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*Building Capacity from the Inside Out:  
Testing a Capacity Building Approach for Disability Programming*

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Keywords: ADA, Americans with Disabilities Act, Accessibility, Training, Capacity Building, disability, inclusion,

Suggested Citation:

Rudstam, H., McWha, I., & Pi, S. (2013). *Building capacity from the inside out: Testing a capacity building approach for disability programming*. Ithaca, NY: Yang-Tan Institute on Employment and Disability, Cornell University.

The contents of this article were developed under a grant from the Department of Education, NIDRR grant number H133 A110020. However, contents do not necessarily represent the policy of the Department of Education, and you should not assume endorsement by the Federal Government.

### **Abstract**

The purpose of this article is twofold: (1) to describe the ADA Trainer Network (ADA TN), a capacity building program designed to build knowledge, alter beliefs and change practices around disability inclusiveness across a range of social participation spheres, and (2) to investigate the effectiveness of the ADA TN program. Based on a capacity building approach, the program aimed to extend the reach of disability efforts by engaging key disability agents (ADA TN members) to build awareness and change actions or behaviors to promote disability inclusiveness within their local communities. In addition to the detailed information about how the program was implemented and evaluated, data collected from the training program were analyzed. A total of 6,250 end-users participated in the 337 training sessions delivered by 413 ADA TN members. Findings from the pre-/post-training survey indicated significant increases in knowledge and intention to act among end-users participating in the trainings offered by ADA TN members. Based on the current capacity building challenges in the disability field, issues for future iterations of the ADA TN program are discussed.

Building Capacity from the Inside Out:  
Testing a Capacity Building Approach for Disability Programming

**Introduction and Purpose**

Despite two decades of Americans with Disability Act (ADA) protections and despite significant program efforts, the economic and employment lives of people with disabilities have largely not improved since 1990 (Erickson, Lee & von Schrader, 2012; Kessler/NOD, 2010a). Research conducted over the last decade shows that the story behind these disappointing statistics is complex and multi-faceted (Baldwin & Johnson, 2006; Hotchkiss, 2004; Houtenville, Stapleton, Weathers & Burkhauser, 2009; Kessler/National Organization on Disability (NOD), 2010b; Kruse & Schur, 2003; McMahon, Hurley, Chan, Rumrill, & Roessler, 2008; National Council on Disability, 2007; O’Day, Mann & Stapleton, 2012), and that new approaches are needed to build awareness and create the change envisioned during the passing of the ADA twenty years ago.

Clearly, the ADA has positively impacted the lives of people with disabilities in many ways. Our built environment looks different than it did two decades ago, affording individuals with disabilities greater participation across many areas of life (Kessler/NOD, 2010b). Yet, these gains have largely not translated into actions that have removed barriers to equal inclusion in the areas of economic and employment life (Erickson, et al., 2012; Kessler/NOD, 2010a; National Council on Disability, 2007; Nishii & Bruyere, 2009).

During 2007 – 2010, the Northeast ADA (NEADA) Center funded by a grant from the National Institute on Disability and Rehabilitation Research (NIDRR), designed, implemented and tested an intervention aiming to change the knowledge, beliefs and actions of key

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stakeholders in the NEADA Center Region (i.e., New York, New Jersey, Puerto Rico and the US Virgin Islands). Called the ADA Trainer Network (ADA TN), this project was designed to extend the reach of the NEADA Center by implementing and testing a capacity building approach. Our approach engaged local disability agents in building awareness and changing actions or behaviors to promote disability inclusiveness in their local communities. The term disability inclusiveness refers to policies, practices, attitudes and actions that lead to the full inclusion of people with disabilities across all realms of community living: employment, education, democratic participation, transportation, commerce, government services, information technology and recreation.

### **An Intervention to Build Capacity**

Capacity building approaches have been used extensively over the past two decades in other arenas of planned change, such as international development and non-profit agency program planning (See, for example, Hawe, Noort, King & Jordens, 1997; Kaplan, 2000; Tefera, 2010; Ubels, Acquaye-Baddoo & Fowler, 2010). While many definitions of capacity building are firmly rooted in (and only make sense within) the sphere of international development (see, for example, Eade, 2005), other definitions apply more generally to organizational development. The World Customs Organization (as quoted in Holloway, 2007, p. 67) defines capacity building as "...activities which strengthen the knowledge, abilities, skills and behavior of individuals and improve institutional structures and processes such that the organization can efficiently meet its mission and goals in a sustainable way."

Generally, the theme that unites and distinguishes capacity building approaches from other program design models is the attempt to bring about planned change by enabling individuals locally to undertake activities on behalf of the agency in ways that advance the

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mission of the agency. It is this definition that informed our approach. Over the past thirty years, capacity building models have been extensively applied to a range of program planning efforts (See, for example, Kaplan, 2000;Tefera, 2010; Ubels et al., 2010). Yet, few capacity building approaches have been systematically applied to disability-related programming.

For the purposes of our project, the following capacity building principles informed our effort. We set out to design a program that would:

1. **Expand our reach.** Capacity building approaches enable us to extend the power of our efforts by engaging more stakeholders. At the NEADA Center, we have experienced an increased demand for our training offerings. While this is a positive development, our core staff simply cannot meet this demand. Building capacity among key disability agents allows us to expand our offerings and provide an expanded service for our consumers.
2. **Build a network of partners and collaborators.** By building a network of partners and collaborators, the NEADA Center had the opportunity to not only expand the reach of our efforts, but also build our own capacity by directly engaging a network of key stakeholders throughout our Region. These partnerships and collaborations have benefitted our program in many ways: offering feedback, informing us of local “hot button” issues, and suggesting further areas of programming.
3. **Build responsiveness to local, community issues, challenges and cultures.**  
Though the ADA is a federal law, its true power to change the lives of people with disabilities will unfold in local communities and regions. The capacity building approach enables us to bridge the gap between federal policy and local issues. Also, this approach allows us to balance responsiveness to community/regional issues with

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a systematic, shared voice around legal, human and practical disability challenges.

We engaged a broad range of local stakeholders in the disability community and then gave these stakeholders comprehensive learning experiences, support materials and resources to enable them to, in turn, train members of their own communities/regions around disability issues. In this way, members of this ADA TN both strengthened the impact of federal disability policy and fostered responsiveness to local/regional issues.

4. **Enhance dialogue and sustain change.** When trainers are not from the local community or region, the training experience tends to be a “one-shot” effort which all-too-often fails to stimulate on-going dialogue within the community. When local community members are facilitating training sessions, there is a greater likelihood that the continued presence of the trainer in the community will result in a meaningful dialogue around disability issues. Likewise, an ongoing dialogue is more likely to facilitate sustained awareness and change.
5. **Provide a more systematic approach.** ADA TN members, in addition to going through two trainer certification sessions, were given a comprehensive set of nine training programs and all materials, guides and resources needed to facilitate the nine training programs in their communities. This systematic approach both contributed to the quality of training programs and ensured consistency of content. Further, by taking this common approach across all trainers, we had an opportunity to test the impact of our approach on the end-use community members participating in the trainings.

6. **Send a message about the capability of people with disabilities.** In recruiting members of the ADA TN, we sought out key disability agents throughout our Region who had the motivation and competence to conduct trainings in their local communities. Our recruitment efforts deliberately focused on people with disabilities, though ADA TN members included both people with and without apparent disabilities. In addition, we provided ADA TN members with any accommodations they would need to facilitate training sessions. By inviting and encouraging individuals with disabilities to become members of the network, and to deliver trainings within their communities, we believe we sent a message to the end-users about the capability and talents of people with disabilities.
7. **Provide a comprehensive, in-depth learning experience to key disability agents in our community.** In planning this program, we aimed to provide important knowledge and skills about the ADA to our trainers. At the outset of the program, we were aware that not all trainers who had gone through the certification program would ultimately go on to deliver trainings in their local communities. Yet, we believed the certification learning experiences and membership in the ADA TN would still benefit participants in ways that enhanced their capacity and furthered the overall goals of the NEADA Center.

### **Program Architecture**

As shown in Exhibit 1, the program architecture for the ADA TN was based upon a cascading approach where ADA TN members, after being certified, were to market and facilitate disability training programs to end-user participants in their own communities, choosing among nine training curricula making up the ADA TN offering.

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## Exhibit 1. Program Architecture of the ADA TN

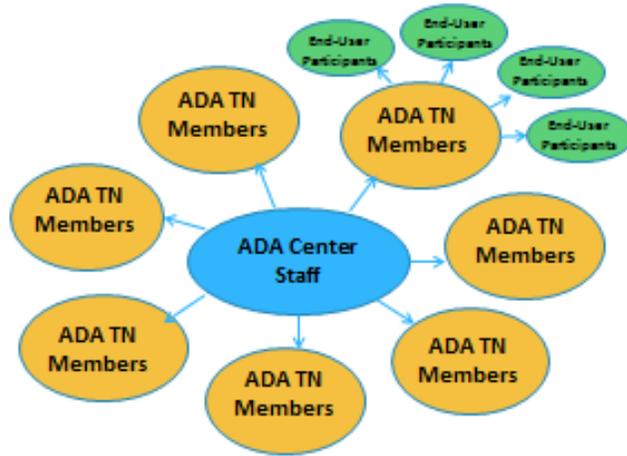


Exhibit 2 summarizes the four parts of the program which were rolled out sequentially several times across the states and territories in the NEADA Center Region. (Throughout this paper we call the trainers who completed the two-day ADA TN trainer certification program “ADA TN members.” Those who participated in the trainings facilitated by these ADA TN members are called “end-user participants.”)

**Exhibit 2. Program Design Overview.**

<b><u>Part 1</u></b> <b>Design &amp; Pilot</b>	<b><u>Part 2</u></b> <b>Certify ADA TN Members &amp; Create Network</b>	<b><u>Part 3</u></b> <b>Implement Programs</b>	<b><u>Part 4</u></b> <b>Analyze Data</b>
Nine curriculum offerings  Facilitator Guide for each offering  Pre/Post-surveys for each offering  Program processes  Certification process  Online supports & processes	Recruit potential ADA TN members  Conduct two-day, in-person certification program  Maintain online ADA TN processes and supports  Offer follow-up program to all ADA TN members 6-12 months after certification program	ADA TN members implement curricula in own communities/regions  Go through approval and contracting process  Use online supports, materials and facilitators' guides  End-use participants complete pre/post-surveys	Analyze pre/post-survey data to describe: <ul style="list-style-type: none"> <li>• Numbers and types of end user participants in the program</li> <li>• Knowledge changes of end-users</li> <li>• Behavior changes of end-users</li> </ul>

**Part 1: design & pilot.** In Part 1, we designed and piloted the nine training curricula that made up the offering. These nine programs were selected to cover a range of ADA issues and were based, in part, upon the focus of our granting agency and, in part, upon our own reading of the interests and needs of our stakeholders. Each of the nine curricula was designed to be about two hours in length and contained between five and seven modules. The nine curricula making up the ADA TN offering were:

1. Disability Awareness: Understanding the ADA - Communicating Respectfully and Effectively with People with Disabilities
2. Getting Hired and Moving Ahead in a Job When Working with a Disability
3. Tapping into Talent: Best Practices in Hiring, Retaining and Accommodating People with Disabilities
4. Serving Customers with Disabilities: Reaching Out & Expanding Your Market
5. About Non-obvious Disabilities: Legal, Practical and Human Issues

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6. Reaching Individuals with Disabilities: Accessibility in Federal, State or Municipal Entities
7. Reaching Individuals with Disabilities: Accessibility in Private or Commercial Businesses
8. Accessible Technology in the Workplace
9. Accessible Web Sites: Everyone Benefits

Each of the nine curricula applied a variety of learning methods: guided discussion, small group interaction, film and/or audio-clip analysis, presentation and other methods. In addition to developing the curricula, we also developed and piloted the following program steps:

- A two-day ADA TN Certification program for ADA TN members (Described more fully below).
- An approval/contracting process to ensure ADA TN members received NEADA Center approval for conducting training sessions and went through all the steps necessary to receive reimbursement for a full implementation of the program (Described more fully below).
- Comprehensive Facilitators' Guides, with program goals and objectives, facilitators' checklists, marketing/outreach templates, facilitators' notes, handouts, PowerPoint presentations, technical assistance, and other resources.
- Program evaluation pre- and post-surveys to gauge the impact of the nine curricula on end-use participants. (Described more fully below).

Finally, during Part 1, we developed criteria for recruiting trainers to be members of the ADA TN program

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**Part 2.** During Part 2, we made appropriate revisions based on our findings from the pilot and implemented the program across our region. Implementation included the following parts:

- **The ADA TN Member Certification Session.** The goal of this two-day, in-person session was to give ADA TN members an overview of all nine ADA TN curricula. To be certified as an ADA TN member, all participants had to attend all parts of this session. On the first day of this session, ADA TN members received an orientation to the ADA TN program purpose and design, each of the nine curricula, comprehensive facilitators' guides for each curricula, the ADA TN website and online supports, the approval/contracting process to conduct trainings, our evaluation goals and surveys, as well as updates on disability trends, laws and community outreach approaches. On the second day, ADA TN members selected and went through (as end-user participants) three of the nine curricula. At the conclusion of Day 2 of this session, each certified trainer was given a unique log-in to access the ADA TN website and was given several hundred ADA TN brochures they could, in turn, distribute within their communities/regions. After completing this two-day certification session, ADA TN members could deliver any of the nine curricula that made up the offering.
- **Online Supports.** To implement the nine training curricula, ADA TN members accessed a website containing Facilitators' Guides, approval/contract process/forms, pre- and post-evaluation surveys for each of the nine curricula, and other supporting materials, such as film clips. The website also contained a map of the NEADA Center Region with the location of all certified ADA TN members plotted on the map so that ADA TN members

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could locate other trainers in the Network. All program materials and curricula were offered in alternative format, such as Spanish and Braille.

- **ADA TN Follow-up Session.** About nine months after becoming certified, ADA TN members were invited to attend a two-day, in-person follow-up session which included program updates, discussion forums around program implementation, a report on on-going program evaluation data and professional development sessions focusing on legal, policy and trend updates in the disability arena.

ADA TN members, once certified, were reimbursed for training sessions they facilitated in their own communities and regions. To ensure quality, accountability and program fidelity, we designed an approval and contracting process each trainer was required to go through before receiving payment for conducting a training session. To be reimbursed for conducting a training session in their regions and communities, ADA TN members went through an online approval process, kept notes about conducting the curricula, and sent NEADA Center all pre- and post-survey evaluations completed by end-use training session participants.

In order to strike a balance between the need to provide a systematic, shared approach to disability programming and the need to enable trainers to be responsive to local, community needs, we adopted an 80/20 guideline to program implementation. That is, trainers were to use 80% of the curriculum as given, but could customize 20% of the curriculum in order to be responsive to community-based target audiences. This customization took many forms, including eliminating one module of the program, adapting a module to include community/target audience concerns, adding a module, or discussing “hot button” local issues related to disability inclusiveness in their community. Trainers were required to document all adaptations of the planned curriculum.

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Since 2007, 413 people have been certified as members of the ADA TN across the NEADAC Region (New York, New Jersey, Puerto Rico and the U.S. Virgin Islands).

**Part 3: ADA TN members implement trainings in their own communities.** During Part 3, ADA TN members conducted training in their own communities using the curricula and supporting materials they received during the two-day certification session and via the ADA TN website. Since 2007, a total of 337 trainings were reported by ADA TN members. We know this number is higher in reality because some trainers chose not to report their trainings or request payment for them. Often this was because trainers were undertaking the trainings as part of their everyday job. At least 6,250 end-use participants attended training sessions offered by ADA TN members.

ADA TN members were also responsible for administering the pre-/post-test evaluations to end-users in the sessions they conducted and were not reimbursed until these surveys were submitted to NEADA Center. This evaluation process and tools are described more fully below in the methods section of this article.

**Part 4.** During Part 4, we analyzed the evaluation data collected in Part 3, to answer three questions:

- Question 1. How effective is the ADA Trainer Network model in reaching end-user participants from different sectors across the NEADA region?
- Question 2. How effective is the ADA Trainer Network in increasing knowledge of disability issues amongst training participants?
- Question 3. How effective is the ADA Trainer Network in impacting training participants' behaviors/actions towards people with disabilities?

Part 4 is further elaborated upon in the remainder of this paper.

### Methods

The 337 trainings conducted by members of the ADA Trainer Network reached a total of 6,250 participants across New York, New Jersey, Puerto Rico and the Virgin Islands. A pre-test/post-test design was used to evaluate the impact of the ADA TN across the three questions outlined in the previous section. This project was reviewed and approved by the Cornell University Institutional Review Board. Part of the ADA TN Certification Session involved reviewing the steps in using these pre-/post-test surveys, including the process of obtaining oral consent from end-user participants prior to administering the pre-test.

The pre-test survey consisted of 17-19 questions (the number of questions varied according to which module was being delivered) and was administered at the beginning of the training. This survey was divided into three sections. The first included five background questions: 1) year graduated high school, 2) current job title, 3) type of organization currently employed in, 4) frequency of contact with people with disabilities, and 5) self-reported closeness of contact with people with disabilities. The second section included six self-report Likert-scale questions regarding past behaviors or actions towards people with disabilities (e.g. “I have helped people with disabilities negotiate reasonable accommodations and/or modifications”). The third section included between six and eight multiple choice questions designed to measure knowledge gain. These questions were specific to each of the nine curricula, with the number of knowledge-gain questions depending on the scope and content of the particular curricula.

Upon completion of the two-hour curriculum, end-user participants were asked to complete a post-test survey which largely reflected the same sections of the pre-test survey. The first section of the post-test survey contained questions around basic satisfaction with the training. The second section focused on actions and behaviors, focusing on intent to undertake

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the same actions and behaviors toward people with disabilities described in the pre-test (e.g. I intend to “help people with disabilities negotiate reasonable accommodations and/or modifications”). The third section consisted of the same six to eight multiple choice knowledge-gain questions given in the pre-test. Pre- and post-test surveys were matched by including a field for the first four letters of participants’ mother’s maiden name and the two digits of the day of their birthday.

Knowledge gains were measured by calculating the mean proportion of correct answers for each end-use participant and compared across pre- and post-tests. Any respondents who failed to answer all of either the pre-test questions or the post-test questions were excluded from the analyses for this section only.

The items pertaining to program impact on behaviors/actions were measured on a Likert-type rating scale, ranging from 6 (“Strongly Agree”/“Very Likely”) to 1 (“Strongly Disagree”/“Not at all Likely”). Thus, the two behavioral subscale total scores had a theoretical range of 6 to 36 (6 items each), with higher scores indicating more positive self-reported past behavior and behavioral intentions towards people with disabilities. Past and future (intended) behavior/action scores were obtained by calculating the mean across all responses for each individual respondent.

Analyses were undertaken using paired sample t-tests, so that individual scores in the post-test were compared directly with the same individual’s pre-test scores. Any meaningful change across these scores would infer effectiveness of the training intervention. Cohen’s *d* was calculated for each significant difference in order to indicate effect size.

**Results**

Results suggested that the ADA TN had a significant impact on both knowledge and behavior/action intentions of participants, and was an effective model for impacting a large number of participants across different sectors. Analyses addressing each of the three questions underpinning this study will be discussed in turn in this section.

*Question 1. How effective is the ADA Trainer Network model in reaching individuals from different sectors across the NEADA Center region?*

Of the total 6,250 end-user participants, 4,410 (71%) completed both the pre- and post-tests and were therefore included in the analyses. Table 1 gives the total number of participants in each of the nine training programs and the proportion of usable surveys for each. From Table 1, the three most popular trainings were Program 1: *Disability Awareness: Understanding the ADA – Communicating Respectfully and Effectively with People with Disabilities* (n = 3,167), Program 5: *About Hidden Disabilities: Legal, Practical and Human Issues* (n = 1,062), and Program 6: *Reaching Individuals with Disabilities: Accessibility in Federal, State or Municipal Entities* (n = 753).

**Table 1**  
*Total number of participants, and usable cases, for each ADA Trainer Network program*

Program Topic	Total Participants	Usable Surveys	
		Number	Percent
1: Disability Awareness	3,167	2,227	70.3%
2: Working with a Disability	377	272	72.2%
3: Tapping into Talent	371	184	49.6%
4: Serving Customers with Disabilities	349	271	77.7%
5: Hidden Disabilities	1,062	845	79.6%
6: Public Sector Accessibility	753	525	69.7%
7: Private Sector Accessibility	84	52	61.9%
8: Accessible Technology	33	21	63.6%
9: Accessible Websites	18	13	72.2%
<b>TOTAL</b>	<b>6,250</b>	<b>4,410</b>	<b>70.6%</b>

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In order to measure the reach of the training programs across different sectors, participants were asked to identify whether they work for public, private, non-profit or some ‘other’ type of organization. From Table 2, more participants (42%) reported working for an organization in the public-sector than either private (15%), or non-profit (13%). A large number of participants (17%) did not answer this question. Participants who indicated ‘other’ (12%) were asked in open-ended questions to give details; common answers included being unemployed, or being a university student.

**Table 2**

*Total number of participants from public, private and non-profit sectors for each ADA Trainer Network program*

<b>Program Topic</b>	<b>Public</b>	<b>Private</b>	<b>Non-profit</b>	<b>Other</b>	<b>Missing</b>	<b>Total</b>
1: Disability Awareness	746 (33.5%)	405 (18.2%)	348 (15.6%)	302 (13.6%)	426 (19.1%)	<b>2,227</b> <b>(100%)</b>
2: Working with a Disability	155 (57.0%)	21 (7.7%)	18 (6.6%)	26 (9.6%)	52 (19.1%)	<b>272</b> <b>(100%)</b>
3: Tapping into Talent	86 (46.7%)	28 (15.2%)	47 (25.5%)	16 (8.7%)	7 (3.8%)	<b>184</b> <b>(100%)</b>
4: Serving Customers with Disabilities	83 (30.6%)	84 (31.0%)	74 (27.3%)	14 (5.2%)	16 (5.9%)	<b>271</b> <b>(100%)</b>
5: Hidden Disabilities	276 (32.7%)	94 (11.1%)	83 (9.8%)	162 (19.2%)	230 (27.2%)	<b>845</b> <b>(100%)</b>
6: Public Sector Accessibility	483 (92.0%)	8 (1.5%)	8 (1.5%)	18 (3.4%)	8 (1.5%)	<b>525</b> <b>(100%)</b>
7: Private Sector Accessibility	15 (28.8%)	12 (23.1%)	12 (23.1%)	7 (13.5%)	6 (11.5%)	<b>52</b> <b>(100%)</b>
8: Accessible Technology	4 (19.0%)	7 (33.3%)	0 (0%)	4 (19.0%)	6 (28.6%)	<b>21</b> <b>(100%)</b>
9: Accessible Websites	13 (100%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	<b>13</b> <b>(100%)</b>
<b>TOTAL</b>	<b>1,861</b> <b>(42.2%)</b>	<b>659</b> <b>(14.9%)</b>	<b>590</b> <b>(13.4%)</b>	<b>549</b> <b>(12.4%)</b>	<b>751</b> <b>(17.0%)</b>	<b>4,410</b> <b>(100%)</b>

*Question 2. How effective is the ADA Trainer Network in increasing knowledge of disability issues among end-use training participants?*

A series of paired sample t-tests was used to examine the extent of changes in knowledge before and after the training by comparing pre-test and post-test scores. Table 3 shows the t-test

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results by program and overall. The analyses revealed a significant knowledge gain overall from pre- to post-test, ( $t(3,961) = 42.47, p < 0.001$ ), where participants answered on average 53% of questions correctly in the pre-test, and 69% in the post-test. Calculation of the overall effect size for knowledge gain indicates a medium effect size ( $d = 0.65$ ). As evident in Table 3, most programs demonstrated a significant increase in knowledge ( $p < .001$ ), the only exceptions being Programs 6 and 8; potential reasons for which we will discuss in the next section.

**Table 3**

*Paired sample t-test results for pre- and post-test knowledge scores, for each ADA Trainer Network program*

	N	Pre-test Mean (SD)	Post-test Mean (SD)	<i>t</i>	<i>d</i>
Overall	3,962	0.53 (0.24)	0.69 (0.25)	42.47*	0.65
<b>Program Topic</b>					
1: Disability Awareness	2,065	0.56 (0.21)	0.72 (0.19)	32.05*	0.80
2: Working with a Disability	260	0.68 (0.21)	0.79 (0.20)	7.78*	0.56
3: Tapping into Talent	168	0.55 (0.23)	0.66 (0.20)	6.17*	0.51
4: Serving Customers with Disabilities	265	0.72 (0.22)	0.86 (0.15)	11.84*	0.74
5: Hidden Disabilities	769	0.48 (0.24)	0.76 (0.21)	27.57*	1.24
6: Public Sector Accessibility	368	0.21 (0.09)	0.21 (0.09)		
7: Private Sector Accessibility	36	0.50 (0.19)	0.66 (0.18)	4.28*	0.86
8: Accessible Technology	21	0.65 (0.18)	0.69 (0.20)		
9: Accessible Websites	10	0.31 (0.11)	0.70 (0.08)	10.37*	4.06

\* $p < .001$

*Question 3. How effective is the ADA Trainer Network in impacting end-use participants' behaviors/actions towards people with disabilities?*

Results of the paired sample t-tests suggested that, for all but one program, the ADA TN curricula significantly and positively impacted participants' behavioral/action intentions. Results indicate an overall significant change in behavior/action scores between pre- and post-tests ( $t(3687) = 49.35, p < 0.001$ ). From Table 4, respondents gave a mean rating of 4.66 out of 6 when asked whether they had undertaken various positive behaviors/actions towards people with

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disabilities. This mean score rose to 5.53 when asked after the training whether they intended to undertake each of those behaviors/actions in the future. The overall effect size of  $d = 0.89$  is large. The only program which did not have a significant increase in behavior/action intention was Program 9, which already had a high rating and had a small sample size ( $n = 12$ ).

**Table 4**

*Paired sample t-test results for pre- and post-test behavior scores, for each ADA Trainer Network program*

	<i>N</i>	Pre-test Mean ( <i>SD</i> )	Post-test Mean ( <i>SD</i> )	<i>t</i>	<i>d</i>
Overall	3,688	4.66 (1.16)	5.53 (0.72)	49.35*	0.89
Program Topic					
1: Disability Awareness	1,851	4.58 (1.23)	5.51 (0.76)	35.72*	0.91
2: Working with a Disability	248	4.81 (1.18)	5.62 (0.60)	11.08*	0.87
3: Tapping into Talent	174	4.92 (0.90)	5.61 (0.59)	10.38*	0.91
4: Serving Customers with Disabilities	253	4.80 (1.07)	5.66 (.56)	13.98*	1.01
5: Hidden Disabilities	589	4.84 (1.10)	5.55 (0.72)	17.47*	0.76
6: Public Sector Accessibility	494	4.52 (1.07)	5.41 (0.69)	20.36*	0.99
7: Private Sector Accessibility	49	4.70 (1.00)	5.53 (0.69)	8.96*	0.97
8: Accessible Technology	18	4.31 (0.99)	5.07 (0.87)	3.63 <sup>+</sup>	0.82
9: Accessible Websites	12	5.74 (0.23)	5.74 (0.25)		

\* $p < .001$ ; <sup>+</sup> $p < .005$

## Discussion

The results of this study suggest that the ADA TN had a significant positive impact on both the knowledge level of participants, as well as on their intent to undertake a number of positive behaviors/actions to benefit people with disabilities. The training was effective in reaching a large number of participants from public, private and non-profit sectors. It is interesting to note that the most requested trainings were the general disability awareness program (Program 1), the program on hidden disabilities (Program 5), and the program focused on public sector accessibility (Program 6). We believe the popularity of these three programs may reflect a general trend among stakeholders using disability-related programming. After more than two decades of the ADA, there remains an on-going need for basic awareness

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programs, as well as a need for programming on emerging disability-related issues, such as non-obvious disabilities and revisions in Accessibility Guidelines.

While a significant knowledge gain was seen across most of the programs, Programs 6 (Reaching Individuals with Disabilities: Accessibility in Federal, State or Municipal Entities) and 8 (Accessible Technology in the Workplace) did not show significant knowledge gains. Program 6 requires special mention because it is the third most popular training and no significant knowledge change was seen between the pre- and post-test surveys. This may indicate a need to review the content of Program 6 or the multiple choice questions used to gauge knowledge gain to ensure alignment between the two, and/or to ensure content is novel to participants. Yet, behavior/action intent did increase significantly for Program 6, suggesting that though knowledge per se did not increase participants were positively impacted by the Program. We believe a possible reason for this may have to do with the focus and audience of this program. Since the ADA was passed, public sector entities have generally received training around basic accessibility issues (hence the higher knowledge levels on the pre-test survey). Yet, more remains to be done when it comes to implementing accessibility guidelines, dealing with emerging issues in accessibility and in creating on-going plans for accessibility for public sector entities. Hence, these findings indicate there could be a need to shift of the focus of this program away from basic accessibility issues and more toward planning and implementing on-going plans to ensure equal access to consumers with disabilities.

Program 8 (Accessible Technology in the Workplace) was the second program which did not have a significant change in knowledge. The number of participants in this program, however, was small ( $n = 21$ ), limiting meaningful inference. Program 9 (Accessible Websites)

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had no change in behavior/action intentions, and also had a small sample size ( $n = 12$ ). Both programs had relatively high ratings across both sub-scales in both pre- and post-tests.

Measuring behavior change is always challenging. In this study, we measured self-reported previous behavior/action prior to the training intervention (on the pre-test) and intent to undertake the same behaviors/actions immediately following the training (on the post-test). The post-test method utilized in this study may give inflated ratings of behavior/action intentions because there is likely to be a ‘training effect’, where training participants respond more positively to those questions simply by virtue of having attended the session. Future research should include a time-delayed follow-up measure of behavior change to assess whether the training had a long term effect on participants actual behavior. In addition, a measure of impact on organizational/community climate would provide valuable information on the impact of the program beyond the participants themselves.

There are three limitations to the ADA TN Program which should be considered in future research. First, surveys require a lot of program time to complete; in total, about twenty minutes of the two-hour session was needed for survey completion, taking valuable “face-time” away from the sessions. Second, future research should include a more systematic capture of process data. Though ADA TN members were encouraged to use an online trainers’ log to report the processes they used to outreach and implement training sessions, most trainers either did not use this log or used it inconsistently. Future research should provide a more consistent structure to collect process and fidelity data. Third, future research should utilize methods to gather data on the capacity of the trainers themselves, and the impact of our approach on developing their capabilities and competencies as trainers. More specifically, it would be helpful to gather data on ADA TN members’ capacity to integrate local issues/problems into the trainings they offer in

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their communities. We need more data on ADA TN members' decisions about including local issues, resources or content in their trainings, such as, how they make these decisions and what is the impact of including this local content.

Overall, a promising direction for future research on the ADA TN intervention is that of Participatory Action Research (PAR). PAR has been extensively used in fields such as community, organizational and international development. Yet, it has largely not been embraced in the field of disability. The power of PAR in future intervention research on the ADA TN program would lie in its ability to both yield more in-depth data on intervention impact and to more fully engage ADA TN members and end-users (Bartunek & Schein, 2011; Reason & Bradbury, 2008). Further, a research challenge for the ADA TN intervention lies in the difficulty of capturing and describing longer-term program impacts on community life in realms such as employment, accessibility, transportation, educational access, and other areas. PAR could offer a powerful way to engage local community stakeholders in identifying and describing the outcomes of community changes spurred by the ADA TN program.

In addition to the data we collected during the survey, there are a number of key lessons we have garnered during our experience of implementing the ADA TN which we will apply to future iterations of the ADA TN program:

**The subtle but powerful value of the “Network.”** The word “Network” in the title of the program proved to be an important hidden benefit of the effort. The establishment of this Network was useful for many aspects of our other programming. Members of the Network participated as a “sounding board” for program ideas, fostered other collaborations for our Center, and alerted us to local trends in their communities. In this way, the Network enabled us

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to build capacity for our center that went far beyond simply providing training sessions in their local communities.

**Building opportunities for people with disabilities.** Similarly, the Network is more than just a collection of trainers. Connections and conversations between Network members resulted in collaborations which enhanced the opportunities for people with disabilities in local communities throughout our region. An example of this was when three ADA TN members had a conversation about the rapidly emerging needs around returning veterans in their community, many of whom have obvious and non-obvious disabilities. As a result of this conversation we developed another training program tailored to their community, focusing on using local resources to facilitate veterans with disabilities as they transition to civilian life.

**Better inclusion of trainers and end-users in program development.** In retrospect, we believe the program design would have been strengthened by more thoroughly engaging both potential ADA TN members and end-user participants earlier in the program development phase. Future iterations of the ADA TN program will more comprehensively and systematically include the voice of these key stakeholders throughout program design. In this way, we can be more effective in aligning the program to our stakeholders' needs, and collect better data about program process and outcome.

**Hidden benefits to ADA TN members.** As discussed earlier, some trainers who had gone through the two-day certification program either did not implement trainings, or did not report their implementations to us. Yet, even if some members did not go on to deliver any trainings, we believe the ADA TN certification program in itself was a valuable service to the constituents we serve throughout our Region (New York, New Jersey, U.S. Virgin Islands and Puerto Rico). These certification sessions (both the basic certification and follow-up programs)

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provided a comprehensive learning opportunity in their own right, touching upon both disability-related updates (e.g. legal/policy changes, disability trends, emerging disability issues) and upon issues around promoting the disability inclusiveness message in local communities. Additionally, these sessions offered an opportunity for disability-related professionals to meet and converse around key aspects of their work.

**The issue of reimbursing trainers.** A unique element of our approach was the fact that we paid trainers who conducted trainings and complied with all elements of our contracting process. We believed this reimbursement served to both enhance buy-in to the program and to support disability professionals throughout our Region. A downside to the reimbursement system, however, was the time and attention it required, and the complexity of implementing the reimbursements themselves.

**The importance of the messenger: Supporting people with disabilities as trainers.** From the beginning, we actively recruited people with disabilities as trainers in the ADA TN. In addition, we reimbursed trainers for accommodations to conduct trainings, as well as costs incurred traveling to the training session, and other related costs. We believe that having people with disabilities in positions of competence and leadership sent an important message to end-user participants throughout our Region—a message that we hope was as impactful as the content of the training sessions.

**The cost-benefit of the ADA TN capacity building design.** Even with the cost of reimbursing ADA TN members for completed trainings, the ADA TN proved ultimately to be a very cost-efficient program. When comparing the cost of having NEADA Center staff implement the same number of trainings conducted by ADA TN members, the ADA TN program resulted in a savings to our Center of close to a half a million dollars. ADA TN trainers

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implemented 337 sessions, costing the NEADA Center \$156,400. These 337 sessions if delivered by NEADA Center staff (@\$1,700/session--cost for staff time, travel time, meals & miles) would have cost \$572, 900. This lead to a total cost savings for NEADA Center of \$416, 500 (\$572, 900 - \$156,400). This cost-savings allowed Center staff to concentrate on programming that complemented the ADA TN offerings by providing learning experiences for participants who wanted to go beyond the basics.

### **Conclusion**

This project has shown that capacity building efforts in the field of disability are a viable way to build knowledge and awareness of disability issues in local communities, and can enhance participants' intention to change their behaviors and actions. Though capacity building approaches have been in existence for at least three decades, few capacity building efforts have systematically been applied and tested in the field of disability. With limited resources and an intensifying need for disability interventions in organizations and communities, capacity building approaches such as the one we describe here can hold promise in extending the power and reach of disability service providing agencies. Also, these approaches can serve to spur local dialogue/conversations on these issues, engaging and sustaining attention in ways that "one-time" or online-only training efforts cannot. The lessons we have learned are being applied to future changes in both the program design and evaluation that will improve its reach, efficiency and power.

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