same neo-liberal thinking that aims to privatise the health and the education systems, liberating the State of its main responsibilities towards the well-being of the population. Soon we will be evaluating public libraries in terms of “sustainability”, not in terms of the cultural and educational service that public libraries are set to provide. The perspective of financial sustainability above all is mainly promoted by US-based co-operation agencies and organizations, and it is in the bloodstream of the philosophy and culture of any human activity in that country. In my view, however, it is a very narrow perspective of sustainability because of its
influence through funding, it is imposing itself worldwide. The above analogy with public libraries is not a mere coincidence. I believe telecentres should be a modern version of public libraries, with an additional outreach communication component that transforms the former individual relationship between the library and the user, into a collective process involving the community. One of the main thrusts of libraries and telecentres is to open the world of information and knowledge to the communities, with the advantage that telecentres can tailor the information to community needs. From the point of view of sustainability, community telecentres should be treated as public libraries. The InfoDes project in Peru, precisely, was built on the idea of enhancing with ICTs the capacity of public libraries in rural areas, which had been created 20 or 30 years before....

There is no challenge at all in making a telecentre in urban areas “sustainable”. As long as there are students, teachers, or professionals the telecentre will make good business. The thousands of “cyber-cafés” that have popped-up in urban areas, even in the poorest countries, without any institutional support show that commercial ventures are easily sustainable. Even in small towns “cyber-Cafés” are mushrooming at an impressive rate. For less than the equivalent of one US$ dollar urban customers can use Internet during one hour for information, for chat, for e-mail, for games or for porn sites, whatever. Sustainability of this type of telecentres or cyber-cafés is far from being a relevant proof of ICTs serving the most needed in the community. Certainly, it is good to have students doing their homework or teachers preparing their classes (if fluent in English); profit-making cyber-cafés have been catering for them with very convenient prices and guidance (and often training), without the need of any international project to subsidize the operation.

But then, the question remains: should we exact certificates of “sustainability” from the other telecentres or telecottages that really aim to contribute to community development and social change? Should we treat them as commercial ventures? Can a factory worker or a rural woman afford to pay one US dollar for an hour of Internet? How about defining sustainability in terms that are more coherent to the social and cultural functions of community telecentres? I suggest the concept of sustainability should be reviewed in terms of community ownership and in terms of concrete benefits to community organisation and development, particularly in rural areas. The now logic of profit that comes along with globalisation is not going to contribute to solving the problems of underdevelopment, but is going to contribute to a wider gap between rich and poor, those that can afford access to ICTs and those than cannot.

The above are some of the issues and questions concerning the rapid expansion and development of telecentres. As a relatively new knowledge and communication tool for development and social change, we need to pass the stage of fascination for the technology and reach the point where we can look at it with critical eyes, applying what we have learned during the past 50 years from development in general, and in particular from community participation and participatory communication. The long experience of community radio, in special, can teach us much about the challenges ahead. Or at least, may allow us to establish the difference between a commercial venture and a public service for development and social change.

CONCLUSION

We conclude with a visit to the field. In 2005, the Thai Nguyen University of Agriculture and Forestry (TUAF) responded to a “request for proposal” from the Asia Pacific Economic Cooperation organization’s Education Foundation that called for projects that focus on the use of ICTs to address some of the needs of low-income youth. The TUAF-Cornell proposal was funded and the project got underway in 2006. The following excerpts illustrate an approach to putting ICTs and telecenters to work in a concrete situation.

UNIVERSITY-SUPPORTED TELECENTERS IN VIETNAM

The Project area

The Northern Mountainous Area (NMA) is the primary setting for this project. The NMA consists of 16 provinces. It covers an area of 110,000 km² (34% area of the whole country). It has a population of approximately 16 million people (20% of population of Vietnam’s population).
Ethnic minority groups (34/54 ethnic groups of Vietnam) reside in the area. It is known as a key regional center of government, economy and culture. NMA is a very important region that contributes significantly to national socio-economic development, national defense and security, and maintains the balance of natural ecosystems in this area.

**Disadvantaged youth as one target**

This project is based on the assumption that information and communication technologies can be instrumental in improving the welfare of Vietnam’s disadvantaged families and its youth, especially given that youth have a strong affinity for the new information technologies such as computers and digital content. Recent studies by UNESCO in other countries confirm this assumption.91

Disadvantaged youth in the NMA have the following problems in particular:

1. They face many difficulties in their economic and cultural lives.
2. They have fewer opportunities than youth in other parts of the country in accessing education, training and recreational activity.
3. They are less confident than other groups in Vietnam society.
4. They face many difficulties in looking for a job because of above mentioned reasons.
5. Expenditure by governmental authorities to provide services (education, training, etc.) to disadvantaged youth is inadequate although they are willing to do so.
6. For social equity, disadvantaged youth need to be supported to get more access to information, education, technology, and so on.

TUAF statistics show that fewer disadvantaged youth join the university than other groups. For example, in the year 2000, 48,360 students attended the university entry exam. 13% of them (6,286 students) are among the disadvantaged youth group. Moreover, for those who gain admission, during their study at the university, their abilities are more limited than for other groups.

In the following ways, the project specifically addresses the priorities of serving disadvantaged youth with the benefits of ICTs:92

1. Developing training programs for disadvantaged youth that show them how to use information technologies for accessing government and non-government resources such as those related to employment opportunities and benefit programs. Such training programs will be available to youth in the region through community-based telectron.
2. Providing disadvantaged youth with ICT training and internships in telectron so that they might gain experience for employment in Vietnam’s many community cultural centers around the country and in Vietnam’s expanding information technology environment.
3. Providing disadvantaged youth with opportunities to learn various skills, such as those in agriculture and commerce, through non-formal education and distance learning provided in telectron.
4. Providing youth-oriented information and entertainment via DVDs, CDs, on-line, etc. from government and the private sector that are designed to build good citizenship and reduce young people’s sense of isolation from mainstream Vietnamese society.
5. Developing user-friendly ICT materials related to family welfare (including health, education, employment, governance) and making them readily accessible through telectron, thereby increasing opportunities for disadvantaged youth through strengthening the family unit.
6. Surveying the information and communication needs of disadvantaged youth in the mountainous regions of the country, which typically translates into both social and physical isolation.

**Approach**

The project will network TUAF with other universities in Vietnam in a permanent arrangement to support community welfare, agricultural development and the Millennium Development Goals.93

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92 The importance of addressing disadvantaged youth was pointed out by the Asia Pacific Economic Commission’s Education Foundation, which provided start-up funding for the project.

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by applying information and communication technologies to these. The universities will incubate telecenters within a reasonable geographic distance from the campus and support them with resources vital to making the telecenters sustainable and demand-driven. The system is intended to intersect with some of the 7000 government rural cultural centers that offer computer and Internet access for Vietnam villages.

**Objectives:** The project includes the following specific objectives as steps toward the University ICT4D Goal:

- Create and incubate community information and learning centers (telecenters) and other ICT mechanisms for reaching rural populations with information and learning resources especially in the northern mountainous regions of the country. Underlying this objective is the need to build awareness and train advantaged populations in the uses of ICTs for enterprise, family welfare and educational purposes.
- Establish within TUAF a Communication Center with the mission of applying information and communication technologies to agricultural, forestry and rural development outreach initiatives of the university, and to provide leadership for other participating universities so that the universities can effectively support community-based telecenters.
- Establish ICT4D-related academic programs within TUAF and the other participating Viet Nam universities that will provide students with the skills to apply ICTs to the social and economic goals of the country after they have completed. Such an academic program would be a resource for creating information materials for the collaborating telecenters.
- Establish communication and social science-oriented research programs within TUAF and the partner universities that can continually assess ICT needs various population groups such as the disadvantaged youth, women and the poor, and provide this service to the project’s telecenters and the Government’s rural cultural centers.
- Support the content, research, and human resource needs of existing government rural information (cultural) centers.

**Expected Outcomes.** The principal expectation in this project is that it will result in institutionalizing system for the support of community information centers by forging a mutually supportive link between universities and communes in Vietnam. Such a system will serve the interests of a variety of special interest populations such as the disadvantage youth targeted by the APECEF. During the first year of building the program, the project will assist in building partnerships and stakeholder participation. Within 6-8 months, the participating universities will be able to report a beginning in the incubation of telecenters and the building of alliances with existing PTCPs. Collaterally, the universities and their partners will study the information and communication needs of the communities, including the unique needs of disadvantaged youth, and the project will take steps toward meeting those needs. This will include policies, plans and action within the participating universities for reaching out to poor families in the NMA using ICTs for development. The project will also provide a foundation for institutionalizing the system within the universities, the government, and communes.

As the project unfolded in late 2006, communes in three provinces had pledged support (and participation) by providing suitable accommodations and some staffing. Meanwhile, TUAF continues to explore the expansion of the project into most of the provinces in the Northern Mountainous Region and to collaborate with a major Learning Resources Center (library) project that could use the telecenters as an outreach facility as libraries become more aware of the potential of ICTs as tools for joining development initiatives.

We leave this discussion with a brief comment designed as a word of caution about the enthusiasm for communication, ICTs and telecenters. It requires a quick stop in Central America.

A USAID project in Guatemala trained members of collective farmers’ associations to download daily pricing information and market trends, and then to disseminate this information to all members. Farmers underwent complementary training, including in bargaining and negotiating techniques, to enable them to act on this information. As a result farmers were able to demand a fairer price for their
produce from intermediary buyers, and to balance their production with supply and demand trends, thereby accruing a better rate of return. [Emphasis added.]
ICTs can deliver potentially valuable information to end-users like market prices to poor rural farmers and medical advice to rural healthcare workers. However, market information is useless if there are no roads to transport goods, and medical advice is meaningless if there is no money to purchase medicines. As evidence from research on Botswana SMEs [small and medium enterprises] confirms, information is important, but it is only one part in a chain of resources (infrastructure, skills, money) required for the end-user to have the capacity to act.

Yet the challenge and the hope are great. In its approach and commitment to developing Community Multimedia Centres, UNESCO notes that the human dimension of plans for the introduction of ICTs is especially crucial for their success in the poorest rural and urban areas of developing nations. Implicit in the CMC initiatives, says UNESCO, is the notion that ICTs need not remain the preserve of the educated and the literate.

APPENDIX: SOME GLIMPSES OF ICT AND DEVELOPMENT IN ACTION

MACEDONIA – THE FIRSTY WIRELESS COUNTRY
While Macedonia was spared the violence that took hold of the region after the break up of Yugoslavia in the early 90s, more recently all eyes were on the country when its own ethnic tensions began to boil over. Luckily it avoided full-blown civil war and is now on the brink of actually leading the world in what could be a template for other developing states - the former Yugoslav Republic of Macedonia has become the first wireless country.

Macedonia is dotted with villages. The mostly ethnic Albanians who live here are poor and rely for their livelihood on working whatever land they have. Their day-to-day rarely involves computers, let alone the Internet.

But a project funded by the United States' Agency for International Development has brought broadband Internet access to hundreds of such remote villages in Macedonia by putting the country's 460 primary and secondary schools online. While the computers for the labs came from China, USAID's side of the project, called Macedonia Connects, was to pay for a local company to provide wireless Internet access for the nation's schools, and while doing so roll out a wireless communication network across the whole country.

— David Reid, the BBC

"WHEN IT CLICKED" IN INDIA
IT was an extraordinary day for Mangalakshmi. The crumpled currency notes in the drawer totalled a nice Rs 700, justifying the big smile on the woman's face. She knew it was a windfall that happened when her Internet kiosk morphed into a photo studio.

"I charged only Rs 20, sir," Mangalakshmi recalled when a month ago, 35 villagers sat in front of a web camera at her kiosk in Tirupachur village to have their picture taken for a bank loan. Each villager saved at least the Rs 12 that it would have cost to go from the village to the town of Tiruvallur, eight km away, to get the two mug shots required for the loan. Mangalakshmi's doubling as the village photographer gives one an idea of what all can be done at a simple Internet kiosk. Creating new revenue streams for kiosk operators is critical to the spread of the "kiosk culture," which appears to be on the point of takeoff.

There are some 5,000 Internet kiosks in rural India today – a minuscule part of what is waiting to be covered. And, the coverage will depend upon how viable the business model is. "Our target is that a kiosk must be able to generate Rs 3,000 per month from the sixth month onwards," says V. Varadarajan, Managing Partner, Minvalai. Minvalai [a local service provider for n-Logue Communications] provides people like Mangalakshmi the powerful Internet connection that is currently not available in rural areas. This is possible through the wireless-in-local-loop (WLL) technology that companies such as n-Logue have developed. Minvalai sells her the hardware
Advocacy And Interventions

by Royal C. Colle

and software that will bring this powerful connection to Tirupachur and other villages through a series of towers.

In addition, local service providers like Minvalai – who is the n-Logue franchisee for Tiruvallur district – train kiosk owners, maintain the kiosks and arrange for bank finance. While the technology flows top-down, revenues flow bottom-up: Villagers use the Internet café and pay the kiosk operator. The operator pays connection and maintenance charges to Minvalai, who pays a franchise fee to technology provider n-Logue.


http://www.blonnet.com/ew/2004/05/03/stories/2004050300020100.htm

COMMUNITY RADIO IN ADA, GHANA

Introduction and Origins  Radio Ada is a rural community radio station in eastern Ghana. The station started broadcasting on 1 February 1998, and it has won a loyal following among its predominantly illiterate audience.

The origins of the station can be traced back to the 1950s and 1960s, when the founders got their start in broadcasting: one with a small radio station in Monrovia, Liberia, that has since been washed away by the sea, and the other with one of the very first community radio stations in the Philippines, DZJO, that continues to operate today from its base in Infanta, Quezon. In 1982, one of the founders was instrumental in starting the first community radio in Africa, the ill-fated Homa Bay station in Kenya, on the shores of Lake Victoria, an experience that drove home the risks of such a venture in a continent hostile to independent information.

Indeed, there had been an earlier brush with this hostility in 1974, when broadcasting in Ghana was a government monopoly. Encouraged by private discussions with key officials in the Government, the founders of Radio Ada submitted a formal application for what, if approved, would have preceded Homa Bay as the first community radio in Africa. The application was turned down.

Legal Context  It took nearly two decades following this event to open the way for independent media in Ghana. In 1992, constitutional government was restored and, with it, the possibility of a new communications scene. The new Constitution, which came into effect in January 1993, states that: “There shall be no impediments to the establishment of private press or media; and, in particular, there shall be no law requiring any person to obtain a licence as a prerequisite to the establishment or operation of a newspaper, journal or other media for mass communication or information.”

The process of establishing private broadcasting did not, however, start until February 1995. That was when the Ghana Frequency Registration and Control Board (GFRCB) issued guidelines for the submission of applications to operate private broadcasting stations.

Frequency Allocation  The application for Radio Ada’s frequency was submitted on 17 March 1995 by its legal entity, Ghana Community Broadcasting Services, previously registered as a non-profit company. However, it was not until 16 April 1996 that the application for Radio Ada was accepted. A positive aspect of the delay was that, in the interim period, private broadcasting companies had negotiated major reductions in the fees levied for the allocation of a frequency originally set at the equivalent of about US$ 13,000 for all stations. In the event Radio Ada, as a community radio, only had to pay a tenth of this, and on 3 May 1996, it was allocated the frequency 93.7 FM for a period of five years. This was later changed to 93.3 for reasons that will be explained later.

Main Factors Considered when Starting Radio Ada  The information in Radio Ada application to the GFRCB reflected the station’s very specific sense of identity, in accordance with the following elements.

Objectives: The key elements that make up Radio Ada’s sense of identity are embodied in its mission statement. This was crystallized from the expressed objectives and expectations of the
station’s volunteers and from other members of the community. The mission statement includes the following items:

• To support the development aspirations and objectives of the Dangme people in every sphere of life;
• To give a voice to the voiceless in every context and at all levels;
• To sustain the dynamic growth of Dangme culture within the national and the global polity;
• In all of this, to encourage, promote and contribute to informed dialogue and reflective action.

Coverage area and target audience: The primary target audience of Radio Ada resides in the four Dangme-speaking districts of Ghana. These are in the eastern sector of the country within 100 km of Accra. Large parts of them still lack, or have only recently received, such basic infrastructure as piped water and electricity. The estimated total population of the coverage area is 600,000, over 60% of whom are illiterate. Poverty is widespread.

Language: Radio Ada broadcasts exclusively in the vernacular of its audience, Dangme. Dangme comprises five mutually intelligible languages - Ada, Gbugbla, K’Ningo and Se. There are marked cultural distinctions between the speakers of these languages. However, the linguistic interface, and the marginalization hitherto of the language in the national discourse, give them a special bond as a people. In recent years, there has been an effort in the educational and religious institutions to develop “standard Dangme”, a uniform version of the languages. The policy at Radio Ada, however, is to use Dan in its various, original and native spoken forms.

Location - base area: The station is in Ada in the Dangme East District. Theoretically, it could have been based anywhere in the coverage area, but one of the founders is a native son of Ada, which meant that the station started out with a reserve of trust that facilitated getting community support and local resources. At the estuary of the Volta River, Ada comprises two contiguous towns, Big Ada and Ada Foah, and their surrounding villages in a virtual cul-de-sac that gives residents a particularly intimate sense of community. Most residents in the area are engaged in farming and fishing.

Actual site: The site of the station building was chosen because of its easy access to the surrounding community. It sits in full view on the main feeder road to the national highway, at the junction to Big Ada and Ada Foah.

Name: The station’s on-air name, Radio Ada, is drawn from its location, although it is a radio station for the Dangme-speaking community as a whole, not just Ada. Because of this, it has often been suggested that the station’s name should be “Dangme Radio”. The station has, however, retained the name Radio Ada because, while it promotes strong local cultures as a basis for sound national development, it also guards against chauvinism.

The building: The Radio Ada building was purpose-designed and built. It provides one on-air studio, two production studios with adjacent control rooms, two offices and a few small service rooms. The decision to construct was taken after it was established that converting an existing building, whether purchased or leased, would not be cost-effective. The design tries to blend the essential elements of a professional broadcasting operation with the special requirements of a community radio station, especially the need for access and the realities of working in a rural area. For example, rather than being sealed off, the on-air studio looks out onto the main road, allowing anyone who comes to the station to see the announcer, or even passers-by on the road to exchange a wave with him. The ceilings are lined with “tsatsa”, a local mat woven out of reeds which has proven satisfactory acoustically while also giving the studios a cool and indigenous feel.

Equipment selection: The equipment chosen reflects the station’s dual character as a rural, community-based yet professionally complete broadcasting operation. The items of equipment are the best options technologically for their price, offering high performance with ease of operation, low energy consumption, and minimum maintenance.
Transmitter: The transmitter... has performed exceedingly well in covering the target area, but it will soon be used only as a standby unit. It will be replaced by a 1-KW transmitter to enable the station to get a stronger signal into the nearby metropolitan areas, where there are sizeable Dangme-speaking populations, thus expanding its market potential.

Antenna Tower: The tower stands 150 feet high right next to the station building. It was built out of pieces of scrapped antennas after the cost of a shorter (100-foot) new tower proved prohibitive. It was hoisted by professional riggers working during their own time.

Studio equipment: Two of the three studios are fully equipped; the third is expected to be equipped soon. The on-air studio equipment consists of two sets each of professional compact disc players, minidisc and cassette recorders/players and a 12-channel audio mixer. The production studios have the same equipment, but of a semi-professional standard. The mix and performance of the equipment has proven entirely satisfactory.

Field recording equipment: Radio Ada attaches great importance to field recording equipment because of its emphasis on programmes originating in the community. Currently, it has four portable minidisc recorders and two professional and one semi professional audiocassette recorders. After some initial resistance to the minidisc recorders because they seemed too high-tech, staff now favour them for their greater portability, recording quality, precision of operation, editing facility and efficient in-built rechargeable batteries. The high cost of minidiscs has lead to a policy of using them as masters with more programmes being dubbed on to audiocassette.

Funding: With long-term sustainability in mind, it was decided early that requests for donor funding would be limited to equipment. Land and the building were provided from the limited resources of the founders. For sentimental reasons, Radio Ada first solicited funds for its equipment from UNESCO - a pioneer agency in community radio. UNESCO regarded the request favourably but was able to meet less than half the cost. The shortfall for the equipment, except for one studio, was covered by the Stem van Afrika Foundation of the Netherlands and the World Association for Christian Communication.

Major Elements in Running a Community Radio

At the heart of running this community radio station are the following elements:

Programmes: Radio Ada broadcasts 17 hours a day between 0500-2200 hours. The programmes can be broadly divided into the following categories: news and current affairs, socio-economic development, local culture, religious, youth and general interest. Guiding programming is the station’s holistic view that regards every programme as a potential tool for development. The main news offerings are three daily 15-minute bulletins and a daily 110-minute news magazine programme. The bulletins emphasize local news, especially stories filed by the station’s volunteer stringers. A 10-minute market report is also broadcast on market days.

Programmes that are specifically development-oriented include four weekly half-hour programmes for four key occupational groups - farmers (women and men), fishermen, fishmongers (i.e. fishsellers who are also fish smokers) and drivers - as well as programmes on health, the environment and on literacy and development. All these programmes are produced and recorded in the field, based on the participants’ concerns and interests, and they typically include discussions, interviews and spontaneous performances of traditional worksongs or other music.

The occupational, as well as the literacy programmes, apply the principle of “narrowcasting” and are sandwiched between general-interest programmes during the optimum listening time for the target group. More occupational programmes are being developed, e.g. for artisans, traders and teachers, with the idea that every group in the coverage area should feel it has a “piece of the action” in the station. In addition to its news and development-oriented programmes, the station produces a weekly total of approximately 30 half-hour programmes in the other categories. Its
programmes on local culture include storytelling, traditional cookery, Dangme bookreading, discussions on various aspects of culture, and a daily half-hour of traditional music featuring local groups recorded either at the studio or in the field.

One development-oriented programme on the environment is designed as a travelogue, with the producer going from village to village each week, highlighting its special features of interest and in the process calling attention to environmental problems. Despite the soft-sell approach, the message seems to get through. Arriving at a village one day, the producer noticed a sudden flurry. He had been recognized, and children were sent scurrying by their elders to fetch brooms and tidy up the area. While this was flattering confirmation that the producer’s words were being heard, the ultimate objective of the station is that programmes should lead to sustained community action. This requires attractive, contextual presentations that build on people’s knowledge and that are closely integrated with interventions on the ground.

Staff: Radio Ada’s staff consists of about 50 volunteers. Fourteen work full-time. Twenty producers operate mainly in the field and come to the station at least once a week to discuss programmes, edit recordings, etc. Ranging in age from the early 20s to the early 50s, the volunteers include farmers, teachers, hairdressers, masons, civil servants, traders, school leavers and extension workers. Approximately a third are women. About half of the volunteers have full-time jobs outside the radio station, while the rest are self-employed or unemployed. When resources permit, the remuneration of a core group of staff will be considered. The founders of the station serve as its volunteer executive directors.

Staff training: Prior to their involvement with Radio Ada, none of the staff had had any experience or training in broadcasting. Except for five who went for short-term courses in radio production in Kaduna, Nigeria, all received their entire training through courses organized by Radio Ada. This was for two reasons: first, conventional training courses do not emphasize a development philosophy and community-based approach; second, conventional training normally requires qualifications that are unnecessary or even irrelevant for a community radio station. The basic criteria for volunteers at Radio Ada are simple and inclusive: commitment to the community, willingness to work as a volunteer, and ability to speak Dangme and English - the Jailer because the majority of the trainers did not speak Dangme.

All formal training was organized through a series of participatory workshops covering: participatory research tools, basic programme production, news production, and announcing. The workshops, conducted by specialists who support Radio Ada’s objectives, started out with its development philosophy and the necessary professional concepts and they offered practical, hands-on experience. Training, organized in various forms, has continued as a permanent activity of the station.

Management: Much of the management of the station is done by a committee of seven of the more senior volunteers. This establishes, implements and monitors policy on all aspects of the station and also maintains the station’s bank account. A station coordinator is the acknowledged head but refers routinely to the executive directors. The decision-making of the committee is based on constant consultation with each other and with other volunteers. Team spirit and self-appraisal are fostered in monthly evaluation workshops involving all the volunteers, except for the news stringers who are not resident in the immediate catchment area.

Community support, access and participation: Prior to its application for a license, the idea of setting up Radio Ada was discussed with, and informally endorsed by, the appropriate traditional leaders and government authorities in the intended host community. With the allocation of its frequency the first task was to widen the process of building community support. This was concentrated on the station’s immediate catchment area, from which it would necessarily draw its main resources. Built into the process was the recruitment and training of volunteers.

A community survey was conducted by these volunteers in July 1996. Its purpose was to introduce the idea of a development-oriented, vernacular station and solicit the ideas of the
community on programming and operations. The survey involved over 1,200 respondents in 42 villages who gave virtually unanimous, almost emotional, support to the idea of the station. Typical responses from the survey, during a community meeting, were: “Yes, FM in Ada will be helpful. We do not hear about things happening on the radio. Anybody who rejects this idea must be jailed. In the old days we never had this chance. Now when it comes, we must embrace it- Now all of us can listen to our own voices. We can now listen...in our own mother tongue. It should come now, now.”

The enthusiastic response of the community to the idea of the station has been sustained by the participatory character of its programming and operations. To give yet another opportunity for community participation, five minutes are set aside after the midday and evening news for a commentary where listeners may record their views on any subject, with the only proviso that they do not make slanderous or derogatory statements. One commentary involved the leader of an association of women fishmongers. Traditionally, it is only the men who fish, and it is from them that their wives purchase fish to smoke and sell. The men sell at their price and the women keep any profits they make on their sales to consumers for the maintenance of their household.

In her commentary the leader of the fishmongers bitterly criticized Radio Ada’s market report and protested against the beating of some members of her association by their husbands. This is because when Radio Ada started broadcasting the market news, the husbands of the fishmongers angrily claimed that their wives were cheating them by selling at far more than the price they had paid to them. In a presentation on Radio Ada, it was explained that the market prices reflected the cost and time of the 12 different processes involved, or value added, between the time of purchase and the time of sale of the fish. The presentation elicited respect and calmed the situation.

Audience reaction: Lacking the necessary resources, Radio Ada has not been able to conduct a formal listener survey. However, feedback is constant through the staff’s interaction with listeners on their recording trips and the influx of letters and visits to the station. The feedback is consistent in characterizing Radio Ada as a “blessing on the Dangme community.” Letters and comments from a variety of sources quote precise details, indicating that listeners pay attention meticulously to programme content. Many offer constructive criticism and make suggestions for other programmes. As many letters as possible are responded to in a weekly mailbag programme.

Reports from the field indicate that whole sections of towns and villages stop for certain programmes, such as the series of an indigenous street musician who weaves local legend and moral tales into song. For many, the station is clearly their only source of information of the outside world. It has also become a player in the life of the community, being called upon frequently to establish the veracity of issues and mediate in disputes.

Operational costs: Radio Ada has not solicited any subsidies for its operational costs. These are intended to be funded entirely from income from commercial advertising and from low-priced social announcements (e.g. obituaries). Currently, expenditure is mainly for utilities, supplies and, in the absence of a station vehicle, transport allowances which are calculated at actual cost. After nearly a year in operation, and even with an all-volunteer staff; income is running at about half of expenditure. This is mainly because, with the many other tasks involved in establishing the station, not enough attention was focused on marketing. It is expected that with more aggressive marketing, the station will at least break even by the end of its second year of operation.

Problems and Difficulties Encountered

Problems: There were delays in the arrival of materials for the construction of the building, but even so it was completed in 13 months. The transmission frequency was the most serious problem. After Radio Ada’s successful test broadcasts in August 1997, a powerful FM station in Lagos, Nigeria, began Opera ting on the same frequency, effectively jamming Radio Ada and making it impossible to begin full broadcasting at Christmas 1997 as planned. Radio Ada had to
Main Lessons Learnt

The first year of operation has been an important lesson in validation: for the community, that radio can play an essential and developmental role in their day-to-day lives; for the volunteers, that they have the capacity to run and maintain a broadcasting station; and for the station itself, that it provides a vital and appreciated service.

The main lesson learnt is that, in the interests of sustainability, the commercial aspects should be addressed from the very beginning. There was so much pressure to get the station up and running that no staff were assigned to “sell” the station’s services. This is particularly urgent not because the achievements of Radio Ada have carried their own momentum. Overnight, the station outgrew its capacities. The community response has been such that the station is called upon for a greater variety of outreach services than ever anticipated. The necessary resources exist but the station must now help to mobilize them.

The final lesson is more of a reminder: in addition to material resources, knowledge and skills, it needs faith and solidarity to carry and idea forward – as Radio Ada’s volunteers have amply demonstrated. Admonishing a fellow volunteer for his priorities in giving more time to party politics than to the station, a volunteer said: “Party politics is for four years. Radio Ada will be here forever.”

UNESCO, *Community Radio Handbook* (106 pages)


Readers can gain a comprehensive picture of the telecenter movement in the 2007 publication *Making the Connection, Scaling Telecenters for Development* written by Barbara Fillip and Dennis Foote, senior staff members at the Academy for Educational Development which published the book. Available free on-line at [http://connection.aed.org/main.htm](http://connection.aed.org/main.htm), it is a valuable piece for planning telecenter initiatives. The 237 page book contains a history of telecenters, lessons learned and case studies drawn from AED’s work in the field, as well as the work of Microsoft and the International Development Research Centre which contributed to the volume, and others active in information and communication technology for development.
Chapter 7
GENDER ISSUES AND COMMUNICATION FOR DEVELOPMENT

Internews Helps Start Women’s Radio Station in Afghanistan (November 14, 2003)

Internews Afghanistan along with the Canadian NGO IMPACS has helped start Radio Sahar ("Dawn"), a women’s independent community radio station in Herat, Afghanistan. The station, which received a flood of letters from listeners in its first week of operation, carries programming from the Tanin network, their own productions covering women’s social and cultural issues, and some music.

Founder Holan Khatibi, who is the executive director of Women Activities and Social Services Association (WASSA), stays clear of political issues and takes care not to offend the local government officials. But she believes that Radio Sahar is a crucial step towards empowerment of women in Herat.

Women carry out all of the technical and production activities associated with running the station and Internews and IMPACS provide training in radio production, journalism, management and fundraising skills. They also provide the funding for equipment and operation costs. Internews activities in Afghanistan are funded in part by the United States Agency for International Development.


The issue of women and access to information is a vital one, and it significantly relates to the world’s attempt to reach the Millennium Development Goals by the year 2015. Here is a brief look at some relevant factors.

• Girls and women make up a large percentage of the world’s poorest people. Of the 1.3 billion people living in poverty, 70% are women.
• Wives and grandmothers and sisters are influential forces in the family.
• Girls and women play a large role in food production in developing nations, producing half of the world’s food. Furthermore, women work two-thirds of the world’s working hours yet earn only about 10% of the world’s income and own less than 1% of the world’s property.
• Two-thirds of children denied primary education are girls, and 75% of the world’s 876 million illiterate adults are women. In the least developed countries nearly twice as many women over age 15 are illiterate compared to men.
• Women are often perceived as incapable of handling important communication resources such as those in the digital environment.
• Women are disadvantaged regarding access to information.

The Technical Center for Agriculture and Rural Cooperation (CTA) in the Netherlands captured the nature of the dilemma for women who are principally involved with agriculture in developing nations in a report published in 2004. The document is entitled Gender and Agriculture in the Information Society. It asserts that "Globally, women are twice as likely as men to be involved in agricultural production, transport of goods and marketing. Their role in ensuring food security is crucial; when male family members leave to look for paid work elsewhere, the responsibility for feeding the family falls to women." However, the report notes, women are less likely to be educated and tend to have less social and economic power than men. Factors such as living in rural areas, low levels of literacy, education and power, along with little opportunity for leisure time, make women’s access to and use of ICTs far lower than men’s. The report identified some of the reasons why the idea of using ICTs for agriculture and rural development may fail from a gender perspective:

• Women often do not have money to buy communication devices or to pay for access.
• ICTs are often considered outside women’s domain, and may only be available in places where women do not feel comfortable or during unsuitable hours.
• Rural women rarely find content that is in a local language or relevant to their needs.

1For a brief summary, see "Women, ICTs and rural development" in ID Global Issues web site, at http://www.id21.org/society/s5aho1g1q1.html. The next section comes from that source. The full report can be found at http://www.cta.int/pubs/gender/cta_gender_en.pdf.
Lack of time and skills, along with the problem of costs, means that women often do not use ICTs for potentially the most relevant uses such as business or education.

A lack of data and indicators for success makes difficult scaling up good practices.

Ignoring men’s perspectives can also lead to failure if men, who tend to hold power, feel excluded and stand in the way of programs targeted at women.

The relationship between women and HIV/AIDS is an especially important issue in development. One source notes that “Of the estimated 39.4 million people living with HIV/AIDS at the end of 2004, 17.6 million – or about 45% – were women....In sub-Saharan Africa...57% of adults with HIV are women, and 76 percent of young people (aged 15-24 years) living with HIV are female.” William Ryerson, President of the Population Media Center in New York, reports that while health services are critically important for addressing the AIDS crisis, the non-use of family planning clinics and HIV testing facilities “is not primarily the result of lack of access to these services. Rather the leading reasons people cite for non-use of available services are cultural and informational in nature.” For example, he writes, of the 600,000 women and girls who die worldwide every year from pregnancy and childbirth, many die within reach of medical facilities – which are not used because relatives refuse to allow women to be treated by male doctors, or because of a lack of understanding about how to access health services.

Silvia Balit, a communication expert who worked for many years with the Food and Agriculture Organization in Rome, summarizes the important aspects of the gender challenges concerning development and communication in the following unpublished paper.

LISTENING TO WOMEN: The Changing Context

Development Goals

Working with poor rural women has always been a priority for communication for development practitioners. The UN system officially began addressing the needs of women and development with the first international conference in Mexico in 1975, the WID Decade that followed and the Beijing World Conference on Women in 1995. In Mexico, the role of women as economic agents was recognized. The Beijing Conference produced for the first time in UN history a Platform for Action that devoted an entire section to women and the media. Now, all major international development goals, including the UN Millennium Development Goals, address poverty alleviation, and gender issues, and recognize that information and knowledge are essential for achieving these goals.

Yet, apart from some successful examples at the community level, development strategies and communication for development efforts have failed to improve the conditions of women on a global scale. Compared with men, women are more subject to poverty, illiteracy, domestic violence, and discrimination. They are marginalized from global, national and community dominant power structures....

Rural women are key actors and economic agents in solving the major issues on the development agenda, including the need to manage the environment in a sustainable manner, the exploding rate of population and urbanization, the HIV/AIDs pandemic, food security, human needs with regard to health, education, and literacy, and the alleviation of poverty. But the contributions of women are often underestimated and overlooked in development strategies and they still remain the “invisible” partners in development. They belong to the culture of silence.

New Landscape

In addition, the changing landscape has created new groups of vulnerable women. The feminization of agriculture has placed a considerable burden on women’s capacity to produce, provide and prepare food in the face of already considerable social, economic and cultural constraints. HIV/AIDS, the major health crisis of the century, is related to gender issues, and
women are the major victims, directly and indirectly. It has been estimated that almost 50% of those living with HIV and AIDS are now women. The growing number of mortalities as a result of HIV/AIDS, civil strife, and the rural-urban migration of men in search of employment, has led to an increase in female-headed households. Migration is also changing the economic, social and cultural roles of women, offering new opportunities and challenges, but also problems of social, religious and racial discrimination, as evidenced by the question of the veil for Muslim women in France. Women have increasingly become the victims of conflicts and violence, and cultural practices such as female genital mutilation.

The role of communication
The empowerment of women through the sharing of information, knowledge and communication is crucial for achieving development goals. However, information, communication and knowledge are essential but not sufficient elements to address the unequal conditions of women. Gender issues do not exist in isolation from wider contexts of social, political and economic forces and unequal power structures. These constraints need to be taken into account and it must be recognized that information and communication cannot substitute for structural changes. But how can communication contribute to overcoming structural constraints? Social communication processes can empower communities marginalized by economic and political structures to transform their conditions of uneven development. Giving a voice to women enables them to become active participants in the public sphere and in a democratic process to promote their own development and social change.

Need for new directions
There have been many changes since communication for development began some 40 years ago. There is need for new directions to respond to a changing environment, globalization, new roles for women, and the opportunities offered by the Information Revolution. There is need to create an alternative framework for communication programs with women that is truly participatory, and not only on paper. Strategies must begin by listening to rural women, and involving them in assessing the nature of the problem, defining priorities, formulating solutions and managing the processes of change. Where participatory communication approaches have been applied, they have had an empowering effect.

A good example of the need for new approaches is the critical debate going on with regard to past communication strategies for HIV/AIDS. The epidemic is both a cause and an effect of underdevelopment, and the spread of HIV/AIDS is linked to issues of gender inequality, discrimination, poverty and marginalization. The fight against AIDS has become a top international priority and has brought communication to the forefront as a critical tool for influencing lifestyles. But apart from a few notable successes the record so far has been poor and the pandemic is spreading. There has been overemphasis on short-term results, while AIDS is a long term and complex problem. Thus broader and longer-term strategies are required with holistic approaches to address the social, cultural, political, and gender aspects of AIDS, in addition to health messages. Approaches should shift from putting out messages to opening up a dialogue with those most affected by the pandemic. Interventions should seek to enable women to define their problems as well as the solutions, thus contributing to their empowerment and transforming unequal gender relations.

The global information society and rural women
New information technologies are viewed as a potent force in transforming social, economic and political life across the globe. But, how is the global information society affecting communication with rural women and gender issues? The human right to communicate is far from being global and the information society is still far from being democratic.

Information policy
The first session of the WSIS (The World Summit on the Information Society) in Geneva concentrated primarily on issues of access to overcome the digital divide and gave little attention to political and social issues. Reference to gender issues in the Plan of Action were limited and related only to access for women and girls, and removing gender barriers to ICT education and training. The Civil Society Declaration “Shaping Information Societies for
Advocacy And Interventions by Royal C. Colle

Human Needs” instead had sections on Gender Justice and Women’s Rights. Among the core principles and challenges it stated “the need to address gender concerns and to make a fundamental commitment to gender equality, non-discrimination and women’s empowerment, and to recognize these as non-negotiable and essential prerequisites to an equitable and people-centered development within information and communication societies.”

The information revolution and constraints for women
The Information Revolution has bypassed the rural poor, and the huge majority of these are women. A significant gender gap exists between women’s and men’s equal participation in the knowledge society.

So, what prevents poor rural women from having a share in the pie?
• They are poor with no money to spend on access to communication technology.
• They have limited access to infrastructure.
• They live in isolated rural areas or in slums in large cities, often without electricity and telephones.
• They are often illiterate with limited access to training and education
• Social and cultural norms constrain their mobility.
• They are part of minority ethno-linguistic groups and speak minority languages.
• Content is not related to their information needs.
• They suffer from social/cultural discrimination, and have limited participation and voice in the public sphere.
• They lack skills in the use of communication technology.

To overcome these barriers the international community has been supporting the establishment of public access points – or telecentres as often they are called – as a means of bringing the advantages of the Internet and computers to the poor, including rural women, through intermediaries.

The problem however has been the sustainability of these efforts.
• Often they have been parachuted from outside and not adopted from within.
• Research on the specific information needs of women has not been carried out, and thus they have been not provided with useful content.
• Often information has not been translated into local dialects and socio-cultural issues have been ignored.
• Training in communication and management skills has not been provided to intermediaries, and especially to women.
• Participation on the part of marginalized sectors of the community, including women has been lacking.
• Finally they have not succeeded in obtaining financial sustainability in the short period of time expected by donors.

A second generation of multimedia community centers based on the use of the Internet and community radio is now attempting to overcome these constraints.

New opportunities ...
ICTs can be new enterprises in themselves. Micro credit loans enable poor rural women in Bangladesh through the Village Pay Phone program sponsored by the Grameen Bank to earn an income from providing a village phone service. Placing the phones with women enables other Muslim women to interact and use the phone-shops. A Canadian evaluation of the program showed that the income derived by operators was on average 24 percent of their household income – and in some cases it was as high as 40 per cent of household income.

Another example is WIRES (the Women’s Information Resource Electronic Service), an Internet based resource center providing business information to small-scale women entrepreneurs in Uganda. WIRES has helped to create networks of rural women producers and organizations, enabling women to create and access local markets. For example, women use the telephone to contact suppliers or clients and use the Internet to search for market information. Women have also learned how to improve poultry production and vegetable...
gardens and increase household income through the sale of surplus produce.

**Participatory communication: some guiding principles**

Although it is important to identify new directions there are lessons learned from decades of experience in applying participatory communication approaches with rural women which are still valid and should continue to be applied. These include:

- Communication as a social process for empowerment, for conflict resolution and to negotiate with decision-makers to influence and modify policy.
- Communication technology and media only as tools to facilitate the process.
- Programs produced with and by communities themselves, about their social problems, and not just produced by outsiders.
- The professional quality of the programs becomes secondary to content and process.
- The importance of interpersonal communication and the role of a facilitator, a community worker or a social animator.

In addition, listening, dialogue, establishing trust, learning about perceived needs and taking into account traditional knowledge and culture are essential prerequisites for successful communication with rural women. Ownership by the community is also important. This leads to the other basic principle underlying participatory communication—respect for the knowledge values and culture of indigenous people.

**The way forward**

The following are suggestions for an agenda that could help to improve the effectiveness of rural communication programs with women.

**Planning**

If programs for the advancement of women are to be successful, the planning phase should include a communication component designed to reflect their special needs, conditions and taking into account women’s active participation in traditional communication networks. Gender perspectives should be incorporated in the planning, implementation and evaluation of ICT projects. International, national and local expertise should include women. Sufficient resources and time for participatory processes should be allocated.

**Training**

The training of women as communication specialists at all levels from field workers to trainers and planners is essential for successful communication efforts carried out by and for women. At community level they must learn to become facilitators in processes of social change. They should also receive training in computer skills and the use of ICTs.

**Research**

More participatory research should be carried out to identify the information and knowledge needs of illiterate rural women. The studies should be carried out with the participation of the communities involved who are familiar with the social, political and economic context.

**Monitoring and evaluation**

More monitoring and evaluation should also be carried out on the impact of rural communication programs for social change. New qualitative indicators are required. Identification of indicators as well as monitoring and evaluation activities should be carried out not only by outsiders, but also with the participation of the communities involved since they are the end users of what has worked and what has not worked. The advent of new information technologies opens up a vast new field for research and evaluation of the impact of these technologies at the grassroots level and especially with female audiences that are hard to reach.

**Advocacy**

Finally, advocating for gender-sensitive communication policies with governments and decision-makers remains an important priority. Policy makers should include gender perspectives and the specific requirements of women in rural communication policies and involve them in decisions regarding the application of different media and technologies. Donors should shift their focus to the information and knowledge needs of the poor in rural communities to ensuring local appropriation and use of ICTs by women. To increase the benefits for them local content and languages are critical.
The challenge
Effective communication can lead to the empowerment of women. Listening to rural women and giving them a voice has strengthened their pride and self confidence, enabled them to take control over their lives, to set their own agendas, to gain skills and become active participants as equals with men in promoting development goals and social change. Without communication the voices of rural women for change will not be heard.

Jacques Diouf, Director-General, FAO, puts the importance of addressing women in sharp perspective:
We live in the ‘age of communication’, but the full impact that information and knowledge can have on development is just starting to be seen. This is especially true for rural women, who shoulder much of the agricultural work and other rural activities in developing countries, where they are responsible for producing most of the food. Harnessing the power of communication – through traditional folk media, rural radio and, where available, television and the Internet – is critical both for us to learn from women and to help them learn new ideas, practices and opportunities. The use of modern communication technologies, integrated with local channels and networks, will enable more women to be heard and reached. A common challenge, for women and men alike, is to exploit the power of communication processes as a means of realizing their potential as well as achieving equitable and sustainable development.4

While they are not a panacea for improving the gender equality issue, information, education and communication are important factors in strategies to address it, especially in the developing nations. Unfortunately, one target of Goal 3 on Gender Equality – eliminating gender disparity in primary and secondary education preferably by 2005 – was the first failure in the Millennium Development Goals campaign. While the issue of access to communication does not appear explicitly in the gender parts of the MDGs, Goal 8 includes as a target making available the benefits of new technologies – especially information and communications technologies. The first phase of the World Summit on the Information Society echoed this target in the 175-nation Plan of Action that made a commitment to extend the benefits of information and communication technology to everyone in the world.

Although in this chapter we examine some of the barriers women face specifically related to the Information Society including those identified by Balit above, we will not dwell on the negative side of this issue. We will explore some of the innovations and changes that offer new opportunities for women, and while these apply particularly to the new information technologies, the challenge is to apply the ideas to other communication situations. The emphasis will be on the new information technologies but the issue goes beyond the digital environment. A former Cornell graduate student on leave from her Ministry of Agriculture job in Kenya once listed the problems with agricultural extension in her country. Included on her list were these points:
1. The extension system in Kenya is top-down and lacking in participation.
2. Women play important roles in agricultural production yet rarely receive mainstream extension services.
3. There are fewer women than men in the mainstream government extension service.
4. Women are chosen as "contact farmers" only when they are household heads or when they are members of women's groups.
5. Women are only targeted by government home economics staff.
6. The extension staff has not been equipped with skills to incorporate gender into their work.
7. The agricultural institutions' curricula do not include gender and participation issues.
8. Men do not involve women in household decision-making – thereby limiting women's opportunities to implement extension programs.

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The situation is not unique to Kenya. I recall sitting on a train with an extension official from a state government in India. He described the difficult problem of the extension service in reaching the vegetable growers in the hill country of the state. A significant part of the problem, I deduced, was that the growers were women and the extension agents were men. The culture of the area made it awkward for a male extension agent to interact with the women farmers, and to have female extension agents roam unaccompanied into the environment was likewise a potential complication.

The accompanying box illustrates an innovative approach to helping rural women gain access to information that is vital to their work. The story appeared as a news feature on the OneWorld web site in 2005.

**Wiring up a Knowledge Revolution in Rural India** by Lalitha Sridhar.

**CHENNAI, Sept 9 (OneWorld)** - An IT project in southern India is empowering low-caste village women, helping them net information on everything from grain prices and cataract operations to the Iraq war. Among the villages in the former French colony of Pondicherry which are hotspots in the Information Village Project (IVP), started by the M.S. Swaminathan Research Foundation (MSSRF), is sleepy Embalam, 12 miles from Pondicherry. In a small 10-ft by 10-ft room, four computers share space with back-up batteries and rudimentary furniture. A group of 15 women, some of them from the so-called untouchable castes or Dalits, operate the computers, collate and present data. They speak no English and have not studied beyond high school. For the benefit of the odd visitor, they put up a Power Point presentation they have created. They man one of the twelve spokes – called Knowledge Centers – of the information and communication technology (ICT) enabled rural upliftment program. Says 37-year-old D. Usha Rani, who wraps up housework before reporting for voluntary work at the center, "The Knowledge Center has become a place everybody flocks to. Villagers get information on all kinds of situations and problems – weather, crops, livestock, health, everything. We have even mediated disputes." Examples abound of women with only primary schooling operating computers with ease, engaging in HTML coding and editing in the local Tamil language.

The IVP's 12 Knowledge Centers cover 40 villages scattered around the Pondicherry region. Each center caters to two-three villages in the surrounding area. All are inter-linked via wired and wireless communications devices.

According to M.S. Swaminathan, one of the architects of India's Green Revolution and the founder of MSSRF, "If new ICTs could benefit rich countries, why shouldn't they be harnessed to help poor ones? The technologies of the industrial revolution have only exacerbated the divide between the rich and the poor. Technology has to be harnessed without increasing the existing divides."

According to an ongoing survey in five villages covered by the project, people benefit from securing information on employment, crops, fish markets, loans, dairy farming, real estate, veterinary services, weather and wave-height information, bus service and power outage schedules, exam results, and public address announcements. One example of a valuable application has been the availability of the list of people below the poverty line (BPL), secured and uploaded by the nodal team at Villianur. Being featured in it provides access to government schemes for the poor. "Till now, most villagers did not know about government programs meant for them. Even if they did know of the schemes, they did not know if and how they were entitled to them," remarks senior scientist, K.G. Rajamohan. "The BPL list was treated like a state secret despite the fact that it's in the public domain. But once they know they are in it, villagers walk up to bureaucrats and ministers and demand their due," he adds. The Embalam women report the varying prices of grain in government and private markets. Farmers now get the best possible price. Every household in Embalam now has an insurance policy - a national life insurance scheme subsidized by the Central government of which the villagers had no knowledge before.

The project, which began in 1998, selected Pondicherry because it had certain initial advantages. As per the 2001 census, 89 percent of men and 74 percent of women are literate.
in the Pondicherry region, which is spread over 492 sq kilometers and has population of nearly a million. The area already had a reasonable telecom infrastructure. Embalam has a population of 7,000, with 600 of 1000 families living below the poverty line. It is verdant paddy and sugarcane territory, a typically agrarian economy.

The identification of the villages is a selective process which can take up to six months. Says J. Gobu, scientist at the project HQ in Villianur, "We conduct surveys to see if the caste divisions in the village are not too deep." Villagers are told that a computer center is being set up. "That is accepted more easily. We have to see if the population is receptive," explains Gobu. "We have to make sure the information is dynamic and not only academic. It has to be user-driven and gender-friendly. The villagers decide what they wish to do."

Though the project is supported by the International Development Research Center and the Canadian International Development Agency, financial viability is a limiting factor. The project had to overcome initial teething problems such as abuse of infrastructure and political interference from local parties. Says consultant Sara Ahmed, "More young people have to be involved. Also, networking with other women's groups can be encouraged. This will increase awareness about rights."

The project has won two major international awards – the Motorola Gold Award 1999 and the Stockholm Challenge Award 2001 under the "Global Village" category. The project has also caused a major social shift. Declares a volunteer in the Embalam center, T. Amirtham, 35, and a mother of four daughters, "The men in our community first looked at us with jealousy. Then it became envy. When we first started, we would automatically stand up when a man entered this room. Not anymore – we are more confident and respected. That's the way I want to raise my daughters." The power of connectivity has also widened their horizon. The women of Embalam recently corresponded with the president of the US National Academy of Sciences, Brian Albert. Says Amirtham, "When we saw the World Trade Towers fall on TV, we felt awful. We wrote to Brian and told him how bad we felt. He in turn wrote back. We also urged him not to go to war with Iraq."

Source: http://www.oneworld.net/article/view/67610/1.

As we will see in the perspectives ahead, policy, culture and norms are all relevant to the gender and communication situation. We start with perspectives of Nancy Hafkin and Nancy Taggart who wrote a comprehensive report for the U.S. Agency for International Development on women and information technologies. They propose several strategies for improving the position of women in the Information Society. 5

INSURING WOMEN'S ABILITY TO TAKE ADVANTAGE OF INFORMATION TECHNOLOGY OPPORTUNITIES

Information technology can offer significant opportunities in developing countries for virtually all girls and women, including poor women living in rural areas. However, their ability to take advantage of these opportunities is contingent upon conducive policy and an enabling environment in their countries to extend communications infrastructure to where women live and upon raising their educational level. Out of enlightened self interest women in developing countries need to involve themselves in the area of information and communication technology policy and regulation. Girls and women must acquire literacy and basic education to be able to fully utilize new technology. More girls and women need to enter scientific and technological studies so that they can participate in information society at all levels. The final element is finance. In considering entrepreneurial ventures associated with information technology, women need access to capital. This article looks at ways to ensure the equitable

5 This abridged version of the full report Gender, Information Technology and Developing Countries: An Analytic Study was published in The Journal of Development Communication (December 2001). The references can be found in an on-line version at: http://ip.cals.cornell.edu/commd怪/jdc-1.cfm. See http://learnlink.aed.org/Publications/Gender_Book/pdf/Exec_Sum_Nophotos.pdf for an Executive Summary of the USAID report.
HOW POOR WOMEN CAN ACCESS AND BENEFIT FROM INFORMATION TECHNOLOGY

Do poor people in developing countries need information technology? While Bill Gates and others believe that providing basic needs must come first, many others feel that information technology (IT) can help meet basic needs and can provide access to resources to exit from poverty. In considering whether information technology can help poor women, the relevant questions are how (are there ways to overcome the constraints that prevent most poor women in developing countries from using these technologies now?) and for what (are there ways in which information technology – of all kinds – can be the most cost effective means of helping poor women in developing countries meet their basic needs and exercise their fundamental rights?). The starting point should not be technology, but rather the real needs of poor women, especially for appropriate information – for access to government and its records, in pursuit of economic activities, and to gain information on health and education.

Technological Constraints
Technological and social solutions exist to many of the constraints that presently keep poor women from using information technology. While most of these solutions have been tested in pilot projects, few have easily replicable business models. Several of these solutions are described below.

No Telephones, No Electricity
A project has started in Andhra Pradesh, India, using packet switching to route Internet data and telephone calls through the spare capacity of railroad cables to areas presently without telephone service. If successful, it would provide connectivity at rates below those of any other option.... For areas where there is no electricity, the Pondicherry project in India combines power supply from the grid with battery backup and solar power. India’s one billion oxen drawing water have been suggested as a potential source of 40,000 megawatts of power a year....

Wireless and Satellite Connectivity
Pilot projects have been put in place in Mongolia as well as in Chennai (Madras), India, and elsewhere using wireless radio modems for transmission of Internet data to remote, sparsely populated areas where there are no landline telephones.... Radio links and satellite broadcast technology provide connectivity to a telecenter in the KwaZulu Natal province of South Africa where telecommunications infrastructure (both landlines and cellular coverage) are very limited. Wireless telephony could not be used because the Telkom telecommunications company has a monopoly until 2003 on fixed telephone service. This is a low-cost solution, estimated at $3000 per rural communal site, including computers, with recurring monthly costs of $40 (Smith, 2000). It contrasts strikingly to some high-cost connectivity solutions that run as much as $100,000 per connected site....

Inexpensive Multiple-User Computers
Rapid progress is being made towards the availability of inexpensive Internet-access devices that could be installed for public access. The Simputer, being developed expressly for the rural...
poor by Ashok Jhunjhunwala and Vijay Chandru at the Indian Institute of Science, has attracted a great deal of interest and support. With a market cost of about $200, the battery-run pocket computer/Internet-access device uses free software and features a smart card that could provide a whole village with separate personal accounts on one machine.... The developers feel that the availability of the device will spur content development in local languages.

**Interlinking Technologies**

Information technology does not have to be computers and Internet. Radio, television, embedded chips, and links between old and new technologies are important IT tools in reaching poor people in developing countries. In South Africa, the women-run Moutse Community Radio Station, founded by members of the Rural Women’s Movement (RWM), a national organization that lobbies around issues of concern to poor rural women, is a major tool for poor women’s empowerment in Mpumalanga province.... The Kothmale FM radio station in Sri Lanka combines traditional community radio serving a poor and isolated rural area of Sri Lanka with Internet and computer technology. The radio station provides an interface between the Internet and the rural community. On the program “Radio Browse the Internet” listeners send in queries, a search is done for them, and the results are broadcast in the local language. The station set up two free community Internet-access points that the community also uses. Kothmale has also developed a database, available at the access centers, of frequently requested information of local interest downloaded from the Internet....

**Social and Economic Constraints**

**Literacy**

Interfaces have been developed using icons, graphics, touch screens, and voice recognition for the illiterate and neo-literate. The low-cost Simputer software is accessible to illiterate users. It recognizes different Indian languages from its library of sounds, which it converts to speech and reads out to the user.

**Language**

Translation software, even to/from relatively obscure languages, is becoming easily available. However, more than translated material, original local-language content will go a long way to making IT relevant to local communities everywhere. This approach is being used heavily in India.... The involvement of young people from the digital diaspora working to encourage IT development in their home countries and home villages would stimulate both software and content development in local languages. The International Development Research Centre and the International Women’s Tribune Center have produced a CD-ROM for women in Uganda that bridges both literacy and language barriers. Produced in Luganda voice, the CD-ROM entitled “Rural Women in Africa: Ideas for Earning Money” presents suggestions for women’s micro-enterprises that illiterate women can understand easily....

**Access costs**

Public-access centers should be able to provide services at rates affordable to the rural poor. Studies have shown that poor rural communities are willing to spend money on communication if it is available.

**Ways in Which IT Can Benefit Poor Women**

There are many pilot projects underway that show information technology reaching and benefiting poor people in developing countries, with women among the beneficiaries. Some are exclusively for women; others are not. Nevertheless, they are all examples of projects that could be replicated to address the needs of poor women in developing countries. Some of the most interesting and innovative are described below.

**E-governance**

Poor women can profit greatly from having access to government information online, such as land registration through the Computer-aided Administration of Registration Department (CARD), functioning in Andhra Pradesh in India since 1998....

**E-commerce shared-interest business networks**

The most successful cases of the poor benefiting from information technology are those based
on advancing common economic interests through access to information not easily available previously. These cases also underline the point that information in and of itself has no value unless it is relevant to the local context. The projects described below fall under the general rubric of e-commerce, but they are locally based and differ from the externally oriented projects that use the Web to market women’s handicrafts to affluent consumers in developed countries.

**SEWA**
The Self Employed Women’s Association (SEWA) has been organizing women in the informal sector in India since 1972. It was one of the first organizations globally to realize the potential of using ICTs for the productive growth of the informal sector. SEWA is establishing Technology Information Centres in eleven districts of Gujarat to provide computer-awareness training and basic computer skills for their “barefoot managers,” build the capacity of women organizers and leaders, and strengthen their members’ microenterprises. Electronic networking is expected to strengthen the connections between the various cooperatives working in different sectors and areas. In the second phase, the centers will also support the education of girls....

**Gyandoot/Dhar**
Organized by the district government of Madhya Pradesh (India), Gyandoot is an intranet linked to the Internet that connects some 26 rural information centers in Dhar district and serves half a million people. Daily price and volume information is provided from major national agricultural produce markets. Users can get printouts of land records that they need to get crop loans from banks. They can file applications online for government benefits and services and post grievances, with replies guaranteed in a week. Users can send email in Hindi to each other or to connected village-level institutions and district offices. Unemployed high-school graduates whose income derives from sale of services to villagers operate computers....

**Coffee Planter Kiosks**
In India, Bangalore ITC plans to set up 25 Internet kiosks in Karnataka for coffee planters to get global price information and sell their produce at the right time. A local portal is being developed that gathers many sources of coffee-growing and marketing information....

**TARAhaat**
Also in India, TARAhaat has been designed as a portal cum economic system to connect villagers with information services, government agencies, and markets in their local language. Local businesses will be franchised to set up cyberkiosks (TARAdhabas) for public access. Cooperative purchasing and delivery services are also part of the project.

**Dairy Farmers and IT**
The Indian National Dairy Development Board (NDDB) has set up farmers’ information and services kiosks to deliver useful content and services to poor rural people. Using information technology, the milk co-operative has seen a substantial increase in milk production, resulting in more efficient milk collection and higher profits for producers. Rural Internet kiosks have provided extensive education for farmers and dairy workers that has contributed to increased productivity. Computers are being used at 2,500 rural locations, covering a half million people, to buy milk from producers quickly and transparently. There is a digitized system for weighing and testing milk and automation of milk collection and payment procedures. When they feel that they are getting a fair price for their milk, producers produce more. Farmers can order goods and services from cooperative sector agencies and get information on a variety of subjects of local interest through the system. Available to all users, the system database includes a complete history of all the cattle that the co-op members own....

**Health and Education Information**
There is a plethora of IT projects concerned with education and health in developing countries. The Warana Project is notable because it uses computer-information kiosks and training centers to bring health and education information directly to the rural poor, focusing on women, in an area that covers 70 villages in Maharashtra, India. Agricultural, medical, and
other educational information is provided through cooperative societies.... To supplant the limited information available to women from informal sources, the Village Information Project of the M.S. Swaminathan Research Foundation in Pondicherry, South India, provides highly practical locally relevant information in local languages on health and education, as well as on prices and markets through networked Village Knowledge Centres.... The Marie Stopes Foundation in India uses the Internet to disseminate information on women’s reproductive health.... California-based WomenConnect! uses ICTs to strengthen the capacities of women’s NGOs in seven African countries to improve women’s health.... Most of the examples cited in this section come from India, which has become a laboratory for IT solutions that reach and benefit the poor. In addition to having a huge population of poor people, India has favorable political conditions, a high concentration of digital talent, many close ties with international corporations, supportive foundations, active non-governmental organizations, and the active involvement of India’s highly successful digital diaspora working to spur the development of information technology in their homeland. India also has a National Working Group on “Taking IT to the Masses.”

Poor women in developing countries could improve their lives and the lives of their families with the help of information technology. Both the technological solutions and the successful pilot projects, along with tested finance mechanisms, are already in place. However, neither the technology solutions nor the pilot projects yet have sustainable business models that would allow them to be replicated in other regions. The focus needs to turn from small projects to national programs, supported by national policy commitments. When these national programs are put into place, women must ensure that they are part of them, and that governments remember that when they talk about reaching the poor in their countries with information technology, women are the majority of those whom they are talking about.

ENGENDERING ICT POLICY

Most developing countries have come to realize the need for policies on information and communications technologies to guide the development of their national information infrastructure. A number of countries have already elaborated such policies, including some, such as a number of Asian countries, Brazil and Morocco, with notable success.... In other countries, the process is underway but not completed. Most African countries, for example, are in this category.... Still other countries are aware of the importance of policy development in this area but have not yet begun the process. The fact that these policies are in the process of being elaborated or about to be started in most developing countries is advantageous for women to get in on the formation of ICT policy-making so that gender can be considered in the early stages.

To date, developing countries have implemented few concrete policies to promote gender equity in using ICTs. Most concentrate on competition and investment policy, technology, regulation, and rural access. Generally within the country, the ministry of communications or the ministry of information technology, where there is one, takes the lead in ICT policy-making, often with the assistance of the national telecommunications regulatory body, which reinforces the technical aspects of the exercise.

Social Aspects of ICT

Policy concentration on the economic and technical aspects of ICT policy development may ignore the enormous social and economic impact of telecommunications and information and communication technology. The Buenos Aires Declaration on Global Telecommunication Development for the Twenty-first Century stated that telecommunications are an essential component of political, economic, social, and cultural development and the basis of the global information society.... As has been the case in many other policy domains (e.g., agriculture, health, education), policies that are ostensibly gender neutral can become gender-discriminatory when implemented in a socio-economic environment already pervaded by gender discrimination. Information and communication technology deals with the dissemination of resources among different groups of users and sectors. In any such exercise, priorities need to be established. Thus, even if not explicit, gender is an implicit component of any such exercise.
From the gender perspective, the essential question is whether gender equity is an explicit objective or an underlying principle of the ICT policy and strategy. Even policies that consider social elements, such as universal access and ensuring reach of communications to rural areas, can be gender blind if the exercise is treated on the macro level without disaggregating by sex. Without explicit gender analysis and incorporation of the results into policy instruments, it is unlikely that the results will have positive impact on women. The benefits of ICTs may bypass women even if their countries develop adequate information infrastructure and service delivery.

Despite the increased awareness, there are very few places where policies reflect this awareness. Examining ICT policy instruments in four African countries (Mozambique, Senegal, Uganda, and South Africa), Marcelle found that only the South African Telecommunications Act of 1996, which predated the Malta Conference, included provisions to redress the gender imbalance in access to telecommunications. However, not much has been done regarding gender in the implementation of the Act. In the remaining three countries in this group gender was largely ignored.

Recognizing the needs and perspectives of women in ICT policy can help ensure the active participation of women in policy discussions and lead to the increased contribution of ICTs to socio-economic development. When women have access to information technology, they can engage in a variety of productive tasks, including entrepreneurship and management of small and medium economic enterprises. Thus, development goals and gender goals can advance at the same time.

**Gender Concerns in ICT Policy**

Although ICT policy formulation is often conducted as an exercise where gender has no place, gender is a very relevant concern in many of the areas under consideration. And, while ICT policy and strategy vary considerably from country to country, most policy and policy instruments deal with similar issues. The gender concerns in a number of ostensibly technical ICT policy areas are outlined below.

**Network architecture and deployment (choice of technology).** This is the most technical area, and the one most often left to technical experts. Yet, this area raises the most gender concerns. The most basic IT concern for poor women in developing countries is whether they can afford the technology choices that are made. Thus the gender focus should be on building network infrastructure for the majority and not on expensive high-capacity specialized access that caters to a wealthy minority. Technology choices (such as fixed wireless as opposed to fiber-optic cables for telephone) may be less costly alternatives that could result in lower tariffs for women users, particularly those in rural areas. Technology that may be too complex for illiterate or semi-literate is also a matter of concern. Gender advocates should work to promote infrastructure investment strategies that provide basic infrastructure in all areas, specifically rural and peri-urban areas where poor women tend to concentrate and which are notably lacking in access to ICTs.

**Pricing and tariff issues.** The major issue in pricing and tariffs is whether costs passed on to women consumers will be affordable. Will rates be the same or higher in rural areas where most women live? Gender-equity advocates should promote the development of incentive programs to increase access and pricing policies to stimulate expansion and increased use in previously underserved areas, where women predominate.

**Licensing issues (ownership and control).** Are women provided the same opportunities as men for ownership and control of licenses and IT-related businesses? The possibility can be considered of granting a certain number or percentage of information-technology licenses to women-owned businesses. Information on licensing opportunities should be made available at locations that women are likely to access. Granting of licenses could contain conditions such as the establishment of training programs for women technicians.

**Strengthening technology innovation (R&D).** Efforts are needed to assure that women are among those who work in technology innovation. Scholarships and grant programs for women in science and technology can be created, and some of the available places in research...
training programs could be reserved for girls and women. In R&D attention should be given to the design of equipment that takes into account developing countries’ conditions and constraints of particular relevance to women, such as literacy levels and languages.

**IT-enabled private-sector business development.** The major gender concern is for women to be aware of these opportunities and able to compete for them under transparent conditions. Encouragement for women as owners and/or managers of telecenters and other value-added IT services is of particular interest.

**Human-resources development for system support.** The objective on this issue is to ensure the presence of girls and women among the technologically trained. Girls and women should have equitable access to training and hiring at all levels, including system design, networking, software development, content creation, web development, information management, maintenance, and system management.

**ICT labor-force participation.** Girls and women should have access to jobs at all levels, not just low-paid entry-level jobs. Women should make planners aware of both labor-force and entrepreneurial opportunities in outsourcing and other IT-enabled businesses.

**Data infrastructure.** Policy in this area should ensure the involvement of women in content creation, especially content that is relevant and accessible to as many women as possible in the country.

**Facilitating access to ICT networks, including universal service obligations.** Focus should be on the promotion of public access over individual household access and extension of service to rural and other underserved areas. Gender must be considered in discussions of universal-access schemes. Linkage of traditional and new technologies should also be considered. In the establishment of telecenters and other public-access points, attention should be given to time and location constraints that women face. Sex-disaggregated statistics on access and use, on incomes, on differential impact of costs and technology choice, and on employment and entrepreneurship in various IT fields are needed for effective engendering of ICT policy. These statistics are rarely available. A recent memorandum of understanding by the International Telecommunication Union (ITU), the United Nations Development Fund for Women (UNIFEM), and the United Nations University Institute for New Technologies to promote the collection and dissemination of such statistics should be helpful in collecting and disseminating these data....

The Policy Elaboration Process Gender needs to be taken into account explicitly not only in the content of ICT policy, but also in the process of policy elaboration, implementation, and evaluation. Following principles of equity and inclusion, women and men committed to engendering ICT policy should be members of the national task force that is established to develop ICT policy or strategy. Representatives of women’s organizations and units from government as well as civil society should participate in the entire process from planning through implementation, monitoring, review, and evaluation. In South Africa, for example, Women’sNet, the African Information Society Gender Working Group, and the Gender Unit of the Department of Communications have all been active in organizing women to become aware of the issues and to participate actively in the making of national ICT policy.... In Zimbabwe, the Media Women’s Association (FAM-Zimbabwe) organized women to advocate the consideration of gender in the national telecommunications policy. In order to take on these tasks that will put them in regular contact with technical ICT experts, women must understand their own information needs and develop sufficient technical knowledge to be credible advocates.

Women need to get involved in engendering ICT policy not only at the national level but at international levels as well, including at the level of the World Trade Organization, the ITU, and other bodies that deal with the future and governance of information technology.

**IMPROVING WOMEN’S ACCESS TO INFORMATION TECHNOLOGY**

Increasing women’s access to information and communication technologies in developing countries involves increasing availability of communication in areas where women live since most women in developing countries live in areas that are presently underserved. Extension of
infrastructure, particularly wireless and satellite communications, to rural areas and peri-urban areas is crucial to increasing women's access to information technology.

**Public Access Strategies**

At the end of the last mile, the emphasis needs to be on common use facilities. Perhaps the most sustainable strategy for public Internet access is the market-driven, locally initiated service model. Peter Benjamin has identified the small-scale, locally driven phone shop as a potentially sustainable model for providing Internet access in developing countries. Benjamin points to Senegal where thousands of phone shops, offering primarily telephone services, and to a lesser extent, fax and photocopying, have started up, with support from the telecom, SONATEL, to meet demand for domestic and international phone service. Many of the customers are women. Such phone shops are already profitable, and while most do not yet offer Internet access, they could gradually scale up to offer Internet access as demand increases. The phenomenon is also well developed in Ghana, where women are prominent among the owners and operators. Other public-access communication facilities (which could be adapted to Internet access) include teleports and STD Public Call Offices in India, mobile payphones in India and Bangladesh, “wartels” in Indonesia, and teleboutiques in Morocco. In Peru, monocabinas are franchised low-cost public Internet-access points.

"Communications shops" of all varieties hold particular opportunities for women’s access. They are conveniently located within communities; women are already using them for phone calls, and women could be hired as managers or be given training and capital to launch them as businesses, which would in turn attract more women customers. This strategy combines women as consumers and as entrepreneur-managers, providing both IT access and income-generation opportunities for women. However, these opportunities exist only where government regulations allow resale of communications services.

A more sophisticated, and costly, approach to community communications access is telecenters, which come in many varieties from upgraded cybercafés and telephone shops to Multi-Purpose Community Telecenters. However, telecenters tend to be expensive and are often dependent on donor support. Few have become sustainable on their own. Among those that have proven successful is the National Institute of Information Technology network of 100 “Learning through Exploration, Discovery and Adventure” (LEDA) Family Clubs in India, fee-based multimedia centers that combine Internet access with computer-based learning facilities. Women manage many of these centers, and fathers, mothers, and children come together to use computers, tap into the Internet, and receive training.

In addition to single-purpose telecenters, public-access communication facilities can be located in or near institutions that women frequent such as schools, markets, health clinics, post offices, or even beauty salons. For school-age girls, the World Bank’s World Links for Development (WoRLD) program that provides Internet access and computer training in secondary schools in developing countries has been successful in reaching young women. An evaluation of the program in five countries in Latin America and Africa showed girls doing as well as boys in “ability to communicate with others, to write reports, find and analyze information, and use computers, software, and the Internet”. Facilities located in schools might be opened to community residents after school hours and on weekends.

Mobile units are also being used to provide communications to underserved communities and institutions. These units could reach homebound women as well as women in remote areas or those who are economically or socially detached from the mainstream. Mobile access strategies are already being used to target women in rural communities. The Fantsuam Foundation in rural Nigeria uses Mobile Community Telecenters (MCTs) equipped with satellite and wireless Internet access to provide Internet access to community members and training for health workers. In response to initial resistance from health workers to using new technology, the program worked with the health-training institutions in the area to make the training more appealing. The vans are also used in Malaysia to bring advanced information technology to schools without these facilities.
IMPROVING GIRLS’ AND WOMEN’S ACCESS TO EDUCATION

The single most important factor in improving the ability of girls and women in developing countries to take full advantage of the opportunities offered by information technology is more education, at all levels from literacy through scientific and technological education. Such improvement requires interventions at all levels of education. First, the concentrated efforts of the past ten years to ensure girls’ and women’s access to quality basic education should be continued and strengthened. Information technologies could be integrated into girls’ education and women’s literacy programs to expose girls to new technologies at early stages and allow for much-needed integration of these two program areas.

Beyond access to basic education, girls and women must be equipped with skills to prepare them for a range of roles in information technology as users, creators, designers, and managers. Therefore, efforts should focus on increasing the number of girls and women studying IT-related subjects in formal schooling and seeking IT training outside of school, as well as related areas to help them fully utilize IT skills.

Generating Demand for IT Education

Some initiatives in developing regions use innovative strategies to engage girls in science and technology careers. A UNIFEM-supported research project in Brazil brought women scientists and engineers as role models to girls in secondary schools. The Federation of African Women Educationalists (FAWE) is developing toys for girls that “demonstrate scientific, technological and mathematical principles” and has created a comic book for girls with cartoons of girls and women discussing the importance of studying science and math (UNIFEM, 1999).

Making IT Education and Training Available to Girls and Women

As girls in developing countries are less likely to continue in school beyond upper primary levels, computer education should be integrated into schooling as early as possible in order to have the greatest chance of reaching girls. Programs such as WorLD and SchoolNet, among others, are providing computers mainly in secondary schools but also in some primary schools abroad.... In developing computer training, educators need to structure the free time available to students for using computers and the Internet in consideration of girls’ acute time constraints due to household chores to ensure equitable exposure to computers and the Internet.

Within higher education, the possibility of scholarships helps encourage women to apply to IT-related academic programs or training. In May 2001, through a grant from the Carnegie Corporation of New York, Makerere University of Uganda announced a $1 million fund for girls from disadvantaged areas to study science. Some governments support special measures to increase women’s enrolment. For instance, female enrollment in a government-supported IT training program increased after the Government of South Africa introduced such a policy. India’s State of Andhra Pradesh reserves 33 percent of higher-education seats for female students, which educators view as an important step in increasing women’s access to the education needed for more lucrative IT careers. These policies might be directed particularly at attracting more female students in scientific and technological areas.

Women outside the formal schooling system and already in the workforce need access to technology training to retrain and upgrade skills as well as to acquire new ones. Where it is financially feasible, public-access centers could offer Internet and computer training to community members, perhaps with support from governments or in collaboration with secondary schools or universities.

Ensuring that Women Get the Right Skills

Beyond the technical skills for developing, using, or maintaining IT software and hardware, women, as well as men, need other skills “to fully participate in the information society and to shape society to improve their quality of life.” [Cathy-Mae] Karelse argues that women need information literacy – skills both in disseminating the knowledge that they produce and in using their knowledge to influence decision-making. In addition, Karelse argues that “those who design, build and maintain the technological infrastructure need to know something about the social effects of the use of those technologies – that is, what kinds of content are carried and
what happens when content of different types flows." She defines information literacy as "the ability of learners to access, use, and evaluate information from difference sources, in order to enhance learning, solve problems and generate new knowledge".... Women and men in developing countries may be particularly ill-equipped with these skills, because formal schooling in developing regions still retains the values of colonial education systems, emphasizing memorization rather than critical thinking or reflection.

Women also need entrepreneurship and business-management skills to apply IT skills. This is a particular need in South Africa, where Apartheid sapped South Africans of the incentives and educational foundation essential for entrepreneurship.... Women, in particular, lack knowledge of where and how to find capital to support their business ventures. IT training programs for women could include training on how to develop business plans, conduct market surveys, and provide information on sources of funding and venture-capital firms in emerging markets.

**MICRO-CREDIT**

In addition to access and education, capital is an essential input in ensuring women’s ability to take advantage of the opportunities presented by information technology.

Information technology can offer many economic opportunities to women in developing countries, including those for women entrepreneurs in the application of IT tools to existing businesses as well as for the establishment of new IT-enabled businesses. The profiles and pre-requisites of the new business opportunities resemble those of existing women-owned informal economy businesses in developing countries (focus on trade, services, and light manufacturing; five employees or fewer, often from their families; owners with low levels of education and literacy; women entrepreneurs starting up with less professional work experience and knowledge of their sector than male counterparts; market sectors with low barriers to entry; and often home-based)(Aguilar, 1999). The only characteristic that differentiates them from existing businesses is the use of new technologies, since most women-owned businesses in developing countries use traditional technologies. As most developing-country women entrepreneurs are poor, operating in the informal economy and lacking capital as well as documentable assets, they need capital from non-traditional finance institutions to start up IT-enabled businesses or use IT tools to enhance existing businesses.

Micro-finance schemes, which have targeted women because of their high rate of repayment and because lending to them reaps social dividends, are the most likely source of the necessary financial inputs. The best-known model is that of the Grameen Bank and Grameen Phone operation, which combines lending to women’s IT-enabled micro-enterprises with social and economic assistance and training in entrepreneurial skills.

One task is to make micro-finance project managers aware of the viability of women’s IT-enabled businesses. A second task is to make them aware of the importance of using IT tools to strengthen existing businesses so that they would not hesitate to make loans to such enterprises. Given the record of micro-finance in reaching poor women and helping them rise above poverty, the support by micro-finance project managers of lending related to women’s enterprises utilizing information technology could be an important aspect of women’s economic empowerment in developing countries.

**Conclusion**

The opportunities offered by information technology have to be seized deliberately because both the potential benefits and the costs of not doing so are very high. However, it would be a mistake to approach IT solely from the perspective of not leaving women behind. To fully benefit from new technology, women must act as leaders in its development and as agents of change, using technology to accelerate their economic and social progress. If pursued thoughtfully and strategically, IT can position women as global leaders in the mainstream of those seeking development solutions in the information age.
based enterprises for women in developing countries. Titled *Women's ICT-Based Enterprise for Development*, it includes case studies showing how women have become engaged in the ICT world. These range from Building a "women's digitisation business" in Mozambique and the e-SEVA Centres in India's Andhra Pradesh to an ICT club in Zambia. The cases show that in some projects women receive benefits from ICT resources; in others they gain benefits as ICT entrepreneurs. Here is a description of the ICT Club in Zambia, the story told by Edwin Zulu Kutoma and J. Wakunuma.

**WOMEN ENTREPRENEURS AND ENTREPRENEURSHIP IN ZAMBIA**

Kalomo Bwacha Women's Club was formed in 2000 in order to support women in their small-scale enterprises as well as to shed more light on how marginalised women were in Kalomo. It was formed by a group of ten women from different backgrounds who came together with a view to supporting each other and other women within and around the surrounding villages. The club includes women who are nurses, teachers, secretaries, seasoned businesswomen and housewives. Some are retired and some are still employed. They started a small-scale enterprise, which included tailoring, craftwork such as the creation of reed mats, knitting, sewing tablecloths, cooking and baking. The idea was to cater for community events such as weddings, traditional ceremonies and other parties. This initiative prompted various women's clubs to affiliate to the Bwacha Women's Club (BWC) through a yearly subscription. BWC members also visit the affiliated clubs to share, exchange and learn with them.

The ICT project was initially started through a local enterprise support agency – ELIF Business Solutions – as part of an initiative supported by the International Telecommunications Union. In October 2004 the International Institute for Communication and Development (IICD) provided US$6,000 for the women's club to purchase ICT equipment. Following this a local businessman gave the club free use of a building. Previously, the women had operated from their homes where they would meet once or twice a month. The ICT equipment and premises have opened new doors for the club which has changed its name to Kalomo Bwacha Women's ICT Club.

With the introduction of the ICT enterprise – the first of its kind in Kalomo – the club has expanded its business and increased its income. The women also benefit from increased interaction, contact and communication at local, regional and international levels. They, and the community as a whole, are enthusiastic because positive changes are obvious. Communication is easier, the enterprise is easily approachable and is not solely about business but also has a community feel and there is a lot of support from local private businesses as well as the public sector. For example the country's electricity supplier is supporting the women by giving them concessional electricity rates. The enterprise is also a meeting place where lively discussions are held and members update each other on latest developments that may be of interest to the community. Local digital content is being created, developed, used and promoted.

IPDM's *Handbook* was originally published in English but has also been translated into other languages. According to the IPDM, the *Handbook* is designed to be useful to two groups of people. First, it aims to help government and NGO officials to plan, initiate, evaluate and improve ICT-based enterprise projects for women. Second, it is intended for facilitated use by

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9 Subtitled, *A Handbook for Agencies in Development* (2005), it was authored by Richard Duncombe, Richard Heeks & Sharon Morgan of IDPM, University of Manchester, UK and Shoba Arun of Manchester Metropolitan University, UK. 2005. The Institute's web page has a large collection of valuable papers on various aspects of information and communication technologies, and can be accessed at [http://www.man.ac.uk/idpm](http://www.man.ac.uk/idpm). The *Handbook* is available for download at [http://www.womenictenterprise.org/handbook.htm](http://www.womenictenterprise.org/handbook.htm). The case studies are at: [http://www.womenictenterprise.org/cases.htm](http://www.womenictenterprise.org/cases.htm).
groups of poor women themselves who want to start up, manage and improve ICT-based enterprises.

**PARTICIPATION OF WOMEN IN TELECENTER ACTIVITIES**

As we noted in Chapter 6, telecenters have become a significant way for women to access ICTs. Hudson reports that the World Links school-based telecenter (SBT) project in Uganda apparently increased the ICT readiness of young women: in Uganda, female university students who had participated in the World Links SBT projects were more computer literate, more likely to use computers in their studies, and more likely to be studying for an ICT-related degree and planning a career in an ICT-related field.\(^\text{10}\) This prompts us to shift to several case studies with some more how-to-do-it implications. First is a piece by Mary Fontaine, who wrote the following piece as a staff person at the US Agency for International Development’s Learn Link Project implemented by the Academy for Educational Development.\(^\text{11}\) As the foregoing articles suggest, literacy and connectivity are not the only obstacles women face in using ICTs. Because girls are sometimes denied the opportunity of going to school, they lose the chance to become familiar with computer technology at an early age and later may develop technophobia. Furthermore their culture often defines (and they themselves begin to believe) that technology is for males, not females. The social environment in which a woman lives may prevent her from going out of the home to a telecenter where there may be men who are not from her family. And women may perceive telecenters as irrelevant to their lives. These issues present a challenge for telecenters that want to serve the whole community. Fontaine takes up the case.

**ICT FOR ALL – ARE WOMEN INCLUDED?**

In 19 seconds, a Google search for “women, development, and information/communication technologies” yielded 10,400 results. A quick scan of the first 10 or so pages of descriptions revealed a large number of articles focusing on Information and Communication Technologies (ICTs) as tools for the economic advancement and social empowerment of disadvantaged women in developing countries. Indeed, one of the articles listed was an essay I had written on that theme.\(^\text{1}\) \[^{Note: The content for the footnotes within this box are found at the end of the article.}\]

Clearly, the topic deserves attention. In the rush to computerize the world, women whom technology bypasses risk even greater social isolation, political marginalization, and resource impoverishment. Yet the literature is full of promising case study material, mainly descriptions of projects with worthy objectives indeed. One cannot help but conclude that the ICT movement must be achieving excellent progress on this front. But are these achievements merely small, isolated successes, or are they substantive stepping stones leading to equal ICT access and digital opportunity for women and men everywhere? Certainly, the trend in North America is encouraging. In 1999, 49.5 percent of all Internet users in the United States were women.\(^\text{2}\) Then, in the first quarter of 2000, the number of US women online surpassed that of men for the first time!\(^\text{3}\) Canadian statistics are similar. In 1994, for example, 22 percent of men were online compared with 14 percent of women. “By 2000, the proportion of men surfing the net had more than doubled to 56 percent, while the proportion of women had more than tripled to 50 percent.”\(^\text{4}\)

Though the Internet population in other developed countries is still predominantly male, those statistics are changing as well. In Europe, for example, ICT use is skewed toward men, sometimes “going well beyond the general male to female proportion of the overall population.”\(^\text{5}\) Yet women’s usage is steadily increasing, with the female Internet


\(^{11}\) The article by Fontaine is from *TechKnowLogia*, July-September 2002. The web page is http://www.techknowlogia.org/TKL_active_pages2/CurrentArticles/main.asp?FileType=HTML&ArticleID=424
audience…largest in the more mature markets, such as Sweden at 46 percent, Britain at 42 percent, and Germany and France at 39 percent each. The trend is ever upward, and one expects that, over time and as needed, European women will be equal Internet users with their male compatriots. Outside of OECD countries, however, the gender divide is thriving, with so few women online that, in some places, they do not even appear on the radar screen. While male use of the Internet is growing in developing countries, women are far less likely to have access to ICTs and, as with virtually every modern advance, far more likely to be the last to benefit from the opportunities ICTs can provide. After changes upon changes, are we more or less the same? A digression….

Reading through the project descriptions on the Web, I was struck by how little the language about women and development has changed over the last 25 years. When I first entered the international development field, I was an avid reader of Irene Tinker, Ester Boserup, Fatima Mernissi, and other innovative feminists leading the way to a new model of development – one in which women mattered. At the time, I thought their insights into gender issues offered great promise for altering the course of human development. Little did I know that, a quarter of a century later, our publications, conferences, workshops, seminars, brown bags, and their 21st century equivalent the listserv – still would be wrestling with the same concepts and complexities of change.

The ICT phenomenon – and the growing gender divide in the developing world – is characteristic of many activities that still fail to reach “third world” women. Why? What is it about women in developing countries that continues to confound and defy development experts? Are the theories wrong? Are the approaches and models insufficient? Or have they just not been implemented properly?

**Beyond Access: How not to design development projects for women**

Clearly, the model of individual ownership of computers that works so well in North America is limited in developing countries to the social and economic elite—and utterly unrealistic for disadvantaged populations. Telecenters, or community based, public Internet centers, have been touted as an effective solution to the access problem, and a variety of models have sprung up as pilots or prototypes around the world. Moreover, many telecenter projects have carefully and creatively crafted outreach efforts to attract women to the centers. “Preliminary evidence suggests that telecentres in developing countries,” however, “are not particularly effective in helping women…gain access to better economic, educational and other opportunities. Women use telecentres much less than men, and when they do use them, it is usually for non-Internet related purposes.”

Dr. Eva Rathgeber, Joint Chair of Women’s Studies at the University of Ottawa and a leading telecenter researcher, cites reasons for this failure that read like a 1975 primer on how not to design interventions for women: focus on machines that women find “unfriendly,” construct cramped premises with little privacy and no childcare facilities, hire male managers and technical assistants, choose an inconvenient location with unsuitable hours of operation, charge fees beyond the financial reach of poor women, and, perhaps most important, offer content that is perceived as irrelevant. In short, Dr. Rathgeber suggests that like other technological innovations before them, telecenters are sometimes designed without adequate attention to the needs, capacities, and preferences of local communities in general and of women in particular. Accommodating local needs is a simple and basic tenet that all development professionals know. Yet in terms of women, Dr. Rathgeber believes it is not being done. “The knowledge exists,” she claims, “but it is not being used.”

**A lot of knowledge, a lack of success**

Dr. Rathgeber’s claims correspond with the results of my search for a successful case study to share in this article. I had hoped to present a case study of a telecenter that women frequented equally with men and that met the information and communication needs of both effectively. Unable to find one, I must agree with her conclusion that none of the major actors in the establishment of telecenters “has successfully developed an effective methodology to address women’s different priorities and constraints.”
Yet the plethora of articles, essays, reports, models, guidelines, and project descriptions on the Web suggests that ICTs finally may do for women what the print dissemination of Women in Development (WID) material has not. With the almost instant and unlimited availability of programming experience, cumulative knowledge, even nascent wisdom on which to draw, there is no excuse for ICT initiatives in general or telecenter activities in particular to fail women.

To illustrate the elements that are critical to telecenter success for women, I chose not to search further for an existing case in point. Rather, I present a hypothetical telecenter mini-model that incorporates the essential features we know to be conducive to women’s participation. Drawing on first-hand experience with 28 AED/LearnLink-administered centers in Ghana, Benin, Paraguay, and Bulgaria,\(^{12}\) plus selected research and studies from the many excellent documents available online, this article describes a community telecenter deliberately designed to accommodate both men and women equitably. In the process, some of the common constraints to women’s access and usage are identified and addressed.

A wonderful drawing

A couple of years ago, the Canadian International Development Research Center (IDRC) produced a wonderful drawing of a telecenter, a comfortable, convivial place with men and women and children and goats and chickens wandering about, each taking care of his or her or its own business. The center is rich with personality and community spirit, one of those welcoming public square-type places where people congregate to meet friends and exchange news while accomplishing some information or communication task. As with the old public telegraph or post office – or the watering hole\(^{13}\) – one gets the feeling that almost everyone stops by the center almost every day, if not to conduct specific business then just to see what’s new. Several features of this telecenter stand out as particularly important for women. First, contrary to the notion of ICTs as intimidating and inappropriate in a “low-tech” village setting, the center presented in the drawing appears to be integrated seamlessly into the surroundings. Rather than appearing sophisticated, high-tech, and out of place, the telecenter seems to be a natural extension of life, combining computers with more traditional ICTs, such as photocopiers, telephones, and a meeting room. The relaxed atmosphere blends in beautifully with the palm trees, grazing goats, and napping dogs outside, and men, women, and children of all ages are clearly comfortable inside, working, chatting, and learning together. The telecenter has been set up to harmonize with the village, building on tradition and accepted cultural norms and fostering a sense of familiarity among people of both genders.

Second, with a house, a car, and a woman carrying a basket on her head, the physical location of the center appears to be at a community crossroads, not in an isolated spot difficult
for women to reach. It seems that women do not have to travel far to use this telecenter but can walk there in the course of their daily activities. Moreover, while studies suggest that many people in communities with telecenters do not even know where they are located, one senses that the entire community knows where to find the center in the drawing.

One also gets the sense that what is going on in this telecenter is relevant to the lives of the visitors. Just as people frequent the market to find the necessities of life, here, too, they obviously are engaged in meaningful activities—perhaps researching a topic for a school assignment, sending an email to a loved one, or checking market prices. The people seem to be aware of what can be accomplished with ICTs and to understand and appreciate ICT applications, and the community as a whole is taking advantage of the opportunities ICTs present. Clearly, the information and communication needs of the community have been ascertained, and the telecenter has been set up to meet the priorities and interests of both male and female users. These are not just “machines for men.”

Childcare seems not to be an issue or problem. Indeed, children are clearly welcome, whether outside playing or inside with their mothers. While no organized child care is apparent—an addition that, if designed properly and affordably, would likely enhance the female friendliness of the telecenter—children seem not to be a deterrent to women’s use of the center. The “open door” atmosphere appears to extend to all age groups.

At this particular moment in time, the center in the drawing is accommodating approximately 20 people, some working alone and others in a group; though the center holds only ten or so computers, which seems to be sufficient. No one is waiting, and the space is roomy enough to provide people with enough privacy to do their work.

Most important, women appear to be comfortable engaging in telecenter activities alongside men. While research suggests that women sometimes do not feel at ease with male technical assistants, the center depicted in the drawing reveals no such difficulty. Indeed, the staff is so integrated into the telecenter activities that, aside from two men who appear to be employees—one at the back with outstretched arms and another at the front door welcoming a woman who is entering—differentiating between clients and staff members is not easy to do.

_In the real world_

While the happy telecenter cartoon illustrates how some of the logistical difficulties for women can be addressed, it does not depict the deeper, underlying obstacles to women’s ICT access and usage. Illiteracy, poverty, purdah, and other constraints related to time, mobility, finances, and social and cultural tradition—the same constraints that limit women’s equitable access to high quality education, health care, paid employment, and legal rights—conspire to keep women from participating in and benefiting from the information revolution. If telecenters are to offer women equitable opportunities for personal and professional growth, these longstanding and well-documented constraints must be considered from the outset, informing and factored into the creation of new telecenters at the design stage.

Beyond addressing the obvious obstacles to women’s access and usage, ICT-specific concerns require attention as well. Some of these include the following:

- Women’s awareness of IT functions and benefits;
- Convenient, effective training in ICT applications;
- Reliable hardware;
- Appropriate software;
- Affordable opportunities for use;
- ICT policies that promote and enable women’s access;
- Sufficient literacy and language skills among women—or access to mediators;
- Women’s ability to synthesize, organize, and apply information; and
- Women’s ability to produce and disseminate information as well as receive it.

_Diffusion_

Of the several approaches to introducing ICTs in developing countries—access, awareness,
and diffusion – only the latter is likely to reach women effectively. Access involves making Internet, computing, and telecommunications tools available. Once the technical issues are solved, those who already understand the advantages of ICTs – a relatively small segment of the population – will use them. In this model, entry and start-up costs are relatively low, but the risk is that the digital/gender divide within countries will widen.

*Awareness* adds orientation and demonstration programs to access. This approach takes time, money, and planning, but it reaches beyond the technical elite to other “early adopters” who, given the opportunity, will take the time to learn and integrate ICTs into their personal and professional lives.

Diffusion involves a pre-planned, systematic program of activities designed to spread the message broadly. (The *message* includes “what are ICTs?” and “how can ICTs help you?”) Diffusion is time-consuming and resource-intensive, but it is how disadvantaged groups are reached. Effective diffusion programs should focus on local needs and priorities, both in terms of the message conveyed and the method used for conveyance. What works in one environment may not work in another.

Alternative delivery channels can be useful for reaching remote regions and populations, especially those lacking literacy skills. For example, information obtained through the Internet can be repackaged for distribution/dissemination/diffusion through more traditional means, such as radio, television, even face-to-face meetings or community theatre. Therefore, one need not have access to a computer *per se* to benefit from information originally gathered online.

Sound access programs also go beyond the mere delivery of information. Once one gets information, what does one do with it? For women accustomed to minimal access to information, for example, information overload can negate the benefits. Follow through involving synthesis, organization, application, and distribution may be necessary.

The vast majority of information available on the Internet has been produced in English-speaking countries. For non-English speakers, this information has little value unless it is translated. Equally important, there is a lack of information from developing countries online. Locally produced material, in native languages and concerning topics of local interest, could greatly benefit development efforts at the local level and go a long way in attracting women to use ICTs.

**Women want access**

A new survey undertaken by the International Telecommunications Union (ITU), the UN agency dealing with telecommunications, indicated that “…women from all regions of the world showed a striking solidarity in the belief that ICTs are critical to them in meeting their personal and professional goals.” More specifically, “99% of the women surveyed said that access to ICTs is important to women entrepreneurs, with 97% agreeing that ICTs helped them to meet their professional goals.” Even women who lack a specific understanding of how ICTs can benefit them seem to know, almost innately, that computers represent a hope for the future – if not for themselves then for their children. And they are right. What is needed now is for development planners, donors, and practitioners to build on this hope by addressing the same old issues that have confounded development for women for years – to approach development, finally, as if women really mattered. In truth, we know what needs to be done. It is merely a matter of doing it.

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Designing an ICT project related to gender

One place to start in planning gender into ICT initiatives is to make explicit such assumptions as the following:

1. Information and communication technologies (ICT) are vital components of development programs, with computers, networks, and websites as central actors in this new century.

2. For at least a generation or two, shared public facilities such as telecenters, cybercafes and information access points (IAP) will be the most likely means for women to be part of the Information Society.

3. Access to these information resources is more than connectivity, and the social, political and economic aspects of access require as much attention as the technical and telecommunications aspects. Cultural barriers especially impede opportunities for females to gain the benefits that can come from ICTs.

The cultural barriers that hinder women’s access to ICTs, and especially computers and the Internet, are more problematic and complex than simply making computers available in a library, telecenter or other public facility. As we have seen, those barriers include: literacy, education, language, cost, locality, the perceived role of women, and technophobia. These are not inherent in the female condition as we can see in thousands of offices across the world where men are often less competent than women in dealing with computer programs and putting toner in laser printers. Nor are they barriers uniquely experienced by females. But they are barriers that exist widely and more severely for women and particularly in Africa, Latin America and some parts of Asia. Some of these obstacles are as resistant to change as the cultural foundation for female genital mutilation and wife abuse. They are deeply embedded in socially-supported practices such as denying school opportunities for girls, which as we said earlier, is where the computers are most likely to be and where they would learn to read.

These barriers eventually may disappear as cultural practices begin to change. We are reminded of this possibility when we observed a commencement ceremony where Cornell University awarded a Ph.D. degree to a candidate who came from a family of 11 children in rural Kenya. Six of her female and male siblings had also earned college degrees. When we asked how that could happen, our acquaintance attributed it to her father’s idiosyncratic...
counter-culture belief in education for boys and girls. But these kinds of cultural changes will take generations to ripple through society. Meanwhile, the gulf exists between women's information needs and potentially vast amounts of relevant ICT mediated information.

Experience in the field suggests that there are some shortcuts to accelerate women gaining some of the benefits that come from ICTs. Organizations such as UNDP, FAO and UNESCO and various public and private sector organizations have already undertaken an approach that overcomes the obstacle of individual ownership of computers and network access; they have accepted the telecommunications concept of "universal access" in which there is shared use of ICT facilities at a public place. A related shortcut linking women to ICTs is exploiting the concept of intermediaries.

Richard Heeks suggests that intermediaries are organizations or individuals "who own ICTs and who can act as gatekeepers between cyberspace and the organic, informal information systems of those on the wrong side of the digital divide." Heeks suggests that good intermediaries bring more to the process than connection to information and communication data and hardware. Motivation is a key element. He contends that too often projects assume motivation is present – and too often it is not. In designing ICT systems within development projects he suggests that it is critical that someone have an answer to such questions as Why should I? Why should I learn ICT skills? Why should I access ICTs? Why should I use ICT-borne information? This is where intermediaries can contribute.

**Intermediaries in an ICT strategy**

Because it may take generations to bring significant and personal ICT benefits to a majority of the women in developing nations, a project in India proposed the strategic use of intermediaries to deliver these benefits to women in this generation. In India there are thousands of women's self-help groups (SHGs) involved in a wide array of micro-economic enterprises. Many have been mobilized by NGOs that have a commitment or mandate to improve the welfare of their constituents. For example, in Gujarat, the Self Employed Women's Association (SEWA) has a membership of more than 200,000 women in some 790 villages. SEWA helps these members organize into groups or cooperatives so that they can cooperate to build stronger enterprises. Micro-finance initiatives around the world and in India show that it is possible to address the issue of poverty through appropriate institutional structures such as SHGs.

The case study below suggests that the promotion of women's SHGs as a kind of intermediary is an effective means to empower poor women and enable them to participate in and drive their own development. SHGs are often recognized as a key transmission belt for development efforts by the state and the civil society. Such village level collectives are a preferred institutional mechanism because they are gender sensitive, participatory, cost-effective and grassroots-based. And experience by SEWA using satellite communication for training "barefoot managers" reflects the capability of women's groups to use ICTs creatively and effectively such as in the rapidly emerging fields of e-Governance, e-Commerce, e-Health, and e-Education.

Information may be important and valuable, but there are other factors that also need to be addressed in an ICT-for-development strategy. The list depends on the circumstances but might include roads, markets, clinics, and credit. That is why, when we explored the SHG intermediaries approach in India, we were also exploring the establishment of a facility that could provide quality-control for SHGs' products, packaging, and delivery services for their micro-enterprises. Information and communication are important, but as we will suggest again and again, most often there are other factors in the social, political and economic environment that must be addressed. (Note, in Chapter 5, the emphasis on the 4 Ps of social marketing.)

Indications of what can be accomplished when attention is paid to gender issues appear in this case study. Acknowledging many of the obstacles addressed in this chapter, a group of professors active in development programs at Cornell University in the USA and at Tamil Nadu University of Veterinary and Animal Sciences in Chennai, India raised the question: do we have to wait generations for society to change its ways toward women and their access to information technologies – or is there something that can be done in this
generation to at least provide them with the benefits of ICTs? To answer the question they designed a project to help women in this generation. It is an approach that acknowledges that women may not have to push the enter key on a computer to gain benefits from digital resources. The project was funded by UNESCO and the description in the box below is drawn from http://ictpr.nic.in/tamilnadu/profile.htm, the UNESCO web page ICT in the Hands of the Poor. The case study is titled “Empowering Resource Poor Women to Use ICT.” Before looking at the case study we provide some background notes that will help put the case study in perspective.

1. Social innovation. The primary social unit being addressed is the women’s Self Help Group, about 20 women usually involved in a microenterprise. The intent was to gather Representatives (Rs) of at least six SHGs to train them on the use of the basic ICT resources and services of the local Village Information Centers (VIC). These VICs had been incubated by the Tamil Nadu University of Veterinary and Animal Sciences. ICT training content related especially to micro-enterprises and health, or other topics as proposed by the Rs. After the training, the Rs would follow up with their respective SHGs in various ways, including: (1) they themselves serving as an information broker ("intermediary") between the SHG and the VIC, (2) doing informal peer training within their groups so that SHG members will be empowered to use the VIC, (3) organizing training sessions in health, enterprise management and other development-related areas. Some Rs were also expected to serve on an advisory body for the project. Thus, the organizers wanted to test the feasibility of using the SHG structure as a means of extending ICT benefits to poor women in the community.

2. Technological innovation. With the Rs as advisors and the VIC as the principal point of contact, the project was expected to produce learning packages (initially related to micro-enterprises and health) using a variety of media that could present information and training, allow feedback, and prompt further information seeking at the VIC. The media available would also allow group and individual learning – with both real time and on-demand learning schedules. Project personnel were to consult with Rs and the VIC management committees on suitable media to complement the VIC computers and network resources. Complementary media could include cable television, CDs, DVDs/videocassettes, audio cassettes and printed materials. Some of these were to be accessible in the VIC while others could be obtained for use in homes. Thus, the researchers were testing the feasibility and practicality of combining different ICTs with the core computer technology of the VIC in systematic learning and communication situations that would provide poor women in SHGs with information related to poverty alleviation. Here is the case.
of 23 to 50 years. Their monthly income ranges from Rs.1000 –3000. Out of 40 members 23 are illiterates and no one owned land assets. Some of the members are rearing milk animals and one of the members prepares and sells sugar candy in the village itself.

Two more semi-urban information centers of SHGs with a total of 31 members were established at Kancheepuram District. The group members belong to the age group of 22 to 50 years. Their monthly income ranges from Rs.1000 –5000. Out of 31 members three are illiterates and no one owns land assets. Some of the members are involved in micro enterprise activities like preparation of pickle, Pappad Masala powder, incense stick, wheat flour, jam, squash, flower bouquet, and hand woven decorative materials. Two more Urban centers are established in the metropolitan city of Chennai. The SHGs have a total of 32 members. The group members belong to the age group of 21 to 55 years. Their monthly income ranges from Rs.3000 –5000. Out of 32 members 5 are illiterates and no one owns land assets. They are actively involved in preparation and sale of Phenyl, soap oil, detergent powder, liquid blue, candles, incense stick, artificial flower bouquets, etc.

The overall objective of the action research is to explore the potential of ICTs for poverty reduction. The action research component has the following specific objectives.

• Testing the feasibility of using the SHG and other women group structure as a means of extending ICT benefits to poor women in the community
• Testing the feasibility and practicability of combining different ICTs with the core computer technology for the information access in systematic learning and communication situations that will provide poor women for poverty alleviation.

The whole project is conceived as an action research program. The specific objectives of the project are

• To identify the information and service needs of resource poor women groups.
• To establish a system for enabling target groups to access and apply ICTs for their development and capacity building.
• To provide service on needs of technology marketing and micro-financing, for sustenance.
• To build and test a viable and sustainable model for linking women groups and ICTs.

TECHNOLOGY

Information and communication tools:
Computer and other accessories with inbuilt CD writer, UPS, modem, webcam, speaker, head phone and three in one CD player are installed in all information centres. Telephone connectivity is also provided to all the sites except the rural site Kandarakottai. [It was applied for.]

Internet facility:
Internet connection was established to the semi urban and urban site through dial up facility and in the rural site, internet connection was established through CorDect wireless in local loop (WLL) technology.

• Print media:
Books on fodder for livestock, economics and marketing in livestock have been supplied to all of the information centers.

• Audio-Visual aids
Educational CDs containing question and answers have been supplied to the Information Center for the benefit of students appearing for 10th and 12th grades that have public examination. CDs on animal husbandry technology were also provided to the information center for the benefit of information centers users. Other areas for audio-visual aids include fish culture and making milk sweets among many others.

• Audio aids
Audio CDs on Goat farming and Infertility and artificial insemination are also provided to the information centers.
To overcome the language barrier Tamil software like word processor, word tutor were also installed for easy understanding.

PROJECT IMPLEMENTATION AND DEVELOPMENT
An interview schedule was designed to conduct baseline survey to access the demographics and profile of SHGs and to identify their information needs. It focused on SHG member socio-economic profile, SHG related profile, group profile, impact of SHG, training, media usage profile, information sources and uses, overall information needs assessment and questions about the project. The SHGs were identified by interaction with Government, NGOs, service departments, financial institutions and industries, and are selected based on the following criteria:

- Interest of SHG members towards ICTs
- Space availability in the household
- Easy [physical] approach to the household
- Capacity of the group to maintain the information center
- Interaction and sharing of knowledge within the group and between the groups
- Involvement in micro enterprise activity
- Financial status of the group.

In each site (rural, semi urban and urban) about 10 to 12 SHGs were identified and RRA [rapid rural appraisal] and a base line survey was conducted with the members. Based on the capacity and interest as mentioned above. The below mentioned six groups were selected for the project implementation. After identification of the SHG group, computer and other accessories were allocated to rural, semi urban and urban groups. PRA and group discussions were conducted at all the sites to find out the time schedule, seasonality mapping and mind mapping. Computer training and internet training were given to the interested SHG members not exceeding five in each group. After computer training the members have started exploring the use of computer more and also some of them are sending mails through the Internet.

**OUTCOMES OF THE PROJECT**

**On Empowerment** The participants told that they have heard and seen the computer but not used it themselves. Those who are already aware of computer/internet (some of them in urban and semi-urban area) have revealed that because of shyness they did not learn computer. They were under the impression that the computers are to be used by educated and elite people only. After establishing the Information centers at SHG women households, the trained members have started using it. They are in the process of learning computer for their knowledge empowerment. This has now motivated others members from the same and other SHGs to learn using computer. Many of the members in rural and semi urban area are interested to send their children to learn computer.

The members with school level education started using computer, printer, scanner, web camera, internet browsing, CD writing, etc. Children are the motivating force for the rural women to build capacity on knowledge empowerment. After providing information tools they are doing letter documentation, saving their files in floppies, recording their SHG accounts in Excel and taking printout. Now they are documenting their activities in digital camera too. Prior to the ICT exposure they felt like illiterates but now they are empowered with computer literacy, which needs to be watched for ultimate benefits.

**Social network** Some of the SHG members are able to send e-mails to contact the authorities, institutes, organizations and their friends/relatives. Also, corresponding with M/s. EID Parry Ltd (Collaborator), an industrialist concern for getting assistance in connectivity problems. Varakalpattu SHG has started selling sugar – purchased from M/S EID Parry Ltd., in the local area.

**EMBEDDING ICT NETWORKS IN COMMUNITIES**

**Telephone usage** Most of the people who are living near the information center (Kancheepuram) do not have telephone facility at their home. They asked their fellow women and men to utilize the information centre phone for the communication. They are now using a novel method of charging Rs. 1/- for incoming call and they are intimating the message to the recipients. They are charging for outgoing calls also. By this they want to build up relationship with others. They feel it is an advertisement for their center and they want the community to utilize the
information center facility. This has resulted in good rapport with other SHG members and the community as a whole. Children of the SHG members are getting trained in using computer.

**Family Life and Family Future** The members are respected by their spouse for being a member of SHG and now their status has improved further by having a computer center among their family members and other SHG members. These women are respected by local community, local government authorities like municipality, and panchayat board for having and accessing computer.

**SUCCESSES**

The information and service needs of the resource poor women group were identified through baseline survey and group discussion. Computer and other accessories are provided to the identified self help Groups. Basic computer training and internet training was given to the SHG members. Members started using the ICT tools for recording their SHG accounts, designing the labels for their products developed by micro enterprise activity, browsing and e-mail, etc. Most of the members (semi urban, rural) by themselves started using telephone facility for their communication. Due to the establishment of the information centre at the SHG woman's household the interaction among the group members and with other SHG groups has increased. SHG members are engaged in micro enterprise activity. Initially the members did not have much confidence and did not have any business development plan to expand their product sales. Due to empowerment now they are visiting the office of District collector and banks for their financial needs and to improve the marketing of their products. Steps are being taken to popularize and market their products through [www.ruralbazar.tn.gov.in](http://www.ruralbazar.tn.gov.in).

Not only the SHG members but also the members belonging to other SHG who are living nearby; and the school, and college-going students also access the center for playing computer games, Internet browsing and telephone facility.

**Sustainability of the information centre**

SHG members are making more effort to make the center sustainable. They are charging for the services from the beneficiaries.

**CHALLENGES**

**Information**

Women are interested in skill training programmes to earn money. They are keen to learn methods to prepare different products. This information is not available on the website.

**Language barrier**

Most of the websites are in English. It decreases the interest of users. Women are interested to seek information through website in Tamil language. Due to the hesitation on correct usage of English language for writing or for seeking information, many members are not sending mails or browsing internet. Some of the members are having false opinion that highly educated people only operate the computers.

The computer with the operating system *XP professional* is a great task to the SHG beneficiaries. One of the SHG members revealed that it is not so easy to operate the system like television or radio. ICT is a new tool for them and they are not able to express what they want to know exactly.

**The outlook.**

Thousands of SHGs exist throughout Tamil Nadu. Typically the membership consists of women near or below the poverty line who engage in small economic enterprises to supplement family income. However, they lack the information and communication resources to maximize the return from their efforts, and they lack the skills to use ICTs that can help. The case study suggests that they can use ICTs to get training, to obtain information and documents from afar, to communicate with experts, and obtain market data, and to strengthen their families’ welfare through health-related information. The combinations of ICTs available will allow individual members of the SHG to use an ICT at the Village Information Center or at home, and individually or in a group. Most important, in most cases, the system will allow a
SHG member to obtain information and training “on demand.” Based on experience in projects in other places it seems likely that members of the SHGs in the project will have an impact on other family members’ access to information and the VIC.

While small in scope, this ICT-and-Women project is important in several respects beyond the principal goal of bringing ICT benefits to women. For example, it tests in the field the important concept of intermediaries. This can be a useful model for others to try wherever intermediaries exist. For example, after extensive field visits and interviews around the world, Don Richardson, a Canadian consultant on rural communication, concluded that one cannot expect poor farmers in rural communities to mention computers and digital networks as high priority items for improving their lives. However, he suggests that there are various intermediaries that serve these populations – extension field office, rural NGOs, health clinics, government offices, church organizations – that can take advantage of these technologies to improve their work, improve communication capacity, gain efficiencies, and reduce telecommunication costs. The challenge is to have these intermediaries guide their constituents into the 21st century Information Society. The project also demonstrates the significant role that universities can play in supporting ICT in development, and especially in supporting relevant content development and systematic evaluation. Universities have been largely invisible in the ICT-for-development movement. (See Chapter 6.)

Additional resources
The publication i4d devoted its August 2005 issue to reviewing various ICT for development initiatives for women to show how ICTs have helped in the empowerment of women. The accompanying excerpt provides case studies and links to additional information.

<table>
<thead>
<tr>
<th>ICT AND THE EMPOWERMENT OF WOMEN</th>
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<tr>
<td><strong>Areas of focus</strong></td>
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<tr>
<td>Globally, the projects around the world that focus on gender and ICT for empowerment can broadly be grouped into projects that focus on (i) access to information for livelihoods; (ii) using other ICT tools like community radio; (iii) creating storehouses of data; (iv) education and training of women; (v) supporting women entrepreneurs; and (vi) linking of women producers to global markets.</td>
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<tr>
<td><strong>i Livelihoods information access</strong></td>
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<td>In Eastern Europe, the Council of Women Farmers, and the State Committee of Ukraine for Entrepreneurship Development, UNDP in cooperation with an NGO has started a telecentre project in Ukraine to provide information on agriculture and farm management for supporting women farmers who identified lack of information and networking tools as the major obstacle for improved incomes from farming. The purpose of the telecentre is to provide access to information that is critical for their livelihoods. Telecentres have been set up by many government agencies as well as NGOs all across the country. The most important services that are provided relate to livelihoods issues. Self Employed Women’s Association in Gujarat, India, has set up Technology Information Centres (TIC) in 11 districts in Gujarat with the objective of providing crafts related skills, computer skills, other multi-media skills, and organizing and leadership training using ICTs effectively. Connectivity through information networks can support women’s access to information, covering technical information on sustainable agricultural practices and innovations, market news and agricultural commodity prices, weather predictions and rainfall patterns, recommended crops for the season and information on institutions that provide expertise and training.</td>
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<td><strong>ii Using other ICT tools like community radio, video etc.</strong></td>
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<td>The Deccan Development Society (DDS) has trained poor dalit (the Indian social classification for the poorest and untouchables in the caste system) women in Medak district of Andhra Pradesh to use the video to represent their lives and redefine their status. Community radio has become a popular media for women and can play important role for empowerment and the right to information for rural women. DDS has also set up a community radio station in Machnoor village, with a 100-watt FM transmitter with a 30-kilometer radius reach. Supported by UNESCO, a small team of dalit women have recorded over 300 hours of programming on</td>
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issues related to women’s empowerment, agricultural needs of semi-arid regions, public
health and hygiene, indigenous knowledge systems, biodiversity, food security and also local
song and drama. Using multiple digital technologies among the communities has proved to be
very successful in initiating women to new technologies and empowering them. Self-Employed
Women’s Association (SEWA) has used the video as a tool of women’s empowerment from
the mid-80s onwards. SEWA’s cooperative, ‘Video SEWA’, has produced video footage on
many issues including livelihoods of poor women. It has used the medium to share information
with their own members and also as a tool for training and teaching new skills, and to reach
policy makers. Also, SEWA’s satellite technology programme has enabled the organisation
working in over 10 districts of Gujarat to provide information on topics like Panchayati Raj
(village governance institutions), nursery raising and forestry management, savings and credit
through the use of satellite cable. Since a number of women farmers and skilled worked in
rural areas are unlettered, they prefer to learn about the new methods and market information
through the video, phone, radio.

iii Creating storehouses of data
Women’s groups have been organised in self-help groups, which focus on savings and micro-
credit programmes as a way to access small loans to start and run their enterprises. This
requires learning a number of management activities like record maintenance, fund transfers,
etc. The Collectorate of West Godavari, Andhra Pradesh, has introduced a software solution
package called ‘Mahila Spurthi’ that can do most of the credit related operations. SEWA
started using ICT by piloting its computerisation for a few activities like savings and crafts
activities limiting itself to one district. Today SEWA has successfully developed software which
generates various customised reports such as community-wise artisan members, embroidery-
wise member lists, grade-wise member lists.

iv Education and training of women
The Delhi based Studies in Information Technology Applications (SITA) provided computer
skill training to poor and disadvantaged women. The aim was to empower low-income women
from rural, suburban and urban areas, through computer training, customised to meet the
demands of both the public and private sectors and generating rural employment.
Datamation Foundation’s ICT Centre at the Babool-Ulm-Madarsa, Seelampur, North-East
Delhi has been operating since March 2003 to take ICTs closer to Muslim women, whose
mobility is restricted by cultural prescriptions. The corner stone of the project is the use of CDs
for building skills of women. More than 40 vocational and skills-enrichment modules which
include bead-making, dressmaking, carpentry, embroidery, candle-making, mehndi (henna),
handbag-making, tailoring, etc. have been developed for income-generation. [See the
resources identified at the end of this chapter.]

v Supporting women entrepreneurs
Self-employment through ICTs is another income-earning area for the poor women. The
Village Pay Phones project of the Grameen Bank in Bangladesh is a success story. The banks
lend money to rural women to buy cellular phones, which serve as Public Call Offices (PCOs).
Due to cultural barriers women often cannot leave their homes to far away places. These
mobile PCOs also provide an opportunity for women to get development information through
the support of the NGO’s databases. A pilot program involving 300 villages revealed that
women were earning about US$700 per year after covering all their costs, over twice the per
capital annual income in Bangladesh.

vi Linking of women producers to global markets
One of the most powerful applications of ICT in the domain of knowledge networking is
electronic commerce. e-Commerce is a field which, with organisational support, can provide
enormous opportunities for poor women producers to meet up the challenges of selling their
products in the global market. SEWA’s Trade Facilitation Centre has considerable success in
its e-Commerce endeavours supported by its websites www.banascraft.org,
‘Rupununi Weaver’s Society’ formed by indigenous women of two tribes, revived the ancient
art of hand-weaving large hammocks from locally grown cotton and then took their exquisite wares online (http://www.gol.net.gy/rweavers/). [In 2004], they sold 17 hammocks to people around the world for as much as $1,000 a piece – a gigantic sum in this part of the world. PEOPLink (http://www.peoplink.org/) has been helping women communities traditionally involved with handicrafts to put their products online in the world market. It is building up a global network of Trading Partners (TPs) that will provide services to several community-based artisan producer groups and promote them to retail and wholesale buyers in the industrialised countries.

[The article continues by showing how lessons learned from these various experiences were adapted to The Mahiti Manthana Project in south India's Karnataka state to empower women and adolescent girls.]

Source: http://www.i4donline.net/articles/current-article.asp?articleid=401&typ=Features.

In addition to the references found in the text of this chapter, readers have the opportunity – using the Internet – to explore other useful resources. The following list shows how to gain access to both printed and video materials on-line.


2. "Networking Change, Creating Opportunities through ICT" is a 29 minute video presenting three case studies from India that show how women benefit from ICTs, but also how they themselves become involved in the exploitation of the ICT media. The film is at: http://www.comminit.com/materials/ma2005/materials-2225.html The projects are Nabanna in West Bengal, Namma Dhwanini in Karnataka in South India, and Seelampur in one of New Delhi's "inner cities."

3. Another video is "Women and ICTs: Mediating Social Change"(14:12 minutes). It is a more detailed version of the Seelampur case study from the Muslim inner city in Delhi seen in "Networking Change." It can be accessed at: http://www.comminit.com/materials/ma2005/materials-2224.html


5. Prior to the Tunis phase of the World Summit on the Information Society, a regional pre-summit conference was held in south India on gender and the information society. A collection of 13 papers from the summit was published in 2006 and is available in a 142 page download at http://www.apdip.net/news/genderis. The papers, edited by A. Gurumurthy, P. J. Singh, A. Mundkur and M. Swamy, were published by the United Nations Development Program and the Asia-Pacific Development Information Programme in Bangkok. The same web page provides a link to a video of the conference that can be viewed on-line.

Another side of the gender issue

This module on gender has concentrated on issues surrounding the access of women to ICTs. We close with a description of a situation that provides another perspective on gender.

A story from Jamaica

In rural areas, 70% of the cybercafes/telecenter users are women. In capital town it is around 50%, but those who do apply for training are 75% women. It's general in the country; for
example, 70% of the students of the University of West Indies in Jamaica are women. This of course starts at schools where most boys quit early, and girls continue. So the problem here might be to design strategies to get more men and particularly boys and teens into empowering themselves, in and through ICTs, and get them off the street, where crime is often their only option.

— Email from Yacine Khelladi to the GKD listserv, September 19, 2003.
Chapter 8
COMMUNICATION PLANNING AND STRATEGY

In this chapter we lay out some general principles that can be helpful in designing communication programs related to psychological, social and behavioral change, and then provide some specific how-to-do-it guidelines on making the kinds of decisions that are essential to developing an effective communication strategy. The kinds of changes just mentioned are important to reaching most development goals, and they are especially relevant to meeting the Millennium Development Goals which appear several places in this book. Inevitably, nations, agencies and individuals concerned with achieving those Goals must address the issue of using communication skills and resources efficiently and effectively. Thus, communication strategies need to be a significant part of the planning that goes into poverty reduction programs, into achieving gender equality, reducing the incidence of malaria and HIV/AIDS, providing basic education for all. Designing and implementing communication strategies is far more complex than broadcasting radio and television announcements or putting up posters on all the empty spaces on a village path or city street.

The benefits of communication strategies
Building a communication strategy has some specific benefits to an organization. These include:

1. **Blueprint for action**: making explicit what the communication effort is trying to accomplish, how it will be done, and in what time period, thus making the strategy a “blueprint” for action. This activity encourages an organization to anticipate future conditions rather than build an intervention exclusively on current conditions or past traditions. (A famous ice hockey player is reputed to have said: “Skate to where the puck will be, not to where it is.”)

2. **External coordination**: providing a basis for effective coordination with other components of an organization’s activities such as supply and delivery of inputs (seeds, contraceptives, money), services (by clinic staffs, extension agents), and policy implementation.

3. **Internal coordination**: coordination and integration of communication activities when more than one person is involved in tactical planning and implementation. This situation occurs, for example, when one person is in charge of radio broadcasts, another with interpersonal field contacts, and there is another person or group handling advertising and publications.

4. **Controlling the pace and sequencing of message dissemination**: particularly important when some messages have to be articulated with other phenomena such as the weather, agricultural cycles, or manufacturing and distribution processes.

5. **Estimating resources needs**: estimating resources and planning for their mobilization is a key to successful implementation. Such resources might include trained people (hence there may be a need for training) or facilities (there may be a need to build a radio station or supply computers).

6. **Setting priorities**: important because there are likely to be constraints such as money, personnel and time. Usually, not all communication activities that would be desirable can be done with the resources available. Priorities often need to be set concerning what channels to use, what messages to emphasize, what people to reach.

7. **Making assumptions explicit**: what are the planners’ perceptions of the “market” and the social, political, technological and competitive environment in which the strategy will be implemented?

Some potential problems with the strategy approach
Developing a strategy might be perceived favorably by some officials, but suspiciously by others. Some may see a strategy as a threat or as a delaying tactic. The following may also obstruct efforts to laying out a clear strategy.

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1 Strategy and tactics are similar concepts and operationally there is not always a clear line between them. We view tactics as more detailed plans for executing a strategy. For example, a strategic decision might be made to use radio drama to make rural families aware of an opportunity to raise a crop for a new vegetable processing plant. Which stations to use, who will write the scripts and act in the dramas, and what dramatic situations will be used could be considered to be tactical decisions.
Accountability: In a strategy when you set objectives and put a program on a schedule, someone has to take responsibility for implementation. What if objectives, schedules and other parts of the strategy do not progress as planned? Will someone be blamed? Who will be responsible?

Rigidity: Once written in a document, it may be difficult to change the details of a strategy, although strategies inevitably need to be dynamic – that is, they must be adjusted periodically to meet changing conditions, including a rational response to successes and failures.

Timing: Developing a strategy, including the situational analysis, takes time. It may appear easier and politically safe just to get started by sending messages rather than delaying a project by doing the research and analysis that are important starting points.

Resources needed: Planning requires a variety of skills for doing research, analysis, evaluation and orchestrating details, and these might not be available. Similarly, funds may not be available to carry out the research that is necessary.

Generalizations to guide communication planning

Planning a communication initiative has several dimensions. Thus, a communication plan includes a strategy for reaching various stakeholders to effect change or reinforcement; but a communication plan also must include matters such as the mobilization of human and physical resources, designing a management system, and laying out a practical research plan. Typically the nature of the communication plan will guide or dictate decisions related to these issues.

As we saw in Chapter 6, the 21st century brought us new and often dazzling tools to use in communication initiatives. However we have accumulated a lot of knowledge and experience during the last six decades of the 20th century that contribute to our understanding of how to approach the challenge of building effective communication strategies for shaping knowledge, perceptions and behaviors that support the kinds of changes vital to achieving various development goals. Many of these emerged in the previous seven chapters; now we approach the topic in a more how-to-do-it style. Some of our knowledge comes from the study of communication campaigns – much of which has been done by scholars studying in American institutions. However, we have benefited also from the documentation of projects in other countries, for example, the massive family planning programs in India, child health projects in Honduras and The Gambia, and the Mtu ni Afya (Man is Health) campaign in Tanzania. Of the latter, William Smith at the Academy for Educational Development says:

[Mtu ni Afya] brought tens of thousands of Tanzanians in villages throughout the country together regularly around a radio listening group to talk about problems and their solutions. The purpose of radio was to stimulate community "talk" - not lecture or entertain but to mobilize against a common enemy.... There maybe some lessons from the past that when excavated might stimulate young African today to reinvent at least one wheel that served their ancestors so well.

Everett Rogers and Douglas Storey distilled lessons from past campaign studies which they summarized in a collection of nine generalizations. The generalizations focus on factors that contribute to campaign success. Although campaigns differ from communication programs, the lessons are appropriate because campaigns are often components of communication programs. Rogers' and Storey's "minimal definition" of a campaign states that: (1) a campaign intends to generate specific outcomes or effects (2) in a relatively large number of individuals, (3) usually within a specified [short] period of time and (4) through an organized set of communication activities. We will discuss and emphasize the nature of a communication program later in this chapter. Meanwhile, here are their generalizations.

2 See, for example, see: M. Rasmuson, R. Seidel, and W. Smith, Communication for Child Survival at http://www.globalhealthcommunication.org/tools/38.
Generalization #1: Widespread exposure to campaign messages is a necessary ingredient in a communication campaign's effectiveness. Although exposure to campaign messages of a relatively high proportion of the audience certainly does not guarantee a campaign's success, a campaign will usually fail without it.

Generalization #2: The mass media can play an important role in creating awareness-knowledge, in stimulating interpersonal communication, and in recruiting individuals to participate in campaign activities. Mass media communication is not a campaign panacea, but the media can have significant benefits such as providing models of behavior for persons to observe and imitate. Some campaigns, Rogers and Storey assert, may be perceived as failures but they may actually just fall unrealistic objectives, perhaps by delivering their messages to the wrong audience. And awareness and knowledge – while appropriate objectives themselves – do not necessarily lead directly to opinion or behavior change. So one key to successful communication campaigns (and programs) is setting reasonable and appropriate goals and incorporating media where they can perform best.

Generalization #3: Interpersonal communication through peer networks is very important in leading to and maintaining behavior change. While the mass media may be effective in disseminating information, some experts suggest that interpersonal channels are more influential in motivating people to act on that information. We suggest that this needs qualification and will address this issue later in the chapter. However, the generalization does alert us to the need to consider incorporating interpersonal forces in a strategy rather than concentrate predominantly on the mass media.

Generalization #4: The perceived credibility of a communication source or channel enhances the effectiveness of a communication campaign. Rogers and Storey define “credibility” as the degree to which a source or a channel of communication is considered knowledgeable or trustworthy. Peers are more likely to be considered trustworthy than are professionals or experts or others more socially distant from members of a campaign audience, but professionals or those perceived to be in positions of authority are more likely to be considered competent or knowledgeable. They point out that commercial sources of information may be perceived as less trustworthy because they have a stake in selling a product. (The word "perceived" must be remembered in these discussions because such wise phrases as "perception is reality" can be important – as we saw in social marketing concerning how people calculate costs and benefits associated with adopting or changing behaviors.)

Generalization #5: Formative evaluation can improve the effectiveness of campaigns by producing messages that are specific to the desired behavior change. Planners of commercial media campaigns have long practiced formative research for message design: (1) market research to determine audience predispositions, and (2) pre-testing messages for comprehensibility and response. Rogers and Storey point out that only since its successful and highly publicized use in producing the children's educational program Sesame Street has formative research been widely applied outside of the advertising industry. They report that the Mtu ni Afya project used formative evaluation to determine the health needs and circumstances of the potential audience in Tanzania, and then designed campaign materials and activities to suit the characteristics of those who would participate, including the newly literate.

Generalization #6: Campaign appeals that are socially distant from the audience member are not effective. Rogers and Storey noted that the use of patriotic appeals by national government leaders in the promotion of overt behavior change has rarely been effective except in cases where the values and attitudes evoked by such appeals run parallel to other salient concerns of the individual. Family planning campaigns centering on patriotic appeals by a prime minister or president have been unsuccessful unless the direct impact of contraceptive practice on individual parents is understood by them. Appeals emphasizing population pressures, national

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5 According to Wikipedia, the original Sesame Street series has appeared on television in more than 120 countries, and more than 20 other “national” versions have been produced. Each version adheres to a rigorous research routine including pretesting.
food imports, and strains on the national educational system have little relevance to parents unless the effects of larger family size on the parents' quality of life can also be conveyed.

• **Generalization #7:** Campaigns promoting prevention are less likely to be successful than those with immediate positive consequences. As we encountered in our elaboration of social marketing, prevention appeals usually have invisible or long delayed rewards, or avoids the possible occurrence of some unwanted event in the future. The undesired event may, or may not, occur if the innovation is not adopted. They suggest an alternative approach: for example, having more energy as a result of regular exercise may be more obvious and a source of more immediate gratification than is the reduced risk of heart disease in the long run.

• **Generalization #8:** Audience segmentation strategies can improve campaign effectiveness by targeting specific messages to particular audiences. Audience segmentation involves breaking down a mass audience into a number of subgroups, each one internally homogeneous yet different from each other subgroup. As we saw in social marketing, this means that the communication treatment is highly focused on those who are most relevant to the behavior change issue. Recognizing that some parts of a communication campaign or program requires attention to advocacy, a planner would necessarily want to consider segmentation because advocacy is often directed at special groups that as policy-makers and leaders.

Rogers and Storey indicate that when campaign planners do not pay attention to a segmentation strategy, information gaps are likely to be created among groups within the intended audience. Defining an information gap as the widening difference in knowledge or other communication effects between the information-rich and the information-poor as the result of an information campaign, they concluded that those individuals in an audience who are already better-informed about an issue and already have more favorable attitudes toward it are most likely to be reached by campaign activities. So, they suggest, gap widening can be identified or prevented if the information-poor are identified and then targeted for special campaign efforts that address the information gap peril.

• **Generalization #9:** Timeliness and accessibility of media and interpersonal messages can contribute to campaign success. It has not always been obvious that people must have access to a particular medium of message delivery. In most early communication campaigns reviewed by Rogers and Story, newspapers and television were the preferred media; today, for some, the Internet would have to be considered. Often levels of literacy (including computer literacy) and media ownership patterns have constrained access to campaign information among those sub-audiences most in need. In today's highly digital world, this generalization suggests that we not ignore more traditional communication resources such as folk media and radio (the most widely available mass medium) and pay attention to interpersonal channels as means of overcoming social structural constraints on access to information. Rogers and Storey remind us that "unless high-priority audience segments are reached by messages in appropriate channels [and at the appropriate time], a campaign is unlikely to be successful.

### 2. UNICEF AND COMMUNICATION

Behind many of the generalizations and conclusions expressed in this chapter and others are theories generated by personal insights, laboratory and field experiments, systematic observation, and practical experience. The following article was written by several people well-versed in the challenges of planning communication programs provides a brief but valuable excursion through some of these theories. The theories provide a foundation for the main discussion in this chapter, which presents an approach to designing and managing communication programs especially focusing on knowledge, opinion and behavioral change. Neill McKee, Erma Manoncourt, Chin Saik Yoon and Rachel Carnegie are the authors and the article "Involving People, Evolving Behaviour: The UNICEF Experience" originally appeared in *Approaches to Development.*  

All the authors have had substantial experience in UNICEF programs.

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PUTTING THEORY INTO PRACTICE
Practitioners of development communication often set out to change the behaviour of people reached in the projects they undertake. The behaviour may range from getting farmers to adopt a new cropping technique, to persuading mothers to feed their babies boiled water. Their approach may be top-down or participatory, as the occasion requires. It is unlikely that farmers will respond to non-participative interventions in altering their cropping practices, just as it is unlikely that mothers with critically ill babies will respond to lengthy participatory processes when seeking treatment.

Communicators working to change or develop people’s behaviour have found it a highly complex activity to engage in, with goals often remaining elusive in spite of their best efforts. Many development communication campaigns succeed admirably in raising awareness about a particular issue while failing abysmally, at the same time, to bring about the sustained behaviour change such awareness is suppose to trigger. For example in anti-tobacco campaigns, smokers may quickly learn about the dangers of smoking, but continue to consume the same number of cigarettes that they did prior to their exposure to the messages of the campaign. Why are people’s behaviours so difficult to change? Why do development communication interventions often fall short of their behaviour altering goals?

While some of the answers and solutions may be found within the discipline of development communication, many others seem to lie well beyond its confines. It seems interventions in development communication must be integrated with a number of other efforts so as to nurture new behaviour in people. Once motivated with information and awareness about a new practice, people need to learn and master new skills to enable them to apply it. At the same time their environment need to evolve in such a way that they are encouraged to practise their new skills and knowledge. In other words, interventions in development communication must be integrated and coordinated with other interventions in education and, policy advocacy and implementation aimed at nurturing the new behaviour.

It seems, on another front that an individual in a developing community enjoys less freedom to make a strictly personal decision when considering whether to adopt a new behaviour, than her/his counterpart in a developed country. In making such a decision, the individual in a developing country will consider more deeply the interests and views of her/his family, peers and community alongside her/his own preferences. As such campaigns must aim to reach beyond the individuals, whose behaviour we are interested in, to include the people who influence the individuals and their behaviour.

Underpinning these personal and communal decisions are the values that lie at the core of the community. Shared values define so much of daily life in developing societies that development practitioners must take time to identify and appreciate them. These values are the cardinal reference points of people as they filter new information, learn new skills, discard old practices and beliefs, evolve their environment, and decide upon action.

This integrated approach towards involving people in evolving behaviour is summarised in the model below. This contribution will focus on the two outer rings of the diagram: “Enabling environment” and “Ability to act”. The inner two rings of “Information” and “Motivation” are the forte of development communicators, and have been covered in-depth in the preceding sections of this publication.

However before we turn to these two topics, let us first review briefly the main theories for behaviour change from the interrelated perspectives offered by sociology, psychology and anthropology.
Theories and Frameworks for Behavioural Change

Understanding people and their behaviour is one of the keys to successful development programmes. The actions and practices of an intended beneficiary or a stakeholder can directly affect the evolution of many social and health-related problems. In order to increase programme impact, and develop interventions that are strategically applied, it is important that development professionals determine, and understand, the various factors that influence an individual’s or a community’s decision to perform or not perform specific behaviours.

Applying a behavioural perspective to the programme planning process enables one to identify the populations most ready for change; to examine the behaviours most easily influenced, along with their most important determinants; and to design interventions that are most likely to have the desired influence on these determinants. Behavioural frameworks are not only useful for identifying determinants of both desired and undesired behaviour, but also assist programmers in identifying potential points of intervention.

The relationship between programming and behaviour is critical in developing programmes that address key social and development problems. During the situational analysis phase of a programme, theories influence need assessments by pointing to the types of information that would be most helpful in guiding programme decisions and by identifying behavioural factors that are more important among target populations.

In the planning phase, theories direct attention to important explanatory factors (how different factors relate to behaviour), thus identifying intervention targets. During programme implementation, theories identify change processes that can be targeted.

As part of the evaluation phase, such frameworks are used to identify important explanatory factors for observed behaviours. They also signal factors that need to be measured, in order to understand whether or not the hypothesised change or developmental process occurred as planned.

A variety of behavioural frameworks (models, theories) will be discussed in this contribution but for illustration purposes, emphasis will be placed on health programmes and consequently the use of health behaviour examples. Nonetheless, the reader is reminded that the discussion that follows has a wider application to other social and development programmes. Although one often hears the term “health behaviour”, it has different meanings depending on one’s professional training. For programming purposes, distinguishing between health-directed and health-related behaviour is useful. The former refers to observable acts that are undertaken with a specific health outcome in mind. In direct contrast, health-related behaviours are those actions that a person does that may have health implications, but are not undertaken with a specific health objective in mind.
Box 1: Key Definitions

Behaviour is defined as: “an observable act, such as stepping on a weighing scale”. Technically speaking, a behaviour category is used to refer to a composite of discrete actions. For example: “weighing a baby” is composed of several actions: “putting the child in a harness,” “calibrating the scale measurement,” calculating the kilogram’s on a scale”, etc.

Behavioural determinants are factors that either influence or cause an action to occur, or not occur. Also referred to as mediating factors, they may be internal (anxieties, beliefs, etc.) or external (peer pressure, supportive setting, etc.). Research has shown that these factors will vary in importance for different behaviours and across different settings; therefore a clear understanding of when, where and under what conditions the desired behaviour should occur (or undesired practices should cease) needs to be determined.

A discussion of behavioural terminology is incomplete without mention of two key internal behavioural determinants, knowledge and attitudes, that affect how human beings act.

Attitudes are feelings, opinions or values that an individual holds about a particular issue, problem or concern.

Knowledge is internalised learning based on scientific fact, experience and/or traditional beliefs. Experience shows that knowledge is necessary but not sufficient to produce behaviour change, which occurs when perceptions, motivation, skills and the social environment also interact.

When formulating interventions, it is important to clarify who is the subject of the action – by age or cultural group, gender, religion, ethnicity or some other characteristic. Decisions about which groups to target help us make choices amongst the variety of theoretical models and conceptual frameworks that are based on empirical programme experience. Realising that change in society occurs at many societal levels, programme staff are often faced with choices as to who they should direct their efforts – individuals, families or households, communities or the wider society as a whole. In practice, these choices are influenced by time and resource considerations and should be informed by an understanding of behaviour as a developmental and change process. Knowledge of the available theories or models can also guide programme planning and clarify the relationships between different factors that influence, interpersonal and group behaviour.

Box 2: Female Genital Mutilation [FGM].

UNICEF’s Sara Communication Initiative for the adolescent girl in Eastern and Southern Africa has researched attitudes and produced materials on FGM. Through focus group discussions, communities aired their views on the issue and identified any positive elements related to the practice. Many believed that, as a rite of passage, the ceremonies as a whole gave a sense of cultural identity to young people and provided a form of family life education to young girls. People were aware of the negative impact on the girls’ and women’s health, yet girls highlighted the anxiety caused by resisting the practice individually, since an uncircumcised girl may be mocked and considered potentially unmarriageable within her community.

The debate in the focus groups centered on whether it was possible to reject the negative while retaining the positive elements of this rite of passage. People also considered who would be the most likely and effective initiators of change within the community as a whole. The Sara film and books reflect these research findings, and seek to stimulate debate on FGM at the community level and also advocate for greater support at policy level.

Some Theoretical Frameworks that Explain Individual Behaviour

• Health Belief Model (HBM)

The Health Belief Model is the most common and well-known theory in the field of public health and has been used more widely than any other to guide behaviour interventions in development programmes. Developed in the early 1950s by Godfrey Hochbaum and other social
psychologists at the US Public Health Service, it was used to explain patients’ responses to tuberculosis preventive actions. The HBM model is based on the premise that one’s personal thoughts and feelings control one’s actions. It proposes that health behaviour is therefore determined by internal cues (perceptions or beliefs), or external cues (e.g. reactions of friends, mass media campaigns, etc.) that trigger the need to act. It specifically hypothesises that individual behaviour is determined by several internal factors:

- Belief about one’s chances or risk of getting an illness or being directly affected by a particular problem or illness (perceived susceptibility);
- Belief or one’s opinions about the seriousness of a given problem or illness (perceived severity);
- Belief about the efficacy of an action to reduce risk or severity (perceived benefits) compared to one’s opinion about the tangible or psychological risks or costs for proposed action (perceived barriers).

According to the HBM, the first two beliefs jointly form one’s conviction and influence the degree to which an individual may be motivated to act on a given problem. The theory also suggests that the above reflections and thoughts are triggered by both internal (e.g. sweating, nervousness, etc.) and external influences (e.g. reactions by other people and/or opinions of significant others, media, etc.). These are labelled as “cues to action”.

Once an individual is motivated to act, the actual behaviour undertaken will be determined by a third factor – a personal perception of “cost-benefit”. This framework further explains that before deciding to act, individuals consider whether or not the benefits (positive aspects) outweigh the barriers (negative aspects) of a particular behaviour.

In a more recent formulation of this theory, the concept of self-efficacy has been added. This addition takes into account individual beliefs or personal perceptions of one’s own ability to undertake a particular action.

### Theory of Reasoned Action (TRA) and Personal Behaviour (TPB)

Similar to the HBM model, the Theory of Reasoned Personal Behaviour also supports the notion that one’s thoughts and perceptions are important determinants of behaviour. Developed by Fishbein and Azjen (1980), this theory added a new dimension to our understanding of behaviour by introducing the concept of behavioural intent. According to their behaviour research, the most critical factor in determining whether individuals will actually perform a desired behaviour is their behavioural intent. Behavioural intent reflects the level of commitment that an individual has to undertake a desired behaviour and likelihood that an individual will perform the desired behaviour: It is influenced by personal attitudes and perceived social pressure/norms.

In later formulations of TRA, the concept of perceived behavioural control was added to the framework. This concept identifies beliefs that individuals have about the availability of resources and obstacles to performing a behaviour, combined with perceptions of the impact of these, or power of each to resource or obstacle to either facilitate or inhibit desired behaviour. This was an attempt to reflect that factors outside an individual’s control could also affect actual performances of a particular behaviour.

Clearly, this theory acknowledges the joint influence of attitudes, norms and perceived control in affecting behavioural intention as a motivating force in the behaviour process. It also clarifies that perceptions of control, similar to behavioural intention, have a direct influence on one’s taking action. However, the relevant importance of each of these dimensions is dependent on the behaviour goal, itself. TPB posits that individuals who have positive attitudes towards performing a particular behaviour, and who believe that “significant others” are in favour of or support the desired action, will more likely attempt a particular behaviour. For some people, their own personal attitudes will have a greater influence on their behaviour than perceived social pressure, and vice versa for others.

### Stages of Change Theory

The Stages of Change Theory is based on the premise that behaviour change is a process and explains the psychological processes that people undergo are iterative in nature. Assuming that
individuals experience different levels of motivation to change. Prochaska, et al. (1992) suggests that interventions should be matched to individuals at their respective stages in the change process. It also suggests that behaviour change can be characterised by five stages: pre-contemplation (no thoughts about change), contemplation, decision/determination, action and maintenance.

The theory, conceived as a circular model, allows for individuals to enter at any stage and takes into account that the stages, themselves, may appear different, given different situations. While these stages can be used to explain why people behave as they do, they can also inform intervention design and communication messages that can be tailored accordingly.

Some Theoretical Frameworks that Explain Interpersonal Behaviour

• Social Cognitive Theory (SCT)

Developed by Albert Bandura (1986), Social Cognitive Theory assumes that individuals interact constantly with their social environment and that they influence, and are influenced by their social milieu – friends, family, co-workers etc. Central to this theory is the premise that behaviour is a result of a three-way, reciprocal interaction between personal factors (i.e. one’s own feelings and reactions) and environmental influences (i.e. thoughts, advice and feelings of “significant others”). In contrast to the previously discussed conceptual models, this theory emphasises the role of one’s own experiences and observations of others and the results of their actions on personal behaviour. SCT explains human behaviour as a multi-dimensional and reciprocal process. It uses four concepts that can be used to guide programme development and behavioural interventions at an interpersonal level: reciprocal determinism, behavioural capability, outcome expectations and self-efficacy.

SCT is centred on the premise that people learn their behaviours from their own experiences (trial and error) and the results of their actions and by observing others. Observation, and consequently effective role models, are important in learning new behaviours. Empirical study shows that the more similar a role model is to a particular target group, the more the group will identify with the model and try to emulate his or her behaviour.

Practice, trial and error, is the most powerful source of learning. It takes into account that the individual’s mastery of tasks is important and that the more they practice and are able to accomplish a particular task, the more motivated they will be to attempt a desired action.

According to Bandura, one’s sense of self-efficacy is also learned through emotional reactions or feelings about a situation or from persuasive arguments and encouragement by credible people within an appropriate social context.

• Social Experience Model

Using a human development perspective, Bloomberg et al. (1994:455) developed a framework for understanding the critical interaction between elements of the social environment and health. They concentrated on the concept of social experience, and the ways in which social the immediate and wider environment of an individual can affect his/her behaviour. This theoretical model emphasises that human behaviour is the result of interactions with “significant others” and the ways that one is treated due to his/her status or membership in a particular group. It also explains that social context and relationships in which one is involved influences his/her self-perceptions of personal competencies and expectations and can ultimately affect various social or health outcomes.

According to Bloomberg and his colleagues, an individual’s socio-demographic background plus his/her own personal traits determine the social context of interactions with others. They noted that factors such as environment resources, parental education, family income, occupational status are key socio-demographic characteristics that play a role. More importantly, this theory suggests that the opinions and behaviours of one’s friends, family, or social network influences one’s own personal perceptions and actions. This social experience has a direct impact on one’s actions and ultimately, social, health and other development outcomes.
• Social Network and Social Support Theory

The theory explains the mechanisms by which social interactions can promote or inhibit individual and collective behaviour. As defined by Israel et al. (1985, 1990) and other researchers, a social network is person-centred and refers to the set of linkages and social relationships between people. An understanding of network theory enables programmers to better analyse how friends, families and other significant people might impact on the same individuals and groups that they are trying to influence. In developing appropriate interventions, the following network characteristics should be considered: size and number of members; frequency of contact and strength of bond between members; extent to which different members know each other; and extent to which resources and support are exchanged between members.

Social support, on the other hand, refers to the content of these relationships – i.e. what is actually being shared or transmitted during different interactions. As such, assistance provided or exchanged through interpersonal and other social relationships can be characterised into four types of supportive action: emotional support, instrumental support such as tangible aid or services, appraisal support such as feedback and constructive criticism, and informational support in the form of advice or suggestions, etc.

Some Theoretical Frameworks that Explain Community or Societal Behaviour

• Diffusion of Innovations (DOI)

Based on his study of collective human behaviour and responsiveness to novelty and the introduction of change, Everett Rogers (1983, 1986, 1995) developed a theoretical model entitled Diffusion of Innovations Theory. Based on agricultural extension work in USA and East Africa, this theory explains the progression over time by which members of a community or society adopt new, or different, ideas and practices. It is based on the premise that social change or changes in human behaviour can be understood by the way that individuals and groups respond to new or different ideas and behaviours that are introduced. The theory also provides insight into the impact of social influence on individual and household behaviour.

Commonly referred to as “innovations”, these new ideas can in fact be technologies, attitudes, behaviours, policies, practices or even programmes. Experience has taught us that these innovations are not always recognised initially as being necessary, useful, or important, by the target population. Their acceptance, and adoption, on a wide-scale basis begins slowly, as a few people or groups try the idea out first before it gradually spreads to others, as a social momentum may be created or the social climate becomes more accommodating. The theory also posits that the adoption is a process. All eventual adopters pass through five stages: (a) awareness of the innovation; (b) interest in it; (c) trying it out; (d) making a decision to accept or reject; and (e) adopting or adapting the innovation into one’s daily life.

• Conceptual Model of Community Empowerment

Many theorists are not satisfied with individual behaviour change alone. They maintain that we should be more concerned with empowerment of people for long-term change (Freire, 1970; Wallerstein, 1992; Steckler et al, 1993). A review of literature (mainly health education articles) reveals that there are a variety of definitions for the concept of “empowerment”. For some it is:

• largely a personal process in which individuals develop and employ necessary knowledge, competence and confidence for making their own decisions/voices heard, or,
• participatory competence: the ability to be heard by those in power, or,
• a social process of recognising, promoting and enhancing people’s abilities to meet their own needs, solve their own problems and mobilise the necessary resources in order to feel in control.

Central to an understanding of the community empowerment process is the recognition that communities are composed of individuals and organisations that interact in a variety of social networks. This interdependence supports the notion that changes in one part of the social system has rippling effects in other parts. As a result, development programmes that aim to facilitate community ownership, competence and commitment to change must explore the concept of empowerment at three levels of practice: individual, organisational and community.
They are distinguished as follows:

- Individual empowerment has a focus on personal efficacy and competence. It also takes into account one’s sense of mastery and/or control over a situation.
- Organisational empowerment emphasises processes that enable individuals to increase control within a formalised structure, and the organisation itself to influence policies and decisions in the larger community. In practice, it also provides opportunities for individual growth and access to decision-making processes.
- Community empowerment centres on collective action and control that is based on participation of both individuals and organisations within a specific social context. Some of its benefits, on a group level, are greater economic independence and social recognition.

In summary, there are various theoretical models from which programme staff can choose. None of these have proven completely satisfactory in the field of international development. Many practitioners find that they can achieve the greatest understanding by combining more than one theory or developing their own conceptual framework. What follows in this contribution is such an attempt. It is not a theory, but it does offer insight in the form of a model which can be easily understood by professionals in many fields and it does answer some of the criticism sometimes made, that theories of behaviour are too Western and geared to the individual.

**Strengthening People’s Life Skills**

The term “life skills” is applied in a variety of ways in the context of different programmes. In some cases it is taken to refer to practical, technical skills, such as mixing oral rehydration solution or putting on a condom. In other cases, it refers to entrepreneurial or livelihood skills, necessary for economic survival. In the school context, it is sometimes taken to mean the essential skills of basic education, including literacy, numeracy, and technical skills in health education. In this section, however, the discussion of life skills focuses on what are often termed psycho-social competencies. These are the skills that enable individuals to think and behave in a pro-active and constructive way in dealing with themselves, relating to others and succeeding in the wider society. Life skills are required both in everyday circumstances and, particularly, in specific risk situations.

The most accessible way to explain life skills is perhaps to provide a list of life skills which have been identified by different programmes around the world. The Mental Health Promotion Unit of the World Health Organization in Geneva has analysed the content of numerous life skills programmes in schools around the globe, and has found that there are five basic life skills areas which frequently appear (WHO/MNH, 1994). These life skills areas provide a starting point. Later in this chapter we will examine whether life skills have a cross-cultural relevance and the ways in which they can be adapted.

Each basic life skill area leads to a multitude of other skills to be developed and practised. For example, developing critical thinking skills can strengthen people’s ability to clarify their values and assess risks more effectively. After developing basic communication skills, young people can go on to learn about negotiation skills, assertiveness and resisting peer pressure. Learning decision making skills can be further refined with additional activities to practise setting realistic goals for the future.

Clearly, different dimensions of life skills are appropriate for different age groups. For example, in the case of communication skills, while young children might aim for clear expression and the ability to speak and listen in turn, older children need more advanced skills in negotiation. Adolescents, and indeed adults, could refine this still further and should be able to combine communication skills and problem solving skills for conflict resolution.

Life skills are required by people for their healthy development by enabling them to:

- to acquire a sense of self-worth and self-efficacy;
- to build supportive relationships with family and friends;
- to promote healthy living;
- to cope with the stresses and pressures of daily life;
- to deal with conflicting values and norms for behaviour.
The acquisition of life skills is clearly linked to the development of values. Of most significance are the attitudes relating to the individual’s perception of self and others. The enhancement of life skills goes hand in hand with the promotion of self-esteem, self-control and personal responsibility. It also involves, crucially, both a respect for others, regardless of race, sex, religion or life style, and a sense of the individual’s responsibility for the group, be it family, friends or community.

These general attitudes need to be combined with efforts to clarify one’s own set of values. In many regions, vast population growth, urban migration and exposure to alternative values through new information channels, have challenged traditional family and community structures that formerly raised young people within their own particular cultural system. In many cases, the social and sexual mores of the modern world are in direct conflict with traditional values. Within societies there is often moral ambivalence, when what is practised contradicts what is preached. All these factors lead to feelings of confusion and alienation for young people attempting to make sense of their world, feelings which may manifest themselves in risky behaviours.

**Life Skills Learning Process**

What most clearly defines a “life skills approach” from other health promotion initiatives is the teaching and learning approach. In life skills programmes the emphasis is more on process rather than on content; on how something is learned, rather than what is learned; on how to think, not what to think. Life skills are not a set of technical skills that can be taught on the basis of information transferred from the teacher to the pupil. Nor should life skills be taught in isolation. They need to be dealt with holistically, taking into account the social, cultural and economic context of the learners’ lives, with application to real life concerns.

Considering the health and social issues addressed within life skills programmes, the information content is, of course, significant. However, effective learning is likely to depend more on the methods employed than on the information component of the programme. “The methods used are what most clearly distinguishes life skills programmes from information dissemination initiatives, such as teaching ‘facts for life’.” (WHO/MNH, 1994:3) This educational approach involves participatory and active learning methods. The objective is to create an environment conducive to experiential learning of life skills.

Defining knowledge as a “process of inquiry” (Freire, 1973:46), in which the learner is the active agent in creating knowledge, is the key issue which demarcates active learning in life skills education from conventional, didactic approaches. “The central, and indispensable, component of active learning is the ‘inner’ activity in which the learner constructs and reconstructs his system of knowledge, skills and values. It is this structure which enables him to order new experiences, and thus to attach meaning both to the outside world and to his role in it” (Somerset, 1988:151).

It must be acknowledged that, for learners of all ages, their experiences will not always be easy or positive. Applying life skills to their real life involves taking risks. If young people refuse to smoke, take drugs or alcohol, they might risk ostracism from their social group. If a person, concerned about his or her partner’s sexual history, insists on condom use, he or she might risk rejection. This is why life skills education should always include time to practise skills in a safe learning environment. This is an opportunity to test out other people’s reactions to new behaviours.

Obviously all efforts should be made to create as supportive an environment as possible, through parallel work with parents and the community. However, it must be acknowledged that use of life skills is, in itself, a risk-taking venture, since it potentially alters the individual’s relationship with others, challenging their values, roles and power relations. This underlines the importance of life skills education as a long-term, sequential and developmentally appropriate intervention. To support the learning and practice of life skills, they should always be taught first in the context of low risk, non-threatening situations, to provide opportunities for positive feedback from the application of life skills. The skills should then be explored and practised in
progressively more challenging or threatening situations over time. It is the confidence gained in the practise of skills in low risk situations which helps people to persevere with their intended action when people do not respond favourably to their behaviour.

Box 3: Zimbabwe School AIDS Action Programme

The School AIDS Action Programme in Zimbabwe provides an interesting example of an attempt to take a life skills approach from small scale intervention into a national programme, introduced through the formal education system. With HIV/AIDS prevention as its primary objective, the programme has a broad foundation in the development of life skills.

The programme has been developed by the Ministry of Education's Curriculum Development Unit in partnership with UNICEF. Its main impetus has been on the research, development and dissemination of student textbooks, teachers' manuals and supplementary materials, combined with teacher training.

The programme targets all students from primary Grade 4 to the highest secondary class. It is compulsory in the school curriculum and has one weekly period timetabled. The text books are graded and incremental. As the students mature, so the topics move from “bad touches” to actual rape, from making friends to physical relationships. “The textbooks used are issue-oriented and pose a series of scenarios requiring students to explore feelings, examine alternatives, think through situations, take decisions and make judgements. The books avoid talking down to students and do not prescribe answers to problems. The material provides situations that help students confront issues that enable them to make decisions about their own sexual values and interpersonal relationships.” (UNICEF, Harare, 1994) This approach demonstrates how HIV/AIDS education can be planned around life skills development, rather than pure information transfer.

The greatest challenge lies in teacher education, in being able to transform didactic teachers into facilitators. In-service teacher training is provided through a “cascade” model (each level training a lower level), from national down to school level, although this inevitably tends to get weaker as it moves downwards. To provide further stimulus and support to teachers and to promote school interaction, “demonstration” schools receive targeted training and serve a local cluster of schools. However, established teachers have found it difficult to transform their conventional approaches, fearing that greater student participation could lead to a loss of control.

Pre-service training is conducted in all teachers' colleges. This incorporates factual information on HIV/AIDS as well as training in the participatory, life skills approach used by this programme. It also targets the college students themselves as a group at risk.

In a preliminary evaluation study on the text books and implementation in Grade 7, students “were unanimous in viewing the book as useful, enjoyable, appropriate and in the main relevant to their experience,” although many expressed embarrassment at having to discuss these issues with adult teachers, who were themselves also uneasy with the material (Chisuo, 1995:30-31). However, the study highlights the difficulties which participatory methods present to teachers. Rather than introducing the books as a separate lesson, many teachers have tended to integrate the lessons into other core subjects, returning to their conventional, didactic approaches. This necessarily inhibits the development of life skills. Future development of the programme will focus on teacher training and monitoring mechanisms.


Summary of Lessons Learned

Experience of life skills programmes around the world has provided a number of key lessons learned, summarised here:

• Life skills need to be learnt in an integrated, holistic manner, since real-life problems require a range of psychosocial skills. Life skills programmes should be developed to address the “whole person” within his or her environment. Life skills education is a long term process and requires follow-up activities to ensure that learners continue, over time, to apply their life skills in different...
context and have a chance to reflect on their experiences.

- Learners, their families and communities, need to be involved in identifying risky behaviours and the related life skills which are significant to them, to ensure the relevance of the programme and its cultural appropriateness.
- In programme planning, implementation, monitoring and managing, all efforts should be made to promote community ownership of the programme for long-term sustainability.
- Learners require opportunities for practice of skills and positive reinforcement. Consultation and parallel life skills training with other family members, parents, peers and the community can aim to make the environment more supportive.
- Early interventions with children of primary school age enable them to acquire life skills before they may become involved in risk-taking behaviours.
- Both qualitative and quantitative research are an essential part of the whole process of life skills programme development, implementation and maintenance.

The participatory, active learning approach required for life skills education makes new demands on the abilities of educators. Teacher/facilitator training and follow-up support need to be given priority.

When designing risk reduction programmes, on AIDS, substance abuse, etc., the life skills required to address the issue should form the central focus. These life skills will then define the learning objectives, the content, materials and educational methods, as well as the behavioural outcomes to be evaluated.

Work with the media, to promote positive life skills modelling, helps to provide other sources of motivation and examples for the acquisition and practice of life skills, especially for young people.

Life skills programmes should be underpinned by a human rights stance, giving special consideration to the promotion of the Rights of the Child, and the prevention of gender, racial and other forms of discrimination.

While strengthening the capabilities of individuals, life skills programme developers should also recognise the importance of wider environmental factors which can constrain people’s behaviour and limit their choices. Agencies need to collaborate, working simultaneously at a structural level to promote a more positive environment.

Creating an Enabling Environment

All too often, people wanting to make changes in their lives face the resistance of their family, peers and community. Health services are often inadequate for their needs or insensitive to their situation. The education system often fails them. They may also face religious, cultural, economic, or social pressures – or a lack of structural and legislative support – that constrain their freedom to choose healthy and safe options.

All too often, programmes designed to improve people’s lives have focused on the “vulnerable individual”, exhorting them to change their lifestyles. Such programmes not infrequently ignore the wider environment and the forces which push people into doing things that undermine their health, such as having unwanted or unsafe sex, using drugs, being subjected to female genital mutilation (FGM) or using breast-milk substitutes.

At the same time, health promotion programmes can gain far greater impact by building on existing cultural, social and other factors which support safe and healthy choices, for example, in discouraging the use of tobacco or alcohol.

When programming for behaviour development and change we therefore need to think in much broader terms, beyond the individual whose behaviour we are concerned about. Programmes that aim to decrease the number of people who smoke, the number of people injured in car accidents, the number of children who remain without immunisation, the number of teenage girls becoming pregnant, have to do much more than develop individuals’ knowledge, motivation and skills to be effective. They have to focus on creating a supportive and enabling environment for these individuals. Such programmes need to build on those aspects of the environment which are supportive to positive behaviours and minimise or change those which are negative or resistant.
Analysing the Environment
There are two major dimensions of the environment to consider, which overlap and are interrelated. The first refers to the “immediate environment” of parents and family, friends and community members, where interpersonal communication is the major influence on behaviour. Then there are those factors in the “wider environment”, such as culture and religion, health and education systems, news and entertainment media, which both influence and are influenced by pervading social values.

This section focuses in more detail on those aspects of the wider environment that influence and constrain behaviour choices. These include:
- Policy and legislation;
- Service provision;
- Education systems;
- Cultural factors; religion;
- Socio-political factors;
- Socio-economic factors; and the
- Physical environment.

While each factor is discussed separately, in programming terms they need to be addressed in an integrated way, reflecting the manner in which they relate to a specific issue.

Policy and Legislation
In many countries the plethora of parallel projects by governments, NGOs and other agencies may fail to achieve their potential impact at the macro level if they are not delivered within a consistent policy environment, which achieves synergy through coordinated action. The efforts of individual programmes can ultimately only be sustained and expanded when underpinned by supportive policy and legislation. Such legislation must also be held by the political will to enforce its provisions. Development organisations have a crucial role to play through advocacy in strengthening this political commitment.

There are many examples of effective development of policy and legislation in the creation of an enabling environment for change. In fact, in many instances, getting new policies passed has been relatively easy. More difficult has been effectively implementing their provisions. As such, policy and the development of national laws can usually only provide a framework for change, except in relatively clear examples, easily enforced by the authorities, such as the enactment and enforcement of car seat belt legislation.

Box 4: Using VIPP: The Case of Zambia
Since its introduction through UNICEF in early 1994, VIPP made great strides in Zambia, building upon the foundations of participatory training that already existed in the country. VIPP methodologies have been used for strengthening teams, project planning, strategy development, managing meetings, generating information, and training trainers. Over 300 facilitators at various levels in government, NGOs, and international development agencies have been trained in the use of VIPP, and several partner organisations have espoused the methods for their own programmes.

VIPP has been used with numerous different types of groups and organisations to develop strategies on a range of issues, including: promoting girls’ retention in school, improving youth access to media about HIV/AIDS, problem-solving with street children in urban areas, community-based planning, and capacity-building for health reforms in Zambia. VIPP has also been used within UNICEF’s Zambia country office to strengthen its own internal management and planning, and for staff team-building.

VIPP methods are particularly appropriate to raise difficult issues. For example, an adolescent involved with HIV/AIDS education for youth in Zambia uses a VIPP card to anonymously ask: “How can I be sure that my partner is wearing a condom?” Police officers and Lusaka street children have frankly exchanged their perceptions of each other, and at the same time defined common ground. Youths have collaborated with senior health providers to
better define their needs in reproductive health service provision. Staff members have been able to raise their fear about speaking up in front of their manager in a manner that allows for constructive exploration of this issue in the workplace.

A preliminary evaluation of VIPP’s application in Zambia conducted in 1996 indicated that VIPPP is most effective for mid-level decision-makers who are often better at talking about the need for participation than at practicing it in their own working environments.


**Service Provision**

No matter what we do to give people clear and accurate information, to motivate them to change existing practices or to adopt an innovation, and to assist them in developing the skills needed for positive change, our efforts will be largely in vain unless there is a commensurate improvement in the quality of services made available to support such behaviours. Such services include health and education provision, safe water supply, sanitation facilities and waste disposal, and agricultural extension services. These services need to be affordable and accessible, and of a standard to meet the needs of the client community.

**Box 5: Interpersonal Communication and Service Delivery**

In Bangladesh, the Expanded Programme on Immunisation (EPI) had achieved 62 percent coverage by 1991. However, statistics indicated that dropout levels were still very high. A large-scale, qualitative study revealed that much of this was due to the poor quality of communication between service-providers and clientele. Vaccinators allowed relatives and people with higher status to jump places in lines. They seldom counselled on possible side affects and treated poorer people rudely. It was found that, on average, they spent 21 seconds with each child and caretaker. Very little use was made of the thousands of flip charts and flash cards produced to support interpersonal communication. A more in-depth analysis of the same data indicated that there was little difference in performance between those field workers who had undergone training programmes and those who had learned on the job. This led to the formulation of an interpersonal communication (IPC) training strategy for field workers and their supervisors.


**Education Systems**

Although education is part of service provision, it merits a separate discussion, given its formative role in determining people’s behavioural patterns. For those who have been to school, their educational experience is probably the most significant determinant of the way in which they receive, process and use information. Many examples exist of educational initiatives which promote the development of life skills, including the capacity for critical thinking, decision making and problem solving. In this light, such education systems can be seen to develop the capacity of people to work proactively within and upon their environment for constructive change. The key to this transformation lies in the quality of the educational process. The way in which the learner experiences the learning process can either encourage or inhibit positive behavioural development and change. However, while globally many education systems are working actively to improve the quality of teaching, it remains a fact that the majority of educational environments serve only to promote passivity in learners.

A bleak but influential view of this educational approach was taken by Paulo Freire who characterised it as a “pedagogy of oppression” (Freire, 1973). He sensed that such forms of education can keep people locked in a closed world in a “culture of silence”. In this context, education becomes a series of facts passed on from the “knowledgeable” teacher to the “ignorant” student through rote learning. This follows what Freire called the “banking concept” of education, whereby teachers believe their role is to “fill” their students with knowledge. Education suffers from “narration sickness”. “Narration leads the students to memorise mechanically the narrated content. Worse still, it turns them into containers, into receptacles to be filled by the teacher” (Freire, 1973:45).
Where the education system itself is rigid and autocratic, from the style of management at the top, down to delivery in the classroom, it may appear resistant to change. The way society is organised can be reflected and reinforced by the way people are educated: either enforcing acquiescence within a hierarchy or, conversely, encouraging a democratic openness and questioning. However, education systems can be mobilized to challenge social norms and become a catalyst in changing the way people think and behave. Educational reform is possible, albeit slow and incremental.

Many sectoral programmes, particularly in health, water and sanitation, and agriculture, seek to use school systems as a key channel for disseminating their messages. However, such information will likely remain unused unless the learning process encourages enquiry and innovation. Outreach will also be limited unless more students are retained in the school system. Two key issues therefore govern the potential of the education system to contribute to creating an enabling environment. The first relates to the continuing quest for improving quality in teaching; the second to increasing access to and retention in schools.

The education system provides the most crucial point of interface between individuals and their environment. A positive educational experience can prepare people to participate in creating a more supportive environment, in redefining the terms on which they live. For example, disadvantaged groups, who have learnt about the rights to equality before the law, can work individually or collectively to challenge social practice and to lobby for changes in policy and legislation. In terms of programming for an “enabling environment”, investment in education becomes the central priority, for education opens the way for people themselves to influence their environment and widen their options for action.

**Box 6: Mobilising for Education for All in Bangladesh**

A year after the World Conference on “Education for All”, held in Jomtien, Thailand in 1990, not a great deal had been achieved in Bangladesh. There was a great deal of rhetoric and disagreement over the strategies required to bring education to a population of 110 million which was less than 25 percent literate. UNICEF was still giving emphasis to the provision of educational materials, curriculum development and teacher training. There had been much energy and concentration on mass education in the past, with little progress. The Government, academics and NGOs were at odds as to the reasons for the lack of progress, each tending to blame the other. Compulsory primary education was declared by the President at Jomtien, but no one believed that it was enforceable or achievable. The call for “Education for All” remained a hollow cry.

Participatory Planning: A breakthrough came in April 1991. UNICEF organised a participatory planning workshop using a method called Visualisation in Participatory Programmes (VIPP). High-level government, NGO staff and academics attended, along with participants from UNICEF and UNESCO. In three days, participants worked through the essential steps to be taken in mobilizing for Basic Education in Bangladesh and developed a multimedia and multi-partnership plan of action for advocacy, social mobilization and programme communication.

This initial planning workshop was followed by training in VIPP facilitation for key Government, NGO and UNICEF staff involved in education. This training initiated a whole sequence of participatory planning processes, right down to the lowest administrative level. For the first time, people in lower-level posts had a say in what was needed to mobilize the educational bureaucracy, social partners, parents and children.

Determining the Value of Education: A qualitative research study was carried out on the perception and value of education. After a great deal of discussion, it was decided that before launching a major communication initiative for accelerating the provision of educational services and quality of services, more should be known about what parents and children think and believe about schools and school personnel, revealing deep-seated perceptions, beliefs and values. The information from this research was used in the formulation of mass media, traditional media and interpersonal communication messages aimed at various stake-holders in the educational process.
Launching a Movement: In 1992, the Prime Minister launched the “Education for All” movement in a major national conference attended by people from all relevant sectors and all parts of the country. The conference was a lively affair, with a great deal of debate, which sparked new initiatives. At the above event, a communication symbol for “Education for All” was unveiled. The final symbol above, with the girl slightly ahead of the boy because of her historic disadvantage, was adopted as the best concept to promote basic education for all in Bangladesh. Today, it is used by all major partners in the movement and can be seen throughout the country. It is easily recognisable and communicates a message, even to illiterates.

Cultural Factors

In development programmes the role of culture is often ignored, for example, in analyses of social change which take a purely economic and political perspective. In other instances, where the influence of culture is acknowledged, it is still considered to be either sacrosanct (in representing a “unique” traditional culture) or immutable, and certainly not within the domain of the development programmer. However, cultural values form the overriding determinant of behaviour, which cuts across all other factors. People’s behaviour is guided by their personal values, governed by the pervading cultural values of their social group.

A holistic approach to creating a supportive environment recognises the complexity and interrelationship of the various factors determining behaviour, of which culture plays a very significant and influential part. For our discussion, we can adopt a working definition of “culture” as a set of values and practices shared by a group. The domain of such a culture is therefore determined by the number of people or communities who identify with and subscribe to its shared set of values and practices. This results in layers of cultures and subcultures within a single society.

As with the other factors in this section, the discussion of culture and behavioural change merits a whole book in itself. However, the review of gender programmes offers some general lessons that can be applied more broadly to other aspects of culture. It emphasises the value of a programmer’s role as a listener, learning about people’s culture through formative research. This insight allows initiatives to tap into the evolutionary process of culture, building on the value and behavioural shifts that communities believe are desirable and possible. Such work can be reinforced by establishing alliances with other agents in society, particularly harnessing the power of the mass media. However, as culture exists as a set of values and practices shared by a group, change cannot be imposed from without, but will evolve within communities through a participatory process, in which people are enabled to become more objectively conscious and to consider possible transformations.

This finally brings us to the ethical issues that a programmer needs to consider when dealing with cultural issues. Community participants need to be fully conscious that efforts to reform their culture may lead to social disruption. It is they, not the programmer, who carry the risk in challenging their cultural norms. As with the example of FGM, interventions concerned with culture are more appropriate in addressing the community as a whole, on all its levels, rather than isolated, and possibly vulnerable, groups within the community.

Finally it is worth remembering that programmers too, from whatever society, may subscribe to an “international development” culture, their own shared set of values, which could also benefit from a regular, critical scrutiny. In its worst manifestation, this could be portrayed as a sense of cultural superiority, implicit in same policy statements, “particularly when programmes involve ‘educating’ a ‘target population’” (Allen, 1992:338). Our guard against this is to adopt a listening stance and approach our work with communities as a process of mutual learning.

Conclusion: Integrating for Change

This brief review of the many processes and factors that must converge in order to facilitate behaviour change, strongly suggests the importance of adopting integrated approaches in designing development communication programmes. It calls into question the current trend of using the words “information” and “knowledge” to mean the same thing. It also questions the marketing hype which suggests that knowledge can be downloaded from appliances plugged
into the Internet. And that there are technological shortcuts to change and development. 

This review also emphasizes to policy makers and programme directors the importance of building effective and responsive communication elements into development programmes right from the start of all projects. While communication on its own will not bring about change and development, neither will change happen without development communication. We need to integrate all our efforts.

References

DESIGNING COMMUNICATION STRATEGIES: A GUIDE TO DECISION-MAKING

Focus, precision and accountability are factors essential to carrying out effective information campaigns and communication programs. These factors are highly dependent on carefully and systematically designing communication strategies and establishing systems for managing the appropriate communication activities. In this section of the chapter, we look at the elements essential for constructing communication strategies for a variety of intervention programs and projects. We have tested the approach for a campaign to diffuse the results of an agricultural census in China, for reproductive health IEC and advocacy programs in Ethiopia, and nutrition interventions in Honduras. We do not present a specific prescription that fits every project; however we identify the kinds of questions and variables that need to be considered in making the kinds of decisions that go into designing a strategy. The actual design will vary according to many situational factors. We also offer some ideas on how to manage a communication program so that an organization’s resources are used well.

We begin by raising questions about what comes before an organization begins its communication activities – before media production such as producing posters, broadcasting radio programs or printing and distributing booklets. We suggest an alternative approach to the common practice of beginning with a campaign driven by the creation and sending of messages. While the discussion is slightly biased toward behavior change and has some roots in social marketing, the principles and issues apply to public relations, advocacy, technology transfer, social mobilization and social change in general where ultimately the issue is to influence knowledge or behavior. While the overall approach does not fit the ideal participatory model, participatory components can readily be accommodated. (Our contention is that most participatory-styled activities, in fact, are shaped by external forces or agencies that build participation into projects as part of their development strategy. In our analysis in Chapter 2 of the highly participatory Division of Community Education in Puerto Rico, people were "awakened" to their self-efficacy by stimuli from outside the community; their participation did not arise spontaneously from within.)

Many – perhaps too many – communication programs designed to influence public opinion or promote social or behavioral change are driven by intuition, inspiration, artistry, and reaction. Confronted by high levels of disease or malnutrition, a senior health official in a country recognizes the need to persuade the population to change their diets or other behaviors. The official gives an order to prepare some radio spot announcements and create some posters that promote a particularly nutritious combination of foods. The official wants to start the campaign by sending messages. Insofar as communication is concerned, his/her success will likely be measured by how many messages were sent: that is, how many posters were put up, how many announcements were broadcast on radio, etc.

Another approach is to be concerned with how many persons learned about the benefits of particular nutrients, and were persuaded to change their behavior as a result. The emphasis is more on what happens among the target populations. For example, for accountability, is it more important to concentrate on sending information about contraceptives, or is it more important to focus on the reception of the information by relevant people?

To avoid making poor decisions on sending information to target populations, a well-designed communication strategy is essential. In fact, sending information is only part of the total communication effort associated with campaigns and social and behavioral change programs. For example, a contemporary approach to various kinds of information activities that we have considered in other parts of these Readings — technology transfer, public relations, social marketing — emphasizes the need for a change agency (such as an extension service) first to obtain information about the intervention situation, including what and whose behavior needs to change. And who controls the behavior(s). In addition, it is at the strategy design phase that planners need to consider how the concept of participation fits into a communication plan.

Other parts of communication programs include analyzing data, making decisions about setting communication objectives, identifying priority stakeholders and information channels (media), and determining appropriate content. All of these elements connote planning activities. The communication activities dictated by these elements need to be put in a time
frame (that is, they need to be scheduled). It is after these kinds of decisions are made and plans laid out that information begins flowing. At various stages of this overall process, research and evaluation must be undertaken and the results inserted back into the process. Thus, the process is iterative: there is a continual flow of information into and out from the organization conducting the intervention program, and new information influences the process as the process continues. Models used by FAO, WHO and others illustrate this dynamic process. (See Chapter 4). They include the following elements:

1. Investigation (Research) ▶ Plan ▶ Develop materials ▶ Pre-test and adjust ▶ Implement
2. Then: ▶ Monitor, evaluate, and adjust
3. And ▶ Recycle these steps, adjusting for new data.

The P Process
The "P Process" is a planning model that gets its name from its longer title “The Process and Principles for Health Communication Projects.” The value of the P Process (which was developed by the Academy for Educational Development, Porter, Novelli and Associates, and the Program for Appropriate Technology in Health from a substantial amount of field experience) lies very much in its convenient application to a variety of sectors, although it was created around health issues. Originally developed in 1982, it has been used around the world in various health communication projects. Based on more than 20 years of field experience, the P Process was revised by the Health Communication Partnership (HCP) in 2003 to include two new elements not explicitly found in the earlier version: participation and capacity building. The components of the P Process are similar to those found in the WHO model found in Chapter 4:

- Analysis — Listen to potential audiences; assess existing programs, policies, resources, strengths and weaknesses; and analyze communication resources. "Program staff need to understand the problem, the people, their culture, existing policies and programs, active organizations and available communication channels."  
- Strategic design — Decide on objectives, identify audience segments, position the concept for the audience, clarify behavior change model, select channels of communication, plan for interpersonal discussion, draw up an action plan, and design evaluation. There is an emphasis on the facilitation of group action to address health issues.
- Development, pretesting and revision — Develop message concepts, pretest with audience members and gatekeepers, revise and produce messages and materials, retest new and existing materials.
- Implementation and monitoring — Mobilize key organizations, create a positive organizational climate, produce and disseminate communication materials, implement the action plan, and monitor the process of dissemination, transmission, and reception of program outputs.
- Impact evaluation and replanning — Assess impact on audiences and outcomes, and determine how to expand or revise the existing program or to develop new programs; disseminate results.

The remainder of this chapter concentrates on the strategic design component found in the P process as well as in similar models advanced by the World Health Organization and the Food and Agriculture Organization, both special agencies of the United Nations. We look specifically at the decision-making related to communication interventions – with detailed steps on how-to-do-it.

On the Johns Hopkins University Bloomberg School of Public Health web page one can find a detailed set of guidelines for implementing each step in the P-Process: http://www.jhuccp.org/training/scope/BasicPrinciples.htm.

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Where strategy begins

Implicitly or explicitly, a communication strategy usually has its roots in a policy. A policy is a political statement that says, often in many words, that there is a problem or an opportunity and the organization (a government, NGO or enterprise) wants to do something about it. Another way of expressing this is to say “there is an undesirable state and we will undertake a program to achieve a desirable state.” Thus we often talk about carrying out “interventions.” Legislatures, presidents, government ministers, and boards of directors are the typical policy-makers. The Millennium Declaration that resulted in the Millennium Development Goals is an example of a policy advanced by an international group.

Specifically what is going to be done may be left to technical specialists, managers, or administrators. These might include director generals, secretariats, planning councils, and chief operating officers. The head of a country or its legislature may declare that the country is deficient in rice (undesirable state) and that the country must become self-sufficient in rice (desirable state) – as happened in the Philippines when its president initiated a major effort to make the country self-sufficient in rice. (See Masagana 99 in Chapter 2.) Technical specialists – perhaps a national planning council – decide whether the method or program for reaching this goal will be accomplished through increasing rice production, or decreasing per capita consumption of rice by substituting other foods in the diet, or reducing the size of the population (and thus reduce total consumption of rice). The approach chosen dictates some sub-goals (such as “produce new technology for higher yielding seed varieties”; “create a system for convenient and low cost loans to farmers”; “persuade farmers to adopt new farming practices”). These may then become separate but inter-related programs each with its own sub-goals that feed into the goal expressed in the policy. We come back to this point later in this chapter.
Stop! Consider for a moment the AIDS/HIV situation in a community or a country. What different approaches might be taken by health authorities as an intervention strategy? Do these approaches include communication activities? What other components should be included?

As in Masagana 99, a nation’s effort to increase agricultural productivity or to reduce poverty by bringing small scale farmers into the mainstream food chain might include sub-goals related to developing new seeds or innovative equipment technology, financial benefits for farmers, modernizing the input supply system, insuring predictable markets for farmers’ output, and persuading farmers to adopt new technology. At an early stage visible roles for communication begin to appear. For example, one communication activity may focus on gathering information in order to make plans for the different interventions required. Most often communication’s role is seen as a means for informing people about an issue or a practice, or convincing people to adopt a new practice linked to agriculture or community development. However, it is important to recognize communication also as an information gathering process.

We mentioned earlier that each sector of an intervention will have its own sub-goals which are related to and support the overall goal. Thus, in an HIV/AIDS intervention, a principal health-related goal of combating HIV/AIDS may have a sub-goal of promoting condoms use among a high-risk population. While that promotion activity will likely involve issues related to supply and distribution, a communication sub-goal may be to inform, motivate and train stakeholders about condom availability and use.

Communication goals and sub-goals require a communication plan. The plan includes the following components: (1) mobilizing communication resources – which may include facilities such as recording facilities or personnel such as outreach workers or webmasters; (2) a management system indicating who is responsible for what parts of the communication intervention and for liaison with other programs in the overall project; (3) a research plan that includes situation analysis, evaluation and specific studies – such as whether a telecenter can be an effective microenterprise; and (4) the communication strategy or blueprint-for-action itself. It is the communication strategy that we address in the remainder of this chapter. For those using a social marketing approach, this comes within the P for promotion part of marketing's “four Ps” (not related to the P process mentioned above). In an extension system, this is most appropriately the training and communication component of technology transfer.

**Steps in developing a communication strategy**

Research, planning and evaluation provide a framework for laying out a communication strategy. These trigger other steps in the process, including developing materials, pre-testing and implementing. The communication strategy includes (1) objectives, (2) specification of channels to be used, (3) identification of stakeholders, (4) communication content to be developed into messages, and (5) evaluation methods to be used.

It is important to remember that while intervention programs tend to be characterized by an-organization-doing-something-to-people (such as changing or reinforcing their knowledge, beliefs, attitude, skills, and behaviors), the most effective strategies will be those that build into them opportunities for participation by various stakeholders. In much of the communication intervention process, citizens can be effectively involved in research, in defining issues, in decision-making related to setting objectives, in choosing media and content, in production of messages, and in evaluation. And, inevitably, organizations want people to be participants in the benefits of the interventions.

**STEP 1 — SITUATION ANALYSIS**

A communication strategy emerges from a series of important steps. First is a situation analysis. This information-gathering activity is important for shaping the communication plans and strategy, but it is often necessary for coordinating with the parallel strategies planned for

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9 Some refer to this as the research step. We use “situation analysis” as an alternate kind of research. Research is a broader concept: in the communication sector it includes situation analysis, pre-testing materials, monitoring, formative evaluation and summative evaluation.
other sectors. The communication strategy requires a variety of information including some of the following:

1. Demographic information, including population size, geographic distribution, age distribution
2. Psychographic information, including values, lifestyles, and dominant beliefs
3. Historical legacies, including important relevant forces that have shaped communities and the people's current practices related to the behavioral changes proposed
4. Economic realities, including the class structure, how people earn money, patterns of poverty
5. Political realities, including formal and informal leaders, the structure of the political system
6. The social structure, including patterns of settlement, ethnic structure, community organizations, cultural diversity, family patterns, and social networks.
7. Communication patterns, including the prevalence and uses of the mass media and indigenous channels of communication, credibility of information sources and channels, accessibility of the intervention agency and stakeholders to communication media facilities and organizations
8. Beliefs and perceptions related to the product and the intervention and the organizations associated with them; how people presently deal with situations an intervention intends to improve; people's view of the intervention(s) and innovations in general, people's perceptions of the change agent (such as a community health worker) or the public representative of the government or the company
9. The knowledge, attitudes and practices related to the proposed intervention.
10. The goals and methods of the intervention itself, including its real and perceived benefits, limitations, undesired consequences, costs, and limitations and constraints to adopting different behaviors (such as using a telecenter), and what activities or agencies in the community compete with this intervention.

This kind of community analysis could be a major research activity requiring many months, perhaps even years. Some anthropologists have spent large parts of their lifetimes learning about communities. However, techniques have been developed for doing “rapid rural appraisals” that yield the kind of information needed in a much shorter time.

In summary, perhaps the most important reason for doing a situation analysis is to understand the population, their perceptions, and the constraints their life styles may present in changing their behavior; to know as well as possible the consequences for them of changing their behavior to adopt new practices or technology; and to learn how to exchange information with them in a social/behavioral change program. A research agenda is clearly important for working on the information and communication component, but it is also relevant to other components. Researchers may invest money and effort developing technologies that have little chance of being adopted or sustained, and researchers may not realize that people in the community may have significant knowledge that needs to be factored into research planning, and other important decisions. Research may be perceived as being too expensive or too time consuming, but one must ask the question: what are the potential costs of not doing research? The potential costs can be seen in a piece written by Joke van Kampen, Programme Director at Story Workshop in Blantyre, Malawi, in 2006 for the widely read discussion forum called Drum Beat. She identifies what she sees as the shortcomings of the USAID-supported ABC HIV/AIDS intervention program. First, here is an introduction to the ABC initiative by USAID:

Abstinence from sexual activity, being faithful to a single partner, and correct and consistent condom use are three key behaviors that can prevent or reduce the likelihood of sexual transmission of HIV, the virus that causes AIDS. The balanced promotion of all of these behaviors is commonly known as the "ABC" approach — "A" for abstinence (or delayed sexual initiation among youth), "B" for being faithful (or

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10 Andreasen urges that you collect only data that pertains directly to behavior change. On the issue of doing inexpensive research for the situation analysis, see A. Andreasen, Marketing Social Change, Jossey-Bass, San Francisco, 1995, pp. 99-115.
reduction in number of sexual partners), and “C” for correct and consistent condom use, especially for casual sexual activity and other high-risk situations.

An increasing number of countries — including Uganda, Thailand, Kenya, Cambodia, Zimbabwe, India, Rwanda, Ethiopia, Dominican Republic, and Haiti — have experienced national or sub-national declines in HIV associated with the widespread adoption of “A,” “B,” and/or “C” prevention behaviors.

Fundamental to this approach is the recognition that different settings will also feature different barriers to the adoption of ABC behaviors. Prevention programs must therefore be developed in collaboration with the communities they serve and must, in addition to promoting individual behavior change, address the social norms, environmental factors, and policies that contribute to new HIV infections.  

Without our judging the effectiveness of the ABC program, we offer Ms. van Kampen’s comments as a way to illustrate the importance of assessing cultural factors in connection with the development of communication strategies and interventions.

THE ABC Disaster  [Editing note: The spacing in this title is correct.]

World AIDS Day 2005...finally brought the voices to life that point at the failing and devastating effects of the ABC approach to HIV/AIDS prevention. The EU...and the UN Report of the Task Force on Women and Girls and HIV/AIDS in Southern Africa, testimonies, articles, and interviews all simultaneously seem to pay attention to at least the limitations and often the adverse effects of the ABC (Abstain, Be faithful, use a Condom) approach....

Since the introduction of ABC there has been scepticism, but almost of an apolectic sort. What could be heard was that abstinence is "of course" the ideal but since the reality is different, the messages should be targeting sexually active people. All couples being faithful is "of course" what we all would like to see, but since the reality is different, we need to talk a lot about condoms. Over the years, the A and B of the ABC tend to get a lot more emphasis than the C (clearly reflected in the materials and manuals where condoms feature on the last one or two pages of the teachers' guide)....

The criticism of the content of AB is simple: the messages cannot be implemented by substantial parts of the population, they are not geared at real life. Abstinence is not an option for many (poor) women and being faithful does not protect against HIV/AIDS infection. The "be faithful" message is especially disturbing. According to research, serial monogamy is what many young people in Africa see as desirable in terms of relationships. But being faithful only makes sense with regards to HIV/AIDS if you stay faithful to your first sexual partner for the rest of your life, being his/her first and only sexual partner as well, after having been tested and proven to both be negative. Few people in Africa or elsewhere will spontaneously mention that model as their ideal and even fewer will live accordingly. In a recent survey among 15-24 year olds in Malawi, 80% of the respondents say they are not at risk of contracting HIV/AIDS, some of them because they are not having sex at the moment, but a substantial part say they are not at risk because they are faithful to their sexual partner. Being faithful is constantly mentioned in a context of HIV/AIDS prevention and even if the information given is correct, the ABC approach often connects being faithful to being protected against HIV/AIDS.

Many of the well intending ABC materials do pay attention to condoms, but somehow they manage to draw a picture of using condoms as a very exotic not to say alien habit, only fit for those who lack the self control and values to stay safe within A and B. And man, a lot can go wrong with condoms according to these manuals. Probably that is why they never reveal where you can get them. Or teach girls how to negotiate the use of condoms (they are endlessly lectured on how to say "no" instead).

Many educators and communicators in Africa and elsewhere, precisely because ABC has the power of the purse, agreed and implemented the ABC approach. But from a communication

12 USAID, The ABCs of HIV Prevention
Advocacy And Interventions

By Royal C. Colle

There is a lot more wrong with ABC than the content of the messages alone. It is ineffective from a communication perspective. And ABC can lead to effects that would be comical if only the consequences were less tragic.

ABC yells one-liner slogans at people pretending to tackle very complicated, deeply personal and highly sensitive issues in a way that is almost offensive. If the ABC approach is anything, it is loud and omnipresent. I belong to none of the many target groups for HIV/AIDS prevention communication and I live in backwater Blantyre (Malawi), but I have been monitoring for a week and it turns out that on an average day (reading the newspapers, listening to the radio, going to work, walking in town, going to a bar, watching some TV), I receive at least ten HIV/AIDS messages. Or, to be more precise, I receive nine fear-inducing, sex-discouraging messages, and one condom promotion message (billboards from a South Africa based condom factory read: "Studded for more pleasure").

By trying to take into account gender issues or the different positions of men and women with regards to HIV/AIDS, ABC education is revitalising double moral standards. Unlike South Africa, where virginity (and virginity tests) all of a sudden are portrayed as part and parcel of African authentic culture, virginity is not a common concept in Malawi. More than half of the girls in a recent survey had never heard of it. The ABC approach will change that one too. In a sort of strange side effect of the abstinence mantra, manuals on sex education linger on virginity for pages. While virginity might seem a desirable state of being to some people, it is as useful in HIV/AIDS prevention as advising people to stay inside in order to reduce traffic accidents. Full blown double standards go unchallenged in the virginity discourse, since virgins are, we all know this, female.

The same double standards are resulting in hilarious communication hazards. One of the many NGOs here that were circulating messages on the occasion of World AIDS Day published two posters here. One portraying women in a village, pouring maize, the other portraying men drinking beer and playing trick track (ok, let’s not split hairs here). The theme of World Aids Day being Keeping the Promise, the women on the poster say: "I promise to be mutually faithful", the men promise "to reduce the number of my sexual partners". Apart from the fact that it is hard to imagine how an individual can promise to be mutual, note that these promises, when kept, will lead to infection indeed.

Double standards, these days reinforced by ABC communication, heavily blind common sense.... One might argue that all this lying about the reality of people’s sexual life is rather innocent and of all times, but especially in the light of HIV/AIDS prevention it is a serious obstacle. We are in dire need of reliable information on what people do and don’t, what they feel and think. Without that information we will not be able to develop prevention messages that can and will be implemented in real life. Instead of learning how to communicate meaningfully, honestly and openly about sexuality, ABC role-models, teaches and engrains shame, lying and useless values.

The art of separating the discourse from the reality has risen to high heights, both because the ABC messages have little to do with real life and because ABC communication in itself is full of hidden and not so hidden moral messages on what sexuality should be (and not on what sexuality actually is). Recent research shows once again that Malawians are well informed on HIV/AIDS. Young people know about AIDS, they even can reproduce words like abstinence and being faithful and they do not change behaviour. 84% of 15-24 year olds are sexually active, 54% of men did not use a condom in their last sexual encounter, 73% of the women did not use a condom in their last sexual encounter. 70% of youths did not use a condom at sexual debut. Although using the words abstinence and being faithful, many of them indicate they are involved in occasional sex. Clearly the messages received by these young people are being filed somewhere, they are being able to repeat them and to fit into the discourse, it just does not occur to them to actually practice what they are saying. But maybe that should not surprise us, knowing that teachers deliver the ABC messages to them in a context where sexual abuse by the very same teachers is widespread.

Not all of the distorted discourse on sexuality can be assigned to the effects of ABC of course,
but ABC does nothing to clear the air, to encourage open and frank discussion on the issues. Instead, it imposes rules on people that many people have no intention or possibility to obey. AIDS is in Africa to stay. [E]ven if the epidemic stems tomorrow, AIDS will be a fact of life for generations to come. Since this became obvious, stigma and discrimination of people living with HIV/AIDS is getting placed higher on the agenda. Fighting the virus within an ABC context almost inevitably means condemning sexuality or at least a lot of sexuality (everything before, after or outside marriage, to be precise). By suggesting that faithful people cannot contract HIV/AIDS, the conclusion that a person infected must be a person with bad sexual practices and morals is almost logical. To say the least, ABC does nothing to fight stigma and discrimination. If you look at communication coming from organisations trying to improve the quality of life of people living with HIV/AIDS which are using ABC in their prevention efforts (the case with the vast majority of the many faith-based organisations active in this field), you can see how difficult it is to reconcile the messages. It goes like this: to get HIV/AIDS you have to be a very bad person but once you have it you deserve all the care and support you need. In addition, efforts to "justify" the safeguarding of human rights of people living with HIV/AIDS produce a constant stream of testimonies of two top models of "innocent" HIV/AIDS survivors featuring on the one hand the raped girl and on the other, the faithful wife.

In an advertisement for a contest, young Malawians were asked to write songs with the chorus starting: "A real woman waits..." (you could also write a song on "A real man waits..." but that did not seem to inspire anyone, no entrees received). Somehow I am sure the winning song will not read "A real woman waits 'till the condom is in place".

Joke van Kampen
Blantyre, December 2005
"mailto:joke@malawi.net"joke@malawi.net

STOP! Consider a situation in your work where getting people to change their behavior is important. What kinds of information (situation analysis) would be useful in planning a communication campaign or program to persuade the people to adopt a new behavior and discontinue a former behavior? How would you obtain the information?

STEP 2 — SETTING COMMUNICATION OBJECTIVES

The second important step relates to setting objectives. Analysis of policy goals, the interventions chosen and the research findings help shape the outlines of the information and communication strategy. Most important, they will suggest what the principal communication objectives should be. These objectives should deal with cognitive or affective or skills aspects of human beings. Communication itself cannot improve yields of rice nor improve the nutritional status of individuals. Communication can affect knowledge, beliefs, perspectives, motivation, attitudes, skills, understanding, and, to some extent, behavior – all of which can contribute to better rice yields and improved health status of a population. Usually this must happen in partnership with other sectors and other resources such as medical clinics, service providers, seeds, clean water, a distribution system, supply of firewood, fertilizers, transportation, and appropriate weather. A campaign to increase food production or to protect the environment is not really a communication intervention, but communication is likely to be an essential component.

Communication objectives are likely to start with phrases like:

- to increase knowledge...
- to train...
- to teach...
- to change attitudes...
- to motivate...
- to persuade...
- to change perceptions...
- to reinforce...
- to learn...
- to change beliefs

Note that all of these objectives relate primarily to a person’s cognition. Thus when we consider what we can do with communication, we need to keep in mind that we are largely limited by what
can take place in people’s heads. Our communication objectives should not be “to increase crop yields” but rather (among other things) “to persuade farmer’s to adopt a new seed variety.”

Most of the examples noted above reflect an organization’s point of view. They imply output activity by the change agency. These could also be expressed from the population group’s point of view. For example, instead of “to train”, the objective could state “the target population will know how to”— (thus putting the emphasis on the outcome for a particular group of people rather than the action of the organization doing the intervention). Is it more important to measure what is sent out (200 radio announcements in a month), or the impact of the communications (60% of the population will have heard the announcements and be able to paraphrase the message)? Output and outcome are both important matters in a communication intervention program but it is important that a planner be conscious of this distinction. Evaluation of outcomes relates more closely to impact, which, for many in development is the principal issue.

Some communication-related objectives that are neither cognitive nor affective may deal with mobilizing resources, but in a strict sense they are more resource-building or capacity-building objectives than communication objectives. These might include: building a local radio station, creating an information unit in a ministry, establishing telecenters in villages, or training volunteers. These are part of the communication planning process just as the situational analysis is, and they are often essential to executing the communication strategy.

An important question (and therefore there is a decision to be made) about objectives is: should objectives be quantified? If a program or project is to be evaluated, it is often important to have good baseline pre-intervention data (that probably come from the research discussed above) and clear quantifiable objectives. It is possible to have general objectives (“change public opinion about women’s roles and rights in Togo) as a means of focusing attention on what needs to be accomplished; however, if it is important to be able to evaluate a communication intervention, quantifiable objectives are needed. An example of a quantifiable objective is the following: “At the end of three months, 75% of the mothers in the community will know three local foods for significantly reducing protein deficiency in their children’s diets.” This objective can be used in empirically evaluating the communication intervention.

Sometimes it is useful to start out with rather general communication goals that show the direction the communication intervention is taking. An example is: to help villagers understand how to become dairy entrepreneurs. This goal can be sharpened into more specific and precise objectives that deal with knowledge, motivation, skills, and reinforcement. If you end up with vague objectives, the quality of the intervention is likely to suffer, and clearly the evaluation will suffer.

SMART objectives

The acronym SMART has been used to guide the stating of objectives. SMART reminds us that objectives should be:
• S — Specific: what is to be accomplished should be expressed in detail such as: To increase the percentage of persons in the community who know how to access the local telecenter.
• M — Measurable: indicating how much change is targeted. The change can be in the number or percentage of people adopting an idea or behavior.
• A — Appropriate: defining intended changes that are culturally and locally acceptable.
• R — Realistic: avoiding objectives that are beyond the scope of available resources, contrary to relevant experience, or unrelated to communication efforts.
• T — Timebound: identifying the time frame in which changes should be achieved.

STOP! Suggest appropriate objectives for a particular communication intervention. Indicate which are from the organization’s (sender’s) perspective and which are from the stakeholder’s perspective. Try to make most of the objectives “quantitative objectives.”

STEP 3. IDENTIFYING STAKEHOLDERS

Four main strategy components that guide the action part of a communication program are the (1) populations (or stakeholders) to be reached, (2) the channels to be used, (3) the content that will shape the messages, and (4) the time schedule on which the strategy will be implemented. If there are no options available to a planner for making choices concerning these issues, there is no need for a guide for making decisions about that element of a strategy. For example, if an official or a donor agency dictates that a project must test the feasibility of using iPod technology in a community health initiative, there is no need for decisions about channels. A strategy is necessary when there are options—and when decisions have to be made from among the options.

One of the important decisions to be made relates to target groups or “stakeholders.” By stakeholders, we refer to groups or categories of persons who have a significant relation to the intervention being planned. (We try to avoid the term “target groups” despite its widespread use—because the phrase connotes a one-way directional flow of messages, which is contrary to the sense of exchange in the word “communication.” To refer to the population toward whom the initiative is basically directed, we sometimes use the word “beneficiaries.”) Thus, stakeholders may be those whose behavior an agency is trying to change, or other persons who can facilitate or obstruct the changes. The important stakeholders in a communication intervention program can range from national political leaders and agricultural extension officers in a province to community members, relatives, and local leaders. These are the people whom the government agency or change agent wants to reach with information and persuasive messages about adoption of new ideas, practices or technology, and skills training. The primary “targets” are usually identified or implied in the policy that “drives” the intervention, or in the various objectives that have been laid out.

A perceptive paper written by David Korten and Norman Uphoff reminds us of the importance of including bureaucracies among the stakeholders. “Little attention,” they contend, “has been given to dealing with the bureaucratic structures as variables to be modified and managed in support of particular kinds of policy outcomes, such as poverty alleviation.” And further:

Too often overlooked is the reality that the response of the poor to government programs is shaped by the way the services are administered—how accommodating or inflexible the services are, how satisfying or how humiliating their treatment is, how readily the poor get access to services or how much more readily the rich can utilize them, whether government staff adopt a problem-solving stance or a conventionally bureaucratic one, how attuned staff are to the actual conditions and needs of the poor, whether these staff deal with the poor as responsible adults or as basically ignorant and irresponsible.

Clearly this a challenge to the communication planner as well as to the policy-maker bent on achieving results with an intervention program. A strategy may also need to consider reaching other groups. There are those who control and influence the behavior of the beneficiaries: religious leaders, mothers-in-law, local opinion leaders, and information “gatekeepers.” These may be important in supporting or endorsing a proposed change or providing access to vital resources, or they may need to be neutralized if they are perceived to be opposed to a campaign or product. For example, at the policy level, a ministry of agriculture may decide that an extension system needs to modernize by using more information technology and by involving farmers in decision-making concerning priorities in agricultural research. While communication may focus most heavily on communication to and from farmers, the bureaucracy of the ministry itself may need to be oriented, persuaded or trained to deal with a

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14 “Content” refers to the general body of information that is to be conveyed, and “messages” refers to the conversion of the information into specific texts, visuals and sounds that will be shared with stakeholders. The former belongs more to strategy, the latter to tactics.
16 Korten & Uphoff, p. 3.
“reformed” agricultural communication system that stresses a participatory approach and communication technology rather than a “top-down” personal contact system of technology transfer (such as we saw in Chapter 2). PATHS – Nigeria’s initiative for increasing the people’s role in bettering their health – recognized the importance of training community health workers and other health service providers in communication and counseling skills in order to make the health establishment more user-friendly.  

Planners need to decide about communicating with the following kinds of stakeholders:

- **Beneficiaries** — the principal population or stakeholders toward whom the overall communication program or campaign is directed (for example, families, special minorities, youth, communities, women).
- **Controllers** — those who control resources essential to a behavior change or behaviors themselves (parents of children, teachers, pharmacists, input suppliers, “middle-men”, clinic staffs).
- **Influentials** — those who have significant influence over the beneficiaries (community leaders, family members, cooperatives, reference groups).
- **Political leaders** — those who set policy and legislate (government officials, community councils).
- **The general public** — that population that is perceived to support or oppose particular social norms.
- **Competitors** — those who promote a competing behavior or have a stake in the status quo.
- **Gatekeepers** — people or organizations that influence the flow of information to and from any of the stakeholders involved in the intervention (for example, mass media organizations, tribal leaders, bureaucracies).

Each of these categories may need to be “segmented” — a concept central to marketing. The implication of this approach is that each stakeholder group needs to be treated distinctively in laying out the communication intervention, although there may be some overlap among them.

In a reproductive health project in Ethiopia, the national IEC strategy included as primary audiences: men and their spouses/partners. The planners included as secondary audiences: leaders, teachers, extension workers, health service providers, family members, religious institutions and women’s rights advocates.

STOP! Consider a situation that involves changing a population’s behavior related to protecting privately-owned woodlands from urbanization. Who are the potential stakeholders that you might consider including in your strategy? Can you think of situations where those whose behavior you want to change may not be the woodlands owners?

### STEP 4. DECISIONS ON CHANNELS AND MEDIA

There is often a tendency to use communication channels that are already in place or have been used traditionally. Thus, government services may put principal or exclusive emphasis on radio for reaching teenagers; the health ministry may depend heavily on community health workers to do whatever educating or motivating is required related to vaccination campaigns. Sometimes favorite media of administrators may dictate what to use to reach villagers (such as television), or funding may be built around use of particular media (for

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17 The acronym stands for Partnerships to Transform Health Systems, a multi-year initiative supported by the U.K. Department for International Development.

example, Internet databases. In some contexts these decisions might be rational although at first they may not seem logical. For example, a person’s holding on to a job or getting a promotion may depend on following the preferences of more senior officials; or a decision might disrupt a status quo employment arrangement by substituting radio broadcasting in place of agricultural agents. Acknowledging that a variety of possibly irrational influences (from the intervention strategy perspective) may dictate choices, it is important to consider more analytic approaches to decision-making about channels – ones that use research-based data for making decisions.

Following are some of the kinds of questions that will yield information for a systematic analysis and lead to more strategic decision-making.

From the stakeholders’ perspectives:
- What channels are physically accessible?
- What is the cost to the stakeholder of accessing the channel? This may be cost in time (“opportunity costs”) and energy as well as cost in money.
- What channels are convenient to the stakeholder?
- What channels are currently used by the stakeholder and for what?
- What channels are preferred by the stakeholder?
- What channels are trusted by the stakeholder?

From the communication planner’s point of view:
- What channels are available in the community?
- Which channels can the organization afford? Some channels might be available and affordable, but not accessible. For example, some television broadcast services may not allow discussion or advertisements related to family planning.
- What channels are most appropriate to particular stakeholder groups or individuals?
- What channels are most appropriate to particular communication objectives? It is important to be analytical and explicit about the process being undertaken. For example, in helping farmers adopt new agricultural technology, it may be important to (1) make them aware of the technology, (2) increase their knowledge about the technology, (3) learn about their technologies, (4) motivate them to use the new technology, (5) train them to use it, and then (6) reinforce them after they have decided to adopt the technology. Some of these steps may be more effectively done with communication media, and others may be better done through interpersonal channels. This suggests that an integrated mixture of channels would be appropriate.
- What channels can the program afford?
- What channels have the most cost-effective and cost-benefit advantages?
- What has been the experience with the use of various channels for other interventions?
- What new channels might be introduced into communities? Some communities may never have had experience with iPods as a communication tool, or the Internet or communication shops, but these and other technologies could be introduced into the community. Availability of communication channels in a community also may change rapidly as new technologies become available.
- What are the particular benefits of the different channels? For example, provide speed, broad geographic coverage, simultaneous coverage, localization, opportunity for local participation, freedom from distortion, direct feedback.
- What are the infrastructure needs associated with various channels?

Making intelligent decisions also depends on knowing the attributes of the various media that are available or could be introduced. Some of the attributes are inherent in particular media and some attributes are conferred on the media by political, social or cultural conditions. For example, an inherent attribute of television is its capacity to show moving images. A conferred attribute might be that television is a credible source of information for a particular population. In other places and for other populations, television may not be so credible. One can see the distinction, for example, in the way different populations assess television services from Al Jazeera, the BBC and American sources. The distinction between inherent and conferred attributes is important because recognizing which attributes are inherent which are conferred...
will help in the analysis to determine how much you can depend on examples and experience from other situations (and cultures) as guides in your own decision making.\footnote{Chapter 9 examines more closely various media and their characteristics.}

In making decisions on channels and media, it is important to make a list of the information delivery needs of the communication situation (such as reaching a very large population simultaneously, localization of messages, participation possibilities, speed in dissemination, visualization, cost to the stakeholder, credibility, sustainability, etc.) and rank each channel (medium) according to how well its attributes match those needs. The ranking can be done by numbers on a scale (0-10), or by assigning some kind of symbol for each medium that represents how well it delivers on the needed characteristics. Numbers generally work better because you can add up the numbers for each medium and get a score. This will help identify the channels that are best suited to the needs of the project. This process of ranking is important because it is unlikely that any project will be able to afford all the media that are available. The analysis helps establish priorities in channel selection. Below is a simple matrix that can be used for doing an analysis leading to decisions about which media to use.

### DECISION-MAKING ON CHANNELS

<table>
<thead>
<tr>
<th>FACTORS</th>
<th>Radio</th>
<th>TV</th>
<th>CD</th>
<th>Webpage</th>
<th>Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>Localization</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Broad Coverage</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Speed</td>
<td></td>
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<tr>
<td>Frequency</td>
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<tr>
<td>Participation</td>
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<td></td>
</tr>
<tr>
<td>Low cost</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

Insert numbers on a scale 1 → 10, with 1 = low relevance, etc.

The "scores" that one obtains from this analysis presents a good guide to decision-making concerning channels and media. However they should not automatically dictate a choice. For example, a low scoring medium may have a characteristic that is essential to a project (such as participation potential) but may not have enough other desirable characteristics to build up the score. Again, such scores should guide, not dictate decisions about channels. A thinking human being is still necessary!

STOP! Make a list of all the principal channels (including inter-personal and media) that are generally available in a community familiar to you and which might be relevant to reaching stakeholders in that community. List their inherent and conferred attributes. Create a media planning matrix by listing these channels in a row across the top of a piece of paper. Next identify the most important communication needs of the project and list these down the left hand column of the paper. Where the rows and columns intersect, put a number or symbol indicating how well the channel meets the needs. Your list of attributes and the scoring will help in making the judgment.

We digress briefly to look at a small case study in Guatemala that involved a decision to use a small un-sophisticated medium to communicate with rural women about development issues. Susana Fernandez de Colle was the principal researcher for the adult education health project described here and which was partly supported by the Pan American Health Organization. The medium was a simple audio cassette player. In the early 1970s the audio cassette system started out as an entertainment medium but soon became a means for recording lectures, books and other audio materials. In this pioneering study the audio cassette system was used as a means for communicating with women while they washed clothes in the outdoors community laundering center (pila). Would this medium be appropriate today?
contemporary audio recording/playback devices such as iPods be applicable? In addition to looking at media selection and planning, this case study brings together a number of issues examined in previous chapters including information and communication technology (Chapter 6) and gender (Chapter 7).

THE PILA AND THE AUDIO CASSETTE

In the case of agriculture, the introduction of modern techniques usually increases the sophistication of the farmer's operation. He must deal with fertilizer and its proper application, different tools and equipment, pest control, water supply, transportation, current and prospective market conditions, and special credit situations. These demand more effective information links between the farmer and the systems in which he operates. Similar complexities appear in nutrition, health, family planning and other rural development programs. In health, the shift from a ‘curative’ to a ‘preventive’ strategy implicitly argues for more effective communication and education programs.

The paradox – indeed, the problem – is that there are too few, and inadequate, communication resources to fill the needs. One answer is to use communication technology more effectively; another is to place more emphasis and greater responsibility on local institutions and talent; a third strategy is to combine these.

THE ROLE OF ‘SETTING’

One is not surprised to find a mixture of modern and traditional media. Folk forms such as puppets, dance and storytellers have reached masses through modern diffusion channels such as radio, television, film and communication satellites. There is another mixture of traditional and modern which formed the foundation of a modest adult non-formal education project in Latin America. In this case it was the setting which was traditional, the medium which was modern, and the content which was a combination of modern and indigenous.

The setting was the traditional pila or outdoor laundering place found on plantations and in towns and cities throughout Guatemala. The pila has a utilitarian function – it is where women...
wash clothes, dishes, and sometimes children and animals. It also has a significant social function – frequently it is an informal information center where advice, news and gossip are exchanged regularly.

The pila was selected as a communication setting partly by hunch and partly through a systematic survey by us as researchers. Traveling around the country one could easily see the prominent places where pilas were located in a community. Whether they were elegant pillared structures in Quetzaltenango or simple concrete facilities on a coffee plantation, many women would be there washing – and talking or day dreaming. Data to support the idea of using the traditional pilas for communication came from a survey on a coffee and rubber plantation near Guatemala's Pacific Coast where the project eventually took place.

THE COMMUNICATION PROJECT

It seemed clear that families living on Finca (plantation) Maria de Lourdes could live better lives without having to wait for a far-off development plan. Improved health and nutrition were possible simply by using resources close at hand. Many women used the traditional midwife who often delivered a fatal case of tetanus along with a newborn child, although the plantation offered the free services of a trained nurse.

Armed with a few hunches and the conviction that a grass roots non-formal education could improve family life on the finca, we began to gather information for building the program. The site was Finca Maria de Lourdes, located about 200 kilometers from Guatemala City. This is plantation country, relatively flat land with a tropical climate. At one time bananas were grown in abundance, but many of the plantations have changed to rubber or coffee. Time-worn and travel-worn buses wend over the dirt road which cuts through the 1100-acre plantation and meets on all-weather highway about two kilometers away. Although small stalls provide simple everyday items such as candles and tooth-paste, plantation families generally go to Coatepeque, about 12 kilometers away, for their major shopping needs. Few ever travel to the capital, although some may go to Quetzaltenango (Guatemala's second city) by the more modern buses that travel the near-by highway.

The plantation supplies housing, primary school, water, electricity (hydro-electric and diesel generators), corn mills, medical attention (resident nurse/midwife, and a doctor who visits and receives farm patients in his clinic in town), and medicine and hospitalization when needed. All of these are free of charge. Funer al expenses are also taken care of by the plantation. Typhoid, polio, measles, diphtheria, tetanus, and whooping cough vaccination campaigns are conducted every year by the Ministry of Public Health. Children are given parasite medicine every six months if they need it. The free services required by the law from a plantation this size are first-aid, primary school and housing. The houses are cinder block/wood with zinc roofing. There is an average of three persons per room. The kitchen is a separate room.

IDENTIFYING INFORMATION NEEDS

Several sources were used to find out the most useful and appropriate information to convey at the pilas. These included published reports, recommendations of experts, and ideas drawn from the plantation families themselves.

Published reports
Information on the most widespread diseases, prevalent causes of death, nutritional status and education in Guatemala was gathered from official statistics of the Guatemala Government, FAO, the Secretaria General de Integracion Centroamericana (SIECA), and from the Instituto de Nutricion de Centroamericana y Panama INCAP. Journal articles provided important perspectives on traditional attitudes and values associated with food in Latin America.

Advice from experts
Frequently there are a number of experts willing to advise — without compensation — on non-formal education programs. Contributing to this project were experts from the Pan American Health Organization, the physician whose serves Finca Maria de Lourdes, a plantation school teacher, university nutrition experts, and the plantation owners.
Their advice helped in the design of the content strategy. For example, the owners reported tetanus as one of the main causes of infant deaths. Although the farm provides a trained nurse/midwife, people prefer the traditional local midwives because of their rituals and alcoholic beverages, despite unsanitary delivery conditions. (Women also seemed frightened because the farm nurse wears rubber gloves when delivering a baby.) The owners reported that babies were often given coffee, fried food and oil which the mothers thought was healthful. Women breastfeed their children for a long time. They cannot afford milk formulas and the preparation would not be very hygienic. The owners thought that mothers should be encouraged to drink Incaparina (a high protein food supplement).

The doctor who visits the farm said the most frequent diseases were gastroenterocolitis and diseases of the respiratory tract; parasite cases were frequent. He saw a need to educate the people about preventative health measures and to encourage them to follow doctor's instructions. He pointed out scarce economic resources and the contamination of the environment as two of the main causes of health problems, but noted that raising people's level of education is vital to improving their health status. The local doctor, the farm owners and farm nurse said very few workers follow the doctor's instructions and instead prefer the advice of the witch doctors, pharmacists or unqualified midwives. Some people hide when the vaccination unit comes, and parasite medicine is misused because it is taken too often, not at all, or it may not be the appropriate medicine for the type of parasite. These conditions exist because people do not consult the doctor or nurse before giving the medicine to children. It is often not lack of resource materials but lack of information and understanding that causes many problems.

**Needs survey**

A rich source of information came from a simple survey of 40 of the 200 women homemakers living on the finca. They were interviewed by the plantation owner's wife using a prepared interview schedule. She was chosen because she regularly visits and talks with these women and they often discuss their personal lives with her. The interview included questions on nutrition, health, child care and general information about the women that would help us understand more clearly what life was like for them and their families.

The nutrition questions consisted of a dietary recall of the previous day of the homemaker, husband and children. They also dealt with food preferences, shopping habits, Incaparina consumption, home gardens or plants, and whether the families raised animals for food or income. Health questions referred to sicknesses during the last two months, number of children, their ages, causes of death of those children no longer living, how sick are cared for (source of advice and medicine), parasite infection and vaccination of family members. Questions on child care referred to hygiene, breastfeeding and weaning practices. The homemakers were also interviewed about their school education, regular information resources (e.g. radio), whether they worked to supplement family income, asked to summarize their activities of the previous day. Profiles, such as the following, gave a helpful dimension to the data.

*A day in life of a plantation woman.* Maria Tiu has had TB. Right after her last child was born she almost died: 'I got very swollen. Then they gave me vitamin injections and now I am all right.' Maria's husband works in the coffee plantation and does not earn much, but after work he goes hunting in the ravines and uncultivated places, and fishing in the nearby rivers. Four of their seven children are alive. One died of pneumonia when three months old; one died at six months from vomiting and diarrhea. Maria does not know what caused the death of a third child. Benjamin (7 years old) and Isabel (9 years old) have parasites and Maria is going to take them to get medicine at the farm clinic. Maria described her activities of the day before:

*I got up at four in the morning. The first thing I did was to sweep the poyo. I then started the fire, washed the coffee jug, put coffee on the fire and left some tomatoes cooking while I went to wash corn at the and then took the corn to the mill. I made breakfast, made tortillas, served breakfast and ate. I picked up the dishes and clothes and went to the to wash from 7:30 to 10:00. I came back home to sweep, carry some water, make the beds and make lunch. We had lunch at 12:00. I washed the dishes and the piedra and went to get firewood. I prepared the corn for the next day (soaking it in water with lime overnight), made famalitos, strained the beans and*
we had supper at 5:30 p.m. We washed the dishes at home and we sat outside till the night came in. At 8 p.m. we went to bed.

CREATING THE SYSTEM
Since most of a plantation woman’s waking hours are consumed by these essential activities, little time is left for conventional educational programs by teachers or extension agents (even if available, which they are not). The pila, where much time was spent, emerged as a potential non-formal education setting.

The method for providing information needed certain characteristics if it was to fit in with the regular activities of the women. It had to be largely an oral medium because few of the women could read, and oral communication would allow them to work while they listened. It had to be flexible enough to match the visiting schedule of a substantial portion of the women – a schedule that may shift because of harvests, rains, and other localized conditions. It also had to be flexible enough to present information to women who are at the pila for five minutes (for water) as well as those who are there for two hours. It had to be a system which could be used consistently each day to achieve impact through repetition and reinforcement. The setting needed to be simple and not require the presence of professional people because, as in many parts of the world, it was an area seldom touched by extension agents or paraprofessionals aides. Guatemala has fewer than 10 nutrition professionals to carry out field work for the whole country.

There are three pilas on Finca Maria de Lourdes, all located along the dirt road that passes through the plantation. In the basic system, cassette recorder units operating on battery power were played in all three pilas at the same time, twice each day. A small, inexpensive (US $7.00) auxiliary speaker was used at each to augment volume and quality of the sound, although it was discovered later that these were not needed. Flora, a teenage girl from the plantation, was hired to bring the equipment to the pilas each day and start the machines playing. She would replay the day’s program four or five times during the prescribed time periods. This kind of repetition would not have been feasible with radio. A different program tape was prepared for each day of the week during a three-week period. Each tape had the same 30-minute program on both sides so that Flora had only to turn the completed side over—rather than rewind it—to start the tape going again. Then she could go on and do the same at the other pilas. In a short while she would return to the first to turn the tape over and start the cycle again.

USING INDIGENOUS ELEMENTS IN THE CONTENT STRATEGY
The contents of the tapes were made to be interesting as well as helpful by including persons, events, and forms with which the plantation families could identify. Following are the key elements of the strategy.

- **Dramatization.** Because both informal story telling and the *novela* (similar to "soap opera") radio format are popular, a fictitious plantation family was created for the tapes. Through the conversations of the ‘Alvarez family’ and their friends, health, nutrition and other everyday problems that faced people on the finca were discussed, including ways these could be attacked.

- **Authority.** To add credibility, a strong, clear, authoritative-sounding voice was used to summarize the major points covered in the dramatization.

- **Reinforcement.** In addition to summaries provided by the locutor related specifically to the novelas, short announcements or reminders (similar to public service announcements) were placed in several parts of each tape. Additional reinforcement was provided by including interviews with medical or other specialists often known to the people (e.g. the finca nurse and the doctor in the nearby village).

- **Localization.** Interviews not necessarily related to health and nutrition were included to heighten interest and to give listeners a feeling that the content was relevant to them and to their community. For example, interview’s were conducted with the finca owner who related some of the history of the finca, with a young girl telling how her family’s chickens had survived the ‘plague’ because of vaccinations, and with another plantation worker who recounted his early days on the finca and the changes that had taken place.
• *Entertainment.* For variety, music was placed in several parts of the tapes. This also provided an opportunity for the women to talk about what they had heard or simply to think about what was said. Dramatized stories of a fantasy nature were another entertainment element. These were original stories similar to ‘fairy-tales’ and created for this particular geographic and cultural area.

• *Questions.* Occasionally, as a summary/review process, the locutor asked questions based on information given in an earlier part of the tape. After a short passage of music, during which the listener could try to answer the question, the locutor gave the answers. This technique was designed to stimulate the women to become participants.

• *Brevity.* Because women sometimes visited the *pila* for very short periods of time, the length of each section of the 30-minute program was eight minutes or less. This permitted someone who was there only to draw water to hear enough to get a meaningful message.

• *Repetition.* Later programs in the series often included information and *nueva* incidents that reiterated points made in earlier programs. This helped some to remember, others to catch up.

• *Information-motivation-behavior.* Throughout the tape series, a sequence was followed. In early programs, information about vaccinations was presented. Later, motivation to be vaccinated was stressed. And still later (when a public health vaccination campaign appeared nearby), programs emphasized how families could be vaccinated. Those who missed earlier programs still were exposed to this pattern because of the repetition.

### SOME LESSONS LEARNED

The flexibility of audio cassettes in the communication system quickly became apparent. Based on the typical women’s schedule of daily visits to the *pila*, it was originally decided to run the system for three hours a day between 7 and 10 a.m. But after two days, Flora noted that the women’s schedules were changing because the coffee crop was ripening unexpectedly and they were going into the fields in the morning. On her suggestion, the schedule immediately shifted to a two-hour morning session beginning at 6:30 and an afternoon session. Flora would begin the afternoon session when the women returned from the field—a schedule which varied from day to day, depending on the rains. It was a flexibility difficult to find in any other communication system. The success of the communication system was reflected in many ways. Interviews with a sample of plantation women revealed that most of them had heard the tapes and judged them to be clear, truthful and helpful. Even more revealing were comments volunteered by women at the *pila*. One indicated that the tapes were fun,’ and said ‘they make you wake up to some things’. Others remarked how dull the *pila* was going to be when there were no more tapes. One woman asked how much it would cost to buy a machine.

Among other results was a revived interest in raising chickens (valuable for eggs and the meat) after learning from the tapes how inoculations could prevent Newcastle disease. At one point, we were asked to inoculate some of the newborn chicks; that same day vaccine was administered to 80 chicks rounded up by the community. These became known as the ‘the chickens that don’t die’. And they didn’t – until months later when some of the biggest chickens ever raised became part of family meals.

A large percentage of the women memorized the recipe given on the tapes for preparing Incaparina. One who had never tried it was 12-year-old Maria. Because her mother is dead, Maria takes care of the house for her father and younger sister. She liked to listen to the tapes at the *pila*, and since she heard that Incaparina is good and learned from the tapes how to prepare it, she began providing it for her family. Maria had just finished her first pound when the tape system was being evaluated.

The audio cassette equipment operated relatively trouble free. Flora learned how to work the recorders, including changing batteries, in less than five minutes. There were no breakdowns of machines and when batteries ran down they were easily replaced. Although many agencies have been skeptical about how rural people would take care of the machines, the experience indicates that in many ways rural families handle equipment more responsibly than do the more urban employees of ministries and other government and private organizations. Rural people seem to appreciate more the value of the hardware, probably because they have so little. The
women at the pila were very protective of the cassette units. One day when a child started pulling a wire that was hanging from a cassette player, without hesitation or inhibition a woman gathered up the wire and wound it on a high nail so that the machine would not be damaged.

**IMPLICATIONS OF THE PROJECT**

The *pila* project underscores several key points for non-formal education. First is the desirability of seeking natural settings for non-formal education programs. Projects similar to this have used locations ranging from a liquor stole in South Brooklyn, New York, to the shade of a ceiba tree in Guatemala.

Second is the opportunity presented by the use of simple technology to provide information in a dependable but economical way – a factor especially important where personal contact by professionals is limited.

A third point is the considerable potential for villagers to participate actively in gathering, creating, and ‘packaging’ non-formal educational materials. The *pila* project and others have demonstrated that it is not only the traditional story or drama that villagers can share, but also new ideas, contemporary concerns and solutions to problems. With modest resources, rural people are capable of organizing their own communication or non-formal education cooperatives.

### STEP 5 — DECISIONS ON CONTENT

In the communication component of an intervention program where an important element is developing messages, someone needs to make decisions on what the content for the messages will be. Will that person be the script writer in the production house? The advertising specialist in the agency with whom you contract to produce radio or television announcements? Will it be the extension worker who travels to the field to meet face-to-face with farmers? A webmaster? The medical doctor who is deputy head of the ministry? Will it be the members of the community themselves? These kinds of persons might contribute ideas to the content component of the strategy — often in the implementation stage. However, a person specifically involved in planning the communication strategy should make these decisions based on the objectives of the intervention and the situation analysis that has been completed.

Important decisions must be made explicitly about what information needs to be “packaged” into messages. It is helpful to begin by calculating what information stakeholders need in relation to the communication objectives that have been laid out, and compare this with what they already know. From this should come a set of principal content themes, and for each theme a list of information points. (See the discussion of themes and points below.) The final list of communication themes and points may include information the stakeholders already know as well as new information. Including some familiar information (what they already know) in the content may provide a foundation for the new information. And it may contribute to the credibility of the intervention.

To make decisions on content, a planner should try to answer the following kinds of questions (and these can be included in the research questions associated with the Situation Analysis):

- What are the stakeholders' beliefs and perceptions about the situation being addressed by a campaign or other intervention? How do they perceive the costs and benefits to adopting an idea or behavior?\(^\text{20}\)
- How motivated are they to change their behavior? Do they believe they are able to adopt the behaviors proposed?
- What skills do they need to adopt a new behavior?
- What are their current practices regarding the intervention situation?\(^\text{21}\)

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\(^{21}\) Some of these points repeat what was said in the earlier discussion about situational analysis because it is in the situational analysis where the research related to communication begins.
• What communication techniques are appropriate to the situation and culture: for example, use of humor, fear, one-sided versus two-sided persuasion messages, inductive versus deductive reasoning, authoritarian style, dramatic formats, sequencing of knowledge, motivation, and practice, etc.
• How much effort needs to be expended on gaining the attention of stakeholders?

Categories of decisions. For convenience we have organized the major kinds of decisions that have to be made under categories that we call “the four Ss of communication content.” These are: Substance, Style, Sequence, and Psychology. Dividing content choices this way is not based on any laws of science; in fact you won't find this topic laid out this way in any other publication that we know about. We do it this way simply to help you remember, in general, the categories of decisions that you need to consider. The names of the categories are not important, nor is it really important whether one issue goes under one category or another. The point is that you recognize the importance of explicitly making decisions about these kinds of content issues.

The first S: Substance. The first step in planning the communication content is to go back over the communication objectives and understand specifically what they demand. If the objectives call for a person or group to understand or know something or know how to do something, you need to identify the points (or bits or items) of information that the persons need for that objective to be reached. These points may range from "Seed Y gives higher yields" to "You can obtain Seed Y at the agricultural experiment station in community Z."

One of the most important benefits of the "points" system is that it enables you to assign particular points to particular media at a particular time in the intervention. This will help insure two important conditions:

(1) that there is a logical scheduling for delivering particular information – that is, the correct information will be used at the proper time and in the proper sequence, and
(2) that there is systematic orchestration or coordination of messages being carried in various channels. This also suggests that you can more easily coordinate and control the different persons or agencies working on message development. On this latter issue, you must consider that communication efforts (whether they apply to development communication, commercial marketing, social marketing, or public relations) will frequently use a variety channels to reach consumers. The approaches used may range from putting advertising on television broadcasts, "infomercials" on television cable systems, social dramas on radio, planting articles and letters-to-the-editor in the print media, or staging street theater productions – to sending health and agricultural extension workers to rural communities to do face-to-face training and promotion. The messages in different media must reinforce or complement each other.

Placing messages in the various channels should not be a random process. To be effective, the assignment of the information points to particular media at particular times requires care and meticulous planning. The matrix at the end of this chapter illustrates how it can be done.

We have suggested that it is most convenient to organize the content for the communication program according to themes. A source for good examples of themes related to health is the UNICEF-WHO-UNESCO publication Facts for Life. Facts for Life lists in very simple form ten "facts" (or themes) that are considered by experts to be most important to family and child health. (WHO has also released a similar publication outlining communication themes for reproductive health.) Some examples of Facts for Life themes include: the importance of safe motherhood, dealing with coughs and colds, and what you should know about AIDS. Each theme is accompanied by prime messages, or what we have called points. For example, the points accompanying the what-you-should-know-about-AIDS theme in Facts for Life are:

1. AIDS is an incurable disease that can be passed on by sexual intercourse, by infected blood,
by infected mothers to their unborn and newborn children.
2. Safe sex means being sure that neither partner is infected, remaining mutually faithful, and using a condom if in doubt.
3. Any injection with an unsterilized needle or syringe is dangerous.
4. Women with the AIDS virus should avoid becoming pregnant.
5. All parents should tell their children how to avoid getting AIDS.

For a health communication program, this is a good start. However, to be able to orchestrate and synchronize messages related to this issue, you can improve the message planning by adding additional detailed points. Facts for Life, for example, includes hygiene as another of its ten major topics which are supported by six major themes. One of major themes concerning hygiene is the theme: "Illness can be prevented by using clean water." Here are the themes and supporting points:

- **Families who have a plentiful supply of safe piped water, and know how to use it, have fewer illnesses.**

- **Families without a safe piped water supply can reduce illnesses if they protect their water supply from germs by:**
  - Keeping wells covered
  - Keeping feces and water waste (especially from latrines) well away from any water used for cooking, drinking, bathing or washing
  - Keeping buckets, ropes and jars used to collect and store water as clean as possible (for example by hanging up buckets rather than putting them on the ground)
  - Keeping animals away from drinking water

- **Families can keep water clean in the home by:**
  - Storing drinking water in a clean, covered container
  - Taking water out of the container with a clean ladle or cup
  - Not allowing anyone to put their hands into the container or to drink directly from it.
  - Keeping animals out of the house

Depending on other aspects of the content planning and the communication objectives, you may build in some points that are more motivational or affective in nature (perhaps ones that touch the heart – or emotions – rather than the head). Points that deal with benefits persons will gain if they adopt the behavior could be added. Specifying benefits addresses the motivational points.

In summary, this first S should give you a list of themes, each accompanied by detailed points of information. Each point should contain only one idea. The points can be plotted in a matrix like the one that appears at the end of this chapter.

The second S: style. The first S identifies the unadorned pieces of information that help a person move from through the stages of behavior change. Now we look at options for packaging the points. Whatever the channels being used, you generally will have to decide what forms the messages will take. This is what we mean by style. In radio and television we usually refer to formats. Radio formats can include: one person talking (lecture), dialogues, discussions, quizzes, musical/singing messages, dramas (and the popular sub-category: "soap operas"), and audience participation. In video/television there would be similar categories. What might they be in newspapers, magazines, or inter-personal contacts? What combinations of the formats might be used (for example, in radio, combining short open-ended dramas with focus group discussions)? The topic or the amount of time you have to get started or the number of messages that need to be produced or the amount of time or space available or affordable will influence decisions about style.

Style might also include whether you use humor. Your decision would probably be based on your knowledge of the population's characteristics and the appropriateness of the topic. (We have not yet seen very much humor associated with AIDS messages although some

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24 We have added the numbering system to the Facts for Life format for the purposes of this discussion. The 8 refers to the overall topic of home hygiene; the 3 refers to one of the six major themes, and the 1 refers to the first of the points. In our scheme, each of these items marked with • could be considered a point.
comedy routines have touched on condom use.) In a major project in India where satellite television was used to bring rural development information to the most deprived areas of the country, farmers objected to the use of humor in agricultural programming because they felt that farming was too serious a matter to be dealt with in a humorous way. However, entertainment (not necessarily humor) has been used effectively in various development programs. In fact, the "enter-educate" approach used by the Center for Communication Programs at Johns Hopkins University is based on the evidence that entertainment can be used effectively to educate. The strength of enter-educate is summarized by the Center’s "Rule of the Eight Ps." The eight Ps that support the use of entertainment in development messages are:

**Popular:** People like it; they choose to look at or listen to it; they enjoy it. Young people especially prefer entertainment to lectures.

**Pervasive:** It reaches people everywhere. Mass media are becoming more pervasive: radio, TV and VCRs are more accessible than telephones in many countries. [And the spread of new "personal" media such as iPhones, computers, and telecenters increases the pervasiveness.]

**Personal:** Songs, soap operas, dramas and dances are not cold and impersonal. In fact, entertainment is more personal, more intimate, more heart-to-heart than most of our daily interpersonal communication. Interpersonal communication is more likely to deal with trivia and "the logistics of life" and actually to avoid sensitive personal issues. Through mass media, people can personally identify with the characters and situations that entertain them.

**Passionate:** Entertainment rouses the emotions – fear, hope, love, hatred. Emotions are often more powerful than rational arguments in moving people to act.

**Persuasive:** Entertainment can depict role models. It can illustrate healthy behavior rewarded and unhealthy behavior punished. It can illustrate and show people personally how to recognize and adopt healthier and more sexually responsible behavior.

**Practical:** Professional entertainers are ready and willing to incorporate into their productions issues such as wanted and unwanted births, the dangers of AIDS, and the changing aspirations of women. Cooperation with public health professionals to include appropriate messages is usually welcome.

**Profitable:** At the very least, entertainment is cost effective. People pay to watch or listen to it. Writers, producers, and performers are often willing to donate some help in return for more promotion by private agencies. Radio and TV stations can co-produce, offer free air-time, or reduce charges.

**Proven Effective:** Finally, enter-educate approaches are effective. Even before Lea Salonga was recruited in the Philippines, evidence from Latin America showed that the intended audience heard the messages, understood the content, approved of the meaning, talked with others about it, and acted to try to get more information and help.

We would add another P to the P collection: **Participatory.** From rural upstate New York to communities in India we have seen ordinary people become part of the enter-educate process. They serve as producers, editors, critics, performers and evaluators of the approaches being presented in the entertainment package. Many other examples of using entertainment for social and development causes can be found in *Making Waves*, such as Popular Theater in Nigeria, Aarohan Street Theatre in Nepal, and Teatro La Frugua in Honduras.

What dictates the style of content a planner should use for developing messages? The research done about the populations' preferences will help provide an answer: Is it popular or traditional to pass information through stories? Will the entertainment or production techniques

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compete with the communication objective? Is it culturally appropriate to use entertainment for the kind of change proposed? Pilot testing of information products is an important way of determining what works; another is consulting with and observing the approaches used by experienced media people in the project area, including commercial marketing organizations. An informal focus group in a remote village in Jagawa state of Nigeria told the author that coupling health information with local music on cassette tapes was the best way of reaching people in that community.

The third S: sequence. There are several kinds of sequences we use in designing communication programs and campaigns. Unfortunately, we probably chose them automatically without making a conscious decision to use them. How about K-A-P? Do we assume that in order to reach practice, we must first (in sequence) change stakeholders’ knowledge, then attitudes? For many years, K-A-P was a major formula in laying out family planning communication initiatives. Some experts have questioned the role of attitudes in the sequence, and, in some circumstances, we might find it consistent with our communication objectives to emphasize changing behavior first and follow with the effort to change the knowledge or understanding or belief or attitudinal aspect later (perhaps for sustaining behavior or for dealing with cognitive dissonance – the psychological discomfort that may come with carrying out a behavior that is contrary to one’s beliefs). Marketers who use discount coupons to attract purchases of goods in the marketplace or projects that give away samples are trying to prompt behavior with the expectation that they can deal with the cognitive aspects – knowledge, attitudes, preferences, beliefs – either simultaneously or later. In that approach, the sequence might be: practice-knowledge-attitude – where attitude becomes the mental accommodation of the new practice. In campaigns dealing with promoting better relations among ethnic groups, sometimes intervention efforts concentrate on behavior first (for example, reducing or eliminating discrimination), anticipating that the cognitive aspect (for example, prejudice) will change later.28

Similarly, we sometimes assume that the steps often associated (in sequence) with the adoption process – information, motivation, action – represent the way adoption takes place and assume that content should be sequenced accordingly. Those assumptions need to be questioned. They may be suitable for some conditions, for some people, in some cultures – but it is important to make a conscious decision about what is the most appropriate sequencing of the content points. Taking the three elements (knowledge, attitude, practice – or information, motivation, action) there are six possible orders that these elements can take.). With K = knowledge, A = attitude and P = practice, these include:

K ► A ► P
A ► K ► P
K ► P ► A
P ► K ► A
P ► A ► K
A ► P ► K

Based on Valente et al.29

The planner’s careful assessment of the situation and these alternatives is an important part of decision-making.

The fourth S: pSychology. We have collected several issues in this category that deal with how something is said, as much as what is said. Two of them deal with the planner’s estimate (based on some research) of how the stakeholder will perceive the source or the deliverer of the


message. First, what or who should be perceived as the source of the message? Is it the medium itself ("the television said...") where you attempt to use the medium as the authority)?\textsuperscript{30} Should the planner be concerned with the relative credibility of various options?\textsuperscript{31} What kind of credibility is important? Everett Rogers mentions "safety credibility" and "competence credibility."\textsuperscript{32} This influences whom or what kind of person you use as spokespeople or as testimonial givers. When you use dramas as a format, do you want the characters in the drama to be similar to the intended listener (homophilous) or dis-similar to the listener (heterophilous) in regard to some area of competence (such as dealing with the threat of HIV/AIDS)? To what extent – and for what reason – would you use testimonials?\textsuperscript{33}

Using fear – and how much – is a psychological dimension to content that needs to be carefully considered. From research done four decades ago in North American universities and from results of some advertising tactics, it appears that under some circumstances use of fear in messages can be effective, but it is not clear from research how much is too much – potentially causing consumers to repress or avoid messages.\textsuperscript{34} Communication strategists need to test this out in their own situations.

In its persuasion process, does the communication program present one-side or multiple sides of an issue? For example, do you tell consumers about the potential side effects of iron-supplement tablets or contraceptives (even if not required by law)? If you are running a political campaign, do you reveal some of your own candidate's questionable past behavior, thereby inoculating potential voters against future accusations of the opposition? To what extent do you design messages based on a target population's beliefs, values and life styles? (You should!) Psychographic, demographic and other kinds of consumer research will give you the data, but the decision is yours.

Do you use emotional appeals or logical arguments or "objective" information? Decisions made regarding the communication objectives should suggest an answer, and the characteristics of the population(s) with which you are working will influence these decisions.

Is an inductive or deductive approach more appropriate? In an inductive approach, information or evidence is provided and it is left to the stakeholder to reach the generalization or draw the conclusion; in deduction, the conclusion is given explicitly in the presentation of the information. In some situations one or the other might be more appropriate. Again, the clue may be found in the communication objectives. If the objective is related to gaining knowledge and understanding, would your approach be different from a situation that was heavily directed toward adoption of a new technology (or other behavior change)? Would the "sophistication" or educational level of the persons receiving the messages be factors in deciding on an inductive or deductive method?

There is not necessarily a right or a wrong answer to these questions: the issue is that instead of simply using techniques automatically, you need to complicate your (or somebody else's) life by forcing more conscious decision-making in situations where significant choices exist. Whether the decision is correct or not can be checked initially in pre-testing and ultimately in later-stage formative evaluation.

\textsuperscript{30} The word perception is important because it may be necessary to use communication to influence stakeholders' perceptions of reality. A good principle to follow is that under some circumstances a person's perception is his or her reality, and the person may behave in that reality rather than in yours.

\textsuperscript{31} This matter relates also to media selection. Sometimes the medium may be perceived to be the source of a message although in reality it is a person such as a news reporter that is the source. Note how in-store promotion material sometimes includes the phrase: "As seen on TV." In this case, what are the marketer's assessment of the consumer's perception of TV?

\textsuperscript{32} Rogers defines competence credibility as "the degree to which a communication source or channel is perceived as knowledgeable and expert" and safety credibility as "the degree to which a communication source or channel is perceived as trustworthy." Rogers, 2003, pp. 384-5.

\textsuperscript{33} "It is clear from [the] findings that fear-arousing message content is persuasive and that abandoning the use of fear would be to abandon an effective persuasive strategy." J. L. Hale, & J. P. Dillard, "Fear Appeals in Health Promotion Campaigns," in E. Maibach & L. P. Roxanne (eds.), Designing Health Messages, Thousand Oaks, CA: Sage Publications, 1995, p. 70.
Some general issues related to content decisions

- **Implicit content issues.** Content planning obviously must include consideration of the need to gain and hold the attention of a target population. This is partly a media/channel issue, but it is clearly also a content issue. The decision, of course, is not whether you want to gain attention, but how you do it. The options may have to do with color, size, illustrations, motion, sex, etc. Again research will help – if you have done the right kind of research. (The Situation Analysis research agenda might include systematic observation and analysis of what seems to work for successful advertisers or other successful interventions to gain suitable attention.)

- **Inter-relatedness of strategy elements.** Many of the decisions needed in relation to content may be influenced by decisions related to other communication strategy elements. Again, an obvious linkage is the relationship between communication objectives and content. The communication goals and objectives are always the place where content decisions begin.

- **Participation in content design.** A technique for gaining information about what kinds of content are likely to be effective with particular populations is to encourage a sample of those populations to help develop prototypes – or the real thing. For example, we questioned what content should be used in a communication program with high school students in India. The topic was population, family planning, STDs and AIDS. To understand better how to design the messages, we put some communication equipment into the hands of high school students themselves, and this helped us make better-informed decisions about substance, style and psychology. In rural Honduras, we conducted workshops with women and adolescents in which those participants suggested how we could express ideas about sanitation and health. They became the principal writers of short dramatizations that were recorded and distributed on audio cassettes in several communities. They were also the performers. In a rural community in New York, we used an advisory group drawn from the beneficiary community to pre-test our decision about the music to be used between different elements on the tape recording. They advised us to use bright, up-beat "Blue Grass" music in our audio recordings instead of the more sad "Country and Western" music that we had proposed to use.

- **Positioning the product.** Positioning a product such as clean water, inoculations, new agricultural or contraceptive technology is likely to be a higher level intervention decision that comes before the development of a communication strategy and decisions about content (although it would be desirable to have communication expertise go into that positioning decision). By positioning, we refer to giving an identity to the behavior or the product in terms that relate it to the needs of the population. Thus, injectable contraceptives are not just contraceptive shots, but their use may provide real and/or perceived benefits for the consumer that are different from alternatives contraceptives (including using none). Communication content should exploit these benefits by positioning the product accordingly. One good place to incorporate a positioning decision into the strategy is in the analysis and planning related to Substance – as one of the content themes or points.

  Romantic as it may be, effective message creation should not start by someone sitting down at a computer keyboard or typewriter to await a creative inspiration to strike. The communication strategist should take charge by doing careful analysis of the various options that must be considered and then give explicit guidelines (like the four Ss) within which the writers, directors, graphic artists and other creative people can exercise their creativity. Despite all the content planning and intelligent production, it is important to note that the reception and perception of the message lies in the control of the recipient. The content is subject to selective exposure, selective attention, selective perception, and selective retention. Jan Servaes points out that Latin American communication researchers stress the role of the viewer in the construction of meaning in the communication process. He states that these researchers have demonstrated how "audiences" mobilize their own experiences and memories to produce a margin of control over the social meaning of media content. He asserts that meaning is never a simple equation of sender to receiver, but rather a process of

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mediations whereby viewers negotiate meaning and (re)interpret the abstractness imposed by the televisual commodification of life and dreams. This presents a major challenge to the content and message expert.

Some reminders about decision-making related to content and communicating with people who live in poverty come from Javed S. Ahmad, a health communication consultant.

- In most instances, communicators are attempting to change poor people's knowledge, attitudes and behavior concerning ideas and practices that are not their felt needs. It is just assumed that the ideas being promoted are inherently good so poor must buy them—for example, selling the idea of vaccination against childhood diseases.
- Communicating new ideas to bring change, which involves new concepts, new vocabulary, new metaphors, etc. that have no parallel among the poor target audience's "cognitorium". This is probably the reason that change agents talk more of the prescribed solutions (e.g., use condoms) rather than try to explain to them the complicated HIV/AIDS transmission process. This results in a lack of intelligent response from the target audience.
- People who are poor are not necessarily less intelligent than those who are not poor. However, they may lack ambition, resources and abilities needed for effective communication, for example literacy, access to media, and ability to comprehend new knowledge. For instance, messages delivered through mass media that are not accessible to poor are obviously wasted.
- To get poor people's attention, health promoting messages must contain items (words, images, sounds) that pertain to poor people's immediate needs and wants. Hence it is necessary to learn about their needs and wants before designing messages aimed at them, and to change needs into felt needs.
- Most important issue is trustworthiness of the message sources. Poor people are most likely to find recognizable local sources more credible and trustworthy than distant sources which are not familiar to them. For example messages linked to the Ministry of Health, WHO, or a national NGO may not mean much to them. This means that more localized and trustworthy the communication sources are, it is more likely that they will be accepted. However, this approach would conflict with the concept of economies of scale (usually achieved through mass media), hence cannot be [sustained]; and cost of numerous local communication campaigns can be prohibitive.

STEP 6 — MAKING DECISIONS ABOUT EVALUATION

While programs often have evaluation components built into them, decisions need to be made about what kinds of evaluation to undertake and by whom? Three principal kinds of evaluation are possibilities. These include:

- **Formative research**, in which data are collected for forming a plan (as in the situation analysis discussed earlier in this chapter) and for establishing, where appropriate, base-lines from which changes can be measured. Decisions need to be made as to the methods for doing formative research and these may range from qualitative studies (for example, focus groups) to quantitative methods (for example, field surveys).

- **Monitoring**, in which data are collected that answer the question "how well is the communication intervention progressing?" Are the logistics of information delivery working according to plans? Are stakeholders receiving and understanding the messages? Do they believe and act on them in the way intended? Monitoring is vital for making adjustments in the strategy—which may become necessary because of unanticipated events.

- **Summative evaluation**, in which data are collected that answer the question: “To what extent did the program achieve its intended objective?” What were the outcomes—some of which may not be the same as the results related to the objectives? What are the other—perhaps

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36 Contributed to The Communication Initiative’s Drumbeat, October 27, 2006
37 See A. Andreasen, 1995, Chapter 3: "Listening to Customers: Research for Social Marketing."
unintended — consequences that resulted from the communication intervention?\textsuperscript{38} A vital part of this kind of evaluation is having baseline data from which to measure changes, and quantified objectives to provide some guidelines as to what "success" would look like.

Decisions related to these evaluation questions influence other issues such as who will do the evaluation (the stakeholders themselves, the change organization, independent agencies, sponsors of the development communication program) How will the evaluation be fed back into the on-going communication program? And who will receive the evaluations? The answers to these questions evolve from another consideration: why is the summative evaluation being done? Is it to impress funders or sponsors? To improve the program? To build or sustain morale? To terminate a program? Chapter 10 includes guidelines on doing evaluation studies; however, the answers to these questions must come from persons directing the communication intervention.

Making the strategy details explicit

Developing a strategy requires many decisions. Some of these are best made by careful organization of the data in a systematic way. We suggested creating a matrix for making decisions about channel selection. Other matrices might be useful. For example, you can participate in this process by making a collection of matrices or charts showing:

- what objectives will be treated when and in what channels
- what objectives pertain to which stakeholders
- what content will be delivered through what channels and when
- what content needs to be made available to particular stakeholders at the different behavior change stages
- what methods of evaluation will be used for each communication objective.

THE MASTER PLAN MATRIX

Attention to detail in planning a communication strategy is directly related to the advantages of a strategy mentioned at the opening of this chapter. The attention to these details is also related to the potential problem of taking much time to put together a strategy. The major result of adopting this approach to implementing a communication campaign or program is that it will be driven more by social science and careful analysis than by intuition and guesses, yet it will not inhibit creativity nor participation of beneficiaries in developing communication products. In addition, instead of guessing or "feeling" that an information program was a success (or not), it is possible to document the outcome more credibly. And the matrix will help manage a communication program or campaign with precision and control.

Here is an example of how several planning variables can be plotted for each objective and each time period of the communication program. For the objective given, the matrix shows what content (the Substance of the content) will appear in what channels for each stakeholder group at the specified time period of the campaign.

OVERALL PROJECT GOAL: To improve the economic welfare of small farmers in this province...

COMMUNICATION OBJECTIVE # 1: During the current year, make all farmers in the project area aware of the markets available to them.

TIME PERIOD #1 (January-February-March 2008)

<table>
<thead>
<tr>
<th>Stakeholders</th>
<th>Field agents</th>
<th>Village cable tv</th>
<th>Radio</th>
<th>Audio playback devices</th>
<th>Meetings</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farmers</td>
<td>1.1* 3.1</td>
<td>1.5 3.1 - 3.6</td>
<td>1.3</td>
<td>1.4 3.1 - 3.6</td>
<td>1.1, 1.2, 1.3</td>
<td></td>
</tr>
<tr>
<td>Input suppliers</td>
<td>1.1, 1.4</td>
<td>1.4 3.1</td>
<td>3.1</td>
<td>3.1</td>
<td></td>
<td>2.6</td>
</tr>
<tr>
<td>Local leaders</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supermarket officials</td>
<td>2.2, 2.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[Etc]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*In cells are numbers indicating points of information that are appropriate for each stakeholder. For example, below are partial lists of the points that might be included in this communication intervention.

1. Dairying can be a profitable enterprise for a self help group [the theme]
   1.1 Startup information is available at the Veterinary School, Building 03, phone 273-5155 [the points]
   1.2 Veterinarians are available at the April fair to give information.
   1.3 The cost to get started is about Ta6000.
   1.4 In 2007, self help groups will be given loans for new micro-enterprises.

2. Markets are available in the community for dairy products
   2.1 Fluid milk can be picked up by local trucks.
   2.2 Cheese is a product that can be marketed successfully in the province.
   2.3 Dairy products must meet specific standards for successful marketing.

3.0 There are six steps toward successful dairying micro-enterprises organized by self-help groups.
   3.1 Dairy training is available on DVDs at the community telecenter.
   3.2 Step 1 ....
   3.3 Step 2 ....
   3.4 Step 3 ....
   3.5 Step 4 ....
   3.6 Step 5 ....
   3.7 Step 6 ....
Person from Jigawa state, Nigeria, with audio cassette player.

Photo by R. D. Colle
Chapter 9
TOOLS FOR COMMUNICATION INTERVENTIONS AND ADVOCACY

In this chapter we look at some of the tools that are important in making decisions when applying communication to development programs. Some of them are part of the 21st century Information Revolution such as broadband and wireless information technologies and massive data bases. Others – with decades of history behind them – appear here because they continue to be important and demand that we consider their special characteristics. Some of these tools are not physical things at all, but are unique ways of approaching communication tasks, such as the use of entertainment as a means to capture the attention and the minds of people, the amassing of information resources into accessible data bases, and the establishment of national policies that favor the uses of ICT in development. The promise and the complexity of contemporary communication tools are illustrated in the news story below (which, itself, comes from a web page).

BBC NEWS
Wi-fi web reaches farmers in Peru
By Roberto Belo BBC News website technology reporter

A network of community computer centres, linked by wireless technology, is providing a helping hand for poor farmers in Peru. The pilot scheme in the Huaral Valley, 80 kilometres north of the capital Lima, aims to offer the 6,000-strong community up-to-date information on agricultural market prices and trends. The Agricultural Information Project for Farmers of the Chancay-Huaral Valley also provides vital links between local organisations in charge of water irrigation, enabling them to coordinate their actions. More than 13,000 rural inhabitants, as well as 18,000 students in the region, will also benefit from the telecoms infrastructure (including 14 telecentres).

Training in net skills
The 14 telecentres use only free open source software and affordable computer equipment. The network has been three years in the making and was officially inaugurated in September [2004].

HUARAL VALLEY NETWORK
14 telecentres
Two in the city, with ADSL link to the net
12 interconnected through wi-fi
Wi-fi equipment and aerials built locally
Only open source software used
One high-spec server in each centre
Average five low-spec terminals in each centre

The non-government organisation Cepes (Peruvian Centre for Social Studies) led the $200,000 project, also backed by local institutions, the Education and Agriculture ministries, and European development organisations. "The plan includes training on computers and internet skills for both operators and users of the system," said Carlos Saldarriaga, technical coordinator at Cepes. Farmers are also taking extra lessons on how to apply the new information to make the most of their plots of land. The Board of Irrigation Users, which runs the computer centres, aims to make the network self-sustainable within three years, through the cash generated by using the telecentres as internet cafes.

Information portal
One of the key elements of the project is the Agricultural Information System, with its flagship huaral.org website. There, farmers can find the prices for local produce, as well as information on topics ranging from plague prevention to the latest farming techniques. The system also helps the inhabitants of the Chancay-Huaral Valley to organise their vital irrigation systems. "Water is the main element that unites them all. It is a precious element in Peru’s coastal areas, because it is so scarce, and therefore it is necessary to have proper irrigation systems to make the most of it," Mr Saldarriaga told the BBC News website. The information network
also allows farmers to look beyond their own region, and share experiences with other colleagues from the rest of Peru and even around the world.

**People's network**

Cepes says the involvement of the farmers has been key in the project's success. 
"Throughout the last three years, the people have provided a vital thrust to the project; they feel it belongs to them," said Mr Saldarriaga. The community training sessions, attended by an equal number of men and women, have been the perfect showcase for their enthusiasm. "We have had an excellent response, mainly from young people. But we have also had a great feedback when we trained 40 or 50-year old women, who were seeing a computer for the first time in their lives." So far, the Huaral programme promoters say the experience has been very positive, and are already planning on spreading the model among other farmers' organisations in Peru. "This is a pilot project, and we have been very keen on its cloning potential in other places," underlined Mr Saldarriaga.

**'No bulbs available'**

The Cepes researcher recalls what happened in Cuyo, a 50-family community with no electricity, during the construction of the local telecentre site. There it was necessary to build a mini-hydraulic dam in order to generate 2kW worth of power for the computers, the communications equipment and the cabin lights. "It was already dark when the technicians realised they didn't have any light bulbs to test the generator, so they turned up to the local store to buy light bulbs," recalls Carlos Saldarriaga. "The logical answer was 'we don't sell any', so they had to wait until the next morning to do the testing."

Now, with the wireless network, Cuyo as well as the other communities is no longer isolated.

Published: 2004/12/15 09:26:06 GMT  © BBC MMVI

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1. **GOVERNMENT ICT POLICIES**

The current digital divide is not the first time the international community has recognized the disparity between "haves" and "have nots" in the information field. In the late 1970s UNESCO sponsored a 2-year study of the flow of information across national boundaries. The final report "painted a shocking scenario in terms of information inequalities between First World and Third World countries."¹ This "MacBride report" pointed out that "It is essential to develop comprehensive national communication policies linked to overall social, cultural and economic development objectives."² Few policies materialized then, and the accompanying New World Information and Communication Order was generally considered a failure in its attempt to balance information resources among the nations of the world. However, two decades later, the perception of ICTs as a major tool in reaching such objectives as those related to the Millennium Development Goals contributed to many nations establishing national communication goals. Those policies deal with a wide range of issues, including ICT physical infrastructure, import of ICT equipment, applying ICTs to health, governance and rural development, community e-Readiness, Internet Service Providers and connectivity competition, and various rate structures associated with ICT services.

It is important to note how a regional grouping of nations such as the European Union has had an influence on policies. In order to join the European Union, Poland is shaping a national ICT policy. Why? Because the EU requires all its members to have a national ICT policy. Similarly, the African Information Society Initiative has influenced African nations to establish national ICT policies and many of them have done so. The AISI vision included these expectations:

• Every man and woman, school-age child, village, government office, and business can access information and knowledge resources through computers and telecommunications.
• Access to international, regional, and national ‘information highways’ is provided by providing ‘off-ramps’ in the villages and in the information channels catering specifically to grassroots society.
• African information resources reflect the needs of government, business, culture, education, and other aspects of every day community welfare.

Most African countries have started on their "national information and communication infrastructure" By January 2006 about 32 nations had completed their strategies and 13 were in the process of developing them. High among some of the priorities is improvement of access to ICTs in rural areas through the use of telecenters.

In its domestic Community Access Program, the Canadian Government developed an ICT policy related to Canada's interest in being "the most connected country in the world." It went beyond the rhetoric of an Information Society and committed people and funding to make the Internet affordable in rural and urban communities across the nation through community access. It made a six-year commitment to create community access points (CAPs), providing start-up money and an infrastructure to help local organizations participate in the initiative. While the resources offered by the central government were not enough for establishing complete comprehensive multi-purpose telecenters, the brand of the Canadian government combined with some serious money significantly motivated a nation-wide community-based effort that commanded provincial, regional and local participation. Canada now has more than 8,000 CAP sites.

Besides the direct funding available and the administrative push, a national policy can also be instrumental in providing a favorable regulatory and tariff climate, and in producing the human resources that are vital to a telecenter movement. Some telecenters in Uganda and Senegal, for example, had to go through considerable bureaucratic hurdles simply to have imported IT equipment released to projects or simply repaired.

To support its policy goal of becoming an Information Society superpower, India's leaders built a policy around human resource development. The Indian government doubled the number of persons it would graduate from its technology training institutes. The Egyptian Government's plan for incorporating ICTs in its business and socio-economic development includes – besides Technology Access Community Centres in rural areas – creation of facilities in all its 27 provinces that can train 30,000 people annually in computer uses.

In 2006, The Communication Initiative began identifying national ICT policies and case studies from around the world. Its initial effort yielded 25 national policies and 24 case studies. The case studies attempt to demonstrate development impact and lessons learned on the practical implementation of ICT for development (ICT4D), with a particular focus on three sectors: agriculture, education, and health. We identify and provide descriptions of several of these policies. The descriptions include reference to The Communication Initiative web site where each can be examined in detail.

**Mongolia ICT4D National Strategy (2006)**

Sectors Covered: Government, Economy, Industry, Education, Citizen Services, and Health. This policy aims to develop Mongolia into an information and knowledge-based society through the integration of ICT into all societal sectors. The government's Information and Communication Technology Authority (ICTA), formed in late 2004, is responsible for the country's ICT policies and their coordination and implementation; the non-governmental organization Mongolian Information Development Association (MIDAS), made up of ICT professionals drawn from civil society in Sri Lanka, consults with government on ICT policies.

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and issues and assists with the implementation of ICT programmes. 

Cambodia ICT4D National Education Policy (2005)
This policy document was developed in keeping with Cambodia's "Education for All" vision of 
ensuring all citizens equal access to basic quality education, and to prepare them to 
participate actively in Cambodia's reconstruction and integration into the knowledge-based 
global community. The policy was developed in consultation with national and international 
partners and places emphasis on the role of ICT in distance education, the training of 
professionals, non-formal education, and the quality of education at the upper-secondary and 
post-secondary levels, in recognition of the importance of ICT skills in a knowledge-based 

Sectors Covered: Agriculture, Civil Society, Economy, Education, Government, Health, Law, 
and Infrastructure.
This policy was developed over a 6-month period in 2004 through the direction of a national 
steering committee and seven task forces that were established to address the following 
areas: Community Access and Development, Government, Learning, Health, Economic 
Development and Growth of the ICT Sector, Infrastructure and Security, and Legal and Policy. 
The policy is meant to build an enabling environment for the growth of the country's ICT 
industry, providing universal service and nationwide access to information and communication 
facilities, and positioning Botswana as a global competitor. It also aims to provide an efficient 
and cost-effective ICT infrastructure, establish universal access to local and relevant 
information, institute an ICT legal framework, and enhance government services and health 

This policy focuses on addressing information and capacity building issues. The overall 
objective of the policy is to enable Afghanistan to further benefit from ICT by becoming part of 
the global information society while preserving Afghanistan's cultural heritage, promoting 
national goals, achieving a tolerant and vibrant Afghanistan, improving government and social 
services, advancing the rebuilding process, increasing employment, creating a dynamic 
private sector, reducing poverty, and supporting underprivileged groups. The other specific 
objectives of the policy include extensively adopting ICT in order to improve all aspects of 
Afghan life, such as education, health, employment and access to information; cultivating the 
local ICT industry in order to foster investment and employment generation in this sector; and 
utilizing ICT to increase government efficiency and effective delivery of improved social 

Policies are important because they reflect an organization's determination to carry 
out some action. (See Chapter 8.)

2. DATA BASES
As we all know, today's computers and digital networks are especially relevant for 
development work by transmitting accurate and relevant content. Some of this may consist of 
email exchanges. However, one of the significant and prominent benefits of information and 
communication technology is the opportunity for agencies to store large amounts of 
information to be accessed on demand by various populations. In these Readings we have 
mentioned a variety of data bases ranging from the Development Gateway portal (Chapter 1) 
and the UNFPA Population and Reproductive Health Portal (Chapter 4) to data bases created 
by rural communities (Chapter 6). Following is a sample of data bases that have been created 
both for general populations and for the professionals and intermediaries who may influence 
various aspects of development in a country or in a community. The descriptions draw heavily 
on material provided at the web sites that are listed in the boxes.
THE MILLION BOOK PROJECT

http://www.library.cmu.edu/Libraries/MPB_FAQ.html#current

Initiated by Carnegie Mellon University in the USA, the primary long-term objective of this initiative is to transfer all books into digital format, and, in partnerships with other scanning centers internationally, to create a Universal Digital Library that will foster creativity and free access to all knowledge. One of the key activities is to work with different libraries, universities and institutions worldwide that will exchange and/or donate some of their collections whether in digital form or through lending them for digitization. This would include books, journals as well as theses and research reports.

In the Million Book Project, with its proposed plans to make a large knowledge-base widely available through translation and information retrieval, all project partners contribute content to ensure that the collection is extensive, diverse and multilingual. The collection of the first digitized million books will be reached by swapping the digitized books produced by the different partners. This method not only allows for sharing the resources of different countries and dividing the work among them, but also has the desirable feature of having each partner holding its own “mirror site” of the million digitized books, thus guaranteeing fast access as well as reliability and availability.

The Million Book Project set as its goal the digitizing one million books by 2007. By early 2006, more than 600,000 books had been scanned: 170,000 in India, 420,000 in China, and 20,000 in Egypt. Roughly 135,000 of the books are in English; the others are in Indian, Chinese, Arabic, French, or other languages. Most of the books are in the public domain, but permission has been acquired to include over 60,000 copyrighted books (about 53,000 in English and 7,000 in Indian languages).

Twenty-two scanning centers are operating in India, including four mega-centers. Eighteen centers are running in China, including a mega-center in a free-trade zone to avoid customs delays with shipments of books from the U.S.A.

The National Agriculture Library of the U.S. Department of Agriculture and the United Nations’ Food and Agriculture Organization (FAO) have joined the project, along with academic libraries in the United States that have large agriculture collections. Agriculture has become a collection focus for the project, and plans are being developed to create a knowledge network aimed at improving rural community access to critical agricultural information.

The Million Book Project addresses, first, the need to provide students with “free and speedy access” to quality published resources, noting that only about 6% of the surface web content indexed by popular search engines is appropriate for student academic work. A project document goes further:

Beyond the boundaries of these problems, tremendous disparity exists across the nation and around the world in the size and accessibility of library collections. Some single institutions, like Harvard and Yale, have more books in their libraries than some entire states have in all of their libraries combined. In our rapidly changing world, lifelong learning and access to books have become essential to employment, health, peace, and prosperity. Greater public access to information is consistent with the goals of education and deliberative democracy. The expectation is that greater access to information will enhance respect for diversity and pluralism, alter the ways in which people work and deliberate together, and better equip people to understand and challenge the world around them. The Million Book Project will digitize a large body of published literature and offer it free-to-read on the surface web - providing students, faculty, and lifelong learners with rapid, convenient access to quality resources. Equitable, world-wide access to the Collection will contribute to the democratization of knowledge and empowerment of a global citizenry.

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ATTACKING THE HIGH COST OF SCHOLARLY BOOKS

Internet-First University Press at Cornell University
http://dspace.library.cornell.edu/handle/1813/62

The cost of scholarly and professional literature has put it out of the reach of many people, both in industrialized and developing nations. This situation has spawned initiatives to provide "open access" resources – resources that are shared worldwide at low or no cost. One way to help contain the costs of open access is to encourage scholars to publish in the growing number of open access journals rather than in the journals published by large for-profit companies. The former are inexpensive when compared to the latter. Another approach is to encourage pre- and post-publication of scholarly information in an open access repository (OAR) available through the Internet. An OAR is a "digital container" into which scholars can deposit digital objects to ensure that such objects are easily accessible and are maintained indefinitely. The OAR makes the objects it contains freely accessible to users of the Internet, and is designed so that its contents can be easily retrieved by standard search engines such as Google. Most such repositories of this type are maintained by individual research libraries.

In some cases, organizations are building publicly available data bases of original books and materials from professional sources. For example, Cornell University has undertaken an innovative approach to scholarly publishing on the Internet. Manuscripts and videos and other related audio-visual materials (such as oral histories and interviews) are freely available from its Internet-First University Press OAR. These online materials are available on an open access basis, without fees or restrictions on personal use. All mass reproduction, even for educational or not-for-profit use, requires permission and a license. Some readers across the world have accessed this book – Advocacy and Interventions – through the Internet-First University Press at Cornell University.

Materials in any digital format (text, image, audio, video) can be added to Cornell's OAR. This includes all manner of informal (not peer reviewed) publications, such as presentations, working papers, data sets, or course lecture notes. Several institutions, including Cornell, provide graduate students with the option of adding their completed dissertations to an OAR.

HEALTH INFORMATION DATA BASE

HINARI — The Health InterNetwork Access to Research Initiative (HINARI)
http://www.who.int/hinari/about/en/.

HINARI was developed within the framework of the Health InterNetwork, introduced by the United Nations’ Secretary General Kofi Annan at the UN Millennium Summit in the year 2000. HINARI provides free or very low cost online access to the major journals in biomedical and related social sciences to local, not-for-profit institutions in developing countries. HINARI was launched in January 2002, with some 1500 journals from six major following the principles in a Statement of Intent signed in July 2001. The publishers are: publishers Blackwell, Elsevier Science, the Harcourt Worldwide STM Group, Wolters Kluwer International Health & Science, Springer Verlag and John Wiley. Twenty-two additional publishers joined in May 2002, bringing the total number of journals to over 2000. Since that time, the number of participating publishers and of journals and other full-text resources has grown continuously. Today more than 70 publishers are offering their content in HINARI, and others may join.

Local, not-for-profit institutions in two groups of countries may register for access to the journals through HINARI. The country lists are based on GNP per capita (World Bank figures, 2001). Institutions in countries with GNP per capita below $1000 are eligible for free access. Institutions in countries with GNP per capita between $1000-$3000 pay a fee of $1000 per year / institution. Eligible categories of institutions are: national universities, research institutes, professional schools (medicine, nursing, pharmacy, public health, dentistry), teaching hospitals, government offices and national medical libraries. All staff members and students are entitled to access to the journals. Participating institutions need computers connected to the Internet with a high-speed (56k baud rate or higher) link.
AGRICULTURAL RESEARCH INFORMATION

AGORA — Access to Global Online Research in Agriculture

The AGORA program, set up by FAO together with major publishers, enables developing countries to gain access to an outstanding digital library collection in the fields of food, agriculture, environmental science and related social sciences. AGORA is designed to enhance the scholarship of the many thousands of students, faculty and researchers in agriculture and life sciences in the developing world. As of January 2007, AGORA provided a collection of 918 journals to institutions in 107 countries. The world’s poorest countries are able to access leading food and agriculture journals for little or no cost.

AGORA is a successful public-private partnership between FAO, 37 of the world’s leading science publishers and other key partners including the World Health Organization and Cornell University. Introduced in 2003 providing access to 69 low-income countries, AGORA later expanded to include universities, colleges, research institutes and government ministries as well as non-governmental organizations in an additional 37 lower-middle-income countries. AGORA is an online database similar to the CD-based TEEAL resource described above.

A DIGITAL AGRICULTURAL LIBRARY IN A BOX

TEEAL — The Essential Electronic Agricultural Library
http://www.teeal.org/.

Developed by Cornell University’s Mann Library with funding from the Rockefeller Foundation, TEEAL was dubbed a “Library in a Box” by a researcher in Africa not only because it arrives in a box, but because it contains the same capabilities as a real-time library does – a comprehensive collection of current journals to browse or search. TEEAL is available on compact discs or via local area networks. It is a rich resource for agricultural research publications. It includes over two million pages of articles – provided by 60 participating publishers and index providers. The journal collection starts with 1993 issues and is updated annually. TEEAL is available at well below cost to over 100 low-income countries, as listed in the World Bank’s 1998-99 World Development Report, and is a powerful tool for building capacity in agriculture by helping researchers, faculty, students and extension workers quickly retrieve relevant and current scientific information.

The journals in TEEAL were selected by 600 international scientists as the most essential to research and education conducted in the developing world. Some of the subjects covered in the TEEAL journal collection include:

- Agricultural Economics
- Crop Improvement
- Food Processing and Nutrition
- Livestock Production
- Range Management
- Soil and Water Management
- Veterinary Medicine
- Agricultural Engineering
- Environment and Natural Resources
- Forestry
- Plant Protection
- Rural Development
- Sustainable Agriculture

2. CONNECTIVITY

Earlier chapters in this book noted the importance of computers, networks and other ICTs such as the Internet in expanding the communication and information resources available for development initiatives such as those associated with achieving the Millennium Development Goals. However, as indicated in our earlier discussion of telecenters, access to these technologies is unequal across the globe. In its 2005 ICT Diffusion Index report, the UN Conference on Trade and Development (UNCTAD) quantified the digital divide in various ways. The report notes that a person in a high income country is 22 times more likely to be an Internet user than a person in a low income country (Internet users per 1000 people = 322,

compared to 16 per 1000). In much of the world, people and their computers are linked to network resources via "dial-up" services that use conventional telephone lines for the connection. Most of those in low income countries have dial-up which is substantially inferior to "broadband" connectivity that is sweeping across industrial nations. Dial-up service – even when available – is often inadequate for web browsing and for transmitting lengthy or highly graphic materials. In addition, dial-up services may incur long distance telephone charges that raise the barriers to regular access to digital networks, data bases and other ICT-related services. An optimistic part of this story is the opportunity that developing countries have to "leap-frog" over evolutionary technology steps and close the digital gaps using innovations such as wireless connectivity. In the following box Jim Bunce, an engineer with a public policy background, takes us on an exploration of this territory on the frontier of digital access.

THE FRONTIER OF DIGITAL ACCESS

A. The Network: A Commodity Called Bandwidth

What technological innovation would be most vital to the socio-economic development of emerging markets? Many ideas come to mind, but the innovation that will generate the greatest impact is the creation of a high-bandwidth communication infrastructure. Bandwidth refers to the amount of data that can be passed along a communications channel in a given period of time, measured in bits per second (bps). The bandwidth or flow of data through a copper wire network as compared to a fiber optic network (such as the one used at New York Presbyterian Hospital discussed below) is like comparing the flow of water from your home garden hose to the flow rate of water passing through several Hoover Dams or Aswan High Dams. High bandwidth will provide permanent high-speed connectivity throughout an interactive digital web, from any location, at any time, and for whatever reason.

High bandwidth is the electricity of the information era and will be the fuel that powers the information economy. High bandwidth is the proverbial information super highway network upon which every type of digital content imaginable will be able to travel effortlessly from anywhere in the world at any time.

High bandwidth and its accessibility have the potential to impact our lives in every way and to impact every sector of the global economy. In particular, it will transform our systems of education, government, health, communications, entertainment, and commerce. By high bandwidth, we do not necessarily mean access to email, Web sites, or more rapid web page views. High bandwidth is much more than just access to these conveniences. It is the possibility of agricultural students in the State of Uttaranchal, India, interactively attending a virtual lecture on Sustainable Global Enterprise at Cornell University, in real time, from their networked digital notebooks or tablet PCs. It is the possibility of a mother in Guangzhou, China, undergoing various types of three-dimensional imaging scans of her malfunctioning heart valve, with a specialist in Turkey administering the exam and a doctor in Colombia conducting the analysis. It is the possibility of a village elder in Senegal visiting a networked telecenter to obtain information on how to prevent water-borne disease by building wells and digging pit latrines. It is the possibility of a soybean farmer in India selling this season’s harvest to someone willing to pay fair market value based upon a review of the daily trading price from the Kuala Lumpur Exchange or the Chicago Board of Commodities Exchange. It is the possibility of a woman in Bangladesh building a business around her networked laptop computer, obtained through a Grameen Bank-administered micro-loan introduced to her by a mobile e-lender who visited her home in Dhaka. It is the possibility of residents throughout Salvador Da Bahia, Brazil, being able to access government services in their own neighborhoods without having to travel long distances to the city’s core.

The Network

Although varying degrees of connectivity exist within an area like Latin America, Internet penetration hovers at around 20 percent – compared with approximately 50 percent in the United States. High-bandwidth penetration is estimated to be less than 1 percent. Where do we go from here? Evidence suggests that a partnership between the public sector, the private sector, and the NGO community will be necessary to accelerate the development of high bandwidth at a rate of connectivity necessary to address, in a sustainable manner, the needs
of a growing population increasingly dependent upon scarce resources. Digital goods or inherently-not-scarce resources will provide the means to address our current needs without preventing future generations from meeting their own potential needs. Inherently-not-scarce (INS) resources are digital goods that, once created, can be provided to each additional user at a marginal cost of zero to the provider. This provision is made possible through high-bandwidth broadband networks, which allow digital goods to flow uncongested, without the need for management. One can envision such a network as a water pipe of relatively infinite capacity. Digital goods, much like water, flow into one end of the pipe and out the other end.

There are entrepreneurs (such as Stratum Broadband) who believe that, because digital goods capable of being distributed through a high-bandwidth network can be provided to all users at a marginal cost of zero once the infrastructure is in place, the cost should reflect this fact and the use of such a network should be provided free of charge to the users. Currently, a high-bandwidth connection in Mexico, Colombia, and the United States costs approximately $40 a month. This cost represents a much larger percentage of income in Mexico and Colombia than it does in the United States. This imbalance will need to change in order for the global landscape to become more equitable.

The role of government in promoting high-bandwidth access is vital to the development of an efficient network available to all. Infrastructure created by private enterprises will reflect their commercial needs and desires and those enterprises will make every attempt to exclude their competitors. For example, if instead of a National Highway System in the United States, we had a General Motors Highway System, we would be in big trouble. GM Highways would be designed specifically for GM vehicles and would evolve based upon the needs of that company’s customers and its particular business strategy. Areas in which GM vehicles were not sold would not be accessible by this highway system. Over time, private automobile highway networks would evolve without any plan for efficiency. This was the case prior to the passage of the National Highway System Designation Act, signed into law by then President General Dwight D. Eisenhower after a research-based road trip from Washington, D.C. to San Francisco took the Commander-in-Chief three months to complete. This inefficient network was unacceptable to the President and was viewed as a threat to national security. During World War II, then General Eisenhower saw the advantages Germany enjoyed because of the autobahn network. He also noted the enhanced mobility of the Allies after they fought their way into Germany and were themselves able to take advantage of the autobahn’s efficiency.

As President, Eisenhower established the Highway Trust Fund to enable the United States to build a national road network similar to the German Autobahn. The National Defense Highway system was designed to move military equipment and personnel efficiently, in much the same manner that a future National Defense High Bandwidth Network could enable the real-time transfer of information and the efficient coordination of communications.

The United States broadband connectivity ranking has fallen as measured by the OECD (Organization of Economic Co-operation and Development). It has gone from a leadership position to ranking 19th. This inefficiency should be unacceptable to our leaders and to the American people. From a national security perspective, this represents a serious threat to our continued prosperity and to our ability to compete in an increasingly interconnected global economy. It is useful to compare the past government-built highway system for the transport of scarce goods with the current need for government-built high-bandwidth networks for the transport of non-scarce digital goods such as digitized books, data, music, and applications. Similarly, the United States is lagging behind and will continue to be at a disadvantage if it allows the digital gap to widen further. Yesterday’s German Autobahn is today’s e-Japan.

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7 Stratum Broadband is a system integration company working with universities, colleges, municipalities, and businesses to leverage existing data, voice, and video infrastructures to find new revenue streams.
8 John Reynolds, “Building Community Broadband Nationally” (seminar, Johnson School of Management, Cornell University, February 24, 2006).
National High bandwidth Network System. The Japanese Government is currently establishing a network that will provide high-bandwidth fiber-optic connectivity to every home. The United States, on the other hand, is the only G-7 country that lacks an industrial policy on Internet connectivity.

New York Presbyterian Hospital: A “Network of Plenty”

The successful development of e-Government, e-Education, e-Health, and e-Commerce depends upon the ability of high-bandwidth (HB) networks to carry the necessary capacity. Such networks are the best strategy to achieve sustainable economic growth. Individuals and organizations that are connected to HB networks are more productive because of the value of the information they can access and the interconnectedness of the networks. High bandwidth enables us to do many things we were not able to do before and to accomplish them more quickly, easily, safely, and cheaply, thereby reducing our ecological footprint. For example, New York Presbyterian Hospitals (NYPH) has built a high-bandwidth broadband network (ADVA Optical Networking’s Fiber Service Platform [FSP] 3000).\(^9\)

With four major campuses, two data centers, and four clinics, in addition to an aging IT (information technology) infrastructure and a rapidly increasing cost of bandwidth (approximately 20% annually), NYPH realized that significant improvements were needed. The upgraded network is expected to meet the capacity requirements of a variety of special applications without requiring a network budget increase for at least 10 years. Some of the applications, which would not require a network budget increase for at least ten years, include:

- **Grid computing**, which allows researchers to obtain speedier results in diagnostics, research, and analysis, so a hospital can split the processing load of a text-mining application among multiple desktop and laptop computers across geographically dispersed hospitals and research facilities so that diagnosis time is slashed and medical people have enhanced opportunity to save lives;

- **Computerized physician order entry**, which enables a caregiver to access a patient's medical history and order procedures from a hand-held device – an important tool for more rapidly diagnosing ailments and eliminating the human errors that sometimes prove deadly for patients and become more likely as manual touch points increase;

- **Electronic record-keeping systems**, which allow nurses to use wireless mobile laptop computers to record patients vital signs, symptoms, and medications – and doctors can sign in to the same central system to order prescriptions and lab tests and to monitor their patients’ progress;

- **A picture archiving and communication system**, which enables caregivers to digitally store, manipulate, and share cardiology and radiology images, enabling efficient collaboration in diagnosis;

- **Real-time physiological monitoring** in which telemetry data are relayed from intensive-care units to central locations for constant monitoring and analysis, enabling caregivers to respond more swiftly to patients’ changing conditions;

- **Robotic-arm surgery** where the doctor views a magnified image of the area being treated and guides a robotic arm – unsusceptible to the routine tremors of a human hand – in making smaller, more precise incisions. The procedure can be conducted remotely. Bleeding is dramatically diminished, and post-operation recovery time is reduced.

Disk mirroring where using Fiber Channel protocol, network data are synchronously written to multiple data centers, ensuring continuity of care in the event of failure at any one of the sites. The high-bandwidth broadband component is critical to NYPH’s ability to provide affordable, high-quality, around-the-clock care.

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B. Community Broadband Options

A variety of community broadband options have been explored. Included are:

- **Wi-Max wireless** — a standards-based wireless technology that provides high-throughput broadband connections over long distances. WiMAX can be used for a number of applications, including ‘last mile’ broadband connections, “hotspots” and cellular backhaul, and high-speed enterprise connectivity for business.

- **Fiber to the premises** — A broadband telecommunications system based on fiber-optic cables and associated optical electronics for delivery of multiple advanced services such as the triple play of telephone, broadband Internet, and television to homes and businesses.

- **Satellite backhaul in rural areas** — Content that is transmitted via satellite to a receiving entity where it is integrated into a finished product.

- **Broadband over power line** — Broadband over power line technology allows the delivery of broadband connectivity and content services directly to electric outlets in homes or offices. Broadband over power line holds tremendous promise given that 87 percent of the global population has access to the power grid, as opposed to only 40 percent who are reachable via telephone. “Broadband over powerline technology enables businesses and homes to receive Internet services through their existing electrical lines. This means that customers can download movies, music, news in any room in their homes or offices through electrical outlets, at fast speeds, and often at lower prices than they are currently paying for Cable TV and Internet access. Speeds can range up to 200 Mbps full-duplex, a much faster and a more robust bandwidth in comparison with what is attainable with current DSL or cable modem broadband access technologies.”

If applicable, this technology is particularly applicable in Latin America, where a much larger percentage of the population will be reachable. Areas that are yet to be connected to the power grid could still be reached with a combination of Wi-Fi and Wi-Max technology and satellite backhaul.

**e-Villages and e-Nations**

New digital technology for providing broadband connectivity is becoming viable beyond urban centers and industrial nations. One of the areas where the technology already is supporting rural communities is South Asia where e-Villages are being created. An innovative approach to providing a community with network access is the installation of a low-cost wireless broadband architecture for providing high-speed Internet access services in Sri Lanka. Mahavilachchiya is a little known village about 40 km from the nearest town of Anuradhapura. Surrounded on three sides by the Vilpattu jungle, the village has no terrestrial or mobile phone networks. In November 2006, Mahavilachchiya became the first village in Sri Lanka with 24-hour Internet access. As part of the project, more than 400 rural students receive ICT-mediated education. In contrast, typically a student in the rural areas of Sri Lanka has to pay an average of Rs. 150 for 30 minutes of Internet surfing at a cybercafé mainly because service is scarce in these areas. This amount does not include transportation costs and the time spent to reach the Internet café. High capital and operating costs mean limited Internet access in rural Sri Lanka.

Mahavilachchiya now has more than 50 computers and a sophisticated multimedia lab. The majority of the computers are located at the houses of the children attending the Horizon Lanka Academy. The computers are connected by a system called “Mesh Wireless Technology” giving families direct Internet and email facilities. Mesh networking consists of a series of smart digital devices called routers or “Meshboxes”, which use infrared or radio waves to carry high speed wireless connections over a wide area. Instead of having a central server which determines how data are passed between computers, the mesh creates a network of equals, so individual computers find the best way to communicate with each other.

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All the computers are connected together to form a "resilient network" in such a way that the more devices there are on a network, the more routes there are through it. The network can grow organically and will automatically organize itself. The mesh system makes it easy to start small and expand where necessary, without the complex reprogramming involved with adding to a traditional, top-down network. If one node fails, the network will automatically redirect data through an alternative route.

The Sri Lankan government plans to scale up the project to more than 300 villages in other remote areas of the country. These communities are being called e-Villages. Elsewhere, Macedonia probably will lay claim to being the first whole country hotspot, as the story in the following box reports.

**BBC NEWS**

**Macedonia leads world with wi-fi**

By David Reid, Reporter, BBC Click Online

Formerly part of Yugoslavia and previously better known as a potential ethnic trouble spot, Macedonia is now rapidly becoming a wi-fi hotspot. Macedonia is now on the brink of leading the world in what could be a template for other developing states, becoming the first wireless country. Macedonia is dotted with villages. The mostly ethnic Albanians who live here are poor and rely for their livelihood on working wherever land they have. Their day-to-day lives rarely involve computers, let alone the internet. But a project funded by the US Agency for International Development (USAID) has brought broadband internet access to hundreds of such remote villages in Macedonia by putting the country's 460 primary and secondary schools online.

**Affordable access**

While the computers for the labs came from China, USAID's side of the project, called Macedonia Connects, was to pay for a local company to provide wireless internet access for the nation's schools, and while doing so roll out a wireless communication network across the country. Leigh Shamblin, of USAID Macedonia, said: "We're paying for internet services in schools for two years, and because we did that the local ISP, which was chosen through the competitive process, was able to build out this network. "That will allow internet access to become affordable and accessible to people in many sectors of society."

In laying out its own national network, On.Net, the Macedonian company doing the work on the ground, had to go up against the local telecoms giant which enjoyed a comfortable monopoly. "Traditionally, as in every country, there is an incumbent telecoms operator who possesses all the wires across a country. And they are of course in a monopolistic environment," said On.Net's Predrag Cemerikik. "What we did is build our own backbone network across the country, and last mile access to overcome that situation." The network makes use of Macedonia's bumpy terrain by using mountains as distribution points for wireless connectivity, a network connecting the parts copper wires cannot reach.

Glenn Strachan, project director of Macedonia Connects, said: "I think when people hear 'wireless' these days they think of wi-fi connectivity and Wimax, which is the newest brand of wireless connectivity. What we have is an ability to transmit wirelessly throughout the country, and then put a piece of equipment at the school anywhere in this country."

"Those people, once they have that piece of equipment, will have internet connectivity." By using what is called mesh technology, Macedonia Connects is creating not wi-fi hot-spots, but hot-zones which stretch 15 kilometres over a city.

**Building bridges?**

Opinions are divided on projects like Macedonia Connects. Some question whether many of these people really need broadband connectivity, and others insist the internet should stand alongside roads, water and electricity as essential infrastructure. In Macedonia, where the spectre of a civil war that was narrowly avoided still remains, there is faith that the internet might ease community tensions. In schools, for example, ethnic Macedonians and ethnic
Albanians are often taught separately. In some schools there are two different principals, two different sets of teachers, and two different names depending on which ethnic group is attending at the time. The hope is that the Macedonia Connects project will bridge some of these divisions. "It should serve as a very useful tool for interactive communication between multi-ethnic schools. They can organise a debate between them. They can organise some events between them," said Zoran Popovski, secretary of state for education and science.

If people living in the same town cannot get along it might be an idle hope that the internet will magically get them talking to each other. What the internet can do, however, is what it has done everywhere else: help businesses make money. "We need the internet as a sea," said Jani Makraduli, MP and president of the Macedonia technology committee. Macedonia is not on the sea, so we think that the internet is our sea and an open window for a lot of economic changes and new economic growth in our country."

The internet might not be the hi-tech cure for Macedonia’s ethnic tensions, however what is going on here could certainly be a template for other medium-sized countries. Former Yugoslav Republic of Macedonia might be the first wireless country. But it is unlikely to be the last.

Reprinted from the BBC, Friday, 11 November 2005
http://news.bbc.co.uk/2/hi/programmes/click_online/4427960.stm

3. MASS MEDIA AND PERSONAL MEDIA

Audio playback devices

There is a wide array of media available to communication planners that can be integrated into the computer and network systems or used independently. Speaking at the 2006 World Congress on Communication for Development, UN Food and Agriculture (FAO) Director-General Jacques Diouf commented that “Together with the new frontier of ICTs, more traditional media such as radio, video, film, music and theatre were also important in spreading knowledge and promoting development.” These traditional media, in fact, are sometimes more vital than computer-based technologies because of their lower cost and easier navigation. Examples are audio recording and playback devices whose evolution has moved them from plastic and vinyl disks to wire to reel-to-reel and audio cassette tape – and now to CDs and digital technology. Now one of the most popular recording and playback devices world-wide is Apple Computer’s iPod and its generic competitors.

Our early experiments with the audio cassettes in a development communication context yielded lessons and principles that can be applied today, even though digitalization may be overtaking analog (tape) systems. The experiments took place during a "war on poverty" initiative in the 1970s that addressed the needs of people living in poverty in the United States. The research took place in several rural counties, starting with Yates County, a rural area of 343 square miles with a population of about 20,000. It was one of the poorest counties in the state. We discovered that even in an affluent U.S.A. people in Yates County were living in homes with dirt floors, no electrical power, no plumbing and not enough food or medical help. The communication innovation we tested was the Cassette Special Communication System (CSCS).

We made two major assumptions about the situation as we started the project. First, we thought information was important in helping these people live better lives. We acknowledged that the reasons for poverty are often rooted in complex power relations in a society. In various social and economic constraints that a modest information campaign would do little or nothing to change directly. Many of those are problems of a higher order. Yet, our position was that people in poverty may not be able to attack the higher order problems when they are sick, hungry, undernourished and worried by such urgent immediate personal problems as no job, the care of six or more children, inadequate training, and ignorance about how to function in the world around them. Information alone could not solve all these problems, but we were convinced that information could lead to some solutions. For example, we discovered (in a manner to be discussed later) that the cost of medical and dental services was a great concern to these people. Often they would avoid seeing a doctor because of the
cost, helping worsen the health condition. We investigated and found that there was a low-cost medical clinic that had been set up to handle migrant laborers but which was also open to others with low incomes. This was not widely known. We provided the essential details through CSCS to many families in the county. We later discovered that some had started to use those services.

The second major assumption we made was that an audio (sound) medium would be a good channel for communication. There are many studies dating back 30 and 40 years which demonstrate that learning can be effectively accomplished through listening. And we were only too well aware of the many efforts that have gone into developing printed material that has never been used. It merely ends up in some program official's filing cabinet to show what has been prepared.

CSCS as a system

It is important to note that we were concerned with more than just a piece of hardware. CSCS came to refer a particular way of developing messages in which those receiving the messages play a substantial part in determining the content and its format, and to particular strategies for disseminating the messages. The audio cassette unit was the principal device in the system.

Obviously tape recording equipment was not new. It had been around for about 25 years. But cassette equipment, which began to appear in the consumer marketplace in the early 1970 was new and it had unique characteristics – including an affordable cost – that made it very suitable as a socially-relevant outreach device. In one of our CSCS diffusion models, cassette tape units are placed in the potential beneficiaries' households of the special audience and pre-recorded tapes are provided for them. Audio cassette machines are simple to operate and the tapes are relatively inexpensive. Playing a tape is an elementary task; there is no threading or handling of the tape itself. In one test in Pakistan, a researcher discovered that the skill of operating the machine can be taught even to an illiterate, moderately intelligent person in five to eight minutes. In Guatemala we trained a teen-aged girl with two years of formal education to operate a player in three minutes, including battery changing. (See Chapter 8.) It was this simplicity and low cost of the cassette system that permitted us to shift some control of the communication process to the receiving community. After much testing of the system, we found that a simple audio system – whether audio cassette or iPod – might offer the following characteristics that we found in the CSCS.

Consumption pattern

- Time of exposure. Because the cassette playback unit was placed in individual households, the cassette system allowed them to listen whenever they were ready. We think this is important in good communication. Everyone has an optimum time for learning.

In India, I used to go out to the rural villages to find out how the agricultural radio service we were trying to develop could best help the farmer. Inevitably, talk turned to All India Radio. Some farmers criticized AIR because, they said, the agricultural information was broadcast at a time when the farmers could not listen. As we talked with other groups, we discovered that there wasn't a best time for all. For the poorer farmers, a certain hour was best; for the more prosperous, because of their different work patterns, another time was best. What is the best time for a radio or television broadcast on family planning? It may be embarrassing to a woman to listen when she has relatives or friends in the home. Yet she cannot control that timing. As we developed CSCS, we made sure that the exposure time was decided by the person to receive the message.

Let me quarrel a bit with those who put such great confidence in field workers who personally visit households. It is difficult for such a worker to consistently reach a home at the best time to communicate a message. Or even a good time. And it is difficult for her/him to return at a different hour, especially if the field worker has just traveled two or three miles on a bicycle to get to the village. Obviously there are other major drawbacks to the field worker system, such as cost and his/her quite limited range of subject matter competence. Face-to-face communication is important and valuable, but it may have been oversold, as has mass communication, for getting the important communication job accomplished.
• **Frequency.** A second important characteristic of CSCS is the opportunity for a person to hear the message over and over – as frequently as the listener wishes. If a point is missed, or if one wants to play the material for another person, it can easily be done.

• **Literacy free.** Another factor which helps provide the freedom to choose the time and frequency of exposure is that the system is not dependent on literacy. Persons do not have to be able to read, or depend on someone else who can read, in order to get the message. Because the system depends on listening, it is available to young and old, literate and non-literate, the sighted and the sightless, in the dark or in the light. We know that even low-income people who are literate have a tendency to avoid reading “intervention” information.

One time I heard a family planning expert instruct field worker “paraprofessionals” on the methods of contraception. She provided the field workers with booklets and other printed materials to leave with those they visited. After the expert left, I asked the paraprofessionals what would happen to that material if they left it in the households as instructed. They unanimously agreed that it would be thrown away without being read. It was they who suggested that we try putting family planning information into the Cassette Special Communication System.

**Content characteristics**

• **Localism.** One of the key characteristics of CSCS is its emphasis on localism. CSCS is not mass communication in the sense of trying to reach vast heterogeneous audiences, although the system has some of the efficiency of mass media. We stress localism because we believe that messages bearing familiar names, events and places will be more influential with listeners than something which is geographically more impersonal.12

The local language also is important. In New York State, for example, nearly everyone speaks English. Yet, we know that there are differences in the way English is used. In a training session on family planning, a workshop came up with approximately 25 terms referring to menstruation, 15 for penis, and 20 for sexual intercourse. Obviously certain of these words are more appropriate in some localities than in others. Another illustration of the point comes from the Philippine barrios where Rural Reconstruction Movement (RRM) people were trying to push a literacy program. First, they had to identify and find the “illiterates.” As Juan Flavier reports the story, the literacy movement was proceeding very slowly in the barrios despite the fact that Filipino farmers attached great importance to education. For them, it was the only way out of their poverty. So, why the great difficulty in the literacy drive? A clue came when Dr. Flavier and the RRM workers stumbled onto the full meaning of *mangmang*, the Tagalog, word for “illiterate.” In English the word illiterate means “the inability to read and write.” *Mangmana* means this and more: it also implies stupidity. “In other words, says Dr.Flavier, “when we asked who were the illiterates or mangmang in the barrios, we were in effect asking who were the stupids.”13

• **Homophily and heterophily.** These are two useful words to know when talking about content. By homophily we refer to a relationship in which two people are very much alike. They are peers. For example, a person sending a message is perceived as being from the same background as the receiver, like a villager talking to a villager. That is a homophilous relationship. In a heterophilous relationship, the sender is perceived as being different; for example, the non-expert rural dweller sees the sender as an expert and a city person. There are communication assets in each kind of perception. This has to do with the credibility of the message sender. In the homophilous situation, senders have “safety credibility” because he is

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12 We aren’t alone in this view. An unpublished proposal by Population Services, Inc. puts it this way: “Testimonials by local village people would support the claims of the field workers and legitimize their activities regarding a subject which is often regarded with suspicion and skepticism. Even if the message can be carried to large audiences, the problem of relevance remains. A mass media message prepared for one audience in a developing country often carries little weight with an audience in another locale. Thus the impact of a promotional campaign may be seriously eroded by the inability of large sections of the society to identify with its purposes. For the majority of people, credibility begins at the village.”

Advocacy And Interventions by Royal C. Colle

enough like his peer to serve as a comparable role model. Implicit in this kind of communication is the following: “This situation applies to me, and since you’re like me, it may apply to you, too.” In the heterophilious situation, senders may have “competence credibility.” This comes from the sender’s perceived expertness, presumably on a subject about which the receiver knows little. In CSCS, we constructed each tape so that it had both homophily and heterophily. Because CSCS was not based on a strategy of nationwide production and distribution, area-specific homophily could be attempted.

- **Intimacy.** Of particular importance to some information, education and communication specialists is the problem of dealing with sensitive topics quite intimately. Take the case of family planning. There are few radio or TV stations that broadcast openly the mechanics and methods of contraception. Even field workers find it difficult sometimes to relieve a person’s (or their own) embarrassment when discussing the details of family planning. Because the listener can control the receiving conditions in CSCS (e.g., he or she can be alone), the most intimate subjects can be dealt with explicitly and in detail.

- **Interest catching.** Another asset in CSCS is opportunity to make the content interesting. This comes partly from the localism just discussed. But it also comes from the kind of formats we used. We tried to make them entertaining as well as informative. We used short dramas, interviews, conversations, and monologues. We also included a generous amount of the kind of music most liked by the people we were working with. And note that by having the messages recorded, each time they are presented to listeners the same level of enthusiasm is there in the presentation. This is not so easy when you have field workers who have to repeat nearly the same message at each stop. Even the most conscientious person must get weary.

- **Flexibility.** And, finally, in considering content is the matter of flexibility. Not all messages can be appropriately communicated in one minute, or five, or any other set period. Different messages require different amounts of time. The Cassette Special Communication System lets the nature of the content dictate how long a period should be spent on getting particular points across. There are no time constraints as often found in broadcasting systems.

**The mechanism**

It was mentioned earlier that one of the factors which made the audio Cassette Special Communication System such an exciting development was its great simplicity. Another factor is the cassette machine’s size. Built with modern transistors, cassette units were quite rugged and very light and portable.

A related factor is also important. They were relatively low in cost. Units that record and play back were available for about US$20. Some models went as high as US $150. Most models could operate on house current or battery power. The tapes themselves were also inexpensive. A reliable one that played for 60 minutes cost less than US $1. In Nigeria today, a cassette with local music costs about US$0.50.

The simple and low-cost characteristics of the hardware also applied to the costs of producing materials. Because CSCS heavily emphasized local advisors and local production where possible, costs were often low and a helpful amount of feedback was generated even before the final productions were in the field. In many cases indigenous talent could be used. Not only did this reduce costs, but it also generated community interest in the project.

These facts lead us directly to a brief description of how we used CSCS with a low-income rural group in rural upstate New York State. We knew there was a sizable community of low-income people in Yates County. Our first task was to draw a group of advisors from that special community. We felt it would not be sensible for us to sit in our offices and libraries at Cornell University and make decisions from there about what and how to communicate with these people. The low-income advisors gave us a link with that larger in-poverty community.

In using the indigenous person as an advisor, CSCS puts emphasis on having that person help develop content and plan strategy, rather than serving primarily to relay material designed by people like us outside the community. In this way, the community was actually making an input (through the advisors) at the initial stage of the communication process. This is another way of giving the community a greater measure of control over the communication process. We met with the advisors in their community. Often we got together in the basement
of a small rural church; sometimes in the home of one of the advisors. These meetings were held periodically during a period of eight months.

For our first meeting, we made some guesses based on some earlier studies in the community as to what might go on the tapes, and prepared a sample. In fact, we put together several samples, each having something different. Mostly, the difference was in the format of the tapes’ contents. We all listened to the recordings together, and the advisors started to tell us what was good, what was bad, what should be added, what left out. They helped us on the topics, format, language (for example, they advised us against using the word “poor” when referring to low-income people), music, and an administrative question: how to get the tapes and cassette machines into the hands of people who could benefit from them. It was the advisors who were largely responsible for selecting and establishing contact with the 150 households which were to be involved. The advisors were a vital part of the project.

Based on some of our own hunches and the suggestions of our advisors, we developed seven recordings, each about 20 minutes long. Each tape began with an introduction which was mostly music suited to the low-income community’s taste. Then came an “episode” of about three or four minutes. This was followed by another interlude of appropriate music. Then another short episode. Music, episode, etc. Most tapes had a total of four episodes, with music in between.

The subject matter for the episodes (again, based largely on suggestions from the advisors) included such things as welfare rights, vocational training opportunities, low-cost food preparation, population and family planning, parent-child relations, low-cost medical and dental services, and various other services available in the community. There was information, we are sure, that most middle-class agency type people felt had already been well circulated among these people. But according to our advisors, this type of information had not reached them.

After the advisors helped us identify the topics, our task was to research those topics. This involved checking with health agencies, law libraries, public officials, community groups, university specialists, and others for accurate information on the topics selected. We then tried to put the information into the proper format for the target audience.

Each of the four episodes in the recording was put together in a similar pattern. First, there was a “billboard” (brief introduction or “headline”), using an authoritative sounding voice which told what the segment was going to be about so the listeners could focus their minds. For example, the voice might say, “Did you know there is a place in Yates County where you can get low-cost medical help?” Next would be an interview, a conversation or a simple monologue. Whichever it was, it used people who sounded just like people in the low-income community. We wanted the message delivered by people in whom the community could feel trust. This is how we tried to build homophily into the message. This provided safety credibility.

A summary followed the body of the episode. This was delivered by the authoritative sounding voice. He actually accomplished two things. He repeated the important points of the information that had already been given, and he gave it a touch of heterophily. He was the “expert” who provided competence credibility.

The episode concluded with music, which formed the bridge to the next episode. This and all other episodes were built in the same manner, although the body might have been a conversation between two low-income persons, or some other format.

- Pretesting. The third step involved pretesting the tapes. We provided the advisors with “finished” sample tapes and asked them to listen to them in their own homes, and to play them for others whom they knew, such as friends, neighbors and relatives. They reported back to us their impressions and those collected from members of the community. With this kind of pretesting we got advance feedback that helped us in the production. We took the corrections and suggestions and modified some of our tapes accordingly. For example, one valuable thing we learned had to do with the music. Although our advisors very early had said we had picked out excellent music (“Country and Western”), it turned out that this was too sentimental for the kinds of homes in which the tapes would be played. This was because many of those were “broken homes,” that is, homes in which there was divorce, separation, or some other fracture
of the normal family unit. Based on this information, we went through all our tapes and inserted brighter, faster tempo music (“Blue Grass”) in place of the former selections.

- **A distribution strategy.** Over a period of several sessions with our advisors, we decided on a system for getting tapes and cassette units to a sample of low-income people in the community. Each advisor was responsible for placing 15 to 20 cassette players in homes. She/he delivered both the unit and the first tape and showed a household member how to use them. Advisors then sent the remaining tapes through the mail at two-week intervals. While using the postal system might not work in all parts of the world, it did here and it was an excellent distribution system partly, we suspected, because of the excitement these people got when they received a package through the mail.

A variation of this diffusion formula follows the same scheme but includes small follow-up group meetings involving those who have been listening to the tapes. This is similar to the radio rural forum idea that started more than 20 years ago in Canada and was adopted by India and other developing nations.

Another distribution pattern is one in which the advisor starts a unit off with one household, and instructs a person in that household to pass it on to another household after they are finished with it. The initial reaction to this plan by some people was: “Oh you’ll never see those machines again. They’ll go right out of the county!” But on reflection, the low-income advisors framed three hypotheses about the plan.

1. Loss of equipment would be small because the people handling the equipment and passing it on to others would feel responsible for the equipment. They would be likely to pick households that were also dependable and responsible.

2. As the units and tapes were passed from household to household, they would begin to enter households of higher socioeconomic people. In short, the system would circulate up the socio-economic ladder.

3. When a person passes a unit and tapes to another household, they are passing more than equipment. They are also passing on an implicit testimonial about the value of what was on the tapes.

One other distribution pattern is much like the radio forum idea. It involves having the advisor play the tapes for people gathered together in a small group. In Guatemala, one advisor played tapes at the end of the day under a tree where farmers often paused on their way from their fields. But to preserve the idea of giving the receiver independent control over the receiving process, members of the groups can be given the chance to borrow a unit and the tapes to take home for repeated listening and for sharing the experience with others. No ideal time duration was determined for having a CSCS project in the field. The distribution model and the number of tapes influenced on how long a particular cycle was in the field. We left the playback units in households for eight weeks in our Yates trial, which was conducted in a rural area. If this were an already proven communication system being used by a local agency, we would expect that once the advisors brought in equipment from one eight-week (or other length) cycle, they would then circulate the equipment to other households. Eventually the first households might get the cassette players back again – with a new batch of tapes.

- **Results.** Following are some of the highlights from a more complete report of the Yates project. Keep in mind, that in this first trial of CSCS, we were primarily attempting to test the feasibility of the system. One of our simplest hopes in the test was to see if we could get helpful information to low-income households. Among our findings are these:

1. The majority listened to all the tapes.

2. A large proportion – probably about 50 percent – listened more than once and a great many of these people listened at least three times. We had one report that a lady had listened to some of the tapes so frequently that she had memorized some of the dialogues and could recite them.

3. More than half indicated that others besides themselves had listened to the tapes. Another story has it that one lady called up the person who delivered the playback unit to her to see if she could get the second tape installment right away (instead of a week from that time) because she wanted to play it for some friends who were coming for a social gathering.
4. Approximately 80 percent had a favorable reaction to the tapes. When put in terms of usefulness—about 35 percent said that they were very useful, 50 percent said “somewhat useful,” and fewer than 10 percent said they were of little or no use.

5. Finally, we asked about how good a system this was for getting information. 75 percent said it was very good, about 22 percent said it was OK or neutral, and 2 percent said it was bad.

The results were positive enough to prompt similar projects in other New York counties and in other countries, including the pila project described in Chapter 8.

Although cassette tapes and players are still popular in many places, a newer generation of audio devices emerged with the iPod and similar recording-playback devices. Aid workers attached to the NGO called Voices for Humanity distributed more than 65,000 digital audio players containing information on human rights, women's rights, elections and health to remote villages in Afghanistan. A report says that Voices induced tribal chiefs and other community leaders to listen to the recordings and then pass them on to individuals and families. When it turned out that men were taking the devices from women, the Ministry of Women's Affairs suggested changing the color of the devices to pink so that men would be too embarrassed to carry them around. Satisfaction with the initiative was mixed, with some arguing that using radio broadcasting would have been cheaper. Proponents said that the opportunity to play the material on-demand and frequently justified the added expenditure. The decision concerning radio or recorded systems depends largely on the objective of the intervention (general support and public opinion or specific guidelines and directions), the kind of content (simple or complex, and not intimate or personally sensitive), and the nature of the target population (mass audience or particular segments).

**Using conventional radio broadcasting in development**

Radio continues to be a major tool for development, as we pointed out in Chapter 6. Radio overcomes the limitations of education and low literacy in obtaining information. Also, in circumstances where it is appropriate, there is one “voice” providing uniform messages over a wide territory. An example of the use of conventional radio broadcasting appears in a report summarized by The Communication Initiative on its Drum Beat web site. The report notes that for much of Africa, and Sierra Leone in particular, radio remains the most advantageous medium of communication due to its affordability, widespread use and coverage for the majority of Africans. Recognizing this, Development Through Radio (DTR) has been a movement in southern Africa for more than a decade. The Forum for African Media Women (FAMW) and The Forum of Conscience (FOC), a human rights non-governmental organization, collaborated in the implementation of a DTR project to encourage communities in Sierra Leone to undertake activities that would promote sustainable development. The FOC acts as the overall facilitator for the DTR and serves some 30 DTR groups in communities in the North, South, and Eastern Provinces through a DTR Coordinator. The coordinator receives recorded audiotapes from the groups and provides a manifest containing basic information including the date on which the recording took place, the composition of the participating group, and a summary of the discussions. She then hands this to the Sierra Leone Broadcasting Service (SLBS) for editing and broadcasting. Generally, both responses and issues from the women are compiled into one 22-minute broadcast. The community groups involved in the project range in size from 30 to 80 members, aged 14 to 60 years. The project aims to offer a space for interaction and healing of wounds inflicted by the eight year civil war. The women have indicated that they find strength in being part of a group and collectively focusing on poverty alleviation priorities. The project provides a forum that helps them feel heard and empowered to find solutions to their problems.

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15 http://www.communit.com/ict/ictcasestudies/ictcasestudies-17.html. The original source for the case study was Gender and ICTs for Development, A Global Sourcebook, developed by the Royal Tropical Institute in The Netherlands in 2005.
The DTR project has assisted members in making many changes to their lives. By having a voice on the SLBS, they have been assisted in implementing a number of initiatives in priority areas. These include:

- Market centres have been established;
- Training and sensitization on HIV/AIDS and other health concerns has been provided;
- Discussions on human rights issues, police brutality, and gender-based violence have been initiated;
- Skills enhancement programmes have been established for textile design, soap making, etc.
- Marketing efforts for their products have been implemented and strategically directed at larger towns;
- Adult literacy programmes are in progress.

Silk-Road Radio in eastern Europe is another illustration of using conventional radio broadcasting in the digital era. The box below describes the project.

### STORYTELLING ON RADIO FOR DEVELOPMENT: SILK-ROAD RADIO

... The project was launched in Tajikistan in 1998, and expanded to Uzbekistan in 1999 and to Kyrgyzstan in late 2004. Under the auspices of UNESCO Tashkent and co-financed by various international agencies, Silk-Road Radio produces radio programs and delivers educational messages in the Central Asian countries (formerly parts of the Soviet Union) to millions of listeners. Here is the brief story.

The flagship Soap Opera entitled "Har Dardning Davosi Bor" (A Cure for Every Ills) is a collaboration of Silk-Road Radio's Uzbek and Tajik creative teams, who mostly cover topics related to the rural population's concern. Another Soap Opera of Silk-Road Radio entitled "Shahar Bekatlari" (City Stations) targets a more youthful and urban audience. Each Silk-Road Radio Soap Opera is accompanied with needs-based short reports ... that reinforce the themes of the Soap Operas from a factual angle.

Using the more traditional technology of radio to reach large audiences in innovative and engaging ways, the Silk Road Radio Project supported by UNESCO in Tajikistan, Uzbekistan and Kyrgyzstan highlights contemporary issues and priorities through a twice-weekly radio drama series produced and transmitted in each country's language – Uzbek, Tajik and Kyrgyz.

Building on a centuries old tradition of story-telling in the region, the themes dealt with in the radio dramas can be grouped in three categories in accordance with the priority areas of the main funding agencies: family and reproductive health, agricultural themes, and contemporary national issues such as humane and considerate treatment of displaced and underprivileged groups in society, ethnic harmony and tolerance in society and the trafficking of women. For example in Tajikistan, Silk-Road Radio storyline reporters visit various parts of the country to investigate the topics and produce storyline reports with the voice of people on the concerned topics. The storyline reporters pass the prepared indexes to the creative teams of the Silk-Road Radio project for further creation of a new storyline on the concerned subject. While storyline is created in the Soap Opera, storyline researchers produce storyline reports mixed with attractive national music. The episode carrying storyline on a topic is accompanied by the related storyline reports on Vatan FM 106, the national broadcaster-partner of Silk-Road Radio project.

New themes are constantly surfacing in the light of ongoing needs assessment, consultation with stakeholders and audience research. So far the storyline reporting team of the Silk-Road Radio...
Radio in Tajikistan has researched the themes on the right of a girl to education, problem of drug addiction among youth, reproductive rights of women, quality of teaching reproductive subjects at schools, attitude of people to “culture and education”, etc. These are incorporated in the radio drama storylines and scripts through existing and developing characters and scenarios. In this way, the Silk-Road Radio Project continues to be a medium for effective contemporary education, while also drawing attention to current, topical issues.

This report was compiled from:
http://www.itu.int/osg/spu/wsis-themes/ict_stories/themes/grassroots.html and
http://www.silk-roadradio.uz/viewnews.php?id=97&PHPSESSID=a85845f5e734cfe5931796b3d063fc77

Besides its deep penetration into rural and remote areas, radio broadcasting has the advantages of being relatively low cost in production. Barring bureaucratic obstacles, radio messages can be broadcast quickly, and audiences can pay attention while they are at a worksite or at home. They can listen while occupied with other activities.

### 4. INDIVIDUAL MEDIA

From the Massachusetts Institution for Technology to digital researchers in Latin America and Asia, significant research has gone into producing low cost computers, particularly for schools. At the World Summit on the Information Society in 2006, M.I.T introduced the One Laptop per Child computer. Called The Children's Machine, or 2B1, it is an inexpensive laptop computer intended to provide every child in the world access to knowledge and modern forms of education. It was developed by One Laptop per Child (OLPC), a non-profit organization created by faculty members of the MIT Media Lab to design, manufacture, and distribute the laptops. The pricing goal was expected to reach the US$100 mark in 2008. The prototype computer is a "skinnied down" version of the conventional "obese" laptop. According to the MIT team: "Remove sales and marketing costs, and set the machine up with a 7.5" screen, Linux software, a hand crank for power, rugged rubber case, and super bright display so it can be taken into the sun and read like a book,' and you've got a very inexpensive tool for helping 800 million children explore, interact and create."

The laptops will be sold to governments and issued to children by schools on a basis of one laptop per child. According to MIT World (October 28, 2006), with backing from News Corporation and Google, among others, OLPC has begun to line up millions of orders from Brazil, Thailand, Egypt, China and South Africa. In 2006, the Nigerian Vanguard newspaper reported that Nigeria has officially ordered and paid for one million of the B21 devices. Production was expected to begin when five to 10 million have been ordered and paid for.

The Simputer is another low cost portable alternative to PCs. Its promotional material suggests that "It has a special place in the third world because it ensures that illiteracy is no longer a barrier to handling a computer." The projected cost of the Simputer is about Rs 9000 (US$200) contingent of large volume production. But even this is not affordable by most citizens in a developing country. So a Smart Card feature that the Simputer provides enables the Simputer to be shared by a community. A local government organization such as the village panchayat, the village school, a kiosk, a village postman, or a shopkeeper could loan the device to individuals for a while and then it could be passed to others in the community.

Using its Smart Card feature, the Simputer allows for personal information management at the individual level for an unlimited number of users. Simputer promoters suggest that "The impact of this feature coupled with the rich connectivity of the Simputer can be dramatic. Applications in diverse sectors such as micro banking, large data collection, agricultural information, and serving as a school laboratory are now made possible at an affordable price."

There are critics of the efforts to provide low-cost computers on a mass basis to schools and other users around the world. The skeptical comments range from: "It's more important and efficient to spend the money on books" to "the lead and other materials in computers contribute an undesirable hazard to the environment and to people's health."
Perhaps one of the biggest challenges to using these personal media is that of training. The report in the accompanying box suggests one approach.\textsuperscript{17}

### TEL-NEK – EACH ONE TEACH MANY!

Tel-Nek is a not for profit project started in May 2001 in Bidadi, a small town, 35 kms from Bangalore [India]. The project is mainly funded by the Basque Autonomous Community through its Cooperative for Development Fund (FOCAD). In India, the 3 partners of the Tel-Nek project are Anchorag, a social development organization; 3SEI, an organization created by the Government of India and the European Commission to promote the software industry in Europe and India; and Suvidya, an NGO working in the area of education, both ICT and otherwise.

Tel-Nek’s main objective is to foster community growth through training semi-rural women in New Information and Communication Technologies. This project is part of a bigger vision – e-MITRA (emerging Models of Information Technology for Rural Applications) which envisages bridging the digital divide and use of ICT as the backbone to bring about rejuvenation and empowerment of the local community.

The total strength of trainees in the first batch who have just completed the course has been 31 in all, with 26 female trainees. The courses being taught are: Windows basics, MS Word, MS Excel, MS Powerpoint, MS Access, PageMaker, Coral Draw, Graphic Designing etc, local language software like Nudi, Baraha, i-Leap along with IT security, a subject called ‘computers and society’, hardware basics, e-mail, Internet. The training course is done in Kannada, the local language, and teaching manuals are also in the same language.

One interesting teaching method adopted by Tel-Nek involves giving the trainees the task of typing [keyboarding] translated Kannada articles of social significance published in local newspapers. The students are also made to do projects in the field during the training period.

Surbhi Sharma, Trustee, Anchorage, says, "In order to stress the development aspect of our work among the students, as well as to provide them with greater understanding of their immediate demography and community, we held two different kinds of activities: a demographic survey, where the students visited and documented different aspects/places in their villages. For example, someone made a Powerpoint presentation on their village’s water tank, another on a school, someone else on the PHC, etc. The second activity was ‘Project week’ – where the trainees went into the villages, collected house to house survey data etc. and then this data was represented by the teams in excel sheets, as graphs, etc."

Also, the trainees are made to sign an agreement at the time of joining the course, promising to use the training imparted to them to help and assist the community with their knowledge from the computer course and not merely use it for commercial purposes. Each One Teach One (ETO) is a programme whereby one trainee teaches someone from her/his immediate family or neighbourhood the basics of the computer. Visibly excited, many young women who have completed the first batch declare, “On Saturdays, we bring along our brothers and sisters to the training centre.”

### 5. ENTERTAINMENT- EDUCATION

When we think of innovations in communication these days, we frequently think first of information technologies, the World Wide Web and the Internet. There are also important innovations that relate to how communications are designed and how media are used. One example is the linking of communication directly with closely related interventions as in social marketing which we mentioned in Chapters 1 and 5. Another is the use of entertainment for more than entertainment. The use of entertainment as a means for promoting social and behavioral change has a long history – certainly for centuries. In this era, governments, politicians and industry have used entertainment to gain support for (or against) military action,

\textsuperscript{17} Written by Reshmi Sarkar in \textit{IT for Change} and provided by Frederick Noronha via email October 23, 2003.
smoking (or not smoking), reproductive health issues, and a variety of other ideologies or behaviors. One of the early systematic uses of entertainment for social change was a small relatively unknown program in Puerto Rico carried out by the Division of Community Education beginning approximately 50 years ago. (See Chapter 3.) It included motion picture entertainment in its formula for promoting the status of women, good health practices, and community participation in development efforts. Elsewhere, several decades ago, the announcement of the cancellation of a radio drama series on the BBC aimed at rural people caused an enormous outcry among its audience. The Archers was a broadcast program that had guided the lives of farmers and rural dwellers in the U.K. for more than 50 years. The deliberate attempt to use entertainment for social and behavioral change today is called Enter-Educate (E-E). E-E appeared in Chapter 8 in the context of decision-making about content in a communication strategy. Here we look at a variety of issues that expand our discussion of E-E by examining some of its specific applications and some of the science supporting its use as a communication tool. (Note that we used E-E in the audio cassette project described earlier.)

One example of E-E is Egypt’s use of entertainment for a social cause was the 16-episode television series Wa ma zala anneel yagree (“And the Nile Flows On”) that was broadcast during prime time in November and December 1992. The series focuses on the life of Dr. Omayma, a family doctor in a remote, rural village in Egypt. The episodes dealt with the doctor’s struggles to gain the villagers’ trust in face of opposition from village leaders. Viewers learned about reproductive health “in a culturally sensitive and entertaining manner.” Produced by the State Information Service, the topics included: the dangers of childhood marriages and early pregnancy, forced marriage, women’s rights, family size, religious support for family planning, general mistrust of family planning physicians, village morality and family shame. The impact of the series was reported by the Johns Hopkins Center for Communication Programs (CCP) this way:18

A "post-exposure" survey was conducted in eight governorates. Among respondents, 75% had seen the program and gave it very favorable ratings. The leading characters were highly rated in terms of likeability and credibility. Exposure to the program had a significant effect on intention – that is, the likelihood of visiting a family planning clinic: 57% of viewers said that they would definitely go to a clinic, compared to 29% of non-viewers.

Communication about the serial was highest among residents in rural areas, where television is often a major topic of conversation. Conversations took place most often with a friend or neighbor, followed by conversations with the respondent’s spouse. Furthermore, higher percentages of educated respondents discussed the serial with someone than did illiterate viewers. The issues discussed varied by place of residence. The issue of forced marriage was discussed most often in Cairo and Alexandria (24%), while only 4% of rural residents awarded it any attention at all. Village residents reported that they do not feel that forced marriage is an issue at all – it is a regular occurrence and not something that would stimulate controversial discussion.

Watching the serial had a prominent effect on attitudes toward family planning, such as early marriage, age certification, responsibility for determining the sex of the child, and perception of the religious stand on family planning. Exposure to the serial reduced the percentage of respondents who felt that contraceptives are harmful to one’s health. For the most part, exposure to the series did not have a significant effect on increased knowledge. One noteworthy exception is the percentage of respondents who learned that it is the husband’s sperm that is responsible for determining the sex of the offspring: 86% of those who saw the serial knew the correct answer, compared to only 39% of non-viewers.

Statements dealing with empowerment of women also showed an increased level of agreement following the broadcast of the serial. Respondents agreed much more frequently after the viewing than before with these statements: “Family planning gives a woman the opportunity to improve her life;” “These days a woman without education has no support / a woman must complete her education before marriage;” “With current economic conditions a woman should have a job outside the home.”

Today the major intellectual and creative center of the movement to use entertainment for social change is the Center for Communication Programs (CCP) at Johns Hopkins University in the United States. For more than a decade, CCP has worked in many countries to test and demonstrate the use of entertainment for social change. While television has been a major medium, CCP has also used radio, popular music, comic books, and other media to entertain people while they are educated and motivated. As CCP has demonstrated, enter-educate is not simply the creativity of artists at work. There is a strong intellectual and scientific base that has emerged to make entertainment a respectable topic for scientific research and for the development of communication strategies. This has been borne out by several international conferences that have explored the art and science of enter-educate. One of these included a presentation by Dr. Albert Bandura, in which he provided a theoretical perspective on entertainment for social change. The Enter-Educate approach relies heavily on the social learning theory advocated by Bandura. This theory states that most behavior is learned through modeling—a person observes other people and uses their behavior as a model for future behavior. People do not learn a new behavior unless they see it demonstrated. Entertainment both attracts attention and provides a format for demonstrating new, desired behavior. It works by creating an emotional arousal in the viewer which is a vital part element in promoting behavior change. In Entertainment-Education, the creative entertainment people work together with health professionals to produce quality entertainment products that have commercial and audience appeal as well as powerful, factually correct social messages. We include Bandura’s comments here because of their significance for the science of communication.

**HOW ENTER-EDUCATE WORKS**

**Social Modeling and Self-Efficacy**

A comprehensive theory of human behavior must explain how people acquire attitudes, values, and the competencies needed to manage their lives, and how they motivate and regulate their own behavior. There are two basic modes of learning: learning through direct experience, which is a rather tough teacher, and through the power of example. The special advantage of social modeling is that it can serve as an effective instructor and motivate vast numbers of people simultaneously. In prestige modeling, for example, culturally admired television models exhibit the beneficial styles of behavior, and their social attraction increases the impact of their influence. In similarity modeling, characters representing different segments of the viewing population are shown adopting the beneficial attitudes and behavioral patterns, and seeing people similar to oneself succeed enhances the power of modeling.

In transitional modeling, positive models exhibit beneficial life styles, negative models exhibiting detrimental life styles, and transitional models change from detrimental to beneficial styles of behavior. Contrasting models highlight the personal and the social facts. Different life styles and viewers draw inspiration from seeing others change their lives for the better. The other factors are vicarious, they motivate. The benefits of the favorable practices and the costs of the detrimental ones are vividly depicted. Depicted benefits provide the incentives for change.

Another factor that adds to the audience’s acceptance is “attentional” involvement. Melodramatic and other emotional devices are used to sustain high involvement in dramatic

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productions. “Symbolic coding aids” such as epilogues and summarization of the model messages are used to underscore the importance of the social practices that are enacted and to enhance their “recallability.” And the final factor is the provision of environmental supports. It is of limited value to motivate people for change if they do not have the needed resources and the environmental supports to realize those changes. Environmental guides and supports are provided to expand and sustain the changes that are produced by the media.

Belief in one’s personal efficacy is the foundation of action. Unless people believe that they can produce desired effects by their actions, they have little incentive to act. The realities of everyday life are strewn with difficulties, full of disappointments, impediments, adversities, failures, setbacks, frustrations, and inequities. Human accomplishments require an optimistic sense of personal impediments to success. To paraphrase H. G. Wells, “Reasonable people adapt to the world; unreasonable ones change it, human progress depends on the unreasonable ones.”

The distinguishing characteristics of people who achieve success in what they do are an unshakable belief in their personal efficacy and a firm belief in the worth of what they are doing. This powerful internal resource enables them to withstand a lot of adversity.

People who have a strong sense of self-efficacy tend to approach difficult tasks as challenges rather than as threats. They set challenging goals and sustain strong commitment to those goals. They maintain a problem-solving focus that guides effective performance. They attribute failures to insufficient effort or inadequate strategies, they heighten their efforts in the face of difficulties, and they display low vulnerability, distress, and depression. People’s belief in their efficacy can be enhanced in four ways. One of the most powerful ways is through mastering challenges. A resilient sense of efficacy requires experience in overcoming obstacles through persevering efforts.

The second source is through vicarious experiences. Social modeling serves as a way of building a sense of efficacy. Competent models transmit knowledge, skills, and strategies for managing environmental demands. Seeing people similar to one’s self succeed by sustained effort raises the observers’ beliefs in their own capability.

The third way is through social persuasion, and this is the faith that people express in us. Social persuasion is another way of reinforcing people’s beliefs that they have what it takes to succeed. Good social persuaders do more than just express faith in others, they also structure activities for them in ways that bring success and do not place people prematurely in situations where they are likely to fail. In judging their capabilities people also need physical stamina and a sound emotional state. The fourth way of building efficacy is to enhance physical stamina, reduce stress and depression, and correct negative biases.

There are several ways of building resilience through modeling. You can prepare people for the problems they will encounter by enacting prototypical problem situations and modeling effective ways of overcoming them. People also have to learn how to manage failure. You can model how to recover from failed attempts and setbacks and you can show people how to enlist social support for personal change.

People also motivate and regulate their behavior by the outcomes they expect their actions to produce. Your beliefs of efficacy determine the kind of outcomes you expect. These take three forms: 1) the physical costs and benefits, 2) the social costs and benefits, and 3) the self-evaluative costs and benefits. After people adopt personal standards, they do things that give them a sense of self-worth and pride, and refrain from behaving in ways that bring self-censure. “Evaluative self-incentives” operate as strong guides and motivators of behavior. Unless people see that their personal interests are served by adopting new patterns of behavior, they have little incentive to mount the effort needed to change their ways. Media production should highlight the personal and societal benefits of the promoted forms of behavior. Media production should be devised to encourage people to believe that they can do what is necessary to succeed.
The other motivator is aspirations. Once people commit themselves to valued goals, they enlist the effort needed to fulfill them. Goals alone have little motivating value unless they are translated into concrete steps that give substance to the vision. Some goals provide direction for one’s efforts, and some goal attainments build a sense of efficacy and self-satisfaction. Media productions should model how to translate a vision in a desired future into a series of achievable steps.

Many of life’s challenges center on common problems that require people to work together with a collective voice to change their lives for the better. Thus, another area that I emphasize is collective efficacy. This is the strength of families, communities, organizations, social institutions, and even nations. People believe that they can solve the problems they face and improve their lives through unified effort. Social change requires a strong sense of collective efficacy. People who have a sense of collective efficacy will mobilize their efforts and resources to surmount the obstacles to the changes they seek.

The belief in efficacy is the foundation for action regardless of whether you are in a collectivistic culture or an individualistic culture; namely, you have to believe that your effort, whether it is an effort by a group or an effort by an individual, can have an effect. We have to extend our theory of agency from individual agency to collective agency as well, and this is becoming progressively more important as our societies are becoming much more interdependent. The management of life is going to require increasingly collective efforts.

Media production should highlight the personal and societal benefits of the promoted forms of behavior. Media production should be devised to encourage people to believe that they can do what is necessary to succeed.— Albert Bandura

One of the earliest and most prolific uses of E-E has been in addressing the promotion of family planning. The Population Media Center in the USA state of Vermont is a nonprofit, non-governmental organization that specializes in efforts “to improve the health and well being of people around the world through the use of entertainment-education strategies, like serialized dramas on radio and television, in which characters evolve into role models for the audience for positive behavior change.” Its mission is to collaborate with the mass media and other organizations worldwide to (1) bring about stabilization of human population numbers at a level that can be sustained by the world’s natural resources and to (2) lessen the harmful impact of humanity on the earth’s environment. The emphasis of the organization’s work is to educate people about the benefits of small families, encourage the use of effective family planning methods, elevate women’s status and promote gender equity. In the following text, PMC’s President William Ryerson reports on E-E projects related to family planning in Mexico, Kenya, India, and Tanzania, concentrating especially on evaluations of their outcomes.

THE EFFECTIVENESS OF ENTERTAINMENT IN CHANGING BEHAVIOR

There is strong evidence that mass media, particularly entertainment broadcast media, have played a significant role in a number of countries in bringing about changes in reproductive behavior and in promoting adoption of other health measures. Radio and television soap operas in Mexico, India, Kenya and Tanzania have been documented by independent research in their massive effects on audience attitudes and behavior with regard to HIV/AIDS avoidance and use of family planning (1,2,3,4,5). [Editing note: the footnote details appear as endnotes at the end of this box.]

One of the advantages of using serial dramas, as opposed to documentaries or single-episode dramas, is that they allow time for the audience to form bonds with the characters and allow characters to evolve in their thinking and behavior with regard to various issues at a gradual and believable pace in response to problems that have been well illustrated in the story line. Just as important, entertainment programs forge emotional ties to audience members that influence values and behaviors more forcefully than the purely cognitive information provided in documentaries. As described in the social learning theory of Stanford University

20 See http://www.populationmedia.org/.
psychologist Albert Bandura, vicarious learning from others is a powerful teacher of attitudes and behavior (6). Next to peer and parental role models, role models from the mass media are of particular importance in shaping cultural attitudes and behavior.

Serial melodramas using the methods developed by Miguel Sabido of Mexico for promoting reproductive health (7) have been remarkable in that they have attracted no serious opposition in any country. This stems, in part, from the thorough research that has been done prior to the development of the programs to measure audience attitudes and norms with regard to these issues. Characters for the serial dramas can then be developed that reflect the audience, so that the show is in harmony with the culture. Through the gradual evolution of characters in response to problems that many in the audience also are facing, soap operas can show adoption of new, non-traditional behaviors in a way that generates no negative response from the audience. Because of the bonds that have been formed by this stage between audience members and characters, and because of the commonality of problems between characters and the audience, audience members tend to accept these changes, even though they may challenge some cultural traditions. Because they deal with issues that are as sensitive as sexual relationships and reproduction, it is especially important that such programs are designed not to build opposition or cause a backlash.

**Mexico**

In 1977, Miguel Sabido, then Vice-President of Televisa in Mexico, created the first soap opera to promote family planning, named *Acompañame* (“Accompany Me”). As with an earlier serial he produced that dealt with the issue of literacy through the lives of illiterate characters, the program was designed to create characters who would evolve over time to become positive role models for the audience. *Acompañame* showed in dramatic terms over the course of the nine-month series the personal benefits of planning one’s family by focusing on the issue of family harmony.

The results of *Acompañame*, as reported by the Mexican government’s National Population Council (CONAPO) (8), were:

1. Phone calls to the CONAPO requesting family planning information increased from zero to an average of 500 a month. Many people calling mentioned that they were encouraged to do so by the television soap opera.
2. More than 2,000 women registered as voluntary workers in the national program of family planning. This was an idea suggested in the television soap opera.
3. Contraceptive sales increased 23 percent in one year, compared to a seven percent increase the preceding year.
4. More than 560,000 women enrolled in family planning clinics, an increase of 23 percent (compared to a one percent decrease the previous year)....

During the decade 1977 to 1986, when many of these Mexican soap operas were on the air, the country underwent a 34 percent decline in its population growth rate. As a result, in May 1986, the United Nations Population Prize was presented to Mexico as the foremost population success story in the world.

Thomas Donnelly, then with USAID in Mexico, wrote, “Throughout Mexico, wherever one travels, when people are asked where they heard about family planning, or what made them decide to practice family planning, the response is universally attributed to one of the soap operas that Televisa has done. ... The Televisa family planning soap operas have made the single most powerful contribution to the Mexican population success story.”

**India**

Following a meeting David Poindexter, now Honorary Chair of Population Media Center, and Miguel Sabido held with Indira Gandhi, and a training program they organized for Doordarshan (Indian Television), the country began broadcasting India’s first social content soap opera, *Hum Log* (“We People”) in July 1984. The program included promotion of family planning and elevation of the status of women through the words and actions of key characters.

Over 17 months of their broadcast, the episodes of *Hum Log* achieved ratings of 60 to 90
percent. Research conducted by Professor Everett M. Rogers and Arvind Singhal, then of the Annenberg School of Communications of the University of Southern California, found through a sample survey that 70 percent of the viewers indicated they had learned from Hum Log that women should have equal opportunities, 68 percent had learned women should have the freedom to make their personal decisions in life, and 71 percent had learned that family size should be limited (9). Among other things, the program stimulated over 400,000 people to write letters to the Indian Television Authority and to various characters in the program, stating their views on the issues being dealt with or asking for help and advice.

Following a second training for a team from India in December 1986 held in Mexico City, producer Roger Pereira of Bombay undertook the creation of a second television soap opera. This program, Humraahi (“Come Along With Me”), went on the air in January 1992. It dealt with the status of women, with particular attention to age of marriage, age of first pregnancy, gender bias in childbearing and child rearing, equal educational opportunity, and the right of women to choose their own husbands. Within four months, Humraahi was the top-rated program on Indian television. The estimated audience was 230 million viewers. In the series, a servant girl dies in childbirth at age 15 after being forced into an arranged marriage at age 14 by her parents. Following that key episode, the other characters lament what is happening to the young women of India and the tragedy of early marriage and pregnancy. A Rockefeller Foundation-funded study developed by William Ryerson showed that viewers, contrasted with non-viewers, changed significantly in their attitudes regarding the ideal age of marriage and the acceptability of women in the work place – two issues that were central to the story line.

**Kenya**

David Poindexter began working in Kenya in 1983 with the government-run Voice of Kenya, which later became the Kenya Broadcasting Corporation (KBC). After training Kenyan television and radio personnel in Mexico, he helped in the development of two programs: a television series, *Tushauriane* (“Let’s Talk About It”); and a radio series, *Ushikwapo Shikamana* (“If Assisted, Assist Yourself”). Both programs went on the air in 1987. The programs were aimed at opening the minds of men to allowing their wives to seek family planning. The programs also effectively linked family size with land inheritance and the resulting ability or inability of children to support their parents in their old age. Both programs were the most popular programs in their respective media ever produced by the Voice of Kenya.

By the time the two series had ended, contraceptive use in Kenya had increased 58 percent and desired family size had fallen from 6.3 to 4.4 children per woman. While many factors undoubtedly contributed to these changes, a study conducted by the University of Nairobi School of Journalism at rural health centers gave evidence of women coming in for family planning saying that the radio program had caused their husbands to allow them to come for family planning.

**Tanzania**

The most extensive evaluation of the effects of a social content serial drama occurred from 1993 to 1997 in Tanzania. There, Radio Tanzania broadcast a serial melodrama that attracted 58 percent of the population (age 15 to 45) in areas of the broadcast. By design, in one region of the country, the area surrounding the city of Dodoma, a music program was heard instead of the soap opera during the first two years of the project (1993-95). Then, from 1995-97, the soap opera was broadcast in the Dodoma comparison area.

Independent research by the University of New Mexico and the Population Family Life Education Programme of the Government of Tanzania measured the effects caused by the program with regard to such issues as AIDS prevention behavior, ideal age of marriage for women, and use of family planning (4,5). While the population of the Dodoma comparison area was more urban than the rest of the country, a multiple regression analysis eliminated the influence such differences might have accounted for. Nationwide random sample surveys of 2750 people were conducted before, during and after the broadcast of the program. Data were also collected from the AIDS Control Programme of the government, the Ministry of Health, and the Demographic and Health Survey, all of which reinforced the finding of
significant impacts on attitudes and behavior.
Among the findings were a significant increase in the percentage of the population who perceive that they may be at risk of HIV infection; an increase in people's belief that they can take effective action to prevent HIV/AIDS; an increase in interpersonal communication about HIV/AIDS; an increase in the belief that individuals, rather than their deity or fate, can determine how many children they will have; an increase in the belief that children in small families have better lives than children in large families; and an increase in the percentage of respondents who approve of family planning.
The study also provided evidence that the Tanzanian radio serial stimulated important behavioral changes. Over half the population of the areas where the serial was broadcast identified themselves as listeners, with more men than women in the audience. One of the key characters in the soap opera was a truck driver with many girl friends along the truck route. In the program he contracts AIDS. Of the listeners surveyed, 82 percent said the program had caused them to change their own behavior to avoid HIV infection, through limiting the number of sexual partners and through condom use. Independent data from the AIDS Control Programme of the government of Tanzania showed a 153 percent increase in condom distribution in the broadcast areas during the first year of the soap opera, while condom distribution in the Dodoma non-broadcast area increased only 16 percent in the same time period.
The program was also effective in promoting family planning. There was a strong positive relationship between listenership levels by district and the change in the percentage of men and women who were currently using any family planning method. The research also showed an increase in the percentage of Tanzanians in the areas of the broadcast who discussed family planning with their spouses. The program also had a significant effect in raising the ideal age of marriage for women and the ideal age of first birth for women.
In regions where the show was broadcast, the percentage of married women who were currently using a family planning method increased 10 percentage points in the first two years of the program, while that percentage stayed flat in the Dodoma area during the time the program was not broadcast there. Then, when the program was broadcast in Dodoma, the contraceptive prevalence rate there increased 16 percentage points. In regions where the program was broadcast, the average number of new family planning adopters per clinic, in a sample of 21 clinics, increased by 32 percent from June 1993 (the month before the show began airing) to December 1994. Over the same period, the average number of new adopters at clinics in the Dodoma area remained essentially flat.
Independent data from Ministry of Health clinics showed that 41 percent of new adopters of family planning methods were influenced by the soap opera to seek family planning. This included 25 percent who cited the soap opera by name when asked why they had come to the clinic, and another 16 percent who cited "something on the radio" and then identified the soap opera when shown a list of programs currently on the air. Another family planning serial drama using a different method that was broadcast nationwide by Radio Tanzania at the same time was cited by just eleven percent of new family planning adopters at the same Ministry of Health clinics. These data point to the importance of the methods used in the design of the serial drama.
Counting all of the costs of the radio serial, the cost per new adopter of family planning was under 80 cents (U.S.). The cost per person who changed behavior to avoid HIV/AIDS was 8 cents (U.S.).
Because entertainment programming (radio or television, depending on the coverage of each medium in any country) attracts the largest audiences, it is particularly important to utilize entertainment media for disseminating information about reproductive health issues. PMC works to develop comprehensive media campaigns in the countries where it is carrying out projects. Because of the strong evidence of their effectiveness, social-content serial dramas are, in most instances, a centerpiece of the strategy in any country. The strategy uses the best of what has been done in the past, and builds on it in each country with intensive
coverage of issues related to sexual risk behavior. In this way, PMC intends to contribute to rapid change in the health-related behavior of people worldwide.

PMC provides people with entertainment and information to help them make informed decisions without telling them what to do. PMC's approach emphasizes non-coercive, informed decision-making, tailored in each case to local needs and circumstances. Programs are designed to promote human health and dignity by providing education and examples of various alternatives and their consequences.

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Other examples of Enter-Educate

In other case studies we see more examples of E-E, including the use of animated video series in both India and Africa produced by UNICEF to promote the welfare of girls, and the use of television in Africa to promote social changes related to HIV/AIDS. In the United States for more than three decades, a program series called Sesame Street has taught preschoolers (and their parents) using entertainment and advertising devices. Quoting from its web page announcing its 2006 film/video production The World According to Sesame Street:

When it first aired in 1969, Sesame Street was considered groundbreaking. A product of the era's progressive and civil rights movements, it boasted the first mixed-race was to help level the educational playing field for all pre-school children. Sesame Workshop’s international co-productions now illustrate the current political and social environments of their home countries.

Today, Sesame Street is aired in more than 120 countries around the world, and Sesame Workshop is developing co-productions in India, Afghanistan, Indonesia, Northern Ireland and Brazil. The World According to Sesame Street illustrates both the many cultural differences and similarities of producing the children’s television program on a global level.

E-E need not be a mass media event. In Thailand, condoms were "desensitized" by using them in balloon-blowing contests. And for decades, street theater and other traditional

21 Illustrations of the international Sesame Street Story appear at: http://www.pbs.org/independentlens/worldaccordingtosesamestreet/film.html
media have been used to convey ideas and to persuade. Examples found in *Making Waves* include: *Teatro Trono* in Bolivia focusing on drugs, environment and gender issues; *Wan Solbag* in the Solomon Islands focusing on health, HIV/AIDS, environment and governance; *Aarohan Street Theatre* in Nepal – health and environment; and *Popular Theatre* in Nigeria – health and children's rights. Descriptions of each of these can be found on The Communication Initiative web page at: [http://www.comminit.com/materials/materials/materials-919.html](http://www.comminit.com/materials/materials/materials-919.html) and are available in English, French and Spanish languages. Printed "hard copies" copies in English are no longer available.

**APPLYING THE ENTERTAINMENT-EDUCATION APPROACH**

The Enter-Educate strategy has been used world-wide in a variety of contexts. A popular and successful one is Soul City, an AIDS communication project in South Africa. We provide two perspectives on this initiative. First, we will visit Soul City through *Making Waves*. Then Thomas Tufte of the Department of Film and Media Studies, University of Copenhagen explains how E-E works using Soul City as an example.

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**SOUL CITY AS E-E IN SOUTH AFRICA**

**Soul City Snapshot**

Matlakala comes back from work late, and Thabang is very angry. She tries to cheer him up by giving him a shirt she bought for him, but he throws it on the floor, verbally abusing her. He tells his children to go to their bedroom, and he slaps Matlakala hard across the side of her head, knocking her to the floor. The next morning he acts as if nothing happened and apologises to Matlakala. Thabang is having a problem with his salary at school he hasn't been paid for three months. He doesn't like the fact that Matlakala is supporting him. Nonceba [a friend] sees Matlakala's bruised face, and she asks her about it. Matlakala lies she say that she fell.

The Serithi family goes out for dinner and have a good time. Thabang overhears Matlakala telling her father about the beatings, and he is furious, "I told you not to discuss our business with anyone!" The children are terrified, but Bheki [their son] stops him from beating Matlakala again. Thabang tells Bheki he will understand when he gets older and is the man of the house. Thembi tells Matlakala that Thabang used to beat up her mother too. Matlakala goes to her mother and tells her what Thembi told her. Matlakala's mother tries to tell her that she must endure because Thabang paid lobola [a dowry] for her, and it is a woman's duty to make the marriage work.

Matlakala gets a wake-up call when a woman is brought to the clinic. Her boyfriend has stabbed her. Later the woman dies. Matlakala goes to stay at her parent's house. She refuses to go home until Thabang's family and her family have a meeting about his violent behaviour. Thabang's father tells Thabang that he must discipline Matlakala "according to tradition".

At the family meeting, Matlakala's father takes a strong stand as a man, against violence against women. The elder officiating emphasises that he has been around a long time, and nowhere in culture or tradition is violence against women condoned. A man who beats his wife is deemed a coward. Thabang apologises and the episode ends unclearly as to whether Matlakala will agree to return. (Excerpt from a TV Drama, Series 4.)

**DESCRIPTION**

*Soul City* is a South African health promotion project that harnesses the power of mass media for social change. Garth Japhet, a doctor and part-time journalist, founded *Soul City* in an attempt to put the power of mass communications in the service of preventing the spread of HIV and promoting healthier lifestyles. *Soul City*’s programmes are "edutainment", (education plus entertainment) an enriched version of traditional TV, radio and print. They are popular [and are] designed and produced to air in primetime, rather than in less-viewed educational
time slots. Though Soul City is first and foremost a television and radio series, the project pursues a dynamic, integrated and multimedia approach.

**Television Drama**
Soul City is one of the most popular programmes in South Africa, the winner of the Avanti award for excellence in educational broadcasting. About 2 million people watch the show every week. Each of the five series so far has focused at least some of their storylines on HIV/AIDS. Other health and social issues featured include mother and child health, diarrhea, smoking, rape and violence against women, disability, and alcoholism.

**Radio Series**
The messages and themes of the Soul City television drama are replayed through its radio series, entitled Healing Hearts. This consists of 60 15-minute episodes broadcast in nine languages on nine regional radio stations. The show was developed to appeal to more rural audiences who have less access to television.

**Booklets / Newspapers**
The Soul City campaign uses printed material to reinforce the broad messages conveyed by the electronic media and to supplement knowledge with more detailed information. The booklets are serialised in two languages, published in ten newspapers nationally, and thereafter in a total of 2.25 million booklets that are distributed as inserts in these newspapers during the broadcast period. Clinics and community based projects also receive copies for distribution.

**Public Relations and Advertising**
Public relations and advertising strategy have a dual role to popularise the television and radio shows and to advocate for particular health issues. A variety of competitions on the radio and television and in newspapers and magazines encourage health and positive community-oriented behaviour.

**Health Education Packages**
To bolster the awareness and knowledge created by the television show, Soul City uses more traditional youth and adult health education materials in formal and informal settings. Materials include comics with information pages, audiotapes and workbooks. Soul City is increasingly focusing attention on media advocacy for healthy public policy, recognising that communication strategies for meaningful social change cannot focus attention solely on individuals. There are many structural and environmental barriers in the way of individuals making healthy choices. And the need to advocate for healthy public policy, that can help create a supportive environment for behaviour change, is vital, says Shereen Usdin, from Soul City.

**BACKGROUND & CONTEXT**
South Africa is starting to recover after decades of strategic discrimination and enforced inequality. Though it is regarded as a middle-income country, the majority of South Africans still live below the bread line and millions subsist in circumstances resembling the poorest countries in the world.

National health statistics reflect the inequities of society, with large portions of the population suffering from preventable deaths and diseases. Although there have been campaigns to spread knowledge, the backlog in resources and decades of poor education are difficult to eradicate.

Soul City was conceived just after Nelson Mandela's release in 1991. It was a period of intense political and social activity. The activist spirit of the day created a fertile environment for pursuing an innovative and educational use of the public airwaves. The programme's ultimate success has depended on the quality of the programming.

There have been very few health education programmes aimed at challenging social attitudes and changing unhealthy behaviour patterns; Soul City set out to do precisely this in an imaginative and entertaining way that would be accessible to a broad range of people.

**ASPECTS OF SOCIAL CHANGE**
Dr. Japhet is quite clear-eyed about the impact of Soul City's programme. By itself, the
television and radio dramas do not dramatically change people’s public health behaviours. Rather, the programme creates a more fertile and helpful environment in which other public health activities and initiatives can function and succeed. Independent evaluations have shown Soul City’s ability to increase knowledge, shift attitudes and move people to action.

**Broad Reach**

The evaluations of Soul City demonstrated the popularity and extensive reach of the series: 61 percent of all respondents were exposed to the Soul City media; 57 percent of TV viewers saw Soul City TV; 41 percent of radio listeners heard Healing Hearts 37 percent of newspaper readers saw the booklets; 70 percent of young people, age 16-24 (Soul City’s targeted demographic) knew of the show. This kind of awareness was found equally in rural and urban areas.

**A Conversation Stimulant**

According to the evaluation, viewers and radio listeners talked about the show. Discussion took place at home between parents and children, at school between teachers and students, and among friends, particularly younger people.

**Shifts in Knowledge and Attitudes**

The second Soul City evaluation showed that 95 percent of those who had been exposed to Soul City media said they had learned something; 92 percent were aware of the AIDS epidemic, compared to 85 percent of those who had not been exposed to Soul City media. While Soul City has had considerable success providing knowledge and changing attitudes around health and other social issues, it has had less impact thus far on actually changing behaviours. For example, despite the series’ influence on smoking knowledge, no appreciable change in smoking habits was reported in surveys following the series.

**MEDIA & METHODS**

It is widely acknowledged that media is an efficient and cost-effective way of reaching large, dispersed and often illiterate audiences. The vast majority of South Africans, even in marginalised and remote areas, have access to at least one form of mainstream media—approximately 92 percent of South Africans have access to radio, 71 percent to television, and 17 percent read daily newspapers. The use of entertaining programmes to empower people with knowledge, however, is a relatively new concept in South Africa. Soul City has pioneered this *edutainment* approach, contextualising educational messages within a dramatic genre. “I don't believe mass media is the silver bullet. It has to be part of an integrated strategy. It's a catalyst”, asserts Dr. Garth Japhet. The strength of Soul City derives from a mix of strategies:

- **A multimedia approach**: Despite its reliance on television and radio, Soul City does integrate its health promotion with print and public relations activities.
- **A commitment to community-based research**: The messages and storylines of both the radio and television series are tested, refined and retested during each show’s development. Soul City conducts extensive formative research to ensure the issues are dealt with in a way that is relevant and meaningful for audiences.
- **Leveraging the power of stories and brand**: Soul City is not obviously didactic, leaving the actual teaching to its educational support materials and to the other health promotion efforts. This leveraging is one of the most innovative aspects. The characters are featured in comic books, in school, and adult education materials.
- **Creating an environment for change**: The popularity of Soul City has brought the issues of AIDS, tuberculosis, smoking, and others into public conversation.

**CONSTRAINTS**

The media environment is changing in South Africa, providing a greater variety of viewing options. Many other programmes are competing with Soul City’s efforts to reach as broadly and deeply as possible. If Soul City doesn't keep the edge, it could lose audiences. Soul City staff has developed significant and unique skills, but there are few people in the country who are trained or able to replace them. The success of Soul City has led to significant growth in the last three years, and the organisation is just learning how to deal with the managerial and other challenges associated with this expansion.

Demonstrating simple communication devices

Photo by R. D. Colle
Chapter 10
TOOLS FOR COMMUNICATION INITIATIVES: RESEARCH AND EVALUATION

Here is a viewpoint expressed in a "discussion" that took place via the Internet:

To get poor people's attention, health promoting messages must contain items (words, images, sounds...) that pertain to poor people's immediate needs and wants. Hence it is necessary to learn about their needs and wants before designing messages aimed at them, and to change needs into felt needs. [Javed S. Ahmad, The Global Fund]

When developing a communication advocacy or intervention strategy one of the earliest steps is the situation analysis. Another early step is setting up communication objectives. Both of these steps are related to the main focus of this chapter: evaluation. A situation analysis for a communication intervention should discover information about the knowledge, beliefs and dispositions of the key stakeholder groups, but especially those whose knowledge and behavior are targeted for change. In a situation analysis there is an emphasis on finding out what "they" know, what their felt needs are (as compared to the needs assumed by a government or an agency), what their perceptions are. Objectives are related the evaluation issue in another way. For example, we have noted in previous chapters that in considering the role and potential of information and communication technologies for development, it is common for donors, funders, planners and skeptics to look for quantified outcome data to determine the value of ICTs. To obtain suitable outcome data, an intervention needs explicit objectives that address the kinds of outcomes that people need to make their evaluations. Whether it is for the situation analysis or establishing relevant objectives, advocacy and intervention initiatives need practical research.

To present some of the issues related to research and evaluation, we examine an intervention reported in the Journal of Health Communication in 2000 (January).1 The intervention involved an entertainment-education radio soap opera series broadcast nationwide in Swahili, the national language of Tanzania, twice a week from 1993 to 1999. The soap opera series entitled Twende na Wakati (Let's Go with the Times) promoted HIV/AIDS prevention, family planning, gender equity, and other health issues. The soap operas were designed to stimulate interpersonal communication about AIDS among the listeners by presenting them with role models for HIV prevention behaviors. Evaluators gathered pre-intervention data using a personal interview survey in mid-1993 and then four more at one-year intervals through 1997, thus showing change over time. The survey questionnaire asked people to report demographic information, exposure to and perceptions of the soap opera programs and other HIV/AIDS information, as well as other relevant attitudes and preventative practices. These questions provided base-line data against which the outcomes later could be compared. Respondents consisted of self-selected women (from ages 15 to 49) and men (from ages 15 to 60), a selection method that resulted in a sample that favored people with higher socioeconomic status and those with access to radio.

Exposure to the soap operas grew overtime in both the treatment area and in a control area. In the treatment area, the percentage of people who were exposed to the soap operas had increased from 47% in 1994 to 58% by 1997. About 60% of those who were exposed to the soap operas were regular radio listeners. Seventy-three percent of the listeners from the treatment area reported learning about AIDS from the soap opera in1994, which increased to 85% of the listeners in1997.

The researchers found positive effects of the radio soap operas on the adoption of HIV/AIDS prevention practices among the listeners. The findings suggested that, after accounting for the potential effects of other national anti-AIDS programmes, 16% of the people in the treatment group had adopted AIDS prevention methods in 1996, and 12% in 1997, as the direct result of listening to the radio soap operas. The listeners who had adopted an HIV/AIDS prevention method reported reducing the number of their sexual partners (77% in 1995) rather than adopting condom use (15% in 1995) or ceasing to share razors (6% in 1995).

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In this case study we see a variety of outcomes (which were italicized in the preceding paragraph). To summarize, the evaluators measured exposure, awareness, learning (all mental changes), and listening and adoption (both being behaviors). The data that the evaluators report illustrate the importance of going beyond measuring output (broadcasting a certain number of soap operas) when the fundamental issue is behavior change. Furthermore, the data reinforce the challenge presented by the principles of selectivity in assessing outcomes: people are selective in exposure to communication messages, selective in their attention, selective in their perception, and selective in their retention.

**EVALUATION ISSUES**

Sprinkled throughout these Advocacy & Interventions are constant reminders about the importance of research in designing, implementing and evaluating communication programs. In Chapter 8 we noted three kinds of evaluation that are common in communication initiatives: formative evaluation, monitoring, and summative evaluation. Evaluation is research — and how to do competent and credible research is the subject of university-level studies. And these kinds of studies have many highly sophisticated methods — very often supported by computer programs and tests of significance. However, there are some more manageable research tools and techniques that communication people can use in the field to strengthen their planning and decision-making. We will explore these after we examine some of the issues related to evaluation.

**Why evaluation?**

Formative evaluation is done early in a project to assist in the planning process. We referred to this as situational analysis earlier. This kind of research yields data on people's perspectives concerning proposed behavioral or system changes, potential stakeholders, media available in communities, socio-economic and political factors that might influence design and execution of a project, and the direction that a communication program should take in support of a behavioral change intervention. A health communication intervention might include series of questions related to facts about the principal population (what are their current treatment practices?), the provider of health services (what are current levels of knowledge among health personnel regarding procedures?), the service delivery system (what facilities are available to provide treatment?), the communication media available and how people use and prefer them (what percent of the population can use the Internet), information about ministry and health program priorities (what is the financial long-term commitment to the communication intervention), and information about background influences and constraints such as resistance to the initiative's messages. These kinds of information help build the base-line data against which outcomes (the result of quantified objectives) can be compared to measure change.

Formative evaluation also includes pre-testing communication materials as well as logistics related to deployment of those materials. Do messages attract attention; do they stimulate discussion; are they believable? Do children actively respond to radio teachers? Will women visit a telecenter when men are there? Formative evaluation also takes place during the project in order to make adjustments in content, delivery, and feedback systems. In the Basic Village Education Project in Guatemala, in which radio broadcasting was used to help farmers in their agricultural work, evaluation reports told the project leaders that farmers felt as if they were being "talked down to" by the radio broadcasters; the farmers perceived that the authorities believed the farmers did not know farming. The project staff carefully reexamined the radio content and changed its tone. In an example described in detail below, leaders in a family planning project in The Gambia re-programmed various aspects of their radio broadcasting based on comments of women in focus groups.

Monitoring is sometimes considered a kind of formative evaluation. Typically it includes checking various logistics of a project such as: are members of the community using a telecenter and for what purposes; does the radio signal reach the intended populations; are the appropriate women participating in training sessions?

**Summative evaluation**

Summative evaluation (sometimes called impact evaluation) is carried out for a variety of reasons. Evaluation might be used to determine if the communication objectives were met; it may be

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used to *justify* an intervention and be the basis for new or continued funding; evaluation results might be used to help plan further actions by understanding and explaining *what happened* in an intervention (sometimes going beyond the explicit objectives and the related outcomes); researchers may want to learn *what works*, and some might be interested in *testing theories*.

Sometimes summative evaluation gets complicated because the data collected apply to results that include elements that go beyond communication. For example, at the end of a project, the evaluation process may deal with *behavioral* changes such as persuading a population to get inoculations for disease prevention. An evaluation of the effectiveness of this intervention would need to consider both the communication aspects of the intervention and the *enabling* aspects. The enabling aspects are those that are in the environment that make action possible (or impossible). Why is it important to distinguish between the two? If evaluation indicates a failure of the behavioral intervention, it is important to know what contributed to the failure. Consider an effort to get people to inoculate their chickens against Newcastle disease. It is conceivable that the communication part was successful; people were persuaded to inoculate their chickens, they knew how, but *the inoculants were not available at the local feed shop* — so the evaluation would need to probe why people did not act "appropriately." A new intervention might use the same communication strategy, but plan better the supply side. The mixing of communication objectives with other objectives is a particularly relevant issue in the digital age as some governments and donors question the impact (and therefore the funding) of computer and networking technologies. More than one development specialist has suggested the need for more convincing and systematic data — beyond anecdotes — that document positive impact. The complication often lies in the need for various enabling factors such as roads, clinics, and adequate water supply to enable people to adopt new behaviors. (We noted in Chapter 5 the "power" of social marketing in weaving together "the four Ps" to bring about behavioral change.)

**Who does the evaluation?**

Formative evaluation and monitoring are usually done by the intervention agency, although academic institutions or professional research organizations might be called upon to gather data and prepare a situational analysis. In summative evaluation a variety of possibilities exist. Evaluators from an independent organization outside the intervention agency can usually provide more sophisticated research techniques and give evaluation results a high degree of credibility. Program staff might do simpler evaluations and know better the intricacies and nuances of the intervention program. The staff members may have more confidence in their evaluation, trust it, and have a greater inclination to take action commensurate with their findings. Persons in the community other than the project staff can also be evaluators — providing evaluation criteria and perspectives especially from the position of those *acted upon*.

**What methods are used for evaluation?**

Methods for doing research for evaluations have various degrees of sophistication and complexity, and these vary depending on the size of project, the funding and other resources available for data gathering (as well as for data processing), the urgency to get the evaluation done, the characteristics of the population involved, and the purpose of the research. Among those methods most feasible for ordinary communication interventions are focus groups, interviews, surveys, and observations. An important way to obtain information for evaluation and for decision-making is to conduct focus groups. They are a form of qualitative research. They can produce highly descriptive and in-depth information, and clues about what people in communities think about issues around them — sentiments that are less easily captured in survey methods that are unfamiliar to ordinary people. The focus group research method does not provide data that can be construed as statistically representative of a community, but focus groups provide a quick reflection of issues in a community and the actors and forces that are associated with them. Done properly, focus groups can provide useful perspectives on both the intended and unintended consequences of an intervention.

The opening paragraphs of this chapter reflected an evaluation done using quantitative survey research. Another case from Kenya demonstrates the evaluation of a project using quantitative-oriented questionnaires administered in personal interviews. This is a project called *Nimechill*. It took place for seven months in 2004-5 and aimed its messages at 10-14 year old boys and girls using a variety of communication media including television, print, billboards, posters, and T-shirts. The communication objective related specifically to changing three perceptions of youth concerning
abstinence: social norms, self-efficacy, and intentions to remain abstinent. 3 The evaluation study conducted by PSI, a USA-based non-profit organization originally called Population Services International, dealt with how effective the campaign was in changing those perceptions and included a baseline pre-campaign study and a post-campaign study. Briefly, the campaign revealed that youth exposed to three or more of the communication channels used in the campaign were 12 times more likely than youth who had not seen any Chill advertisements to strongly agree with the statement “I will abstain from sex until marriage.” (The word Nimechill = “I am abstaining.”) Data were collected through interviews of youth 10-14 years old selected at random in Kenya’s 13 largest towns. For our purposes, the importance of the case lies in how the evaluation results were used. It produced the following recommendations for future campaigns:

• Regarding the content approach: emphasize social norms, self-efficacy, and risk perception, and consider using risk-based persuasion strategy (in addition to or instead of the “positive affect” theme of the initial campaign).

• Regarding operational issues: favor males in targeting, achieve high or multiple risk exposure, and note that campaigns longer than 7 months are needed to impact behavior; measurement improvements are needed.

Outcomes that appeared outside of the statistical, questionnaire-generated data apparently were identified by plain observation. These outcomes — probably not related directly to any initial communication or behavioral change objectives — are summarized by The Communication Initiative.

Anecdotally, the phrase "Chill" became so catchy that a variety of politicians and influential public leaders have been photographed with groups of youth raising the "V" or "Chill" sign that was established within the campaign. Mini-buses, often colourfully decorated with pictures of international music and sports stars, have taken the initiative to commission their own Chill logos for placement on their vehicles. In addition, entrepreneurs have manufactured their own Chill bumper stickers and regularly sell them for their own profit in bars and petrol stations around Nairobi. During the campaign, articles on youth and "chilling" regularly appeared in the national newspapers, and weekly discussions about "chilling" took place both formally and informally on the radio.4

MEASURING OUTCOMES

Deciding what aspects of a development intervention to measure is a crucial step in evaluation. In evaluating the communication effort, it is important to remember what communication can do. This usually means you concentrate on what the communication objectives are, and those objectives hopefully deal with such mental states as knowledge, beliefs, motivation and intent. As we suggested above and in Chapter 8, communication alone cannot increase rice output, nor high levels of child vaccinations. We turn to experts at the Center for Communication Programs for guidance on the indicators that evaluators can use to measure quantitatively particular communication objectives. Their discussion refers particularly to family planning and mass media campaigns; however the ideas and principles can be applied to other development-related issues. 5 The discussion includes measurement of both outcome and output variables.

MEASUREMENTS OF COMMUNICATION EFFECTS

The evaluation of communication effects usually take one of two forms …:

• the direct measurement of key indicators to answer the question: did the desired change occur?

• a more rigorous, quasi-experimental design to help answer the question: to what extent was the observed change caused by the communication intervention?


Both approaches use the same indicators; what differs are the study design and analytic techniques employed. The indicators outlined below are intended to operationalize the concept of the **steps of behavior change**:

- Knowledge
- Intention
- Approval
- Practice
- Advocacy

To this list we add one additional concept, considered an important prerequisite to this process: exposure to messages.

Given that the objective of most mass media interventions is to affect a sizable segment of the intended audience, it is appropriate to measure these indicators at the population level. Ideally, these data should be obtained from a representative sample of respondents in the intended audience using designs consistent with the needs for data on subsegments of the population and the need to generalize the results. However, because of time and financial constraints, quota sampling or convenience samples are sometimes used to obtain a general idea of trends. In addition, qualitative research techniques (in-depth interviews, focus groups, observation, and so forth) may be used to get additional insight into these indicators.

The hierarchy of effects is by no means limited to behavioral change for family planning or reproductive health. However, it has served as the conceptual model for much of the evaluation work done to date with respect to family planning; thus, the indicators below are described in relation to contraception only. However, to demonstrate the applicability of the model to other areas of reproductive health, Figure VI-1 provides an example of the hierarchy of effects in relation to the adoption of breastfeeding.

[For measuring impact] we present three indicators of process, followed by indicators for the hierarchy of effects.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>PERCENT OF COMMUNICATION PRODUCTS THAT ARE PRETESTED AMONG THE INTENDED POPULATION</th>
</tr>
</thead>
</table>

**DEFINITION**
Pretesting refers to the process of exposing members of the intended audience to a communication in near-final form to determine their reaction to the material. This information is used to modify communication, with the goal of maximizing its impact and utility.

**DATA REQUIREMENTS**
Evidence that pretesting has taken place (e.g., the results obtained and the subsequent changes made to the communication) for each communication produced.

**DATA SOURCE**
Program records (files) and interviews with key informants.

**PURPOSE AND ISSUES**
Pretesting is a standard practice in the design of communication in the private (commercial) sector, which has been widely adapted for use in social marketing and communication campaigns. As mentioned above, the purpose of the pretest is to assess the extent to which the audience will (1) get the message(s), (2) comprehend the message(s), (3) find the presentation appealing, (4) believe the message to be true, (5) identify with or relate to the individuals presenting the message, (6) find message and the medium culturally acceptable (nonoffensive), and (7) apply any of the "cues to action" in the message to their own situation. 

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6 There is general agreement among different authors and organizations that these are the key variables to measure. The Center for Communications Programs summarizes these in the form of the seven C’s: Are the materials clear? Are the materials consistent? Do they convey the idea of personal benefit? Do they cater to the heart (e.g., have emotional appeal, as well as rational)? Do they create trust? Do they include specific cues to action?
The purpose of this indicator is to monitor the extent to which pretesting is used in the design and thereby assess the commitment of a program to the production of quality communication products. Pretesting can also be used to persuade policymakers and gatekeepers that messages and materials are acceptable to the intended audience. Since gatekeepers are often more conservative than the intended audience, a successful pretest is often useful for getting gatekeeper approval.

One issue in applying this indicator in an evaluation is “what constitutes a pretest?” For example, an evaluator might hear “yes, we pretested in-house, getting reactions of the office staff;” or “we had it reviewed by the experts at the University;” or “it is a lot like the poster we did last year so we did not need to pretest.” These responses do not meet the criterion of including members of the intended audience in the pretesting.

Another issue in pretesting is the assessment of the media used to carry the message. Often pretests are done in controlled environments and focus only on content. The pretest can also be used to assess how the message is transmitted. A few examples of the questions that a pretest might answer, include:

- Is the information broadcast too specific for the general audience of television or radio?
- Are the messages and the media compatible (e.g., complex compliance information in a 30-second television spot)?
- Does the medium have credibility with the audience?
- Is media exposure likely to generate a negative reaction?
- Do images created for static media (drawings for flip charts) have the same impact in a dynamic media (television or video)?
- Do television audio tracks work when broadcast over radio?

Some of the lessons learned in pretesting can be applied to a broad range of other communication products.

It is useful to document the findings from individual pretests and review results over multiple pretests in an effort to identify recurrent preferences or problems among different groups. The documentation of results allows these lessons to be shared with others, resulting in generally better quality products. Similarly, if there is to be a series of communications produced that have a similar format, then the first may serve as a "pretest" for the second (although a "true pretest" is preferable).

Pretesting can not guarantee that a message will reach or be effective among the target population, but it greatly enhances the probability that it will be well-liked, accepted, and remembered by the target audience to which it is delivered.

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**Indicator**

**NUMBER OF COMMUNICATION PRODUCTS PRODUCED, BY TYPE, IN A REFERENCE PERIOD (E.G., ONE YEAR)**

**DEFINITION**

“Communication product” refers to one or more messages packaged as a single item on electronic, print, or other tangible medium (e.g., radio spot, poster, brochure, video, etc.).

**DATA REQUIREMENTS**

Listing of items produced in the given period of time.

**DATA SOURCE**

Administrative records.

**PURPOSE AND ISSUES**

This listing constitutes an internal inventory for the program or project, generally done by type of communication. This inventory reflects the capacity of the program to generate materials; as a process indicator, it serves the useful purpose of creating a sense of accountability among IEC staff responsible for production. It does not reflect the frequency or reach of the diffusion of each product, nor does it measure the quality of the items produced.
Chapter 10 | Tools for Communication Initiatives

Indicator
NUMBER OF COMMUNICATIONS DISSEMINATED, BY TYPE, DURING A REFERENCE PERIOD (E.G., ONE YEAR)

**DEFINITION**
"Disseminated" refers to (a) the external transmission or distribution of the communications produced via electronic, print, or other media, and (b) to interpersonal activities or public relations events implemented.

**DATA REQUIREMENTS**
Listing of communication products disseminated and of activities conducted during a given period of time (e.g., one year).

**DATA SOURCE**
- Log books of radio and television stations, tallying the number of broadcasts of each spot or program;
- Routine media monitoring and ratings;
- Broadcast monitoring by staff or volunteers (allows verification of logs);
- Data from program records on number of posters or brochures distributed to service delivery points (SDP) or other outlets, or number of communication events carried out.

**PURPOSE AND ISSUES**
This indicator measures productivity of the IEC Unit, specifically the quantity and type of communication disseminated (irrespective of whether anyone sees/hears them, understands them, or acts on them). "Getting the message out" is a necessary though not sufficient condition to initiate members of the target population into the hierarchy of effects.

IEC programs should have a plan for the diffusion of communication products. The plan is essential to (1) set production requirements, (2) guide immediate distribution of specific products, and (3) guide long-term distribution including issues of replacement, provision for new sites, and demand from outside the program. The plan also serves to set implementation targets for the program during the reference period. It is useful to be able to compare planned and actual distribution in assessing program performance.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>EXPOSURE TO MESSAGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of Exposure</td>
<td>Indicator(s)</td>
</tr>
<tr>
<td>Exposure to family planning messages</td>
<td>Percent of audience who recall hearing or seeing specific FP messages, by channel (spontaneous and aided)</td>
</tr>
<tr>
<td></td>
<td>Number of Messages recalled</td>
</tr>
<tr>
<td></td>
<td>Number of Media that Carried the messages(s) recalled</td>
</tr>
<tr>
<td></td>
<td>Recall (for social dramas and traditional theater) of:</td>
</tr>
<tr>
<td></td>
<td>• preferred character</td>
</tr>
<tr>
<td></td>
<td>• favorite segment</td>
</tr>
<tr>
<td></td>
<td>• story lines</td>
</tr>
<tr>
<td>Comprehension of family planning messages</td>
<td>Percent of audience who correctly interprets FP messages that are recalled</td>
</tr>
</tbody>
</table>
DATA REQUIREMENTS
Self-reported responses from surveys.

SOURCE(S)
National, regional, or local sample surveys with members (preferably a representative sample) of the intended audience.

PURPOSE AND ISSUES
Reaching a large audience is one of the strengths of mass-media communication. Recall of specific messages provides a measure of the reach of a given communication campaign. ("Exposure to" and "reach of" a communication program are equivalent concepts.) Exposure is an operational indicator, used to determine whether the messages sent were received by the intended audience. It does not imply the messages were liked or accepted, but only that they reached the audience.

The exposure to messages and channels allows evaluators to assess the differential reach of various channels. Does television provide more exposure than radio? Which channels are better for reaching selected subgroups such as adolescents? The answers to these and similar questions help program managers plan new projects and allocate limited resources.

Two types of recall are frequently used: spontaneous and aided. Spontaneous recall is obtained from such questions as: Have you heard anything about family planning on the radio in the last six months? In an aided response, the respondent is assisted by being asked whether he/she has heard of the "_______" message, which was not spontaneously mentioned. This type of aided or prompted recall is sometimes called "recognition." The same can be done for specific characters or episodes, the plot of serial dramas, for logos, songs, and even for memorable phrases, such as "Stop at two and raise them well" or "Just say no." Since there can be several messages in an IEC campaign, the responses regarding specific messages can be (a) weighted more heavily for unaided versus aided recall, and then (b) summed to arrive at a continuous variable measuring level of recall....

<table>
<thead>
<tr>
<th>Indicator</th>
<th>KNOWLEDGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of Knowledge</td>
<td>Indicators</td>
</tr>
<tr>
<td>Knowledge of FP methods</td>
<td>Mean number of FP methods known (spontaneous and aided recall)</td>
</tr>
<tr>
<td></td>
<td>Level of method-specific knowledge</td>
</tr>
<tr>
<td></td>
<td>Percent of audience who acquires skills to use contraceptives</td>
</tr>
<tr>
<td>Knowledge of source(s) of contraception</td>
<td>Percent of audience who can name a source of supplies</td>
</tr>
</tbody>
</table>

DATA REQUIREMENTS
Self-report from surveys.

DATA SOURCE
National, regional, or local sample surveys with members (preferably a representative sample) of the intended audience; routine media monitoring and ratings.

PURPOSE AND ISSUES
As with exposure, knowledge of FP methods is commonly measured in two ways: spontaneous and aided recall. For example, the DHS questionnaire is constructed to facilitate this process. Results may then be reported separately (for unaided and aided responses) or in combined fashion, under the label of "knowledge."

The unaided (spontaneous recall) and aided (recognition) types of knowledge can be combined to calculate the percent of the audience who can remember at least one broadcast message, or summed to construct an index of each respondent's level of recall to achieve the equivalent of a dose-response effect. The summed score for each respondent may also be split at the median to form measures of high and low exposure. The average number of messages recalled and/or recognized by the population can also be computed. In general, the greater a respondent's level of recall, recognition, understanding, and skill acquisition, the greater the impact of the mass media intervention on the audience's knowledge of family planning.
Follow-up questions can establish how well respondents understand each message. For contraceptive methods, questions can be included to verify how well respondents know how to use them. For example, what should a woman do if she forgets to take an oral pill for one day? Two? If interpersonal skills, such as negotiating contraceptive use or safer sex practices with one's partner, are modeled in a radio or television drama, then survey respondents can be asked to describe in their own words how they would do it themselves. Answers can be checked to see which techniques or ideas correspond to, and were learned from, the broadcasts. Respondents can also be asked directly where they learned specific skills in order to confirm that mass-media programs were the primary sources. For example, surveys of new acceptors at clinics are often used to monitor the source of referral or factors that motivated the clinic visit.

There is some objection to using the term "knowledge" to describe the recall/recognition or awareness of specific methods, on the basis that this does not reflect the depth of information a person possesses regarding the method. Thus, some surveys go beyond recall of the name of the contraception to questions regarding correct use, contraindications, and related questions.

Similarly, some FP messages are designed to teach a specific skill. For example, in the Turkish feature film *Umet Hep Vardi*, the heroine, a young nurse-midwife, explains to women in the village clinic how to use various contraceptives — at the same time informing the film's audience. In an Egyptian TV spot "Dr. Karima Muktar," speaking directly to the audience, tells viewers how to take oral contraceptives.

Finally, it is important to know where methods are available. Thus, population-based surveys often ask respondents to name one or more locations that provide FP/RH services.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>APPROVAL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type of Approval</strong></td>
<td><strong>Indicator(s)</strong></td>
</tr>
<tr>
<td>Responds favorably to family planning messages</td>
<td>Percent of audience who reacts positively to FP messages (a specific message or to the diffusion of FP messages in general)</td>
</tr>
</tbody>
</table>
| Discuss family planning with one's personal network | Percent of audience who reports talking about FP with one's spouse, friends, and relatives as a result of exposure to FP messages

Thinks others approve of family planning practice

| Approves of family planning practice | Percent of audience who approves of using contraceptives for spacing and/or preventing pregnancies |

**DATA REQUIREMENTS**

Self-report from surveys and other audience measurement tools.

**DATA SOURCE**

National, regional, or local sample surveys with members (preferably a representative sample) of the intended audience; also, content analysis of solicited feedback, especially letters and calls.

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7 If possible, it is desirable to determine whether the content of the communication is positive or negative. This indicator is also conceptually linked to advocacy (see below).
PURPOSE AND ISSUES
Four distinct types of approval may be measured.

**Message approval** indicates whether or not audience members agree with the family planning messages they have heard or seen, and how much they liked or had other positive emotional reactions to them.

**Personal approval** is the extent to which audience members themselves approve of using contraceptives to space or prevent pregnancy. This is generally considered a necessary but not sufficient condition for adopting a contraceptive method.

**Social network** approval is the extent to which audience members believe that members of their immediate social networks approve of or encourage them to practice family planning. If approval is perceived to be low and negative, then the social cost of adopting contraception is high. If approval is perceived to be high and positive, then the social cost is low and the social environment can facilitate behavioral change and maintenance. This implication, supported by theory, is that the decision to adopt family planning is more than an individual choice.

A more expansive concept is **community approval**, defined as the perceived level of family planning approval and practice among other couples in one’s larger community. In some cases, like a rural village, a respondent’s social network and the community may be exactly the same. Community approval, while more distant from the process of decision making, can influence behavior directly or indirectly through influence on the social network. Mass media is a useful tool for changing the ways in which audience members perceive their social environment and the extent to which they believe their social network and community supports family planning.

The discussion of family planning within a personal communication network is a secondary indicator in the sense that it provides confirmation of interest and emotional response for the message. The actual discussions can be either positive or negative in reaction to the message. The discussions can also be interpreted as part of the process of reinforcement or change in community norms.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>INTENTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of Intention</td>
<td>Indicator(s)</td>
</tr>
<tr>
<td>Recognizes that family planning meets a personal need</td>
<td>Percent of audience who believes FP practice is personally relevant for one or more of their needs</td>
</tr>
<tr>
<td>Intends to consult a FP provider</td>
<td>Percent of audience who has decided to consult a FP provider for information and/or advice</td>
</tr>
<tr>
<td>Intends to practice family planning</td>
<td>Percent of audience who has decided to use a contraceptive method within a fixed time period (e.g., the next 12 months)</td>
</tr>
</tbody>
</table>

DATA REQUIREMENTS
Self-report from surveys.

DATA SOURCE
National, regional, or local sample surveys with members (preferably a representative sample) of the intended audience.

PURPOSE AND ISSUES
The decision to practice family planning can take the form of a statement of intent to take action at some point in the future. The value of measuring intention can vary depending on the stage of the program or the intended audience. For example, in early or low prevalence programs (low down on the Hierarchy of Effects), where media objectives are creating awareness, increasing knowledge, and changing attitudes, intention to use is an important step to behavioral change. In programs where the audience is not yet in a position to act (e.g., adolescents being encouraged to delay initiation of sex), intention to use contraception when appropriate is a good indicator of short term impact because long-term behavioral change is not available.
Intention is relevant among members of the intended audience that do not yet practice the behavior. It can be measured by means of yes/no question, “Do you intend to (specific health behavior) in the next 12 months?” Degree of intention or probability of adopting the practice may also be measured by asking members of the audience to respond in terms of a five-point word scale of likelihood (definitely, probably, unsure, probably not, and definitely not).

Unless individuals perceive a personal benefit in making a decision, no matter how much they may approve of the behavior in principle, they are less likely to take action. Intention is an important benchmark on the path from knowledge to practice. It marks an individual’s recognition of a need or a perceived benefit that incites him/her to act. At the simplest level, one may have a need to avoid or delay pregnancy. The expected benefit to be derived from avoiding pregnancy can be stimulated by a variety of motives: getting more time for oneself, providing better care for existing children, improving relations with one’s spouse, further recovery from the last pregnancy, and so forth. The consequences (positive and negative) of practicing family planning may or may not be perceived, and will certainly vary from person to person and across cultures.

Mass media generally focus on creating awareness of a benefit or sparking a latent need: (“Are you thirsty?” “Do you want your children to be healthier?”) The ability to create a felt need can be measured by the reported intention (“I want to buy that drink.” “I intend to use ___ because it will make my children healthier.”) Based on theories of persuasion, the messages designed for family planning IEC interventions usually attempt to link practice to new benefits/values, increase the importance of those values, and/or strengthen the belief that such benefits will indeed result from FF practice. Focus group discussions or in-depth interviews with audience members are used to identify the most important attitudes related to family planning intention and practice. A variety of instruments have been developed to measure them. Results may be expressed as the percent agreement with each attitude statement or as the sum or mean level of agreement with all of those included.

The relationship between attitudes and behavior is usually mediated by intention. Not all individuals who have intentions can act on them immediately. In the case of family planning, many members of the audience desire another child, are currently pregnant or breastfeeding, or may not have access to contraceptives. Communication programs can affect the attitudes and the intention to change behavior (use contraception), without affecting behavior. Intention, as a step in the behavior change process, is “necessary but not sufficient” to predict with certainty behavioral change.

### Table: Indicators of Family Planning Practice

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Type of Practice</th>
<th>Indicator(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visits a FP provider</td>
<td>Percent of audience who has visited a FP provider and has obtained information, advice, or contraceptive supplies in a given period (e.g., the last 12 months)</td>
<td>Number of new client contacts (based on clinic records)</td>
</tr>
<tr>
<td>Begins contraceptive use</td>
<td>Percent of current users who initiated use in reference period between measurements</td>
<td>Percent of married women (or alternatively, of all women) of reproductive age who use contraception</td>
</tr>
<tr>
<td>Continues contraceptive use</td>
<td>Number of new acceptors, by method (based on clinic records)</td>
<td>Percent of married (or all) women of reproductive age who have used contraception uninterrupted for at least 12 months (Alternatively, mean duration of contraceptive use among users)</td>
</tr>
</tbody>
</table>

**DATA REQUIREMENTS**

Self-report from surveys; (alternatively) clinic or provider service statistics.

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8 Some would argue that this should be modified to “Continue correct contraceptive use.”
DATA SOURCES
National, regional, or local sample surveys with members (preferably a representative sample) of the intended audience.
(Alternatively) program records (service statistics); sales data by method from pharmacies; wholesale distribution records from social marketing programs.

PURPOSE AND ISSUES
In sample surveys such as the DHS, contraceptive practice is self-reported. After being queried on which contraceptives they know, respondents are asked if they ever have and if they are currently using a contraceptive method to delay or to prevent pregnancy. The percent of the sample answering “yes” to current use is a measure of contraceptive prevalence, which can be further broken down by method. This information can be used to classify respondents into non-users, users of traditional methods, and users of modern methods.

Specialized service delivery programs evaluate “practice” by looking at contraceptive prevalence by “source of supply.” Social marketing programs, for example, track the percent of the population obtaining contraceptives from the commercial sector.

The data generated from service statistics provide another tool for measuring of changes in contraceptive use. These data have several advantages: they provide continuous information over time, have a consistent quality (or lack of quality), are derived from existing data systems, and provide immediate feedback to program managers at the local level. Similar data can be collected at "sentinel site" facilities. The two program-level indicators mentioned above-number of new client contacts and number of new acceptors—are useful in evaluating mass-media campaigns, since it is possible to link changes in these indicators to the period of the campaign. The use of existing data collection systems also reduces the cost of evaluation.

An objective of some communication campaigns is to change the mix of contraceptives being used: shift users of traditional methods to modern methods, increase the use of long-term methods, shift high risk users to permanent methods, and so forth. Changes in method mix at the population or program level can be linked to media interventions....

<table>
<thead>
<tr>
<th>Indicator</th>
<th>ADVOCACY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type of Advocacy</strong></td>
<td><strong>Indicator(s)</strong></td>
</tr>
<tr>
<td>Advocates FP practice to others (often acknowledging own benefits from FP practice)</td>
<td>Percent of audience who recommends FP practice to friends and relative, privately and publicly</td>
</tr>
<tr>
<td>Advocates FP program participation to others</td>
<td>Percent of audience who speaks out or publicly participates in activities in support of the FP program</td>
</tr>
</tbody>
</table>

DATA REQUIREMENTS
Self-report from surveys.

DATA SOURCE
National, regional, or local sample surveys with members (preferably a representative sample) of the intended audience; in addition to an audience of the general population, the respondents could include: users, dropouts, providers, community leaders and policy-makers. Surveys could measure advocacy indicators, as above, or perceptions of advocacy at the community level. Advocacy can also be assessed qualitatively through observations of participation at community advocacy events, monitoring media position on FP, or monitoring the public affirmation of influentials in support of family planning programs.

The indicator of practice assumes that contraceptive supplies or other commodities are actually available.
PURPOSES AND ISSUES
A major problem in family planning programs is the high rate of drop-outs. Discontinuation of oral pills, for example, has been found to be as high as 50 percent within one year of adoption. For the overall contraceptive rate to increase over time, the rate of new adoption and renewed adoption has to compensate for the level of discontinuation. Cutting the drop-out rate in half may be the easiest way to increase the overall rate of prevalence. The advocacy stage of behavioral change involves several processes expected to reduce discontinuation.

Behavioral change cannot be expected to continue unless the expected benefits are realized or confirmed in practice. In other words, the positive outcomes of contraceptive use reinforce that use and increase the probability of continuation. Furthermore, the continued use of family planning can be expected to be higher among individuals who not only receive benefits but also tell others about them. Public expression serves to reinforce one’s own behavior while at the same time creating a social environment which reinforces others’ behavior or influences others to change their behavior. Mass-media programs can be designed to remind current users that many of the changes in their lives are related to their practice of family planning. Programs can also encourage satisfied users to talk to their friends or to come with them to the clinic. The goal of these interventions is to confirm individual behavioral change through advocacy of use to others, and to establish family planning as an established social norm everyone can follow. According to this argument, it is not enough that an individual practice family planning in secret. Contraceptive users should also be willing to tell their friends and encourage them to do the same. Bearing public witness or providing testimonials on the benefits of use, strengthens commitment as well as persuading others.

If family planning programs are to be sustainable, policymakers and influentials must know that local communities support and favor the program. Thus, the willingness of satisfied users, family planning workers, and others to speak out publicly in favor of national or local family planning programs is also an important indicator of impact and sustainability.

IV. HIERARCHY OF COMMUNICATION EFFECTS: MODEL APPLIED TO OTHER REPRODUCTIVE HEALTH INTERVENTIONS
In the previous section we presented the hierarchy of communication effects in terms of family planning only. However, this model is equally applicable to other reproductive health interventions, as shown in the breastfeeding example, in Figure VI-1, directly below.

FIGURE VI-1. HIERARCHY OF COMMUNICATION EFFECTS FOR THE PROMOTION OF BREASTFEEDING

<table>
<thead>
<tr>
<th>Exposure</th>
<th>Percent of audience who recalls hearing or seeing a breastfeeding message, by channel</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of messages recalled</td>
</tr>
<tr>
<td>Knowledge</td>
<td>Percent who can name three benefits of breastfeeding</td>
</tr>
<tr>
<td></td>
<td>Percent who know ideal timing to initiate breastfeeding</td>
</tr>
<tr>
<td>Approval</td>
<td>Percent who believe family members approve of breastfeeding</td>
</tr>
<tr>
<td></td>
<td>Percent who approve of breastfeeding themselves</td>
</tr>
<tr>
<td>Intention</td>
<td>Percent (of pregnant women) who intend to breastfeed</td>
</tr>
<tr>
<td></td>
<td>Intended duration of breastfeeding (in months)</td>
</tr>
<tr>
<td>Practice</td>
<td>Percent of new mothers who initiate breastfeeding</td>
</tr>
<tr>
<td></td>
<td>Percent of new mothers who breastfeed for at least ___ months</td>
</tr>
<tr>
<td>Advocacy</td>
<td>Percent who recommend breastfeeding to friends</td>
</tr>
</tbody>
</table>

10 While willingness to discuss one’s own use of contraceptives with others generally does reinforce personal commitment to this behavior, it may not be essential for successful contraceptive use, especially in societies where discussion of personal matters is taboo.
FOCUS GROUP RESEARCH

Earlier we mentioned that the focus group research method does not provide data that can be construed as statistically representative of a community, but focus groups provide a quick reflection of issues present in a community and the actors and forces that are associated with them. Done properly, focus groups can provide useful information related to the situational analysis and to the information needs of a community, and, for example, information about community resources that might be helpful in establishing community data-bases, and the feasibility of setting up local telecenters. Focus groups can also provide information on "what happened" — results of the intervention that were not reflected in quantitative measures. The excerpts that follow from "Lessons Learned: Questions About Qualitative Research" are about the how to of focus group research.[11] They were especially prepared in relation to family planning information, education and communication (IEC) interventions in Africa, but the principles and lessons can be applied in almost any communication intervention. Following "Lessons Learned" is a short piece illustrating how a focus group effort influenced the shaping of a communication project in The Gambia.

THE "HOW TO" OF FOCUS GROUPS

When should you use focus groups; when in-depth interviews?

Focus groups reach more people more quickly than in-depth interviews and do not require as much training for the personnel conducting them. Thus they are usually the better option. Sometimes, however, it may be difficult to gather a group of 10 or 12 people from the target audience in the same place at the same time. Some target audiences, such as lapsed contraceptive users or AIDS patients, may be spread over a large area. Others, such as service providers or businessmen, may not be readily available. In-depth interviews can reach these audiences more effectively and have the added advantage that respondents may be more willing to discuss sensitive subjects in privacy than in a focus group situation.

How many focus groups sessions should be scheduled?

Time, personnel, geographic location, and money all play a role in determining the optimum number of focus groups to hold. A major reason for doing focus groups is to collect information quickly; therefore, limit the number of sessions to the minimum necessary to gather the desired information. Look at the sampling strategy carefully: if the right groups of people are assembled, fewer focus groups will be needed overall. Generally, 10 - 12 groups are ideal, unless a massive well-funded national campaign is planned. More than 20 groups may delay analysis and burden the staff. At least two focus groups are necessary to produce adequate data. [In general] stop conducting focus groups when the results become repetitive. Additional focus groups that sample different ethnic groups or geographical areas may be valuable, depending on the purpose of your research and the resources available for the IEC activities. Extra focus groups that cover the same audience are a waste of resources.

What happens when too many focus groups are held?

It takes longer not only to collect the information but also to analyze the results. This delay may, in turn, hold up the implementation of an IEC program — or it may mean that the program goes ahead without the information the focus groups were supposed to provide.

How should the composition of focus groups be determined?

Include all demographic, socio-cultural, and economic groups that are pertinent to the research aims. Most African countries have many different ethnic groups with widely differing beliefs. Attitudes, concerns, and levels of knowledge also differ from rural to urban areas. Since it is impossible to generalize from one of these groups to another, the focus groups must sample every group that is important to the project. If you are planning a national program, you may need

to have many focus groups of different ethnic groups, provinces, and rural and urban locations. To evaluate a local IEC campaign, however, a few focus groups in a single city may suffice. Equally important are variables that distinguish among individuals within the same community: sex, age, marital status, number of children, contraceptive status, education, socioeconomic status, and employment. The program research aims determine which variables are important. For example, if the objective is to examine how women decide whether to continue using contraceptives or not, include only past or current contraceptive users, perhaps diversifying the groups by number of children and educational background. To get the full range of popular opinion on family planning issues, however, it is best to sample groups of both sexes and all ages, as well as people with varied family sizes and contraceptive experience.

How should the participants be selected? Ideally, participants should be chosen randomly, but this is hard to achieve. Participants often are those who are the easiest to reach or those who are known to the organizer or the village chief. This selection bias may affect the results of the focus groups in unforeseen ways. If, for example, the village chief hand picks the participants (and perhaps even briefs them ahead of time), the participants may feel obligated to tailor their responses to suit the chief's ideas and opinions. Likewise, if any local leaders are included in the focus groups, the other participants will not express their own opinions but will simply follow their lead. When the participants are those individuals who are most accessible and available, the group may not fully represent the target audience; instead, it may be biased towards a certain socioeconomic or occupational group. Given these potential pitfalls, it is important to think through the selection process beforehand and to make note of these shortcomings when reporting the focus groups results.

When in the field, it is important to maintain control over the selection process. Everyone in the area may want to participate, and they must understand why they cannot. Explain the situation to the chief or other person in charge, and try to make him your partner. Even if the chief understands and agrees with your selection process, it still means going from door to door to locate people who fit your criteria and have time to participate. Age may pose a special problem: people may not know their exact date of birth, or they may think the very question is insulting.

Should participants know one another? While classic focus group design specifies that participants should not know one another, this may not be possible in an African setting. In villages where everyone knows one another it is simply impossible. In addition, villagers (and even city dwellers) may be more comfortable exchanging views with people they know and trust than with strangers. However, when the focus group touches on such intimate issues as rape, sexual experiences, and contraceptive choices, participants may not wish to reveal their personal experiences and opinions to friends and neighbors. In Cote d'Ivoire, for example, the students did not discuss their personal experiences during the first formal focus group discussions.

Can men and women participate in the same group? It is better not to mix men and women in the same group, especially when the topic is family planning. In some regions, women do not discuss family planning issues with men in privacy—and less so in groups. Also, no matter what the topic, women often assume a passive role when among men, so their views are under-represented in mixed groups.

What special challenges do women's and youth groups pose? Women often bring babies and young children to focus groups. The presence of children may preoccupy their mothers and disrupt the general discussion, thus compromising the quality of the information gathered. The best way to deal with this problem is to explain, beforehand, why it is so important that children be left at home. As for young people, family planning may be viewed as a sensitive topic for adolescents in some countries. Permission from parents and people in authority may be needed before holding a focus group. Make sure that the families and authorities understand the topic and purpose of the focus groups beforehand and that they approve. Be sure that participants know they will not be quoted by name.

Who should moderate? Moderators should preferably be trained personnel. When they are not available, look for people who are literate, fluent in the local as well as the national language, and comfortable working in
front of groups — such as social workers or teachers, for example. Moderators should not know the participants, nor should they be people who the participants may have to work with in the future. Rather than advertising in the newspaper, ask local contacts (perhaps in the Ministry of Health or a family planning organization) to recommend candidates. Moderators recruited in this way will most likely be more motivated and work harder because they feel personally responsible to the person who referred them.

In theory, focus group moderators are not supposed to be authorities on the topic under discussion; the fear is that participants might try to please such moderators by expressing greater interest or more positive attitudes than they actually feel towards the subject. However, health personnel do have some special advantages as moderators for focus groups in Africa: they already know about family planning and can answer participants’ questions afterwards; their position establishes their credibility; and their participation gives them insights into popular thinking that will enhance their future performance on the job. Do not enlist service providers such as doctors, who will be more likely to use language that is too technical.

What are the key issues in training moderators?

It is vital to stress group dynamics since formal educational systems in Africa do not encourage discussion. Moderators need training in how to get participants to talk and on the importance of allowing them to talk. Practice in conducting focus groups is critical to their success, especially in developing their ability to use probing questions—though the specific techniques will vary from one culture to another. As with all skills, conducting focus groups requires practice to master the technique.

It may save time in the long run to expose moderators to the process of analyzing focus group results, because it will help moderators to summarize properly each of the focus groups they conduct. Properly summarized focus groups will help make the final analysis available for the programs in a more timely manner.

In addition, moderators in training need clearly detailed descriptions on the practical side of the job, especially regarding time and money. Specify the hours that moderators are expected to work, including lunch breaks, days off, travel, meals, and what expenses will be reimbursed. This will minimize confusion and disruptions once field work begins.

What is the best way to prepare for a focus group discussion?

Thorough preparation can limit later problems in the field. Be sure that the research aims and sampling design can be clearly communicated to others. Then, contact the village chief and other local leaders to explain the project. If these leaders are willing to cooperate, they will open doors, expedite participant selection, and ensure that people cooperate.

Also, do not overlook basic logistical issues. Locate an affordable, available, and easily accessible facility in which to hold each focus group and arrange for refreshments to be served to participants.

Is it better to take notes or tape-record sessions?

The choice here is not clear cut. Taking notes at a focus group is not easy and it requires substantial training. While taping the focus groups may cut the number of trained personnel needed by half, it poses problems of its own. Ensuring good sound quality requires a reliable tape recorder, ample back-up batteries, and some expertise in their use.

No matter which technique is chosen, it is important to let the participants know ahead of time that their words will be recorded, and be sure they consent before proceeding.

How do you analyze focus group results?

Analyzing the results may be the most difficult part of carrying out a focus group. Relatively few people are trained in qualitative analysis, and it is not an easy skill to obtain. It is difficult to remain objective and refrain from making judgments when evaluating focus group transcripts. Learning how to analyze focus group results takes time, including training, practice, and continuing supervision.

Make sure that there will be someone available to do the analysis before carrying out a series of focus groups. Either locate a local person with experience in analyzing focus group results, arrange for someone to be trained, or bring in an outside analyst.
What limits are there on focus group data?
Because the number of participants is small, the selection process is not truly random, and the questions and answers are not strictly structured, focus group results cannot be statistically significant and cannot be analyzed quantitatively. It is therefore meaningless — and misleading — to say that a certain percentage of focus group participants hold the same opinion or engage in the same behavior. While focus group results may be invaluable in understanding the thought processes of the target audience, they remain strictly qualitative.

In addition, focus group data cannot be extrapolated beyond the target audiences actually sampled. Focus groups conducted in urban areas, for example, may not accurately represent rural areas of the same country. Even focus groups concentrated in one rural province may not reflect prevailing opinions in another rural province if there are socio-cultural, economic, or educational differences between their populations.

How can focus groups results best be maximized?
The first step is to carry out the analysis as quickly as possible so that reports are timely. One way to expedite the analysis is to train the moderators to produce good summaries of each of their focus groups immediately afterwards. An analyst should be ready and waiting to evaluate the focus groups as soon as they are conducted and to quickly produce a draft report that can be circulated to the Ministry of Health or the organization that commissioned the study. Policy-makers and managers can then use the results, as planned, to develop, monitor, or evaluate projects. Don't wait to produce a final report before disseminating the results, because the results may arrive too late to be useful.

The second step is to make the final report user-friendly in order to increase its circulation. The goal is to create an appealing document that makes the results accessible to anyone interested in the topic. The report should be easy to interpret, even for novices without training or experience in qualitative research.

The third step is to publicize the results actively in order to reach a wider audience than those who commissioned the research. One possibility is to hold a press conference, inviting people from other government ministries and from non-governmental organizations as well as newspaper and television reporters.

The following case study illustrates how the information obtained from focus groups can be used in making decisions about content for a radio series in Africa.

GAMBIA – CRAFTING A RADIO DRAMA
During the 1980s, both the government of the Gambia and private agencies actively promoted family planning. Contraceptive prevalence, however, according to service statistics, remains below 10%. Low prevalence is apparently due to fear of side effects from modern methods, as well as lack of communication between husband and wife.

The mass media, especially radio, play an increasingly important role in family planning IEC efforts. Between September and December 1988, Radio Gambia broadcast a drama series entitled Fakube Jarra (A Wise Old Man) in several languages as a regular part of the weekly "Women's Magazine Programme." Each 15-minute story highlighted health or family planning issues. Fakube Jarra was so well received that 36 new episodes were planned for 1990-1991. The Gambia Family Planning Association (GFPA) and Radio Gambia held focus group discussions in February 1990 to gather information about people's knowledge and attitudes that would help develop appropriate themes, messages, and characters for the new episodes.

Focus Groups in Gambia
A total of 14 focus groups...included 64 men and 71 women ranging in age from 18 to 45 years. The moderators explored the participants’ radio listening habits, their general concerns and aspirations, the extent to which they communicated with their spouses, their attitudes and beliefs concerning family planning, and their reactions to the Fakube Jarra programs already broadcast. Results of the focus groups should be looked at keeping in mind that both men and women were included in the discussions. In the Gambia, in many other countries, women assume a passive role in front of men. The presence of men most likely discouraged the women from talking, and the personal nature of the subject matter only intensified their reluctance to talk. Had the groups been separated by sex, the results probably would have given a truer reading of the women's attitudes and opinions toward family planning.

• The Radio Drama Should be Longer and Later
Participants felt that the radio episodes of Fakube Jarra should be longer than the 15 minutes allotted and should air later in the evening, around 9:00 or 9:30 PM, when most family members are home. Many participants listened to the morning and evening news on the radio—suggesting an ideal time to promote Fakube Jarra through radio spots. Because the title Fakube Jarra is in the Mandinka language, Wollof-speaking participants mistakenly assumed it was broadcast only in Mandinka.

• Gambians Approve of Family Planning
All of the participants were aware of family planning: "No one among us will say that he or she has not heard of family planning. Some may even be members of family planning one day. We all know about it." Most participants approved of family planning; one group wholeheartedly agreed with a man who said, "Family planning is better than the ways of our ancestors who bore children continuously without planning. Family planning allows people to control family size and prevents unwanted pregnancies." Participants emphasized three benefits: shortening the period of postpartum abstinence, improving women's health, and helping the family's financial situation. This last point tied into general concerns about the economy and the difficulties of making a living from farming. Many participants said they wanted to learn more about specific contraceptive methods.

• Contraceptive Users Have a Negative Image
Participants often held negative stereotypes about contraceptors, assuming that users only turned to family planning when they had too many family problems and too many children to support. They frequently used the term "breastfeeding women" negatively to describe users: "Breastfeeding women practice family planning to prevent their husbands from loitering about with other ladies." Some participants felt that women who use family planning are promiscuous.

• Religion Cited by Family Planning Opponents
A substantial minority of the participants disapproved of family planning, mostly on religious grounds. They felt it was wrong to plan your family because "a child is given to someone through God's permission." Roughly one half the participants said that Islam does not support family planning. One participant explained: "Mohammed asked his followers to have many children so that in the next world his followers will be the majority. This is only possible by having the number of children God has destined rather than limiting it."

• Spouses Rarely Discuss Family Planning
Finally, male and female participants agreed that most conversations between husbands and wives focus on childrearing, how to make a nice compound "where peace and tranquillity prevail," and financial concerns. Very few participants, however, had ever discussed family planning or family size with their spouses.

Program Activities Resulting from Focus Groups
Representatives from Radio Gambia, the Health Education Unit of the Medical and Health Services, and GFPA met to review the results of the focus groups and other research conducted in the Gambia. The mission of the 17 representatives was to develop a list of topics and themes for the 36 new episodes of Fakube Jarra. Research results yielded the following:

• Change in series goal: The new series would replace the old series goal of increasing awareness of the importance of childspacing and other health behaviors with increasing the...
understanding of modern family planning methods among men and women of childbearing age and increasing contraceptive use at GFPA services.

- **New Wolof title:** The Wolof version became *Pa Kube Jarra*.
- **Rescheduling broadcast times:** Many promotional spots were rescheduled to be close to the morning and evening news. The air time of the drama itself was changed from 8:30 to 9:30 PM. It was not possible, however, to make the drama longer, as the focus groups recommended, because of strict limits on the length of the half-hour "Women's Magazine Programme" into which the drama is inserted.
- **Development of 12 priority topics:** For the new episodes, including many that were mentioned during the focus groups such as: encouraging a dialogue between husbands and wives; countering the belief that Islam does not support family planning; presenting the socioeconomic and health rationale for family planning; describing modern methods of family planning; and promoting a positive image of the family planning use.

Following this meeting, an IEC Task Force drew up a comprehensive list of themes and messages for the radio drama series and determined how many of the 36 programs would feature each topic. The focus group results led the Task Force to give higher priority to religious arguments in favor of family planning, modern contraceptive methods, and fostering a dialogue between partners. In addition, the Task Force recognized the need to portray family planning users as responsible men and women who care about their future, the future of their children, and the future of the community. To counter the misconception that family planning was a last resort for couples overwhelmed with problems they developed messages depicting contraceptive users as couples who decide on their family’s size and on family planning before they begin to have children.

A survey in one district found that more than 75% of the men and women had listened to the *Fakube Jarra* episodes. *Fakube Jarra* listeners were more than twice as likely to use modern contraceptives as non-listeners (35% compared to 16%). The program was responsible for an 11% increase in use of modern contraceptives, from 19.3% before the campaign to 30.4% after the campaign.

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**CAUTION – UNINTENDED CONSEQUENCES!**

The following case studies stress the importance of development organizations being cautious and sensitive in promoting social and behavioral change. While they are not formally evaluation studies, they reveal outcomes of interventions recorded by careful observers without the benefit of systematic and quantitative data gathering techniques. They illustrate the need to be alert to the possibility that some outcomes may fall outside the designs and expectations of the project planner.

The first takes us to Egypt and to a traditional farmer caught in the web of change. Then we visit Stone Age Australians and see the good intentions of missionaries and their unintended consequences. And then we report a short episode from a newspaper in China that illustrates some of the unintended consequences of the Internet.

We often revere the traditional; we romanticize what is indigenous. We hold sacred the knowledge and practices handed down through generations of experience. But what if the conditions that originally cued and prompted the indigenous knowledge and practices no longer exist? The following excerpt from *Shahhat* reveals how the building of the High Dam at Aswan in Egypt significantly altered the usefulness of the Egyptian farmer’s stock of traditional knowledge. While not primarily a communication case study, it shows the unintended consequences of an environmental intervention – consequences that affected the knowledge of a generation of farmers. The case especially highlights the importance of going beyond the formal objectives of an intervention to examine other outcomes.

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Shahhat and the Aswan Dam

Upper Egypt seems destined to follow the Delta cultural pattern given time, as do new settlements on land irrigated and reclaimed from the desert. Whatever its drawbacks, and aside from allowing continuous land use, the Aswan Dam by the late 1970s made it possible to reclaim 900,000 acres of desert land, two-thirds of which has been brought under the plough. Yet so much land had been lost to urban sprawl and salinity, Egypt still had only 5.6 million irrigated and cultivated acres, just about what it had when the dam was built. Egypt's only real hope for the future, given the density and growth rate of its population, lies in irrigating land....

Huddled between the high temple walls and a new irrigation channel from Aswan, named after its setting as the Ramses Canal, are some forty houses, one of Berat's smallest hamlets. So obscure it barely has a name, it is known by the local fellahaen merely as the place of Lohlah, after the great-grandfather of some of the present inhabitants. Beside the temple, it seems scarcely worth a glance. But the villagers have preserved something more precious than stone. In the thirty-two centuries the temple has stood silent and dead in the rainless desert air, successive generations in the humble mudhuts have kept a way of life alive. It is one that in a few more years will probably be lost forever.

To the traveler the hamlet of Lohlah looks like every other Egyptian village. There are the same cows circling the waterwheels, the same pigeon-lofts on the roofs, the same dark, curious Egyptian faces swathed in black or white. There is the familiar whiff of cooking smoke, dried cow dung, Turkish coffee, and sweet and heavy scents. If you peer down its mud-walled lanes, but for the flies, dust, and squalor, it might be picturesque. But no one would dream of wanting to live there. It is down one of these lanes that Shahhat's house lies and where our story begins....

When Shahhat was fifteen, the last August flood of the Nile had come. The new High Dam at Aswan had stored enough water in Lake Nasser so that the valley could be permanently enclosed with dikes. Water became available the year round for the first time, and three crops a year, as well as such new crops as sugar cane, could be grown. The land of an old feudal estate, Sombat, which had been seized after the 1952 revolution, was finally redistributed....

The land was not given outright. The government retained the power to tell the new owners what and when to plant. It provided water — not always enough or in time, they soon discovered — and credit for seeds, fertilizer, and labor. The government bought a fixed quota of each harvest at a low price. This meant constant dealings with the village agricultural inspector and so much delay, favoritism, and bribery that most of [his] neighbors found it profitable to make sharecropping arrangements....

Shahhat was grieved to see the Nile's last flood. From the first he distrusted Nitrokima, the new chemical fertilizer artificially manufactured at Aswan to replace the Nile's lost mineral-rich silt. Until now only land susceptible to the annual flooding and the natural refertilization it brought could be cultivated. Once the high water came in August and the fields were inundated, there was little to do but sow one's wheat, barley, lentils, or maize in November and wait for the April harvest. Now three crops were to be grown each year, even in the scorching summer heat. The field work was unending, and chemical fertilizer had to be used for the first time in the Nile valley. Shahhat felt frustrated. Left to himself to cultivate his father's acre of ancestral land beside his house, he was content. He used the methods handed down from the time of the pharaohs, and everything he put his hand to turned out well. On the government-deeded land, it was different. He had to depend upon Faruk or the inspector for almost everything, and things seldom went as promised. He longed to be independent of anyone.

The second case study that suggests the need to anticipate unintended consequences involves an attempt by missionaries to improve the welfare of aboriginal people. The consequences were quite unexpected. The story is reported in a landmark study titled "Steel Axes for Stone Age Australians" by Lauriston Sharp, who was a well-known Cornell University anthropologist.¹⁴ The

situation occurred in the 1930s among a relatively isolated aboriginal group called Yir Yoront. For the Yir Yont, polished stone axes were an important tool, laden with culturally significant meanings. However, Western technology had begun to penetrate their lives, and one significant piece from the invasion was the steel axe. It is important to note some of the details surrounding the stone axe. First, as Sharp describes them:

- The production of a stone axe required a number of simple skills. With the idea of the axe in its various details well in mind the adult men – and only the adult men – could set about producing it, a task not considered appropriate for women or children. First of all, a man had to know the location and properties of several natural resources found in his immediate environment: [such as pliable wood and bark]. These materials had to be correctly gathered, stored prepared, cut to size and applied or manipulated.

Furthermore, acquiring the stone for the axe was part of a trading system that Yir Yong men had with men outside the Yir Yoront community. Anyone could use the axe. In fact, because of women's various responsibilities, which included providing sufficient wood for cooking and campfires, it was essential that they have access to axes. But women had to get (borrow) the axe from a man. According to Sharp, this necessary and constant borrowing of axes from older men by women and children was done according to regular patterns of kinship behavior. The use of the axe helped define and maintain the character of the pair-relationships and the roles of the two participants.

Circumstances changed rather dramatically when religious missions, with good intentions, started rewarding women, young men and children with steel axes which the mission kept in good supply because of how the missionaries perceived the practical value of the steel axes. Obtaining steel axes this way, women began referring to them as "my axe" – a possession contrary to the Yir Yoront traditions. Sharp reports the result:

- The most disturbing effects of the steel axe [along with other elements that were introduced] developed in the realm of traditional ideas, sentiments and values. There were undermined at a rapidly mounting rate, without new conceptions being defined to replace them. The result was a mental and moral void that foreshadowed the collapse and destruction of all Yir Yoront culture, if not, indeed, the extinction of the biological group itself.

Part of the importance of this case lies in its dramatically illustrating the concept of system in a behavior change situation. It suggests that when you try to change one part of a system (for example, particular agricultural practices) you should try to anticipate what other consequences (unintended) might follow. Conscientious attention to research and evaluation can provide timely warnings of these kinds of problems.

A final caution

Introduce the Internet to improve communications for farmers or to help women become part of the Information Society? For other unintended consequences that reflect the complexities of social change, we take you to China....

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**China Daily, January 15, 2004**

**Net addict dumps family for cyber lover**

A woman in Southwest China’s Chongqing Municipality abandoned her husband and two children and eloped with her cyber lover, and email pleas asking her to return have not yet had any effect, reports *Chongqing Commercial News*.

Chen Mingli was married to Zhang Hailin in 1994. But the woman became addicted to the Internet a couple of years ago and spent most of her time at cyber cafes.

In January 2003, Chen disappeared with her Internet friend on the pretext of going back to her home town. It’s reported that Zhenzhen, 8, and her brother Leili, 6, had sent more than 1,000 letters and emails to their mother but received no response.

**Husband’s Net addiction is big worry for woman**

A middle-aged woman has complained to *Zhejiang Daily* that her husband threatened To divorce her if she tried to discourage him from chatting on line. The woman said that the relationship with her husband has become strained because he has become locked in the virtual world since September, and fell in love with a netizen.
Farmers at an agricultural fair in India

Photo by R. D. Colle