# Learning in a Flash

By Olivier Serrat

Text is no longer the primary means of learning transfer. Character-based simulation, in which animated characters provide a social context that motivates learners, can improve cognition and recall and bodes well for high-impact e-learning.

## Slowly, E-Learning Comes of Age[1]

In business, community, educational, and governmental organizations it has for some time been an article of faith that the delivery of content through information and communication technologies can—through democratization of and access to knowledge—greatly expand the realm of how, when, and where increasingly mobile learners can engage. The world over, e-learning—viz, all forms of electronically supported learning and development—is mooted as a cheap and effective way to provide people the everyday learning opportunities required, cradle to grave, to improve organizational outcomes in the modern labor market.[2]

Notwithstanding, 20-odd years after the World Wide Web was launched in 1991, it must be admitted that key concepts and understandings of e-learning are still emerging. In brief, most of the difficulties that have beleaguered attempts to transfer knowledge

> *Education is not the filling of a pail, but the lighting of a fire.*
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> —William Butler Yeats

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[1] E-learning intersects numerous fields of thought and practice. These *Knowledge Solutions* do not take up "higher-end" matters such as the role of e-learning in knowledge management, organizational performance—both individual and collective, or organizational change.

[2] Take the education sector. As you would expect, e-learning is suited to flexible, distance learning. Because knowledge is no longer tethered to lecterns or a teacher's desk tertiary and secondary education is seen prone to technological disruption just as encyclopedias, journals and magazines, movies, music, newspapers, and television, to name a few other information-centric industries, became from the early 2000s. (Certainly, brick-and-mortar institutions of higher learning are growingly challenged by commercial providers of lecture series; for-profit universities; nonprofit learning organizations, e.g., the Khan Academy; online services, e.g., iTunes U; and specialized training centers that issue instruction and credentials in sundry trades and professions—all of whom can easily scale delivery of online instruction.) But, there is more: e-learning can also be used in conjunction with face-to-face teaching in blended learning mode, be that synchronous or asynchronous. Therefore, some think that the traditional model of instruction in universities—the main societal hub for higher education since the end of the 11th century—will soon be inverted: instead of attending lectures on campus and after that heading off to work on assignments students will first scrutinize online material and then gather in hybrid learning spaces to explore a subject in rich conversations (or laboratory exercises) with professors and fellow students. Proponents of blended learning reckon that the Flipped Classroom model may even enhance critical thinking. (Paradoxically, since economic reasons determine much in higher education, traditional but exclusive face-to-face tuition may become the privilege of a few while demand for global standardization in some fields may lower the level in many cases. In reality, consolidation and diversification are not mutually exclusive.)

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electronically owe, so far, to exaggerated weight on specific technologies—typically to transmit for easy (re)use much smaller units of content than traditional educational and other learning and development settings do—at the expense of a commitment to improving the experience and outcome of learning.[3] (Easy things first, one might argue.)

The point is that digital media alone does not guarantee message uptake: like any learning process, e-learning depends on effective communication of human knowledge in social context.[4] Still, even if one-way communication attenuates the learning experience, the technical affordances[5] of the internet

> *The function of education is to teach one to think intensively and to think critically. Intelligence plus character—that is the goal of true education.*
> —Martin Luther King, Jr.

mean that such communication is for sure here to stay (and hopefully improve). Therefore, especially in the ever more common mode of self-paced, solitary learning, the greatest challenge of e-learning is to make training programs a dynamic, immersive experience akin, to the extent possible, to the learner engagement that occurs in a lecture hall or classroom.

## Making E-Learning Come Alive

> *I would rather entertain and hope that people learned something than educate people and hope they were entertained.*
> —Walt Disney

In the digital world of the 21st century, text is no longer the primary means of learning transfer: people, certainly those in the workforce who have grown up with computer games, are more and more drawn to multimedia. Flash animations[6] that skillfully entice[7] people to construct their own meaning from content and apply instruction to their lives after program completion are a working example.

Character-based simulation, for one, bodes well for high-impact e-learning. Animation is the act, process, or result of imparting life, hence, activity, interest, motion, spirit, or vigor. (Else, it is the quality or condition of being lively.) Animated characters[8] that in well-designed social roles speak, interact, and guide the learning experience can through storytelling[9] enhance e-learning by providing a "real world" social context, e.g., a case study, that motivates learners, thereby improving cognition and recall for learning outcomes.

> *In all aspects of life, we take on a part and an appearance to seem to be what we wish to be—and thus the world is merely composed of actors.*
> —François de La Rochefoucauld

Byron Reeves[10] recognizes that human-media interactions are intrinsically social: therefore, character interfaces

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[3] In the education sector, to use our example, most internet classes have consisted largely of videotaped lectures, sometimes broken into brief segments and punctuated by on-screen exercises and quizzes. Elsewhere, automated Powerpoint presentations are still a staple.

[4] The *Knowledge Solutions* on e-learning and the workplace contend that if e-learning is to justify the publicity that surrounds it proponents should understand its organizational environment and evolve design principles. See ADB. 2010. *E-Learning and the Workplace*. Manila. Available: www.adb.org/publications/e-learning-and-workplace. And, for sure, learners learn in different ways: some learn best by engaging in dialogue; others do so by reading text, watching a demonstration, or playing a game—each takes a different path. Through large-scale data processing and machine learning, information and communication technologies may in the not-too-distant future incorporate adaptive learning routines that help tailor a learning environment to the needs and learning styles of individuals— at any rate where a body of knowledge can be made explicit. A far cry from what is currently at hand, such technologies would measure meaning, promote learning, and evaluate new understandings and capabilities. But, we are not there yet. What is more, pace the availability of technology, purveyors of e-learning must also be equipped with systems and competences for content creation and management, learning activity delivery, and learning management.

[5] These include cloud-based computing, digital textbooks, high-quality streaming video, just-in-time information gathering, and mobile connectivity.

[6] A Flash animation is a film created with Adobe Flash or similar software. Such software manipulates vector and raster graphics to animate drawings, still images, and text.

[7] Media psychologists say the "e" in e-learning should be understood to mean exciting, energetic, engaging, and extended, not just electronic.

[8] Avatars, especially, but also actors, pedagogical characters, and personas are four terms for objects that represent (or stand in for) humans in virtual environments. In the context of e-learning, they are most commonly used as instructors but are also used to represent learners.

[9] Organizations are rediscovering the significance of the primeval skill of storytelling. In a globalizing world, this owes to quickening realization that technology, more precisely for information and communication, is but a reproducible tool. Tools are designed for functionality and assessed against utility and reliability; but they can neither create complex meaning and understanding nor help frame common values and beliefs, essential to resilient human organization in conditions of uncertainty; on the other hand, stories do just that, not least of all by disclosing and leveraging tacit knowledge, meaning, human capital. Resilience is the capacity to undergo deep change without or prior to a crisis; here, tools are not enough.

[10] Byron Reeves. 2004. *The Benefits of Interactive Online Characters*. Center for the Study of Language and Information. Stanford University.

bring much-needed social intelligence to e-learning. Specifically, from a teaching perspective, the 10 benefits of character interfaces Reeves identifies derive from the fact that

- Characters make explicit the social responses that are inevitable (in human-computer interaction).
- Interactive characters are perceived as real social actors.
- Interactivity increases the perceived realism and effectiveness of characters.
- Interactive characters increase trust in information sources.
- Characters have personalities that can represent brands.
- Characters can communicate social roles.
- Characters can effectively express and regulate emotions.
- Characters can effectively display important social manners.
- Characters can make interfaces easier to use.
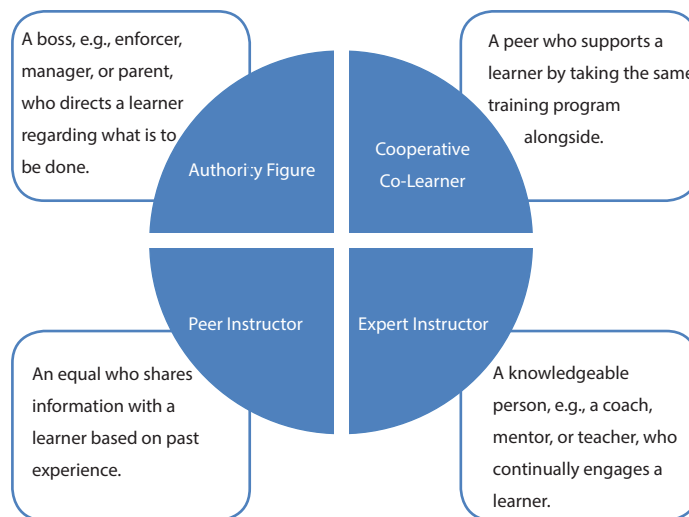- Characters are well liked.

*Don't lies eventually lead to the truth? And don't all my stories, true or false, tend toward the same conclusion? Don't they all have the same meaning? So what does it matter whether they are true or false if, in both cases, they are significant of what I have been and what I am? Sometimes it is easier to see clearly into the liar than into the man who tells the truth. Truth, like light, blinds. Falsehood, on the contrary, is a beautiful twilight that enhances every object.*

—Albert Camus

## Designing Character-Based Simulations

Characters never tire and are always available; all the more reason, then, to design them well with emphasis on interactions between actors in the interface, not technology. To enhance learning comprehension, characters usually assume one or more of four roles to guide learners through a training program: (i) authority figure, (ii) cooperative co-learner, (iii) expert instructor, and (iv) peer instructor. Notwithstanding, in any case, the characters must exude authenticity,[11] entertain, and demonstrate soft skills through voice, first and foremost, as well as body language.

**Figure: Social Roles for Characters**

A boss, e.g., enforcer, manager, or parent, who directs a learner regarding what is to be done.

A peer who supports a learner by taking the same training program alongside.

Authority Figure

Cooperative Co-Learner

Peer Instructor

Expert Instructor

An equal who shares information with a learner based on past experience.

A knowledgeable person, e.g., a coach, mentor, or teacher, who continually engages a learner.

Note: Of course, even if this is less frequent, a fifth role for a character might also be that of a learner, e.g., a professional or student, who develops a skill, gains knowledge, takes up beliefs, or acquires a behavioral tendency.
Source: Author.

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[11] Does the design tell a story with a human element? Are the characters likeable? Do they have feelings? Where do they exist, live, or work? What contextual background can one give to make them more realistic? What tone of voice might best reinforce content?

Jennifer De Vries[12] offers helpful tips for designing character-based simulations:
- **Create Life-Like Characters.** Be purposeful about seemingly trivial and non-instructional characteristics such as body language, clothing, hairstyle, speech and idiom, and, especially, voice.
- **Plan the Scenes Before Development.** Plan scenes with storyboarding techniques and pace them for learners.
- **Check for Understanding.** Ensure that characters interact with learners in common situations and verify with questions that learning objectives are being met.
- **Focus on Learning Objectives.** Get to the point: character development can be distracting.
- **Use Text to Speech before Recording the Final Script.** Draft the script first and use plain text on screen until it is finalized and recorded in audio with real voices.
- **Consider a Multi-Skilled Team.** Engage a script writer to craft the storyboard and draft text; a graphic artist to draw the characters, backgrounds, and other artwork; and a web developer to integrate Flash, wave, graphic, and other files.
- **Run a Pilot.** Pilot test to gather what normal questions learners may have, that should reasonably be addressed by the characters.

> *Never in the history of cinema has a medium entertained an audience. It's what you do with the medium.*
> —John Lasseter

> *There have been great societies that did not use the wheel, but there have been no societies that did not tell stories.*
> —Ursula K. Le Guin

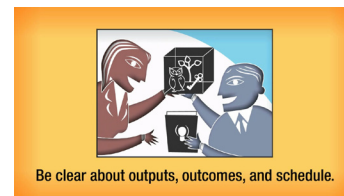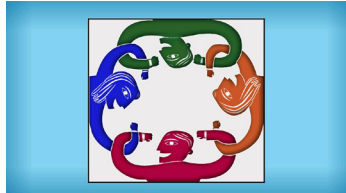| Screenshot 1: Building Trust in the Workplace | Screenshot 2: Conducting Peer Assists |
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| Learning Objective: High-performance organizations earn, develop, and retain trust for superior results. | Learning Objective: Peer assists let individuals share experiences, insights, and knowledge to promote collective learning. |
| Description: Workplace dynamics make a significant difference to people and the organizations they sustain. High-performance organizations earn, develop, and retain trust for superior results. | Description: Peer assists are events that bring individuals together to share their experiences, insights, and knowledge on an identified challenge or problem. They also promote collective learning and develop networks among those invited. |
| Area of Competence: Collaboration Mechanisms | Area of Competence: Knowledge Sharing and Learning |
| Uploaded on 14 November 2012. Duration: 4:57 mns. | Uploaded on 14 November 2012. Duration: 4:15 mns. |
| Source: ADB. 2012. *Knowledge for Development Effectiveness*. Available: www.facebook.com/adbknowledgesolutions | Source: ADB. 2012. *Knowledge for Development Effectiveness*. Available: www.facebook.com/adbknowledgesolutions |
| Further Information: ADB. 2009. *Building Trust in the Workplace*. Manila. Available: www.adb.org/publications/building-trust-workplace | Further Information: ADB. 2008. *Conducting Peer Assists*. Manila: Available: www.adb.org/publications/conducting-peer-assists |
| Source: Author. | Source: Author. |

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[12]   Jennifer De Vries. 2004. *Character-Based Simulations: What WorksTM—The Use of Character-Based Simulations in E-Learning*. Bersin & Associates.

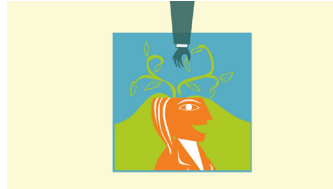| Screenshot 3: Creating and Running Partnerships | Screenshot 4: The Critical Incident Technique |
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| Learning Objective: To create and run partnerships, one must understand the drivers of success and failure. | Learning Objective: The Critical Incident technique offers a starting point and a process to identify and resolve workplace problems. |
| Description: Partnerships have a crucial role to play in the development agenda. To reach the critical mass required to reduce poverty, there must be more concerted effort, greater collaboration, alignment of inputs, and a leveraging of resources and effort. Understanding the drivers of success and the drivers of failure helps efforts to create and run them. | Description: Organizations are often challenged to identify and resolve workplace problems. The Critical Incident technique gives them a starting point and a process for advancing organizational development through learning experiences. It helps them study "what people do" in various situations. |
| Area of Competence: Strategy Development | Area of Competence: Knowledge Capture and Storage |
| Uploaded on 15 November 2012. Duration: 6:58 mns. | Uploaded on 14 November 2012. Duration: 5:27 mns. |
| Source: ADB. 2012. *Knowledge for Development Effectiveness*. Available: www.facebook.com/adbknowledgesolutions | Source: ADB. 2012. *Knowledge for Development Effectiveness*. Available: www.facebook.com/adbknowledgesolutions |
| Further Information: ADB. 2008. *Creating and Running Partnerships*. Manila. Available: www.adb.org/publications/creating-and-running-partnerships | Further Information: ADB. 2010. *The Critical Incident Technique*. Manila. Available: www.adb.org/publications/critical-incident-technique |
| Source: Author. | Source: Author. |
| **Screenshot 5: Distributing Leadership** | **Screenshot 6: The Five Whys Technique** |
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| Learning Objective: Leadership is best considered as an outcome. It is defined by what one does, not who one is. | Learning Objective: The Five Whys is a question-asking technique that explores the cause-and-effect relationships underlying problems. |
| Description: The prevailing view of leadership is that it is concentrated or focused. In organizations, this makes it an input to business processes and performance—dependent on the attributes, behaviors, experience, knowledge, skills, and potential of the individuals chosen to impact these. The theory of distributed leadership thinks it best considered as an outcome. Leadership is defined by what one does, not who one is. Leadership at all levels matters and must be drawn from, not just be added to, individuals and groups in organizations. | Description: When confronted with a problem, have you ever stopped and asked "why" five times? If you do not ask the right question, you will not get the right answer. The Five Whys is a simple question-asking technique that explores the cause-and-effect relationships underlying problems. |
| Area of Competence: Collaboration Mechanisms | Area of Competence: Management Techniques |
| Uploaded on 14 November 2012. Duration: 4:26 mns. | Uploaded on 14 November 2012. Duration: 4:58 mns. |
| Source: ADB. 2012. *Knowledge for Development Effectiveness*. Available: www.facebook.com/adbknowledgesolutions | Source: ADB. 2012. *Knowledge for Development Effectiveness*. Available: www.facebook.com/adbknowledgesolutions |
| Further Information: ADB. 2009. *Distributing Leadership*. Manila. Available: www.adb.org/publications/distributing-leadership | Further Information: ADB. 2009. *The Five Whys Technique*. Manila. Available: www.adb.org/publications/five-whys-technique |
| Source: Author. | Source: Author. |

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| **Screenshot 7: Harvesting Knowledge** | **Screenshot 8: The Reframing Matrix** |
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| Learning Objective: Knowledge harvesting can enrich group know-how, build organizational capacity, and preserve institutional memory.

Description: If 80% of knowledge is unwritten and largely unspoken, we first need to elicit that before we can articulate, share, and make wider use of it. Knowledge harvesting is one way to draw out and package tacit knowledge to help others adapt, personalize, and apply it; build organizational capacity; and preserve institutional memory.

Area of Competence: Knowledge Capture and Storage

Uploaded on 14 November 2012. Duration: 4:25 mns.

Source: ADB. 2012. *Knowledge for Development Effectiveness*. Available: www.facebook.com/adbknowledgesolutions

Further Information: ADB. 2010. *Harvesting Knowledge*. Manila. Available: www.adb.org/publications/harvesting-knowledge

Source: Author. | Learning Objective: The reframing matrix enables different views to be generated and used to solve problems.

Description: Everyone sees things differently— knowledge often lies in the eye of the beholder. The reframing matrix enables different perspectives to be generated and used in management processes. It expands the number of options for solving a problem.

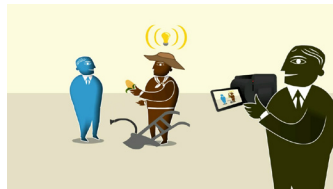Area of Competence: Management Techniques

Uploaded on 15 November 2012. Duration: 3:17 mns.

Source: ADB. 2012. *Knowledge for Development Effectiveness*. Available: www.facebook.com/adbknowledgesolutions

Further Information: ADB. 2008. *The Reframing Matrix*. Manila. Available: www.adb.org/publications/reframing-matrix

Source: Author. |
| **Screenshot 9: Showcasing Knowledge** | **Screenshot 10: Working in Teams** |
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| Learning Objective: Information overload has less to do with quantity than with the qualities by which knowledge is presented.

Description: Information has become ubiquitous because producing, manipulating, and disseminating it is now cheap and easy. But perceptions of information overload have less to do with quantity than with the qualities by which knowledge is presented.
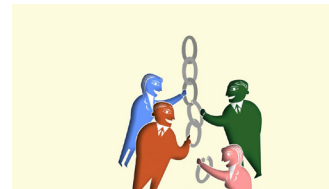
Area of Competence: Knowledge Capture and Storage

Uploaded on 14 November 2012. Duration: 5:18 mns.

Source: ADB. 2012. *Knowledge for Development Effectiveness*. Available: www.facebook.com/adbknowledgesolutions

Further Reading: ADB. 2010. *Showcasing Knowledge*. Manila. Available: www.adb.org/publications/showcasing-knowledge

Source: Author. | Learning Objective: Cooperative work by a team can produce remarkable results.

Description: Cooperative work by a team can produce remarkable results. The challenge is to move from the realm of the possible to the realm of practice.

Area of Competence: Collaboration Mechanisms

Uploaded on 15 November 2012. Duration: 4:04 mns.

Source: ADB. 2012. *Knowledge for Development Effectiveness*. Available: www.facebook.com/adbknowledgesolutions

Further Reading: ADB. 2009. *Working in Teams*. Manila. Available: www.adb.org/publications/working-teams

Source: Author. |

## Further Reading

ADB. 2008–. *Knowledge Solutions*. Manila. Available: www.adb.org/knowledgesolutions
———. 2008. *Storytelling*. Manila. Available: www.adb.org/publications/storytelling
———. 2009. *Learning and Development for Management.* Manila. Available: www.adb.org/publications/learning-and-development-management
———. 2010. *E-Learning and the Workplace*. Manila. Available: www.adb.org/publications/e-learning-and-workplace

## For further information

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### Asian Development Bank

ADB's vision is an Asia and Pacific region free of poverty. Its mission is to help its developing member countries reduce poverty and improve the quality of life of their people. Despite the region's many successes, it remains home to two thirds of the world's poor: 1.8 billion people who live on less than $2 a day, with 903 million struggling on less than $1.25 a day.  ADB is committed to reducing poverty through inclusive economic growth, environmentally sustainable growth, and regional integration.

Based in Manila, ADB is owned by 67 members, including 48 from the region. Its main instruments for helping its developing member countries are policy dialogue, loans, equity investments, guarantees, grants, and technical assistance.

Knowledge Solutions are handy, quick reference guides to tools, methods, and approaches that propel development forward and enhance its effects. They are offered as resources to ADB staff. They may also appeal to the development community and people having interest in knowledge and learning.

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