SOCIAL POLICY RESEARCH ASSOCIATES

Evaluation of Technology-Based Learning Grants

Interim Report
October 2010

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EXECUTIVE SUMMARY

In 2006, the U.S. Department of Labor, Employment and Training Administration (ETA) launched the Technology-Based Learning (TBL) Initiative, which seeks to "expand access to training resulting in an increased number of workers trained, particularly in high-growth, high-demand occupations, and to meet the needs of industry for skilled employees."[1] TBL is usually defined as learning that takes place via some form of electronic technology, typically a computer, with materials accessed over the Internet or via CD-ROMs, or on a particular computer or group of computers in a computer lab. TBL is essentially synonymous with several other terms in common usage, including *e-learning*. Practically speaking, TBL is becoming increasingly inseparable from the Internet, but in a strict sense TBL is broader and more inclusive than terms referring to learning that occurs via the Internet, such as *online learning*.

Soon after this initiative was launched, several small TBL projects were funded as demonstrations. Due to the promise shown by these early projects, ETA decided to provide systematic support for TBL on a national basis. Consequently, in June 2008, ETA released a Solicitation for Grant Applications (SGA) to provide $10 million in funding for TBL projects throughout the country. Based on responses to this SGA, in January 2009, ETA awarded funds to 20 grantees in 16 states to develop and implement TBL projects over a three-year period.

In June 2008, ETA awarded Social Policy Research Associates a contract to evaluate these TBL grants. The evaluation features the collection and analysis of both qualitative and quantitative data. Qualitative data collection has occurred primarily through two sets of site visits to grantees. The first set, which included the six grantees that implemented their programs within the first 10 months of the grant (referred to herein as Cohort I) were visited in fall 2009. The second set of site visits, which included the 14 remaining grantees (referred to herein as Cohort II), were visited during the spring and summer of 2010.

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[1] "Notice of Availability of Funds and Solicitation for Grant Applications (SGA) Under the Employment and Training Administration's (ETA) Technology-Based Learning (TBL) Initiative." Federal Register. Volume 73, No. 120. 6/20/08. Notices, p. 35155.

This interim report presents findings from the evaluation based primarily on data gathered during site visits to Cohort I grantees (please see Exhibit ES-1). The report focuses on the program design, administration, partnerships, and training methods used by these grantees. It also provides a brief discussion of preliminary outcomes and challenges as well as some promising practices that are emerging from these programs. The final report, which will be completed in spring 2011, will be based on all data collected during the evaluation, including site visits to both Cohort I and Cohort II grantees.

Exhibit ES-1: Characteristics of Cohort I Grantees

Grantee	Primary Service Area	Industry/ Sector	TBL Grant Funding	Project Type
Able-Disabled Advocacy, Inc	San Diego County, CA	Information Technology	$584,600	New program – curricula already in place
Greenville Technical College	Greenville area and other parts of South Carolina	Health Care	$154,018	Expand existing program
Guidance Center	Wayne County, MI	Mental Health Direct Care	$500,000	Expand existing program with existing curriculum
Northern Virginia Community College	Northern Virginia	Geographic Information Systems	$492,458	Convert existing curriculum
Ogden-Weber Applied Technology College	Weber County, Utah	Information Technology	$500,000	Expand existing program
University of Colorado, Denver	Nationwide	Energy Management	$502,596	Develop new program

Background

According to ETA, the goal of the TBL grants is to stimulate the development of new and innovative models and uses for TBL and, in the process, increase worker access to training in an effective and timely manner. TBL grantees are required to provide effective user support for all clients, including underserved populations and individuals with all levels of computer and technical proficiency, and to ensure that TBL training programs lead to recognized credentials. In addition, in developing and implementing these TBL programs, grantees are required to make use of existing demand-driven strategic partnerships.

Overview of Training Programs

Cohort I TBL providers operate training programs in information technology, health care, and energy management that lead to certificates, nursing license reinstatement, and master's degrees. These programs serve both incumbent and unemployed or under-employed workers, last for

periods ranging from 30 minutes to 18 months, and provide the bulk of their content online. They also have varying eligibility requirements and computer literacy prerequisites.

All Cohort I programs provide or plan to provide certain services in addition to training. These include career counseling, placement services, internships, and soft-skills or job-readiness training. Students who are co-enrolled with certain partners may also receive case management and supportive services.

Each of the Cohort I programs uses a Learning Management System (LMS), most commonly Blackboard Learn, to allow students to access training materials and assessments as well as to track student progress. The LMS also enables students and instructors to effectively communicate with one another and engage in topical discussions. Programs make provisions to accommodate disabled students.

Cohort I programs have from one to four instructors, hired on either a permanent or contract basis. Most programs provide ongoing training in TBL methods and technical support to these instructors, and most TBL instructors express satisfaction with their programs. Some instructors, however, noted challenges, primarily related to teaching load or the "awkward" nature of teaching without a live audience.

Planning and Design

The planning and design process varied for each program in Cohort I, depending on program goals and the capacity of each grantee organization to reach them. The main goals for the grantees in Cohort I are to use TBL methods to increase access to education and training and to improve the quality of educational content and delivery of their programs. The grantees increase access to training by helping students overcome specific barriers to participating in training, which include challenges associated with geography and time constraints. Efforts to improve educational quality include infrastructure improvements, streamlining training opportunities, and tailoring programs to meet specific industry needs.

All programs engaged in some level of collaboration during the design process. Student needs and the needs of target industries guided the design process for each program, with some programs relying heavily on partners to help them define those needs and develop appropriate ways to address them. The design process was lengthier when grantees coordinated across multiple partners, were developing new programs, or were unfamiliar with ETA grants.

Program Administration, Partnerships, and Linkages

The six Cohort I TBL grantees include four public institutions of higher education—three community or technical colleges and a university—and two private non-profit organizations. These grantees' TBL programs have from four to seven staff, excluding instructors, who devote at least part of their time to the program. Typically these staff members include a program manager/grant administrator, an instructional designer, one staff person who oversees the LMS and other technology, and a liaison to students.

Despite some challenges related to the economic downturn and problems with communication, all six Cohort I grantees have developed or strengthened partnerships and linkages related to their TBL programs. Employers, in particular, are a focus of partnership efforts for all six programs, though some programs have more developed relationships than others. At the time of the site visits, four of the six programs had relationships with local public workforce systems, though the strengths of those relationships varied. Five of the six Cohort I TBL programs have strong linkages with partners other than employers and workforce system entities.

Training Methods and Content

The programs in Cohort I employ different approaches to online learning, using a wide variety of methods for instruction and content delivery. Some programs engage in a more "interactive" approach, where students interact directly with online course materials. The level of interaction may vary and can be as simple as navigating online content or as complex as using technology to run experiments. Other programs incorporate requirements that foster social interaction among online students in an attempt to create community as well as to keep students focused and engaged.

All but one of the programs employs a blended approach to learning, combining in-person elements with online instruction. Blended learning is increasingly becoming the "method of choice" for training programs because of the belief that it is a more engaging approach that also fosters better knowledge retention. While staff across Cohort I programs share this belief, their approaches to blending vary in structure, extent, and purposefulness. Cohort I programs cited a number of different rationales for the use of blended approaches. Some programs, for example, have practical skills training components that require a hands-on approach. Other programs place high value on the opportunities for peer networking and relationship building that are afforded by blended learning approaches. Blended approaches also help students maintain a productive pace and enable instructors to appropriately adapt training to the capacities of each student.

A second, almost universally-adopted method, is Cohort I programs' use of asynchronous delivery (i.e., making training content available at any time and thereby decoupling delivery of

content from the time of its creation). Cohort I programs overwhelmingly opt to use this approach primarily because of its convenience for students as well as for pedagogical reasons, such as the ability to allow students to be self-paced and to review course content as much as necessary, thereby helping them to learn more effectively.

Preliminary Outcomes

After only a year of implementation, it appears that Cohort I TBL programs are on target to achieve a number of expected outcomes. Most programs are either on or ahead of schedule to achieve their goals of increased enrollment. The use of TBL methods also seems to have helped students overcome barriers related to distance and time, making it easier for these students to participate in training. Similarly, employers report being happy with Cohort I TBL programs and graduates, with several employers noting that they have hired or would like to hire program graduates. In addition, students report being generally quite satisfied with their experiences in the programs.

Conclusion

Less than a year after receiving their TBL grants, the six Cohort I grantees have designed and begun implementation of their TBL training programs. During this process, they have developed some possible promising practices and have faced a number of challenges.

Promising Practices

Cohort I grantees have developed a number of possible promising practices in the areas of teaching methods, technology, instructors and partnerships:

- **Requiring in-person activities to help students maintain motivation and develop relationships**. Three of the primarily online TBL programs in Cohort I specifically require certain in-person activities to help students remain motivated and develop relationships with peers and instructors.
- **Recording training content and making it available in multiple, easy-to-use formats.** By making recorded lectures available via simple and easy-to-navigate technology, some TBL programs have made it extremely trouble-free and convenient for students to access training content.
- **Exploiting the potential for online interaction**. Due to the importance of student–instructor and student–student interaction in online courses, some Cohort I programs have developed additional techniques for such interaction such as requiring use of discussion boards and creating social networking sites.

- **Giving in-person orientations to key technologies**. Three primarily online Cohort I programs provide in-person orientations to using their technology to lessen the chance that students will face problems using it.
- **Using Technological solutions to problems related to installing and using certain software on home computers.** To eliminate the problems students have faced in using geographic information systems (GIS) software programs on their home computers, one program plans to install technology to allow students to access this software from a server, rather than from their own hard drives.
- **Providing software that helps instructors adapt content for online teaching.** Greenville Technical College has begun using a software program called SoftChalk LessonBuilder, which allows instructors to publish training content to the college's LMS with no knowledge of programming.
- **Providing training to support online instructors**. Each of the TBL programs in Cohort I provide training for both new and continuing online instructors.
- **Allowing extensive employer involvement.** Through deep and extensive relationships with employers, one program has developed a truly employer-driven program.
- **Developing strong co-enrollment partnerships.** Through its co-enrollment partnership with a community-based organization, one program has provided a significant source of support for about a quarter of its students.
- **Developing strong linkages with the public workforce system to increase employer and student referrals**. Two programs' partnerships with the public workforce system have resulted in referrals of potential students, increased connections with employers, and improved knowledge of local industry.

Challenges

Cohort I grantees have thus far faced a number of challenges in the areas of teaching methods, technology, instructors, and partnerships:

- **Determining an appropriate course structure (e.g., level of flexibility, amount of required in-person time) can be difficult to determine at the outset**. Three programs have had to recalibrate their structures to meet students' needs.
- **The right balance between in-person and online activities can be difficult to set.** Some students wanted more in-person activities to provide them with additional opportunities for hands-on practice.
- **Server problems may interfere with program operation.** One program faced major problems with the college's computer server, causing students to lose access to training content.
- **Software program glitches may interfere with program operation**. Respondents from several programs had problems using their learning management systems as well as other types of software.

- **Some instructors have difficulty adapting to online teaching.** Instructors who were new to teaching in an online environment sometimes had difficulty understanding that online learning requires a different approach to instruction and different methods.
- **Students' needs for assistance can put unreasonable demands on teaching staff.** At one TBL program, which is self-paced and where students require a lot of one-on-one assistance, instructors faced a significant challenge in trying to meet student needs.
- **It can be difficult to develop co-enrollment linkages with the public workforce system**. Two programs faced challenges in developing co-enrollment partnerships with the public workforce system.
- **Employers can be reticent to partner under the strain of the recession.** Two programs faced challenges in developing strong partnerships with some employers; in both cases this was at least partly due to the economic recession.
- **Some employer partners may want too much control.** One program faced a challenge in having employers on the advisory board try to assume too much ownership over the program.
- **CBO partners may face challenges that reduce their ability to fully participate**. One program has had difficulty getting community-based organization partners to attend the meetings of its advisory committee or make many referrals because these partners are over-stretched and too busy.

I. INTRODUCTION

Technology-based learning (TBL) is usually defined as learning that takes place via some form of electronic technology. The technology may be the medium through which content is delivered (computers, mobile devices); the source or repository of the content (the Internet, CD-ROM); the means through which learners discover, manipulate, and create (computer software); the means through which learners and instructors are connected over distances (the Internet, intranets); or any of these modes in combination. A variety of educational technologies are employed in the typical TBL program. TBL is essentially synonymous with several other terms in common usage, including *e-learning*. Practically speaking, TBL is becoming increasingly inseparable from the Internet, but in a strict sense TBL is broader and more inclusive than terms referring to learning that occurs via the Internet, such as *online learning*.

In 2006, the U.S. Department of Labor, Employment and Training Administration (ETA) launched the TBL Initiative, which seeks, through development of innovative models and uses for TBL, to "expand access to training resulting in an increased number of workers trained, particularly in high-growth, high-demand occupations, and to meet the needs of industry for skilled employees."[1] Soon after this initiative was launched, several small TBL projects were funded as demonstrations. Due to the promise shown by these early projects, ETA decided to provide systematic support for TBL on a national basis. Consequently, in June 2008, ETA released a Solicitation for Grant Applications (SGA) to provide $10 million in funding for TBL projects throughout the country. Based on responses to this SGA, ETA awarded funds in January 2009 to twenty grantees in sixteen states to develop and implement TBL projects over a three-year period.

In June 2008, ETA awarded Social Policy Research Associates a contract to evaluate these grants. The evaluation features two rounds of phone reconnaissance, one site visit to each

[1] "Notice of Availability of Funds and Solicitation for Grant Applications (SGA) Under the Employment and Training Administration's (ETA) Technology-Based Learning (TBL) Initiative." Federal Register. Volume 73, No. 120. 6/20/08. Notices, p. 35155.

grantee either in fall 2009 (Cohort I) or spring/summer 2010 (Cohort II), and collection of grantee quarterly reports. This interim report is based on data collected during fall 2009 site visits to the six grantees (Cohort I) that implemented their programs early and presents preliminary findings from the evaluation.

Overview of the Grantees

Due to the broad nature of the initiative's goals, the twenty TBL grantees are a diverse group, as are their training programs (please see Exhibit I-1). While all of their training programs are aimed at high-growth industries, grantees are targeting nine different industries. And even within a targeted industry, grantees vary in their emphasis. For example, among the nine grantees targeting the health care sector, specific programs range from refresher programs for nurses who need to renew their certifications to a program specifically designed to improve communication skills among limited-English-proficient nurses.

Exhibit I-1:
Key Characteristics of TBL Grantees

Grantee	Primary Service Area	Industry/ Sector	TBL Grant Funding	Project Type
Able-Disabled Advocacy, Inc	San Diego County, CA	Information Technology	$584,600	New program – curricula already in place
College of Southern Nevada	Las Vegas Metro Area, NV	Health Care	$420,727	Expand existing program; convert existing courses
County of Orange/OC Workforce Investment Board	Orange County, CA	Health Care	$500,000	Develop new program
Dillard University	New Orleans, LA Atlanta, GA Savannah, GA Detroit, MI	Green Construction	$969,090	Update existing curriculum
Greenville Technical College	Greenville area and other parts of South Carolina	Health Care	$154,018	Expand existing program
Guidance Center	Wayne County, MI	Mental Health Direct Care	$500,000	Expand existing program with existing curriculum
Gulf Coast Community College	Florida	Robotics	$499,583	Develop new program
Hillsborough Community College	Florida	Manufacturing	$498,815	Expand existing program
Illinois Department of Commerce and Economic Opportunity	Chicago Area	Information Technology	$500,000	Convert existing curriculum
Madisonville Community College	W. Kentucky, contiguous	Health Care	$425,181	Convert existing curriculum

Grantee	Primary Service Area	Industry/ Sector	TBL Grant Funding	Project Type
	regions of Indiana, Illinois and Tennessee			
North Central Texas College	North Texas Southern Oklahoma	Health Care	$538,947	Convert existing curriculum
Northern Virginia Community College	Northern Virginia	Geographic Information Systems	$492,458	Convert existing curriculum
Ogden-Weber Applied Technology College	Weber County, Utah	Information Technology	$500,000	Expand existing program
Reno Community Services Agency	Reno-Sparks MSA, NV	Transportation	$499,900	Expand existing program
Research Foundation of SUNY	New York State	Health Care	$365,666	Consolidate existing materials for new program
Temple University	Philadelphia, PA	Information Technology	$695,569	Develop new program
University of Colorado, Denver	Nationwide	Energy Management	$502,596	Develop new program
Wake Technical Community College	North Carolina	Information Technology	$383,686	Develop new system; convert existing curriculum to online
West Virginia University at Parkersburg	West-Central West Virginia	Health Care	$469,164	Expand existing program; develop new curriculum
Western Governors University	Nationwide	Health Care	$500,000	Develop new program

Note: Shaded rows indicate grantees in Cohort I that were visited in fall 2009.

The types of organizations funded to implement these TBL programs are also diverse, as is the amount of funding provided by ETA. Grantees include universities and community colleges, private non-profit organizations, a state workforce agency, and a local workforce investment board (WIB). The size of the TBL grants also ranges widely, from a low of $154,018 to a high of $969,090.

Finally, grantees vary in whether they are developing new training programs or are expanding, updating or changing existing programs. For example, several programs have planned to use their TBL grants to convert existing traditional training programs into online programs.

Providing some underlying commonality to this diversity among grantees are a few key features required by ETA. All the grantees must: (1) develop innovative technology-based programs that can be shown to work toward achieving the initiative's goals; (2) provide effective user support for all clients, including those from underserved populations and individuals with low levels of computer and technical proficiency; (3) ensure that TBL training programs lead to recognized

credentials; and (4) make use of existing demand-driven strategic partnerships in developing and implementing their TBL programs.[2]

Overview of the TBL Evaluation

The primary goals of the TBL evaluation are: (1) to understand the design and implementation processes undertaken by the various grantees and (2) to examine the outcomes, such as the number of credentials and degrees earned, that grantees produce through their TBL programs.

These goals guided the development of a conceptual framework for the evaluation. This framework outlined the central features of the TBL grants and served as an important foundation for the evaluation. This framework includes contextual factors, program planning and design, recruitment and intake, delivery, program administration, partnerships and key outcomes.

The evaluation's conceptual framework was particularly useful in developing the evaluation's research questions. These questions are organized into the nine categories summarized below (the questions themselves are presented in Appendix A):

- **Contextual Factors.** These questions are aimed at understanding how existing employer needs in targeted industries, overall economic conditions, and the characteristics of targeted participants affect the development, implementation, and success of the programs.
- **Planning and Design.** Questions in this category focus on the planning and design process for each program and the grantees' TBL program objectives in terms of industry and participant focus.
- **Program Administration, Organization, and Leadership**. These questions examine TBL programmatic features, staffing structures, and reporting.
- **Linkages and Partnerships**. These questions are focused on the partnership arrangements established by TBL programs, ways in which resources are being

[2] According to ETA's SGA for the TBL grants, the criteria and scoring (of up to 100 points) used to award the TBL grants was as follows: 30 points for "Expanding Training Opportunities," (including 10 points for showing how the use of TBL would expand employment and training options, 10 points for showing how the TBL program would overcome barriers of distance and time, 7 points for "sustainability and scalability," and 3 points for demonstrating the need for Federal investment); 20 points for demonstrating appropriate "demand-driven partnerships" (including eight points for demonstrating the strength of those partnerships, seven points for having partnerships with "high-growth/high-demand" industry partners, and five points for demonstrating the relevant organizational capacities of partners); 20 points for "program design, user support, and outcomes (including 10 points for proposed outcomes, 5 points for "user support," and 5 points for "evaluation and data collection); 10 points for demonstrating that the grants would provide training leading to an "industry-recognized credential." Federal Register. Vol. 73, No. 120. Friday, June 20, 2008. Pp. 35155-35163.

leveraged, the referral systems in place, and strategies for inter-partner communication.

- **Recruitment and Intake.** These questions examine the nature of the outreach/recruitment efforts for TBL programs, the intake/admissions process, criteria for participation, and the equipment and skills needed to participate in programs.
- **Training Delivery**. Questions in this category are focused on issues such as faculty involvement in training programs, the types of training programs developed and implemented, delivery modes and methods, and learning management systems (LMS).
- **Additional Services**. This category includes questions around other services such as placement assistance, career counseling, job readiness training and case management that grantees make available to the TBL participants.
- **Outcomes.** These questions focus on a variety of outcomes such as the number of participants enrolled in the TBL programs, the credentials or degrees attained by participants, and the level of participant and faculty satisfaction with the program.
- **Implementation Challenges and Promising Practices.** This final category includes questions aimed at examining major challenges in design and program delivery and how those challenges have been addressed, as well as the emergence of promising practices.

Data Collection

To answer these research questions, the TBL evaluation includes several distinct data collection activities. First, to capture basic information on grantee implementation plans and timelines, evaluation staff members are conducting two rounds of phone reconnaissance calls with grantees. The first round of these calls occurred in summer and fall 2009, and data from these calls were used in the preparation of this report. The second round will take place during fall 2010.

The second primary data collection activity is conducting site visits. Using information collected during the first round of phone reconnaissance calls, grantees were grouped into two cohorts based on their implementation status. Grantees in the first cohort (all early implementation sites) were visited between August and November 2009. This cohort, which is referred to as Cohort I, includes the following programs:

- the CareerLink TBL program (focused on information technology) at Able-Disabled Advocacy, Inc. (ADA);
- the Care and Training Supports (CATS) program to provide training to mental health direct care workers at The Guidance Center (TGC);

- the Global Energy Management (GEM) master's degree program at the University of Colorado, Denver (UCD);
- the Nurse Return to Work through Technology Expansion[3] project to recertify registered nurses and licensed practical nurses whose nursing certification has lapsed at Greenville Technical College (GTC);
- the Geospatial Career Pipeline Initiative (GCPI) on geographic information systems at Northern Virginia Community College (NOVA); and
- the TBL program (focused on IT) at Ogden-Weber Applied Technology College (OWATC).

These sites were visited and included in Cohort I solely because they were the earliest implementers. The second cohort, comprising the fourteen remaining grantees and referred to herein as Cohort II, will be visited from April to July 2010.

Each site visit includes both a virtual component and an onsite component. Site visitors first carry out the virtual component, which consists of the following activities:

- a thorough examination of the grantee's LMS and all grant-related online courses and materials;
- convening of a virtual focus group of two to four current program participants; and
- observation of a synchronous virtual activity.[4]

Thereafter, site visitors conduct the onsite component, traveling to the grantee's primary location to collect additional data over a period of a day and a half. During this onsite visit, evaluation staff meet with multiple respondents, including, as appropriate, the grant administrator, project director, director of e-learning, instructional designer, instructors, case managers, and program partners, which may include employers, members of the local public workforce system, educational institutions, and community-based organizations (CBOs). If possible, site visitors also observe a program activity, such as an in-person training session.

The third data collection activity is requesting copies of required quarterly reports submitted to ETA by grantees. Of particular interest is the High Growth and Community-based Job Training Grants (HGCJTG) quarterly report (ETA 9134), which is submitted by all grantees. These

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[3] For brevity, this grantee is referred to as Nurse Return to Work throughout this report.

[4] A synchronous virtual activity is an activity that occurs via the Internet in real time. By contrast, an asynchronous virtual activity is an activity that is available at any time.

reports primarily contain cumulative aggregate-level data on TBL participant demographics, services provided, and outcomes.

Two other data collection activities related to the evaluation may take place at a later date if additional funding is available from ETA. These activities would include: 1) gathering detailed participant-level data from grantees' management information systems (MIS) to supplement data collected from quarterly report submissions; and 2) conducting an online survey of TBL participants. These two activities were initially planned to occur in the spring of 2010 as part of this evaluation, but due to delays in receiving approval for them from the U.S. Office of Management and Budget (OMB), they could not be conducted as part of this evaluation.

Deliverables

The TBL evaluation includes two primary deliverables. The first is this interim report, which, as noted above, is based primarily on data collected during site visits to Cohort I grantees. In addition, limited information from HGCJTG quarterly reports from the second and third quarters of 2009 is used in this interim report.

The second deliverable is a final report that will be completed in spring 2011. This final report will be based on all data collected during the evaluation (particularly data collected during site visits to all 20 grantees) and represent a comprehensive accounting of all findings amassed over the duration of the evaluation.

Overview of this Interim Report

The remainder of this report summarizes early findings from the evaluation, primarily based on data collected from the six Cohort I grantees visited during the first set of site visits. As discussed above, data from grantee quarterly reports were also used, although those data were very limited.

The six Cohort I grantees on which this report focuses may differ in meaningful ways from the other fourteen TBL grantees—particularly because each Cohort I grantee is an early implementer and early implementation may be associated, in unknown ways, with certain program characteristics. Consequently, the findings presented in this report may not be generalizable to the broader group of grantees. In addition, even for the Cohort I grantees, this report presents results from only their first year of implementation, and thus these findings should be considered only preliminary.

The report begins with Chapter II, which presents an overview of TBL training programs among Cohort I grantees. Chapter III then presents a discussion of the planning and design processes used by these grantees. Chapter IV discusses the training methods and program content used by grantees. Chapter V then describes how Cohort I grantees are administering their TBL programs and the partnerships and linkages they have developed to support their programs and Chapter VI provides a brief discussion of grantee outcomes to date. The report concludes by highlighting some of the challenges encountered by these TBL initiatives, as well as the promising practices that have emerged. One-page summaries of each of the six Cohort I grantees are included as Appendix B.

II. OVERVIEW OF TBL TRAINING PROGRAMS

The six grantees in Cohort I provide a variety of TBL training programs that target different populations, train participants in several different fields, and lead to different kinds of certifications. This chapter provides an overview of the key characteristics of these programs: what types of training they offer, how they limit participation to targeted groups through eligibility criteria and skill prerequisites, how they orient new participants to their programs, how they hire instructors, what software they use, and what additional non-training services they make available to program participants.

Types of Training Programs

The six TBL grantees in Cohort I are providing training in five different fields: information technology (IT), geographic information systems (GIS), energy management, nursing, and mental health direct care (please see Exhibit II-1).[1] Although only one of the programs (CATS) requires participants to be incumbent workers in the field, two others primarily serve incumbent workers, and the other three serve mostly unemployed or under-employed workers.[2]

The purpose of the training programs and the credentials they lead to also vary: one program results in a master's degree, three lead to certificates, one leads to reinstatement of a nursing license, and one helps workers to complete certain trainings required for continued employment working with developmentally disabled and mental health populations in Michigan. Of the programs offering formal certifications, three offer only one or two different credentials, while one IT program offers more than six different certificates and the other at least fifteen.

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[1] Direct care workers are defined by TGC in their Statement of Work for the TBL grant as workers who "provide supervision and physical and emotional care for vulnerable individuals, including elderly and disabled populations." The grantee is focusing on direct care workers who serve developmentally disabled and mental health populations.

[2] Both the OWATC TBL program and CareerLink can and do serve some incumbent workers (and, as will be discussed in Chapter III, OWATC originally expected incumbent workers to be in the majority). Only Nurse Return to Work does not really serve incumbent workers, since the program targets individuals who have not worked as nurses for five or more years.

Exhibit II-1:
Essential Characteristics of Cohort I Programs

	CareerLink	CATS	GEM	Nurse Return to Work	GCPI[3]	OWATC
Grantee	Able-Disabled Advocacy, Inc.	The Guidance Center	University of Colorado, Denver	Greenville Technical College	Northern Virginia Community College (NOVA)	Ogden-Weber Applied Technology College
Training Field	IT	Direct Care (for mental health)	Energy management	Nursing	GIS	IT
Type of Credential(s) Earned	Industry Certification	Required for continued employment	Masters	Registered Nurse (RN) or Licensed Practical Nurse (LPN) license	Certificate	Industry Certification/ Certificate
# of Certificates/ Credentials offered	6	0[4]	1	2	1	16
Length of Program	About 10 months (10–12 weeks for the online portion)	30 minutes to 3 hours	18 months	4 and a half to 6 months (online portion must be completed in 90 days+ skills lab)	4 semesters (18 -24 months)	10 months for a certificate; individual courses leading to industry certification take 2–8 weeks

Due to the variation in content and credentials offered, as well as in the students served, the TBL programs also vary considerably in length, with the longest lasting for 24 months and the shortest for as little as 30 minutes.

Despite their variation in length, content, and targeted students, five of six Cohort I programs share an important characteristic: they use the Internet as the primary medium for providing their training (please see Exhibit II-2). This reliance on online course delivery does not necessarily mean that the programs are completely virtual; all but one of these primarily online programs

[3] Although the GCPI program will eventually offer dual enrollment programs with some area high schools, and the program is also in the process of putting online a course introducing GIS to students who are not yet in the GIS certificate program, in this chapter and most other sections of the report where GCPI is discussed, GCPI is referred to synonymously with the GIS Career Studies Certificate program, which is the GCPI program's major activity.

(CATS) has some kind of in-person requirement. The sixth program, the TBL program at OWATC, also uses the Internet as a training medium, but only four of its courses are available online and it relies primarily on in-person computer-based training.

Exhibit II-2:
Use of Online Learning Among Cohort I Programs

	CareerLink	CATS	GEM	Nurse Return to Work	GCPI	OWATC
Courses Available Online	All	All[5]	All	All	Only two GIS certification classes are online[6]	Internet Technology, Intro. to IT; Intro. to Prog.; A+ Certification I course[7]
In-Person Requirements	3-hour session twice a month; internship	None	4 days orientation at beginning of each quarter	Orientation, skills labs, one exam, and externship	All but the two online courses are in-person	All except introductory courses are entirely in-person
Bulk of Training Online?	Yes	Yes	Yes	Yes	Yes	No

Prerequisite Skills, Eligibility Criteria, and Application Requirements

The six Cohort I programs have widely varying guidelines and rules for admission. These rules and guidelines exist in three distinct areas: prerequisite skills in the area of computer use; eligibility criteria related to the applicant's educational attainment, employment, place of residence, or disability status; and requirements for the application process.

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[4] The CATS program expects to allow students to be able to access the College of Direct Support's Direct Care Provider *Care and Training Supports* certificate program by December 2009.

[5] This included only three courses at the time of the site visit, although more are expected to be added soon.

[6] Due to the cost and computer memory requirements of software required for online GIS courses, many GCPI students also regularly use the program's computer lab to complete assignments. However, the program is working to eliminate these problems through installation of desktop virtualization, which is discussed in more detail below.

[7] OWATC plans to have four more of its courses available online by July 2010.

Variations in each of these areas are linked directly to differences in the populations targeted by the programs. Five of the six Cohort I grantees are targeting fairly specific populations for their TBL programs (please see Exhibit II-3). Three of these grantees are targeting individuals who currently work or have previous experience in a specific industry or occupation. A-DA (CareerLink) is targeting disabled individuals and OWATC was targeting incumbent workers, but is now recruiting anyone who is interested in an IT career. To ensure that it reaches its targeted population, a program may have to establish certain eligibility criteria in addition to skill prerequisites. Exhibit II-3 describes each program's target group and details the various ways in which each program controls who may apply.

As can be seen in Exhibit II-3, eligibility requirements differ significantly. Nurse Return to Work requires students to have been licensed nurses in the past; other programs require students to have specific characteristics or credentials, such as a disability (CareerLink), or a baccalaureate of arts or sciences (BA/BS) degree (GEM).[8] By contrast, OWATC has an "open door" policy, allowing enrollment by anyone who lives close enough to the school to visit the program's lab on a regular basis.

To be admitted to any of the six TBL programs, individuals must submit some type of registration or application form. In addition, three of the programs require additional materials for admissions. Both CareerLink and the OWATC program, for example, require applicants to undergo several assessments prior to enrollment, and CareerLink also requires an in-person interview to assess motivation. GEM, as a university graduate program, requires copies of undergraduate transcripts, Graduate Management Admission Test (GMAT) scores, and three professional references. The additional materials required for admission to CareerLink, the OWATC program, and GEM are used to assess motivation and suitability, as well as to prioritize certain students when the number of applicants is greater than can be enrolled.

Consistent with the fact that these programs are technology-based, five of the Cohort I programs require applicants to have certain computer skills or experience. Although for two of these programs—CATS and Nurse Return to Work—these skills are as basic as being able to use two IT training programs—CareerLink and the OWATC program—may require much more extensive computer skills depending on the certification a student wants to complete. 8

[8] The GCPI program will allow students at partner high schools to co-enroll in certain GIS classes beginning fall 2010.

Exhibit II-3:
Eligibility Criteria, Skill Prerequisites, and Application Requirements of Cohort I Programs

	Target Group	Eligibility Criteria	Computer Skill Prerequisites	Application Requirements
CareerLink	Disabled individuals	Must be disabled and demonstrate competence in English and math and motivation/ self-direction	500 hours work experience & additional skills depending on desired certification(s)	Submit resume, application, & motivation questions; undergo assessment of math, English and computer skills; complete in-person interview
CATS	Direct care workers who need to complete entry-level or annual requirements	Must work in Wayne County, Michigan	Have a valid email account	Fill out online form and provide email address
GCPI	None	Must have a high school diploma or equivalent	Understand fundamental computer applications and concepts	Submit application
GEM	Individuals with professional experience in energy industry	Must have BA/BS degree	None	Submit application, undergraduate transcripts, GMAT scores & three professional references
Nurse Return to Work	Nurses who intend to return to nursing after five or more years out of the field	Must have held U.S. nursing license and been trained in an accredited nursing program	Ability to use email & attach/ download documents	Submit online application
OWATC TBL program	Originally incumbent workers, but open to all	None	Ability to use the Internet; additional skills depending on desired certification(s)	Complete application & undergo assessment of interests, abilities and work values

CareerLink also requires that applicants have at least 500 hours of work experience with computers, although this requirement can be waived for students who have experience with computers outside of a work setting or are very motivated. At GEM—the only program that does not have explicit computer skill prerequisites—program staff explained that the program does not need to mandate computer skills because the requirements for a baccalaureate degree and professional experience ensure that all enrollees come with at least basic computer skills.

To assess computer skills, two of the grantees require applicants to undergo a skills test. At CareerLink, this consists of requiring an applicant to participate in a simulation of the online course he or she wishes to take, while for the OWATC program, applicants complete a skills

assessment.[9] In both cases, individuals not able to demonstrate sufficient skills are required to complete remedial computer classes before admission or are counseled to switch to a different program.

Although GTC does not currently require applicants to take a computer assessment for admission to Nurse Return to Work, it is considering adding such a requirement due to the extremely low skill levels of a number of recent students. The program manager explained that these students have great difficulty succeeding in the online portion of the program, and an assessment would help the program to ensure that future participants have at least the minimal skills required.

Orientations

Five of the six Cohort I grantees provide an orientation for new students (please see Exhibit II-4). Program staff from these organizations noted that orientations for TBL programs, particularly those with primarily online content, are critical because students spend so much of their time working on their own without easy access to help from an instructor. In support of this observation, two students in a primarily online program complained that their orientation was too short and not comprehensive enough.

The only program that does not provide an orientation is CATS; it does not do so because the technology it uses is very basic and the courses it offers are relatively simple (no instructor interaction and no grades or credentials awarded). However, the Virtual Center for Excellence, which hosts the CATS programs, does make available hard-copy users' manuals for its website and is developing an online version. The center's website also has a link to an online tutorial that will walk students through the process of setting up a Yahoo email account.

Cohort I TBL program orientations typically cover the program's schedule, course syllabi, attendance and grading policies, and LMS.[10] In four of these orientations, students are provided with an opportunity to log in to the LMS to make sure their login names and passwords are working and to begin using the system.

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[9] CareerLink staff noted that an even more basic test occurs earlier in the application process when applicants are required to email in several application-related documents. If a student is unable to attach these documents to an email and send them in, the program will inform the applicant that he or she needs additional computer skills before he or she can participate in the program.

[10] These systems are described in more detail below.

Exhibit II-4:
Orientations Provided by Cohort I Grantees

	CareerLink	CATS	GEM	Nurse Return to Work	GCPI	OWATC
Orientation provided?	Yes	No	Yes	Yes	Yes	Yes
Group or individual	Group	Not applicable (N/A)	Group	Group	Group	Individual
In-person or online	In-person	N/A	In-person	In-person	In-person or online	In-person
Length	3 hours (part of first in-class session)	N/A	4 days every quarter	4 hours	3 hours	2–3 hours

Four of these orientations are provided in person, despite the fact that three of these four TBL programs provide the bulk of their training online. The associate director of one of these programs—GEM—said that his program opted for an in-person orientation because it allows better opportunities for students to begin developing relationships with instructors and peers. He feels these relationships are crucial for enabling students to work together collaboratively online. Furthermore, GEM's associate director of online programs said that in-person orientations make it easier for TBL instructors and staff to help students overcome any initial technical problems.

Two programs offer ways for students to review parts of their orientations. GEM tapes its orientation sessions and puts them online for students to review, and both GEM and Nurse Return to Work make copies of orientation materials and send them to students—Nurse Return to Work via a DVD and GEM via a flash drive.

Five of the Cohort I programs provide orientations in a group setting. As students can join OWATC's TBL program anytime there is space, formal, group orientations are not practical for the program. CareerLink, the other Cohort I program that provides an informal orientation, does so because its extensive admission process gives new students a strong understanding of the program prior to enrollment, thus obviating the need for a formal orientation.

Most Cohort I program orientations are from two hours to four hours in length. GEM's orientation, which lasts for four days and includes required activities from 7 am to 6 pm, is the most extensive. To promote additional interaction between students, all GEM students, even those who live in Denver, are required to stay overnight at the hotel where the orientation is held. GEM staff and students also organize required social events such as happy hours and dinners for the evening hours. Despite its length and the cost to students of staying in a hotel for four days,

GEM students expressed satisfaction with the program's orientation, citing the numerous opportunities for interaction it affords.

Two Cohort I programs provide more than one orientation per cohort of students. For example, GEM holds an orientation at the beginning of each quarter. GEM respondents said that because the program's instructors change each quarter, quarterly orientations allow students to develop relationships with their new instructors. CareerLink, which previously held only one orientation at the beginning of the program, also recently added an orientation at the beginning of the test preparation segment of its program, after a number of students in its first cohort failed to pass certification exams.

Instructors

At the time of the site visits, Cohort I TBL programs had from one to four instructors (please see Exhibit II-5). Four programs hired these instructional staff on a permanent basis, while two programs—GEM and CATS—hire instructors on a contract basis. GEM uses contracted instructors so that it can hire subject-matter experts to cover specific courses, rather than hire generalists or maintain a much larger staff of permanent instructors. These experts can be hired even if they are located out of state or out of the country (for example, at the time of the site visit, one GEM instructor was based in Calgary and another in California).

Exhibit II-5:
Number of TBL Instructors at Cohort I Programs

	CareerLink	Nurse Return to Work	GCPI	OWATC	CATS	GEM
# of Instructors	1	2[11]	4	4	4[12]	4[13]
Experienced in TBL Methods?	Yes	Yes	Yes	Yes	No	No

[11] If another partner college is able to enroll four local students, the program will hire another instructor to conduct the skills lab portion of the program at the partner college.

[12] The program has thus far recorded presentations by four instructors; however, these instructors taught only one in-person class session and are not part of the program on an on-going basis.

[13] The program hires two instructors per cohort per quarter. Eventually, once a third cohort is added in January, the program will have six instructors at any one time. These instructors are contract employees and thus may have no continuing relationship with the program after a quarter is finished

Prior to developing their TBL courses, instructors for GEM had not taught or developed courses using TBL and online methods. Consequently, they had to rely on training and assistance provided by the program to effectively prepare and deliver training content in a TBL format. As part of this training, the program's associate director of online programs provides an orientation for them to both the LMS and the software used for recording lectures. He also sends instructors an orientation and information packet prior to this session. In addition, GEM's associate director of programs, who also serves as the program's instructional designer, assists instructors with converting or developing their courses using the program's template for online instruction, which requires the use of bulletin boards and recorded lectures, among other things.

CATS program instructors also had no prior experience in teaching online courses. However, they received no training on online methods. Instead, instructors simply conducted a standard in-person course lecture, which was recorded, edited, and uploaded to the LMS by grantee technical staff.

No matter their level of experience, instructors at all grantees except TGC receive on-going assistance and support on how to teach effectively in a TBL format. For example, at NOVA, GTC, and UCD, a staff person such as an instructional designer or online mentor provides ongoing assistance to instructors teaching online courses. These colleges or their TBL programs also provide regular refresher or update courses to instructors on using their LMS. GTC also recently developed a special help desk just for faculty teaching online courses (and OWATC is planning to do this as well).

Instructor Satisfaction with TBL Approach

In general, instructors expressed satisfaction with teaching TBL programs. For example, one GEM instructor noted that he liked that students were obligated to participate in discussion boards, saying that it is nice not to "have to worry about students just showing up and zoning out," and that this "generates a lot of beneficial interactions between students and faculty." Another GEM instructor talked about how he liked the variety of TBL formats used by the program and another commented that an online medium allows for more thoughtful contemplation about subject matter.

Respondents from two grantees, however, noted some challenges in relation to TBL program instruction. At UCD, the associate director of programs for GEM noted the difficulty of convincing instructors that the online learning environment demands a different type of teaching, requiring changes to their syllabi and lecture approaches. Two GEM instructors also noted that it was difficult to record their lectures in advance without an audience; one likened this to lecturing into a mirror and the other said that it was impossible to know whether students were

understanding the material without being able to see their faces. A third GEM instructor said that creating PowerPoint presentations and lectures of the right length for an online audience was a challenge when he first began teaching for GEM.

Respondents at OWATC noted a different type of challenge: the large amount of one-on-one time instructors need to give to students. OWATC's TBL program has been very popular, and finding time to work with all of these students individually has been difficult for the program's two primary instructors. As a result of this challenge, OWATC's TBL program was forced to cap enrollment.

Learning Management Systems

Each of the TBL grantees uses an electronic LMS, sometimes also called a course management system, to house and manage its TBL training programs. Users—students, faculty, and staff—access these systems by pointing their web browsers to a specific website and entering an assigned login name and password. Once logged in, users navigate systems that look similar to standard websites and, according to both students and instructors, are quite easy to navigate via tabs and menus (please see the example of an LMS home page in Exhibit II-6).

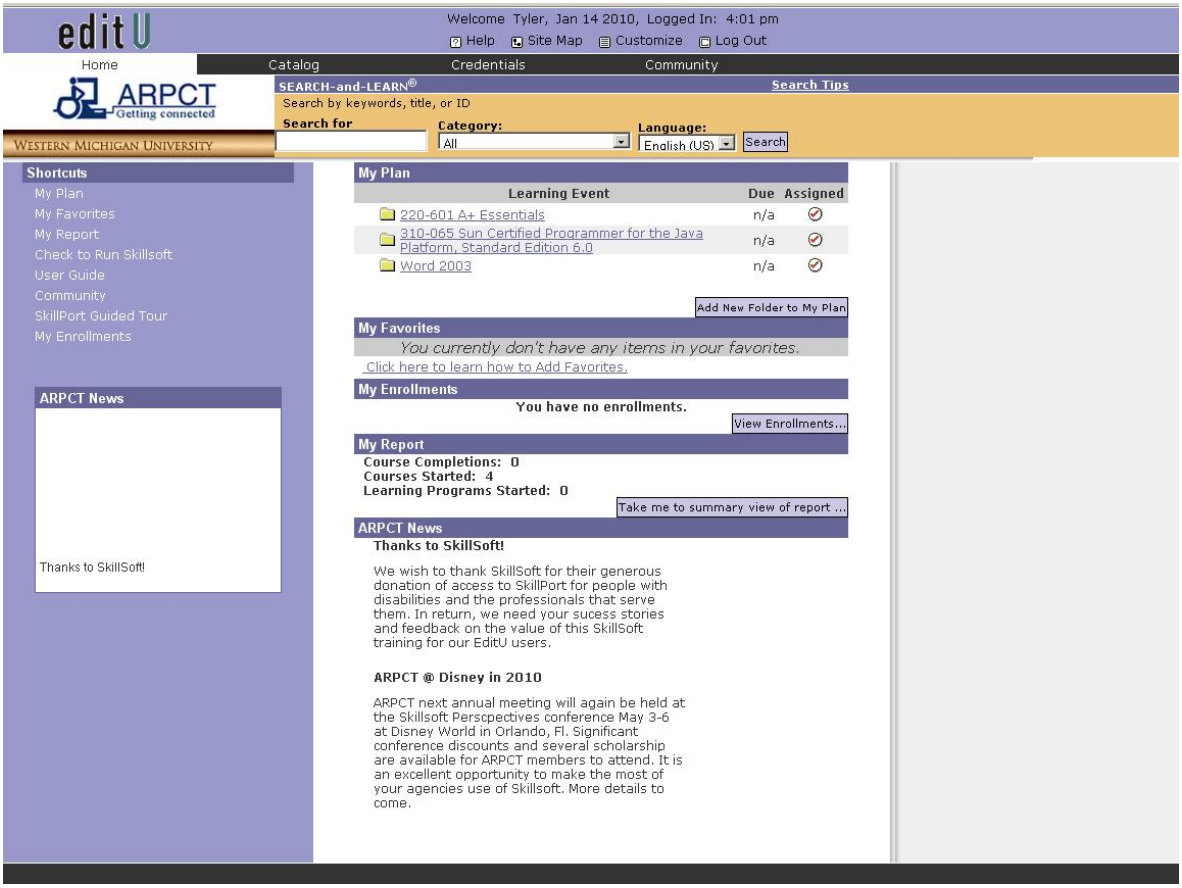
Cohort I grantees use their LMS primarily to perform the following functions:

- allow students to access training materials, including recorded video lectures and PowerPoint presentations, via the Internet;[14]
- inform students of assignments;
- assess/test students;
- track student grades and/or certifications;
- provide avenues for communication between and among students and instructors.[15]

[14] OWATC's TBL program is primarily provided in-person. However, because instruction is completely self-paced, students use the grantee's LMS to access their assignments and take tests in the college's IT computer lab.

[15] A more detailed discussion of the use of these functions in TBL training courses is presented in Chapter IV.

Exhibit II-6:
LMS Example: CareerLink TBL Program



Four of the six LMS also allow program staff to closely monitor student usage of training material. They track how long students are logged in and how long they spend on a particular page or module. At least one LMS—the system used by GTC—can also track how long a student spends on specific tests, and it can grant specific students additional time to complete a test. This system can even monitor how long a student spends on individual test questions.

Finally, at least three of the systems used by Cohort I programs also capture limited demographic, background, and contact information for students. However, all but one of these programs capture these data more extensively on separate management information systems, as do the three other programs that do not use their LMS to capture demographic data at all.

Four of the Cohort I grantees—all institutions of higher education—use the same LMS: Blackboard Learn. Each of these institutions, either individually or as part of a consortium, has purchased this system for use by all of its online programs. Since the cost of the LMS is covered by the school or shared among many programs, individual programs pay little or even nothing for its use. For example, through its membership in the Utah Education Network, a consortium

of public higher education institutions, OWATC's TBL program received free access to Blackboard Learn. Consequently, even if they are not completely happy with its functionality, some programs (GEM and OWATC's program) continue to use Blackboard Learn only because they cannot afford to pay for a different system on their own.

By contrast, the two nonprofit grantees, A-DA (CareerLink) and TGC (CATS), opted to use a contractor to develop an LMS customized specifically for their programs. In the case of A-DA, the organization hired SkillSoft—the same organization that developed the online training programs it uses—to develop its LMS.

Cohort I respondents noted a few challenges related to their LMS. Perhaps the biggest challenge was faced by GTC, which experienced serious problems with its computer server and its ability to host online courses. As a result, the LMS stopped working on numerous occasions, freezing course material and activities. This caused major headaches both for the program and students, one of whom reported that a system freeze caused her to have to repeat a test. Although it is unclear what caused these problems—possibly improper installation of Blackboard Learn—the college has since decided to outsource the hosting of its online courses to Blackboard.

In addition to the server problems faced by GTC, respondents at both GEM and OWATC's TBL program reported some challenges with using Blackboard Learn. The associate director of online programs at GEM, for example, noted that he had difficulty developing the community feature of GEM's LMS page. One of the instructors for the TBL program at OWATC similarly found Blackboard Learn to be a bit "cumbersome," forcing her to redesign some of the A+ Certification I course she was putting online, which resulted in a delay in opening that course for online enrollment. Finally, GEM instructors complained about the grade center feature of Blackboard Learn, finding it difficult to understand and use.

Participant Technical Support

TBL students at all Cohort I grantees can receive technical support from at least one designated program staff person, such as their instructor or a customer support specialist. In addition, students at five of the six Cohort I programs also have access to support via help tabs and/or user guides available on the LMS, which typically provide textual information on numerous help topics. Students at four grantees can also contact a help desk or "mentoring" program, via live chat, email, or phone. These help lines are operated by either the grantee or the LMS developer or both. Typically, staff at these help lines are available after business hours, at least via email.

Despite the existence of various sources of support, students in at least three Cohort I programs—CareerLink, GEM, and the OWATC program—receive most or all of their technical

support from program staff. According to respondents in these programs, this is due to the fact that program staff can provide the best answers to specific questions about the technology used by programs. In addition, in programs where students have regular in-person contact with program instructors, such as CareerLink and the OWATC program, students find it is easiest to ask their instructors for help. By contrast, students from Nurse Return to Work said they found GTC's help desk to be helpful in dealing with LMS problems. For example, one student commented specifically that staff from the college's help desk provided particularly useful support during the summer of 2009, when the college's computer servers malfunctioned.

Accommodations for Disabled Students

Each of the Cohort I TBL grantees has made accommodations for disabled students. For example, A-DA's computer lab is wheelchair accessible and has a special monitor for use by the visually impaired. A-DA also made sure that all of CareerLink's training components are compatible with various types of screen-reading software, so that they can be either viewed or heard, or their text zoomed. Somewhat similarly, Blackboard Learn, used by four of the Cohort I grantees, makes all content available in forms that can be viewed or heard via a screen reader. TGC makes closed-captioning available for all of its online courses and uses sign language interpreters for the live sessions it holds when it tapes online courses. OWATC, which is currently serving a student with a visual impairment, made the course textbook available online in simple text format so that the student could increase the font size to see better.

Additional Services for Participants

In addition to training, each of the Cohort I programs except CATS provides some additional services to TBL students. These services primarily include employment services such as career counseling, placement services, and soft skills or job readiness training. A few students also receive case management and support services.

Career Counseling and Other Employment Services

Assisting TBL training program graduates with finding employment is a goal of all of the Cohort I programs except CATS (which serves only incumbent workers). The main employment service that each of these five programs provides (or plans to provide) is career counseling from program staff. At OWATC and GCPI, program instructors provide career advice, while at other programs such as GEM and Nurse Return to Work, the project director or associate director of operations fulfills this role.

In addition, students in these five programs also have access to career counseling via career centers that are operated by staff who work for a separate program or department operated by the grantee organization. For instance, each of the higher education grantees operates an on-campus career center that is open to TBL students. These centers have career counselors available to provide assistance and also often maintain postings of available jobs. However, because these campus-wide career centers are not focused on the specific TBL fields, TBL students do not commonly make use of them. Although it does not operate a formal career counseling center, A-DA offers career counseling, as well as a job club, to its CareerLink clients.

Three of the programs—CareerLink, Nurse Return to Work, and GCPI—require that students participate in internships with employers as part of the program. These internships, which are sometimes paid and sometimes not, are seen by the programs as a way for students to gain needed work experience and establish contacts with employers that might hire them after graduation. For their part, employers see these internships as a way to test out potential employees at little cost.

At least three of the Cohort I programs (CareerLink, GEM, and GCPI) also plan to provide job placement services to TBL participants. These three programs have been working hard to develop partnerships with employers that can hire TBL program graduates, as well as assist their programs in other ways.[16]

Finally, three TBL programs—Nurse Return to Work, OWATC, and CareerLink—also provide TBL students with soft skills or job readiness training. For example, as part of the curriculum, Nurse Return to Work participants receive training in communications skills and maintaining a professional appearance. OWATC students enrolled in the TBL certificate program in IT are required to take job readiness classes that cover topics such as interviewing and developing a resume, and other students can take these courses as electives. Similarly, CareerLink students can receive instruction from A-DA staff on interviewing and resume preparation. In addition to being able to receive soft skill or job readiness training directly from grantees, students co-enrolled in certain partner programs such as those funded by the Workforce Investment Act (WIA) may also receive such training from the partner program.[17]

In general, programs have planned for participants to participate in internships and receive career counseling and placement assistance toward the ends of their training programs. For example,

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[16] Partnerships with employers are described in greater detail in Chapter V.

[17] Co-enrollment is discussed in more detail in the next section and in Chapter V.

Nurse Return to Work students receive career counseling from the project manager during their exit interviews. GEM is still developing this aspect of its program because its first cohort of students is still two quarters from graduation.

Case Management and Support Services

Case management for Cohort I TBL students is only provided when a participant is co-enrolled in a partner agency's program and that program pays at least a portion of the student's tuition and other costs.[18] These case management services are then provided by the partner agency, although TBL program staff members communicate regularly about the student's progress with partner case managers. In some cases, TBL staff members even work with case managers to ensure that the TBL training is appropriate for a particular individual. Typically students are first enrolled in the partner program, which assigns a case manager, and this case manager then refers the student to the TBL program for training.

Students who receive case management services are usually eligible to receive support services from these same partner organizations as well. The receipt of such services is usually facilitated by the student's case manager. According to TBL program staff, the most common type of support service offered by these partner agencies is transportation assistance. For example, OWATC TBL students co-enrolled in Ogden-Weber Community Action Agency's Education to Careers program receive bus passes to allow them to travel back and forth to the college. CareerLink students co-enrolled in Vocational Rehabilitation are provided with bus passes, assisted with paratransit arrangements, or provided with funding to modify personal vehicles to allow them to travel to program activities.

Summary

Cohort I TBL programs are operating training programs in IT, health care, and energy management that lead to certificates, license reinstatement, and master's degrees. These programs serve both incumbent and unemployed or under-employed workers, last for periods ranging from 30 minutes to 18 months, and provide the bulk of their content online. They also have varying eligibility requirements, with some requiring very specific characteristics such as a disability or a previous nursing license. Computer skill prerequisites also differ, with some programs requiring only basic skills while others demand more extensive skills.

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[18] At the time of the Cohort I site visits, only four of six programs, CareerLink, Nurse Return to Work, GCPI, and the OWATC program, had co-enrollment partnerships with local agencies. These partnerships are discussed in more detail in Chapter V.

Most programs include group orientations, typically lasting for two to four hours, and covering topics such as the program's schedule, course syllabi, grading policies, and LMS. To allow for stronger relationships with program staff and peers, most of these orientations are provided in person, even among programs that provide the bulk of their training online.

Cohort I programs have from one to four instructors, hired on either a permanent or contract basis. Most programs provide ongoing training in TBL methods and technical support to these instructors, with more assistance provided to those with no previous TBL experience. Partly as a consequence of this support, most TBL instructors said they are satisfied with teaching in a TBL program, with some even commenting on the advantages of TBL courses over traditional ones. However, instructors did note a few challenges, primarily related to becoming accustomed to teaching without a live audience, or the burden of working one-on-one with students in a self-paced program.

Each of the Cohort I programs uses an LMS, most commonly Blackboard Learn, to allow students to access training materials and assessments and to track student progress. These systems are also commonly used as a means of communication among students and instructors. Accommodations to these systems have also been made to allow disabled students to access them. Due to the complexity of these systems, all Cohort I programs provide at least one avenue for technical support to students, usually from a program staff person. Despite this assistance, respondents did note a few LMS-related challenges, including server problems and issues with certain functions.

Finally, all Cohort I programs provide or plan to provide certain additional services. These include career counseling, placement services, internships or externships, and soft skills or job readiness training. Students who are co-enrolled with certain partners may also receive case management and support services.

III. PLANNING AND DESIGN

This chapter describes how the six Cohort I grantees planned and designed their TBL programs. The chapter begins with a discussion of TBL program goals and continues with a description of the programs' planning and design processes and the factors that influenced them.

Program Goals

The major goals for the TBL programs in Cohort I fall within two general categories: (1) increasing access to education and training and (2) improving the quality of educational content and delivery. These goals were predicated on what program staff felt were the advantages of TBL and how it could help their programs and the students and industries they served. These perceived advantages of TBL are illustrated below in Exhibit III-I. They are discussed in more detail throughout the sections that follow, particularly in terms of how they help students overcome barriers to continuing education and how they shaped program design.

Exhibit III-1:
Perceived Advantages of TBL

	Career Link	GEM	Nurse Return to Work	CATS	GCPI	OWATC
Overcomes geographic boundaries	✓	✓	✓	✓	✓	
Provides flexibility for time-constrained individuals	✓	✓	✓	✓	✓	✓
Strengthens program infrastructure	✓	✓	✓		✓	✓
Extends access to a greater number of people			✓	✓	✓	✓
Increases the quality and quantity of a specific workforce sector	✓	✓	✓	✓	✓	✓

Increasing Access to Education and Training

With the exception of the GEM program, a primary goal for the TBL programs in Cohort I is to increase access to education and/or training. This goal was formulated in response to perceived industry needs for additional trained workers, particularly in the fields of information technology and health care, both of which are described as "growing industries" with similarly growing labor needs. The goal of increasing access was also the result of a desire to help students overcome geographic or time barriers that keep them from pursuing or furthering their educations.[1]

Improving Quality of Education Content and Instructional Delivery

Improving educational content and instructional delivery is another major goal of the TBL programs in Cohort I. For programs that were already in existence prior to receiving the TBL grant, such as those at OWATC, TGC, and NOVA, the TBL grant enabled the grantees to make structural improvements by adding more computers or software, updating hardware, and piloting new software tools for instructional delivery. OWATC used TBL grant funds, in addition to matching funds from the college, to purchase computer parts for 40 additional lab computers. The IT students then built and networked these computers, and OWATC expanded its lab space to accommodate the new computers. TGC is updating its website to enable users to have greater access to courses and other resources. For example, it added a link to the College of Direct Support's online continuing education library. By purchasing access to this library, CATS participants are able to take advantage of a wealth of educational modules that are approved by the University of Minnesota. NOVA began the process of shifting to desktop virtualization to run its GIS-related software programs. Desktop virtualization operates under a "thin-client" model, wherein the bulk of computer operations is handled through a central server as opposed to via individual computers. NOVA is designating a central server at the college through which to run its GIS programs, thus eliminating the need for students to invest in expensive hardware that would otherwise be needed to run GIS programs on their personal computers. As such, more students will be able to take advantage of online GIS course offerings.

For the CATS program, the TBL grant helps improve instructional delivery by streamlining training opportunities across three geographic zones in Wayne County. Prior to the CATS program, direct care workers were required to undergo training from the mental health training and employment agencies assigned to the specific zones in which they worked. That meant that if a direct care worker worked in more than one zone within the county, he or she was required to participate in two separate training programs under different agencies, despite the fact that the

[1] Cohort I programs' ability to help students overcome these barriers is discussed in more detail in Chapter VI.

training covered the same material. This was redundant for the student and an ineffective use of resources for the training agencies. The CATS program enabled these agencies to work together to standardize course material and offer courses through a single source approved by all agencies across the county.

The GEM program also seeks to improve the quality of training, in its case in management programs for the energy industry. The program grew out of energy industry leaders' dissatisfaction with traditional master of business administration (MBA) programs; they felt that these programs did not provide students with the knowledge they needed to serve as effective managers and leaders within the industry. Thus, the TBL grant enabled staff to design a program tailored to the needs of the energy industry and its intended student population. For example, program courses include "Global Energy, Economics, and Geography" and "Leadership and Decision Making in the Global Energy Environment." These courses teach some of the same fundamental skills taught in an MBA program but with a specific focus on the unique needs of the energy sector. The program uses technology that gives students practical skills in working collaboratively in an online environment, which employers feel is essential to success in a "global industry."

Planning and Designing TBL Programs

A number of factors went into the shaping of programming and/or coursework as programs entered their planning and design phases. These factors included the perceived needs of target industries, the needs of target student populations, and the input offered by community partners, industry stakeholders, employers, and service constituents. Each grantee's level of experience in the targeted field and/or in curriculum design also played a role in how long it took to design its TBL program, as did each grantee's level of experience with ETA grants.

Meeting Industry Needs

The industries targeted by the TBL programs are those identified as "growing" or "high-growth," such as IT, health care, and energy. Assessments of and/or knowledge about the workforce needs associated with these industries provided direction for Cohort I programs as they entered the design phases of their programming.

For several programs, particularly the OWATC program, GEM, CATS, and Nurse Return to Work, local employers were instrumental in providing guidance on developing programs that would best meet industry needs. These employers provided support in a variety of ways. At OWATC, employers regularly provided input on curriculum via Employer Advisory Board meetings in order to ensure that course offerings were up to date and met local industry needs.

Industry leaders were also critical advisors to the GEM program, taking the lead role in designing program curriculum to ensure that it had an industry (as opposed to academic) focus. CATS included employers in its focus groups during the program planning phase in order to ensure that the program was comprehensive in meeting the needs of the field as well as those who use direct care services.

The primary "need" of all of these industries is an appropriately trained, ready-to-serve, and sufficiently large workforce. Programs such as OWATC's and GEM emphasize that workers need "process-related" thinking, and people skills that are generally not taught in textbooks. For GEM, these skills include the ability to effectively collaborate with others as well as to take advantage of technologies that enable employees to manage and lead others regardless of physical location. In response to this need, the program incorporated group projects into each course as well as a mandatory online participation requirement. According to the programming instructor in OWATC's TBL program, the ability to help a client clearly articulate his or her desires and then translate that information into a product that meets the client's needs is an essential skill that is not taught in most textbooks or in most IT training programs in general. Consequently, the programming instructor created a program called "job board" that offers web design students the opportunity to apply their technical skills in web development projects for faculty while they build skills in client relations and communications. (Please see accompanying text box, *OWATC's IT Job Board*.)

OWATC's IT Job Board

OWATC's Job Board serves as a kind of internal internship opportunity, enabling IT students who have advanced web-design skills to practice applying these skills while building the communications skills necessary for effective client relations. Through the job board, a faculty member interested in having a course or faculty web page developed by an IT student can advertise his or her needs to students in the program. Interested students apply to take on the project.

Faculty who participate in this program agree to act as "clients" for the IT students. Students are coached on how to approach this project as one would in industry. The student begins by setting up an initial interview with the faculty member to talk about visions for the web page. The student then holds subsequent follow-up meetings throughout the course of design to solicit client feedback. OWATC's Job Board project has received positive reviews from instructors as well as from advisory board members, who refer to it as a "win-win" situation. Through this project, OWATC and its faculty have access to free web development services while students are afforded the opportunity to develop and hone critical skills that are not taught in their textbooks.

Program designers took these less tangible skills into consideration as they designed their courses. For the GEM program, this resulted in the incorporation of group projects into each course as well as a mandatory online participation requirement. At OWATC, the programming instructor created a program called "job board" that offers web design students the opportunity to

apply their technical skills in web development projects for faculty while they build skills in client relations and communications. (Please see accompanying text box, *OWATC's IT Job Board*.)

Meeting Student Needs

While industry needs greatly influenced program design, the needs of student populations were equally important. All programs, for example, incorporate varying degrees of flexible pacing in order to accommodate the time constraints of their students, many of whom are currently employed and/or have family obligations. At the same time, program designers acknowledge that flexibility must be accompanied by a structure that keeps students engaged, motivated, and moving forward. To address this need, CareerLink requires students to attend a three-hour class in person every other week so that instructors and students can check in with each other. GEM enforces weekly due dates for class assignments and activities to ensure that students do not fall behind in their work. The OWATC program provides students with guidelines as to how long it should take to complete a course. An OWATC staff member monitors TBL student progress, setting up intervention meetings for students who fall behind.

Program designers also appeared to be sensitive to students' levels of technological proficiency when devising content delivery modes for their programs. There is no formal degree requirement for direct care workers in Wayne County and participants in the CATS program tend to have low levels of technological proficiency, thus the program's design is simple and user-friendly. Students in the GEM program, in contrast, must have a baccalaureate degree in order to be eligible for the program. Students are thus expected to already possess a certain degree of technological proficiency. GEM coursework therefore employs more sophisticated technology in its curriculum delivery than some of the other programs in Cohort I.

OWATC's program represents a middle ground between the technological simplicity of the CATS program and the sophistication of the GEM program. OWATC's program designers reasoned that since their students were going to be trained to enter the IT workforce, they could assume a certain degree of technological "aptitude" among the students. At the same time, they realized that much of OWATC's student population is made up of students who have been "out of the education arena" for a long time. One instructor states that this lack of recent educational experience sometimes results in low confidence levels, adding that part of his job is therefore "to teach students *how* to learn again" and to assure them that they are capable of learning. He adds that a majority of his work with students at the beginning of the program involves a great deal of hand holding and confidence building. For this reason, the program's IT courses are simple in design. The courses employ the use of a textbook that students must read, with assignments and

computer-based mini-quizzes at the end of every chapter to assess retention of knowledge. Students are able, in this format, to take practice quizzes as many times as necessary to feel they have mastered the material.

Some Cohort I grantees were clear from the start about the student populations targeted for their TBL programs because they designed their programs to serve specific populations. GTC's Nurse Return to Work program targeted nurses, for example, and A-DA's CareerLink program targeted students with disabilities. One grantee—OWATC—had a clear picture of its intended population at the onset of the TBL project, but adjusted its expectations in the course of implementation. In conceptualizing the TBL program, OWATC staff assumed that their primary population (about 80 percent) would be incumbent workers whose employers want them to receive training to improve their skills. They assumed the other 20 percent would be unemployed or underemployed workers. OWATC staff believed local employers would be enthusiastic to participate and would construe the program as a good investment, since it allows employers to increase the skills of their workers at minimal cost. With the TBL program paying for 50 percent of tuition, books, and fees and Utah's Custom Fit[2] program paying for 35 percent of the same, employers would only have to cover 15 percent of training costs for their employees. But as it turned out, the program's student population "flipped," as OWATC's grant administrator put it, reflecting a reversal of expectations. Currently, its primary population comprises unemployed and under-employed workers and a significantly smaller portion is made up of incumbent workers. According to the grant administrator and program director, this shift is the result of the unexpected impacts of the economic downturn. This was confirmed by an employer partner, who said that employers are "tightening their belts" and—no matter how sound the investment—they are not paying for anything that is not seen as absolutely necessary, including training.

Input from Program Partners

All Cohort I programs were designed through collaborations with multiple partners. Most grantees formed advisory committees, made up of different stakeholders from their respective industries and regions. These stakeholders generally included public workforce system partners, local employers, and organizations working with the programs' target populations. They provided insights into workforce needs of specific industries, regional economic concerns, and the needs of target student populations.

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[2] Custom Fit funds are education monies set aside by the Utah state legislature for training that increases the skill sets of Utah employees.

The degree of partner involvement in curriculum development varied across programs. With no prior TBL experience, A-DA solicited help from the San Diego Futures Foundation (SDFF),[3] an organization that focuses on helping nonprofit organizations with their IT needs, to develop an IT certification program that served the needs of its clients. This in turn led to a partnership with SkillSoft, an organization well-versed in designing IT curricula. SDFF and SkillSoft served as key advisors for A-DA's CareerLink program, providing guidance on curriculum design and program implementation. SkillSoft ultimately provided the curriculum for the program, as it had already developed IT certification curriculum packages that it shared with CareerLink.

Grantees such as OWATC and the GEM program at UCD relied heavily on input from employer partners for the curriculum design of their TBL programs. For OWATC, soliciting employer input regarding curriculum is standard practice, since the institution views local employers as its "clients" and already had employer advisory boards in place. These advisory boards regularly review and offer advice on curriculum in order to ensure that course content is both relevant and up-to-date. UCD's reliance on employer/industry input for the design of GEM emerged out of dissatisfaction with the perceived inadequacies of MBA programs. In fact, program design came almost entirely from the energy industry. Employer partners heavily influenced the choice of course topics and helped define the skills that needed to be mastered through the course of the program.

One grantee—TGC—made an unusually thorough effort to solicit appropriate input for program design. The designers of its CATS program wanted to ensure that their efforts were comprehensive in scope and that their curriculum would address not only the needs of direct care workers but also the needs of the people whom they serve. Thus, they held focus groups with families who receive care as well as other organizations that serve these families. These groups offered valuable insights into gaps in services that should be addressed in a training curriculum. (Please see the text box: *An Holistic Approach to Program Design* for a more detailed account of the CATS program design process and the program goals articulated as a result of this process.)

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[3] The San Diego Futures Foundation is a nonprofit organization whose mission is to "change lives in San Diego County by making information technology available to underserved individuals, organizations and disadvantaged small businesses through training, education, technical services and equipment." http://www.sdfutures.org/about/mission.htm.

CATS: An Holistic Approach to Program Design

The process of developing the CATS curriculum was a collaborative endeavor, involving multiple stakeholders in the mental health field and incorporating input from both providers and recipients of care.

The Virtual Center of Excellence (VCE, a program of TGC) began the process by forming a Direct Care Curriculum Advisory Committee that met on a regular basis. This committee was made up of training directors from the county's community mental health agencies, directors of home care providers, and direct care workers with experience in the arena of mental health, developmental disabilities, and gerontology. Committee members were responsible for prioritizing and defining curriculum content and the resources to be included on VCE's website. VCE also went beyond its advisory group in soliciting input, conducting focus groups of county stakeholders that included the people who receive care as well as representatives from other organizations that work with these populations. These focus groups enabled VCE to identify needs, gaps, and best practices to include in CATS programming.

This collaborative process resulted in the identification of four major goals for the CATS curriculum:

1. *Streamlining direct care worker training* to eliminate redundancy of efforts and enable agencies to share resources

2. *Ensuring that the website is accessible, customer-friendly, and easy to use* in order to increase training opportunities for a workforce population that has little, if any, experience working with computers

3. *Incorporating real-life examples and personal stories into the curriculum* in order to bring life, meaning, and inspiration to direct care trainings

4. *Creating an online transcript system for employer access*

Overall, the programs were thoughtful in their efforts to solicit input and advice from program partners, key stakeholders in target industries, and service populations. This input helped program staff ensure that their designs would effectively meet the needs of their participants and target industries. The time it took to translate this input into design varied across programs, depending on a number of factors. This is discussed in more detail in the next section.

Duration of the Design Process

The duration of the design stage varied across programs depending on a number of factors. One was the extent of partners' participation. At one end of the spectrum is the GEM program, which was designed primarily by industry leaders and GEM staff and did not require extensive coordination across different organizations. This was also true of the OWATC program, which was designed primarily by OWATC staff, with some input from the IT program's Employer Advisory Board (which already existed prior to the grant.) At the other end of the spectrum, the design of the CATS program required coordination across training staff from three different

mental health agencies, directors of home care providers, direct care workers, and care recipients.

Duration was also affected by whether the grant was used to start a new program or to update an existing one. For example, GTC's Nurse Return to Work program had been up and running for several years before the TBL grant, and staff were clear from the start about its goals. This meant that GTC did not need to spend time designing a course from scratch and could more quickly implement the grant to improve course content and instructional delivery. A-DA, on the other hand, was starting a brand new program (CareerLink) in an unfamiliar arena and therefore required more assistance (and more time) to develop the course design.

Familiarity with ETA grants also played a role in the duration. For example, while OWATC's program was not brand new, the grant administrator stated that OWATC had not previously applied for an ETA grant. As a result, the program had to devote more time and resources to make sure that its staff understood and correctly followed ETA policies and procedures during the design process. The Director of Grants at NOVA, on the other hand, had helped facilitate several ETA grants prior to the TBL initiative and was therefore very knowledgeable about ETA expectations, policies, and procedures. She felt comfortable telling staff to begin setting up the design process so that if the GIS program was awarded the grant, staff could immediately launch into the process and not be delayed by procedural issues.

Summary

The planning and design process varied for each program in Cohort I, depending on program goals and the capacity of each grantee organization to carry out those goals. The main goals for the programs in Cohort I are to use TBL methods to increase access to education and training and to improve the quality of educational content and delivery. These programs have enabled students to learn remotely and on their own time. Efforts to improve educational quality include enhancements to the educational materials, hardware and other resources, streamlining training opportunities, and tailoring programs to meet specific industry needs.

The planning and design process for all programs was primarily guided by student needs and the needs of target industries. The primary need for all industries associated with Cohort I programs is an appropriately trained and skilled workforce of adequate size. As they worked to ensure that their programs met this primary need, design staff from all programs also had to consider a multitude of factors to ensure that their program designs appropriately addressed the needs of their student populations. These factors include flexible but managed pacing of courses as well as appropriate matching of course content and delivery methods to the educational levels and technological proficiencies of students.

All programs engaged in some level of collaboration during the design process. Some programs relied heavily on program partners to help them define needs and find appropriate ways to address them through effective course design. GEM and OWATC's program, for example, relied on their employer partners to either define or ensure relevance of course content. A-DA relied on another technology-focused non-profit and a firm that was well-versed in IT curriculum design to help shape its program, since A-DA had no experience in either the IT industry or curriculum development. In an effort to engage in an holistic approach to design, the CATS program not only used input provided by advisory groups made up of different levels of service providers in the mental health industry, but also held focus groups with people who receive care from these organizations.

The duration of the design process varied across programs, depending on a number of factors. For example, when there was a need for coordination across partners, the design phase was more complex and required more time. Whether grantees were developing new programs or updating existing ones also had an impact on how long the design process took, since designing programs from scratch, as A-DA did, requires considerably more time and effort than updating existing programs, as was the case with the OWATC program, Nurse Return to Work, and GCPI. Finally, some grantees were more familiar with ETA policies and procedures than others and that also affected the duration of the design process.

IV. TRAINING METHODS AND CONTENT

This chapter focuses on the course content of Cohort I TBL programs and the instructional methods used to deliver that content. The chapter first categorizes each program according to methods used and then provides detailed descriptions of those methods, the associated technologies, and the assessment of student achievement. The chapter then briefly discusses the reasons why nearly all Cohort I programs opted to use blended learning and asynchronous delivery.[1]

Models of Online Learning

As discussed in the first chapter of this report, TBL includes both *online learning*—learning that occurs via the Internet and necessarily involves computers—and *computer-based learning*, which involves learning through computer technologies that don't depend on connection to the Internet, usually in a computer lab. All of the six Cohort I programs use online learning, with all but the OWATC program using it as the primary means of developing and delivering training content.

To provide a better understanding of the similarities and differences among the instructional methods used by the six Cohort I TBL programs, it is useful to categorize them in terms of a theoretical framework. One such framework is David Huffaker's (2003)[2], which offers three models of online learning. These models—presentation, interactive, and collaborative—categorize programs primarily according to their online delivery approaches. In the presentation model, content is presented to students in a one-way direction, much like it is in a classroom lecture. In the interactive model, content is presented as well, but students are required to

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[1] Asynchronous delivery refers to training content that is available to students at any time, rather than only at the time that it is first delivered. This term is further discussed later in the chapter.

[2] "The e-Learning Design Challenge: Technology, models and design principles." http://www.astd.org/NR/rdonlyres/10F38AF1-3F8F-44F7-A49D-2FFC59FB7320/0/HuffakerELearningDesignChallenges.pdf

interact directly with the material, making choices, responding contextually, and tracking their progress. The collaboration model builds on both of the other models, adding in the social component of learning and encouraging the formation of collaborative online communities. This section of the chapter categorizes each Cohort I program according to this framework, beginning with the three programs that fit the interactive model and concluding with the three that fall under the collaborative model.[3]

Interactive Programs

In the interactive model of online learning, users interact directly with course material. The level of interaction may vary and can be as simple as navigating online content or as complex as using technology to run experiments. Online learning that falls under the interactive model does not require online collaboration or interaction with other students; instead, its interactivity exists primarily to encourage students to focus on achieving individual goals. Three Cohort I programs—CATS, the TBL program at OWATC, and CareerLink—fall into this category. These programs are similar in that they have students use computers or online technology to complete assignments and/or take tests. Where they differ is in their use of technology to deliver instruction: whether this technology is accessed primarily via the Internet or in a computer lab, the level of complexity of the technologies used, and how much structure is built into courses to help students progress within a reasonable time frame. Each program's specific structure and methodology is described below, beginning with CATS, which uses the simplest approach.

CATS—Simple Technology; Minimal Structure; Entirely Online

Direct care workers in the CATS program can access video training courses online via the VCE Web site.[4,5] The courses are designed to be extremely user-friendly, given the low technological proficiency levels of most direct care workers. The program also has very little structure—student progress is not monitored and there are no restrictions on the time it takes to complete courses. In the CATS program, any Detroit-Wayne County direct care worker interested in taking courses can do so at his or her own pace.

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[3] The presentation model is not applicable to any program in Cohort I.

[4] As discussed in previous chapters, VCE (Virtual Center for Excellence) is a program of the grantee, The Guidance Center. VCE hosts the CATS program.

[5] Technically, students have the option of participating in a synchronous activity by attending a live training session when it is being filmed. Students can also view a live training session at one of four designated centers in Wayne County that broadcast the session via video conferencing. These are one-time opportunities, however, whose primary focus is to provide training material for later use online.

A typical course includes a video of an instructor explaining the course content, followed by a few slides of text summarizing video content. The student is then asked to complete a multiple-choice quiz, testing his or her retention of the content material. The student must answer every question correctly to move on. He or she is allowed to continue taking the quiz until all questions are answered correctly. When students successfully complete their courses, their transcripts are updated and made available online, where employers have easy access to them.

The time it typically takes to complete training depends on the goals of each participant, and whether he or she is an entry-level worker or an experienced worker. Current direct care workers who are required to periodically update certain aspects of their training need only take specific courses to fill the requirements set forth by the Detroit-Wayne County Community Mental Health Agency (DWCCMA).

There are currently four CATS courses available online, though the program is continuing to develop, film, and add training modules. These courses include Medicaid Fair Hearings; Local Appeals and Grievances; Health Insurance Portability and Accountability Act; and Recipient Rights Annual I. Courses range from a half an hour to three hours in length. By December 2009, CATS users will also have access to the College of Direct Support's online offerings, including those leading to certification as a Direct Support Provider.

CareerLink—Complex Technologies; Primarily Online

All of CareerLink's IT certification programs are offered online. The program offers IT certification in one or more of the following areas:

- IT Technician;
- Network Technician;
- Desktop Support Technician;
- Server Technician;
- Java Programmer; and
- Microsoft Office Specialist.

In CareerLink's courses, instruction is delivered online through a Java-based, interactive video that has audio features that enables students to hear the same information that is presented in text on the screen. Students watch the videos and then periodically complete activities that test their knowledge. For example, as students progress through each course, they are given opportunities to take "mini tests." Students are able to go back after completing each test to see which questions they missed and to repeat these mini-tests as many times as necessary until they feel comfortable with the subject matter. When they are ready, students take a final, graded test for

each course, which they are expected to pass with 80 percent proficiency. Following completion of each course, students are expected to take the appropriate industry certification exam(s).

Due to concerns about "social loafing,"[6] while students are able to take courses at their own paces, program staff place limits on how long students may take to complete a course. In addition, they provide students with guidance on expected progress rates to help students manage their workloads. In general, students are expected to complete one module each week, and courses generally take ten to twelve weeks to complete.

CareerLink program designers also incorporated an in-person component to the program as part of their effort to keep students engaged and motivated. Students are required to attend a three-hour class, in person, once every other week. These in-person classes serve as "check in" points for students and instructors, enabling the instructor to provide students with support, supplemental training materials, and instruction tailored to meet the specific needs of each student. Classroom sessions also provide time and space for hands-on training, which respondents said is critical for students whose intended careers require direct work with computer hardware.

CareerLink's LMS has a message board and a chat function; however, these are not regularly used. It also has a "Mentor Tool," which is supposed to provide students with unlimited access to SkillSoft's academic mentors, who can assist with questions related to training or with technical issues related to the LMS. The mentoring tool is also supposed to provide students with a daily mentoring email that includes test questions and information on the courses they are taking. However, use of this tool varies. While both the instructor and the instructional designer heralded the Mentor Tool, student respondents stated that they had never used the function. One of these students reported having made several failed attempts to use the feature. The Mentor Tool was also non-functioning during the site visitor's virtual tour of the LMS.

The OWATC Program—Complex Technologies; Primarily in an On-site Computer Lab

As with CareerLink, OWATC offers IT credential (certification) courses[7] to its students, using roughly similar technology. Similar to CareerLink students, students in the OWATC program

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[6] "Social loafing" occurs when learners reduce their efforts in TBL programs. Social loafing often occurs as a result of frustration with technology or because of a program's lesser focus on personal interactions.

[7] Currently, OWATC's program covers the following subject areas: A+ Certification, Network+, Linux+, Security+, Administering Windows Server, Internet Site Design, Internet Technology, and Java Programming.

complete assignments and take tests via the program's LMS. The OWATC program's courses are also self-paced, with guidelines for how long each course should take.[8] OWATC students are required to move through the program at a minimum 67 percent progress rate,[9] which is the same progress rate designated for Pell Grant recipients. Students who fall below that rate receive counseling and intervention. Those who fail to improve after two interventions exit the program.

While the CareerLink program is delivered primarily online, OWATC's program is offered primarily via computer-based learning in the program's computer lab, with readily available in-person assistance from an instructor. OWATC has chosen this method for delivering training content because the program wants instructors to be physically available for students as course materials become more difficult, so that instructors can identify and assist with learning challenges more readily. One instructor added that he likes to be present for students as they move further along in their programs so that he can help "mold them" and prepare them for expectations in industry.

The program does, however, offer four courses online and is using the TBL grant to put four more online by July 2010. Students will continue to have the option to go into the lab to take those courses. The current online courses—Internet Technology, Introduction to Information Technology, A+ Certification I, and Introduction to Programming—are fairly simple in nature, mimicking the lab-based, self-paced courses in that a student is expected to read a textbook, complete course assignments, and take quizzes to test his or her knowledge. The only difference is that the quizzes and assignments are available online so that students can complete them outside of the lab setting.

There is also very little online communication in the OWATC program's online classes. While the program's LMS has chat and discussion board functions, they are rarely used. Students sometimes communicate with instructors via email but student and instructor respondents report that students' preferred method of interaction is face-to-face. This preference is related to the preference of many OWATC program students to do their work in the OWATC computer lab, even if online options are available. Some students may choose to work in the lab because they do not have the required technology in their homes, or because certain scholarships require in-

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[8] At the beginning of each course, a student is given an estimate of the number of hours it should take him or her to complete the course. Similarly, each assignment also has estimates of how long it should take to complete. These are provided to students via the LMS.

[9] Calculated as a student's progress relative to expected time frames as noted in prior footnote.

person attendance,[10] but instructors also believe (and students affirm) that students simply prefer to come in to the lab because they feel more comfortable being in the presence of an instructor in case they need help with their assignments.

OWATC is working on improving the interaction between students and instructors in its online courses. One of the instructors has been testing out Wimba Classroom[11] to see if it will allow him to better help online programming students who are struggling with their assignments. Ideally, Wimba should allow him to see what a student is working on while he communicates with that student in real time, either through a "chat" function, an audio stream, or video interaction.

Collaborative Programs

The collaborative model of e-learning encourages the social aspect of learning. Programs that follow this model of learning leverage online tools as an effective means of having students share ideas, engage in topical discussions, and/or work collaboratively on class projects. Although they do not take the collaborative model to its fullest possible expression, Nurse Return to Work, GEM, and GCPI can be most accurately described as following the collaborative model, as these programs not only require students to interact with course materials, but also include participation requirements for students to engage in discussions with one another and/or work together on group projects. Because they require online interaction and/or group project participation, all programs that fall under the collaborative model have a greater degree of structure than those that fall under the interactive model. The programs differ in the ways in which they use interaction and collaboration to achieve specific goals.

Nurse Return to Work— In-Person and Online Interaction Focused on Practical Skills

GTC's Nurse Return to Work program entails three months of online study, in-person skills labs, an internship, and assistance with the licensing process. There are a total of fifteen online lessons in this program, varying considerably in length, and two four-day in-person skills labs that occur close to the end of the first and second months of instruction. The entire training program lasts approximately four to six months. The program begins with a mandatory, four-

[10] For example, Ogden Weber Community Action Partnership requires 100 percent physical attendance as a stipulation of their funding.

[11] Wimba Classroom is a software program that provides an online meeting room that enables more effective interaction between students and instructors.

hour, in-person orientation. The instructor also makes herself available for in-person meetings with students during the first two weeks of classes, in case they have further questions.

Once the orientation is complete, students begin the online portion of the program. Online course materials include audio and written lectures as well as videos. Videos are skills-based and display step-by-step instructions for various procedures. The instructor also conducts occasional online, synchronous "live classroom"[12] meetings on complicated subject matters such as "medication math" that students can also review once these sessions have been recorded and made available online. Online material is supplemented by additional textbook readings that focus on specific information as well as scenarios and case studies. Students complete the scenarios and check their answers by logging on to the textbook website. Students are also given access to additional web-based material for further practice or supplementary readings. Once a student feels ready, he or she can attempt a course exam. Students are offered only two chances to take their tests; should a student choose to retake an exam he or she is assigned the higher of the two scores. Exams are timed and questions for each exam are chosen at random from a test question bank. Once an exam is opened, it must be completed and submitted for grading. Students must score at least 75 percent on each exam.

About a month into the program, students participate in the first in-person skills lab, with the second one occurring about a month later. Before attending these labs, students must complete certain online lessons. During the labs, simulations and skills demonstrations are conducted in classroom settings; these help to foster collaboration among students. Students are given specific case studies and they are then required to determine the diagnosis, the plan of treatment, and the nursing intervention. Through the skills labs, students are afforded opportunities to interact with one another in person and to collaborate on activities.

Collaboration, however, is not limited to the in-person component of the Nurse Return to Work program. The program requires online participation as well. Students make use of discussion boards and chat functions to respond to topics posted by the instructor or to share knowledge with one another. Students also work together in "virtual groups" to complete group assignments. The instructor monitors online participation and attendance and contacts students who are not interacting with others or participating in the group project. The program also encourages the formation of informal virtual study groups among students. Instructors view all of this interaction as key to successful learning and mastery in a TBL environment.

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[12] Live Classroom is virtual classroom software that combines interactive technologies such as voice, application sharing, polling and whiteboarding.

GEM – Online Interaction and Quarterly In-Person Interaction to Facilitate Learning and Build Peer Networks

Students in the GEM program begin each quarter with an intensive, in-person, four-day convening wherein they stay at a hotel in Denver and attend in-person lectures, participate in social networking sessions, and engage in group work. This is a critical aspect of the program, because it gives students and professors a chance to get to know one another outside of the online environment. It also affords students the opportunity to network with one another, which instructors encourage because the ability to effectively network is seen as an important skill for future energy managers.

After that first, intensive in-person session, all course activities and interactions for the rest of the quarter are done virtually, using either GEM's LMS or Adobe Connect. GEM's online courses are designed to mirror graduate school classes. Thus, a typical week begins with faculty posting 60 minutes of pre-recorded lectures onto the LMS using Adobe Connect. These lectures incorporate audio and video functions and include PowerPoint presentations. Students are expected to watch these lectures, read supplemental materials from textbooks and/or journals, respond to faculty questions posted on the discussion board, and work on related assignments.

Responding to a Need for Structure

Currently, GEM courses are carefully structured to help students stay engaged and on track, particularly through the use of weekly assignments and online participation requirements. This was not always the case, however. The program's current design was developed in response to feedback from students who specifically requested that courses be more structured so that they could better manage course requirements and expectations within their busy schedules.

As discussed in Chapter III, the design process relied heavily on input from industry advisors, as opposed to faculty who may have been better-versed in effective online pedagogical approaches. Thus, initial course descriptions were not well developed and mainly listed the topic and subject areas to be covered within a specific course. As a result, GEM classes had a very "loose" structure, with improvised assignments and due dates and no online participation requirements. GEM students found it difficult to work within such a loose structure, given the many demands on their time by their employers, families, and other responsibilities.

In response to this concern, GEM's associate director of programs worked with the program's advisory committee to create a standard syllabus for all GEM courses. This syllabus contains a list of minimum requirements, including the type and number of assignments that must be included in each course, expected levels of discussion board activity, and guidelines on assignment due dates. Students noticed the changes, commenting that the courses were greatly improved as a result.

Typical course assignments may include three individual papers, one oral submission delivered through Adobe Connect, one large group assignment, and one final exam.[13]

Online interactivity among students is high in the GEM program. Instructors believe that the initial four-day intensive session is key to stimulating the interactivity. They further help to foster this interaction through facilitated discussions via the discussion board and the assignment of an online group project. Students add that in addition to their discussion board activity, they email each other when they have questions or need help. Students and instructors note that interaction between students is highest when students are nearing assignment deadlines.

In addition to their regular course materials, students are provided with a wide range of supplemental learning materials via links through the LMS. These materials include relevant energy sector events and conferences, resources for energy science and management (e.g., research papers, energy news, etc.), domestic and international government resources, various background videos about energy and the energy sector, and information about energy sector organizations. The LMS has also been modified to allow news feeds and selected energy news articles from key newspapers and journals.

GCPI—Online interaction and a Learning Community

All courses in GCPI's GIS Career Studies Certificate program are offered via traditional, in-person classes, which students can take in the computer lab at NOVA's Annandale campus. All but two of these courses are also offered online, although due to the cost of the software required to participate in these programs and the amount of computer memory needed to run them, many online students also make use of the program's computer lab.[14]

All online course activities are asynchronous in nature; however, as with GEM's course structure, pace is managed through weekly assignments and online participation requirements. Similar to the GEM program, GCPI students are expected each week to watch an online lecture, complete weekly reading assignments, respond to weekly discussion questions posted online, and complete a course assignment.

The tools used for GCPI's online courses include calendars to map out course activities over the semester and discussion boards, which are used heavily and form the basis of participation.

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[13] This particular example is taken from the "21st Century Global Energy Issues and Realities" course.

[14] However, the GCPI program was about to install desktop virtualization on a computer server at NOVA. This will allow students to access GIS software from this server, rather than from their own hard drives, which should mitigate these problems.

Students also rely on email to interact with each other and to ask for help. Online lectures utilize audio and video functions and include PowerPoint presentations as well as on-screen navigation software for demonstration purposes.

Course participants have also come to rely heavily on the use of Ning as a platform for learning and social interaction. Ning is a social networking platform that GCPI's director used to create a specific website for the program.[15] Although this website was initially intended for online students, it proved to be a valuable tool for all of GCPI's students as well as the director (who is also one of the program's primary instructors), and its use has therefore expanded to include traditional in-person as well as online students. The director reported that Ning is an easier tool to use than the LMS, particularly if he wants to add content for informational and assignment purposes. He often uses the Ning site to post videos for students to watch and discuss. Students use Ning to "chat," share assignment products, post questions, and even post job listings. Ning has prompted students to engage in discussions that move far beyond the scope of the questions posted by their professors. In this way, students have been able to develop a GIS community that includes both online and in-person students.

Blended Learning

While the programs in Cohort I differ in terms of the models ascribed to each program, all but one of the programs share an important trait: they employ a *blended* approach to learning.[16] Blended learning refers to a training approach that combines a mix of online and in-person training delivery for improved engagement and better retention. Some research has shown that blended learning results in better learning outcomes than non-blended approaches.[17] As a result of this research, blended learning has recently become the dominant paradigm among training designers and experts and is the method of choice for all programs in Cohort I, with the exception of the CATS program. The following section first describes blending among Cohort I programs and then discusses the rationales behind the programs' choice of blended learning approaches and how these approaches serve the needs of the programs' students.

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[15] http://geospecial.ning.com/

[16] Blended course are also sometimes referred to as "hybrid" courses.

[17] See, for instance, Thompson, C . 2002. *Thompson Job Impact Study: The Next Generation of Corporate Learning*.

Use of Blended Learning among Cohort I Programs

Although five of the six Cohort I programs use a blended approach to learning, each offers in-person activities or in-person training delivery to a greater or lesser degree and in different ways. The Cohort I program that currently has the greatest amount of in-person training delivery is the OWATC program. At OWATC, except for four courses (which are also offered in-person), all training is delivered via computer-based instruction in OWATC's computer lab, with instructors on hand to provide immediate, one-on-one assistance. Interestingly, though, OWATC's online courses have no in-person requirements; but to prepare for most industry certification exams or the Information Technology certificate, students currently must complete additional courses in-person.[18]

The Nurse Return to Work program has arguably the next highest proportion of its program delivered in person; it has an in-person orientation, two four-day in-person skills labs, at least one proctored in-person test (for the lesson on medication math), and a required 84-hour internship onsite at an employer. These in-person activities occur approximately monthly throughout the program.

The CareerLink program also includes a significant number of in-person activities, which occur even more regularly throughout the program. For example, while participating in online courses, students are required to attend bi-weekly, three-hour, in-person sessions with the program's instructor to review and practice what they are learning online. Following completion of these courses, students are also required to come in for regular in-person sessions during the program's test preparation and job search components. After completing the test preparation component, students are also required to complete a 16-week internship onsite with an outside employer.

Of the five Cohort I programs that employ blended learning, GEM—with all courses available online and no internship requirement—has perhaps the least amount of in-person activities. However, GEM students are required to spend four full days attending an in-person orientation and training delivery session at the beginning of each quarter. Since the program takes many quarters to complete, GEM's in-person activities occur evenly throughout the program.

In contrast to the purposeful blending approaches used by the OWATC program, Nurse Return to Work, CareerLink, and GEM, GCPI's blending is unintentional, primarily because two of courses that are required for the GIS certificate are still in the process of being made available

[18] However, the program plans to put four other courses online by July 2010. These courses include: A+ Certification II, Internet Site Designer I and II, and Java II. Each of these courses will also continue to be available in-person.

online. Consequently, students must complete these two courses through traditional, in-person sessions. Once these two traditional courses are made available online, however, GCPI, along with CATS, will be the only Cohort I programs with no required in-person components (although GCPI students will still be required to complete an internship either on campus at NOVA or in an employer's office).[19]

However, due to the challenges GCPI students often face in purchasing and running GIS software on their home computers, many end up completing much of their coursework in person at the program's computer lab, resulting in a de facto in-person activity for these students.[20] Similarly, a number of OWATC's online students also choose to complete their assignments onsite in the program's computer lab, partly to use faster or better-equipped computers, but also partly to have in-person access to instructors.

Rationales for Using Blended Learning

Respondents at the five Cohort I programs that use blended learning approaches provided a number of rationales for doing so. This section describes each of those rationales, beginning with the reasoning that certain skills necessitate in-person activities or training delivery.

Acquisition of Practical Skills Requires Physical Presence

Some programs in Cohort I require a blended approach to training delivery because teaching students practical skills warrants it. For example, while the Nurse Return to Work program enables students to conduct 85 percent of their training at home, nurses need some practical skills training that requires a physical presence. This training is fulfilled via the skills labs. Similarly, respondents from both CareerLink and OWATC's program believe that at least some IT-related skills are most efficiently taught through a hands-on approach because of the nature of the subject matter. Instructors and students agree that tasks such as building computer networks or building a computer from scratch are difficult to grasp through textbook and/or online study alone. One networking student in OWATC's program stated that she regularly came into the lab because she enjoys working on the "job bench" projects. She stated that it was difficult to understand how to tackle a technical problem by reading about it in a textbook, adding that "it's much more helpful to *see* it."

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[19] Again, as discussed above, OWATC students, who are pursuing certain industry certifications, such as A+ Essentials and Internet Webmaster Foundations, can also prepare for those certifications and complete the TBL program without any in-person requirements. However, for the college's Information Technology Certificate or many other industry certifications, completion of one or more in-person courses is required.

[20] As noted above, however, this may also change once the program installs desktop virtualization.

Concerns about "Quality"

Staff in both the GEM program and at OWATC expressed concern about general perceptions that online courses are not equal in quality to traditional courses. During GEM's design phase, program staff mentioned that employer partners were concerned about GEM's online component because of negative perceptions about other online programs. It was in part to answer these concerns that an in-person component was added to the program. Staff felt that incorporating an intensive, in-person requirement at the beginning of each quarter—in addition to sound program design—would assure employers that quality and rigor would not be not sacrificed as a result of online learning and instruction. In addition, accreditation requirements stipulated that some portion of the program must include an in-person requirement.

Staff at OWATC also mentioned concerns that shifting too far into an online mode would compromise quality. According to the program director, these concerns about quality originate from their employer partners and advisors, many of whom perceive in-person trainings to be more effective and of higher quality than online trainings. In addition, staff at OWATC believe that students and employers place high value on the institution's hands-on approach to learning and thus feel it is important to stay true to that aspect of the institution's identity while still finding ways to employ technology to facilitate easier access to learning.

While the decision to continue to incorporate in-person training in OWATC's approach to instruction was in some part guided by the desire to fit the needs and demands of local employers, program staff also believe that it is simply sound pedagogy. OWATC's programming instructor states that in-person instruction is often critical to success, particularly as the courses become more difficult. According to this instructor, in-person instruction allows teachers to teach through in-depth discussion, demonstration, and simulations of "real life" scenarios.

Networking/Relationship Building

While the building of peer networks is a by-product of many of the programs in Cohort I, the GEM program specifically highlights social networking and relationship building as both a program goal and a rationale behind its blended approach. GEM staff believe the intensive, in-person session at the beginning of each quarter is a key component of the program's success because it helps develop important relationships among students, faculty, and staff. Moreover, according to employer partners, high-level managers of energy companies need to be able to work collaboratively in groups, and an intensive in-person session is a good way for students to learn the skills involved. Additionally, faculty expressed their appreciation for the in-person component, as it allowed them to put faces to names. Thus, when students seek help or assistance, faculty feel they have a better relationship with and understanding of that person (and

his or her needs) than they would have if no face-to-face interaction had occurred. Finally, participants repeatedly spoke about the face-to-face interaction being a good basis for positive peer pressure and a way to foster productive competition among participants.

While peer relationship building was not a stated program goal, staff and students in the Nurse Return to Work program feel that it is a critical benefit that arises from the program's blended learning model. In-person interactions in skills labs, and through the group "drug card" project in particular, were touted as important catalysts in promoting collegiality and vital interaction between students, which then carried over into other aspects of course learning. For example, study groups were formed as a result of this exercise. Students referred to these study groups as "life savers," particularly since many of these students had not studied in a formal classroom setting in decades.

Finding the "Right Blend"

The OWATC program has placed only a few of its courses online because staff believe that effective IT training requires a hands-on approach. CareerLink, by contrast, put *all* of its IT certification programs online, though program staff also agree that hands-on learning is helpful, particularly in certain IT arenas. The difference, for these two programs, lies in perceptions of the degree of in-person contact necessary to serve the goals of the program and the needs of its student population. CareerLink students who need hands-on training receive it when they attend their in-person class every other week. OWATC students have easy access to hands-on training whenever they go to the computer lab to work on their assignments.

Feedback from CareerLink students indicates, however, that the program's particular "blend" may not completely satisfy student needs. Student respondents commented that they "would like more hands-on training" during class time. One student stated that he only started grasping course content and becoming successful in online tests once he started working one-on-one with the instructor. However, he did not start engaging in one-on-one instruction until late into his training program.

On the other hand, while OWATC's program provides ample amounts of hands-on training, this individualized attention places a heavy burden on instructors' time. This burden resulted in an enrollment cap for the program.

Maintaining a Productive Pace

Perhaps one of the biggest challenges for students working in an online setting is maintaining a productive pace that enables them to complete their courses within a reasonable time frame. Staff at CareerLink, the OWATC program, and GEM indicate that the ability to maintain a productive pace is critical and that it is tied to a student's sense of motivation and/or drive as well as his or her capacity for self-discipline. It is unrealistic to expect all students to have the motivation and self-discipline necessary for success. Required in-person participation is one way that these programs help students stay engaged (and therefore motivated). This required participation also provides staff the opportunity to check in with students to ensure that they are progressing at an appropriate rate.

Issues of productive pacing are not limited to concerns about social loafing and diminishing engagement in a TBL environment. They also include appropriate matching of pace to student ability. CareerLink's instructor, for example, uses the in-person class time to tailor instruction to the differing needs and abilities of each student in the course. Similarly, the OWATC program's emphasis on in-person instruction enables instructors to work individually with students who have different levels of experience and "aptitude" with technology and who therefore need to pace their work differently. One networking student stated that she enjoyed the flexibility of OWATC's program pacing because she had "been messing around with computers for a long time" and was fairly advanced in her knowledge. She was therefore able to move rapidly through her course, completing it well ahead of schedule and leaving her more time to engage in hands-on "tinkering" work at OWATC's "job bench."

Asynchronous Delivery

Asynchronous delivery—making training content available at any time and thereby decoupling delivery of content from the time of its creation—is used by many TBL training programs, including all six Cohort I programs. Indeed, the only Cohort I programs that offers all of its current training courses synchronously—CATS—does so only as a by-product of taping those courses for uploading to the Internet. Consequently, even at CATS, once a course has been taught in real time, it is shortly available asynchronously on the program's LMS.

The principal reason all six Cohort I programs have opted to use primarily asynchronous delivery is convenience for both students and instructors. Indeed, using asynchronous delivery is the primary way that these programs make it easier for students with limited time or constrained schedules to participate in training. Since all content is available at any time, day or night, students are able to review course materials, complete assignments, and take tests whenever they have time. This means that students with families and/or jobs have an easier time scheduling their course work around their other responsibilities.

Another reason for the prevalence of asynchronous delivery among Cohort I programs is that many view it as superior pedagogy because it allows students to interact with the content at their own pace. In the case of some programs, such as CATS, the OWATC program, and Nurse Return to Work, this means that students can progress as quickly or as slowly (within broad program parameters) as needed for their own comprehension.

However, even in the case of programs with a more managed pace, such as CareerLink, GEM and GCPI, where students have to complete many assignments or an entire module within a week's time, respondents said that asynchronous delivery resulted in improved comprehension of course material. This is because it allows these students to interact with training content when,

as one GEM student put it, they are "in the right mindset," and not at a time when they cannot concentrate, such as after a bad day at work. In addition, asynchronous delivery allows students from these two programs numerous opportunities to review material before assignments are due. For example, one GEM student noted that she sometimes listens to a weekly course lecture two or three times in the course of a week to ensure that she fully understands what is being presented, a practice which helps her do better on exams and assignments.

Summary

Providing effective training in a TBL environment can prove challenging, particularly since there are a number of different ways to approach instruction and content delivery and it is often not clear what the best approach might be for different student populations. The programs in Cohort I, for example, took different approaches to online learning and employed a wide variety of technologies for instruction and content delivery. The approach to online learning used by CATS, CareerLink, and the OWATC program can aptly be described as "interactive" in that students are required to interact with course material as part of the learning process. GEM, Nurse Return to Work, and GCPI employ an approach that moves a step further, incorporating requirements that foster social interaction among students in an attempt to create community as well as to keep students focused and engaged.

With the exception of CATS, all the programs employ a blended approach to learning, combining in-person elements with online instruction. Blended learning is increasingly becoming the "method of choice" for training programs because of the belief that it is a more engaging approach that also fosters better knowledge retention. While staff across Cohort I programs share this belief, their approaches to blending vary in structure, extent, and purposefulness.

Cohort I programs provided a number of different rationales for why blended approaches work best for their student populations. A hands-on approach is simply required for training students in at least some of the practical skills that are central components of the programs at OWATC, CareerLink, and Nurse Return to Work. Blended approaches provide opportunities for peer networking and relationship building, which are highly valued in the GEM and Nurse Return to Work programs. Maintaining a productive pace, both to combat social loafing and to appropriately adapt training to the capacities of each student, is also addressed through blended approaches, particularly at CareerLink and OWATC. Finally, instructors engage in blended approaches because they believe that it elevates the quality of their programs and because it is simply sound pedagogy.

A second, almost universally adopted method is asynchronous delivery. Cohort I programs overwhelmingly opted for this method primarily because of its convenience for students, but also because it gives students the ability to move at their own paces and review all content as much as necessary, thereby helping them learn more effectively.

V. PROGRAM ADMINISTRATION AND PARTNERSHIPS/LINKAGES

This chapter covers two related topics: the administration of Cohort I TBL programs and the partnerships and linkages the programs have developed. After a brief description of the grantee organizations, the chapter discusses how and where each program fits within its grantee organization and how it is staffed. The chapter then describes the partnerships and linkages the programs have established with employers, the public workforce system, educational institutions, and other organizations.

Administration of TBL Programs

The TBL programs in Cohort I are administered by two types of grantee organizations: institutions of higher education and private non-profits. Four grantees are institutions of higher education:

- Greenville Technical College (GTC), a four-campus community college system serving Greenville county, South Carolina;
- Northern Virginia Community College (NOVA), the second largest community college in the US, with six campuses and two educational centers serving Northern Virginia;
- Ogden-Weber Applied Technology College (OWATC), a community college with four locations in Weber County, Utah, that offers two-year degrees and vocational training; and
- University of Colorado, Denver (UCD), one of the campuses of the University of Colorado, which offers bachelors, masters, and doctoral degrees via thirteen separate schools and colleges.

Two grantees are private non-profit organizations:

- Able-Disabled Advocacy, Inc. (A-DA), which provides employment and training services to individuals with disabilities in the San Diego area; and
- The Guidance Center (TGC), a behavioral health and human services organization that serves Wayne County, Michigan.

Each of the higher education grantees administers its TBL program through a specific academic department, division, or college within the institution. For example, at NOVA, the TBL program (GCPI) is housed within the Geospatial Technology Systems Program in the college's Communications and Human Studies Department. Somewhat similarly, OWATC's TBL grant is administered by the Information Technology program in the Department of Information Technology and Business. The GEM program, meanwhile, is part of UCD's business school, although the program is housed and administered separately from the rest of the school. Since its program leads to reinstatement of a nursing license rather than a degree, GTC's TBL program (Nurse Return to Work) is under the school's Corporate and Career Development Division, which provides continuing education and training for corporate, professional, and personal development.

Among the private non-profit grantees, TBL projects are administered in the same units as similar programs. For example, A-DA's CareerLink program is administered in the same unit and by the same program director as the agency's Projects within Industry placement program for persons with disabilities. Similarly, CATS is part of TGC's Virtual Center for Excellence, which provides numerous online training programs to mental health workers in Wayne County.

To administer their TBL programs, each of the six Cohort I grantees has from four to seven staff, excluding instructors, who work at least part-time on the program (please see Exhibit V-1). Although there is some variety in the roles these staff play, four particular roles are common across most programs.

- **Program director/Grant administrator**. All of the six programs have at least one staff member serving in this role.
- **Instructional designer**. All the programs except the one at OWATC have had an instructional designer assist with designing or editing online course material. At two programs—CareerLink and GCPI—the instructional designer played a major role in the design phase, but spends little time working with the TBL program on an ongoing basis. The instructional designers for both Nurse Return to Work and GCPI are also assigned to assist other online programs offered by GTC and NOVA; the instructional designer for CareerLink is a SkillSoft employee who works with a number of organizations that use SkillSoft training programs.
- **LMS manager/online programs director**. Four of the six grantees designate a staff person to oversee the program's LMS and other technology. In two of these four programs—Nurse Return to Work and CATS—this individual plays this role for the grantee organization as a whole, rather than just for the TBL program. For example, at Nurse Return to Work, the staff person in this role is the director of GTC's Online College, while at CATS the role is played by TGC's executive director of program operations. By contrast, GEM has its own dedicated staff

person in this role, its associate director of online programs, while in OWATC's TBL program, one of the two primary instructors serves in this role.

- **Student liaison**. Three of the six programs have at least one person serving in the role of student liaison. At GEM and CATS, this role is played by a single staff person; at OWATC, two staff—the program secretary and the academic counselor—serve as liaisons to students.

Exhibit V-1:
Number of Staff at Cohort I TBL Programs

	CareerLink	CATS	GEM	Nurse Return to Work	GCPI	OWATC
Grant administrator/ Program director	2 (1 is A-DA's executive director)	1	1	1	2 (1 is also an instructor)	2
Instructional designer	1 (works for SkillSoft, not A-DA)	1 (Continuing education coordinator)	1	1 (works with many GTC online courses)	1 (assigned to work with TBL grant by online college)	
LMS/online programs director	1 (also the program's instructor)	1 (works on all online programs at TGC's Virtual Center for Excellence)	1	1 (works with all GTC online courses)		
Liaison with students		1	1			2 (academic counselor and program secretary)
Other staff		2	3	1	1	
Total TBL program staff (excluding instructors)	4	6	7	4	4	4

Partnerships and Linkages

To be eligible for ETA's TBL grants, all TBL programs were expected to have "strategic partnerships with recognized or emerging high growth/high-demand industries, educational and

training institutions and the public workforce system."[1] This section of the chapter describes the partnerships and linkages developed thus far by Cohort I grantees, particularly those with employers, the public workforce system, and educational institutions.

Partnerships and Linkages with Employers

In keeping with the requirement in ETA's SGA, partnerships with employers in high-growth/high-demand industries are a major focus for all Cohort I TBL programs. Programs are highly motivated to establish partnerships with employers because of the many benefits of such relationships. To ensure that their graduates will be readily employable, programs want their curricula to be aligned with employer needs and industry standards, and the best way to achieve this goal is to receive advice and guidance directly from employer partners. And even after completing development of their curricula, TBL programs have multiple reasons to continue to reach out to employers. Employers may provide internships[2] for program participants, hire program completers, refer potential program instructors, help programs keep up with industry changes, and contribute funding and in-kind resources. In the case of GEM, the strong employer focus has even deeper roots: the idea for the TBL program originated with a high-growth/high-demand employer—the vice president of an energy company (please see accompanying text box, *Employer Involvement at GEM*).

Employer Involvement at GEM

A primary reason for GEM's strong connection with energy industry employers is that the idea for the program originated with a Denver-based vice president of an international energy company. The result has been a program that has received more than $1.5 million in financial support from the energy industry. Energy company representatives are also active on multiple GEM committees, particularly those that advise the program on curriculum and marketing. Several companies also support the program by covering tuition costs for employees who are being groomed as future corporate managers.

Due to the highly targeted nature of each TBL program's particular industry focus, each program is carefully targeting that particular industry for its employer partnerships. Program staff conduct outreach to potential employers in these targeted industries in a few ways. One method is to ask

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1 "Notice of Availability of Funds and Solicitation for Grant Applications (SGA) under the Employment and Training Administration's (ETA) Technology-Based Learning (TBL) Initiative." Federal Register, Vol. 73, No. 120, June 20, 2008.

2 GTC uses the term *externship*, a term used in the health care industry, rather than internship. However, because the meaning of the two words is basically synonymous, in the interest of brevity, this report uses *internship* throughout.

existing employer partners for introductions to potential new partners. GEM, for example, has relied heavily on current energy industry partners to bring in other such companies. For example, the vice president of an international oil company that is a major supporter of GEM has met with executives of other oil and gas companies with offices in Denver to discuss and encourage partnership with the program. Another method is to make use of the employer linkages of other partners. For example, A-DA's partner, SDFF, has helped CareerLink to develop a number of new employer partnerships in the IT industry.

Employer partners commonly play several key roles in TBL programs. One such role is to serve on a program's advisory board. Four of the six Cohort I programs have some kind of advisory board or committee made up primarily of employers. Two of these boards—those at GEM and OWATC—serve only the TBL program, while the advisory boards at A-DA and TGC are organization-wide and provide input and advice to multiple grantee programs. Due to its broad focus, A-DA's advisory board does not include as many IT industry employers as the director of CareerLink would prefer. Consequently, she worked with SDFF to form a separate TBL Employer Committee made up of staff from the two agencies that could focus specifically on conducting outreach to the IT industry.

TBL advisory boards meet as often as bimonthly (at TGC) and as seldom as twice a year (at OWATC). The TGC and GEM advisory boards met weekly and monthly, respectively, during each program's design phase, but now that their training programs are better established, the groups have opted to meet less often.

Through their advisory roles (and sometimes through separate efforts), employers at three Cohort I programs play an important role in ensuring that the programs' curricula are aligned with industry standards. For example, GTC involved several hospitals and health care systems in designing the Nurse Return to Work program's curriculum. At GEM, energy industry representatives have been intimately involved with program design, suggesting and reviewing potential course topics and materials. For instance, as discussed above, energy industry executives suggested MBA-like courses specifically tailored to the industry, such as "Energy Accounting," "Financial Management and Hedging in the Global Energy Markets," and "Leadership and Decision Making in the Global Energy Environment." For CATS, the program worked with employers who were members of its Direct Care Curriculum Advisory Committee to review existing training materials and select the most important for inclusion in the program's online modules. At both GEM and CATS, employer partners play an additional role in helping to recommend and select instructors for the programs.

Another key role for employer partners is to provide internships or job placements for TBL students. As noted in Chapter II, CareerLink, GEM, and GCPI are all planning to provide placement services to TBL students when they complete their training programs. In addition, CareerLink, GCPI, and Nurse Return to Work all require students to have internships. Consequently, a major focus of these programs is to develop partnerships with employers who can hire TBL program graduates and/or provide internships to program students. As a result of these efforts, the GCPI program has received commitments from three local GIS employers to hire TBL students as paid interns and to cover the cost of tuition for one to four credits. Similarly, GTC's Nurse Return to Work program has developed partnerships with at least eight local hospitals and health care systems to provide 84-hour clinical internships. CareerLink has also developed internships with a number of local employers and continues to try to develop new relationships. For instance, staff noted that they recently met with a San Diego-area naval program interested in providing internships, particularly for students who receive a specific certification related to data security.

Finally, some employer partners also provide in-kind or cash resources to TBL programs. For example, as part of their commitment to the GEM program, several energy companies contributed the entire $500,000 match required for the ETA grant. In addition, a representative from one of these companies estimated that his company has since contributed a million dollars toward the development of a new building to permanently house the GEM program. His and other companies have also contributed to GEM by covering tuition costs for their employees who are enrolled in the program.

Employer partners of Nurse Return to Work and GCPI also contribute in-kind resources to those programs as part of providing internships. For example, GTC's employer partners cover the cost of paying for a preceptor to monitor Nurse Return to Work interns, and GCPI employer partners similarly cover the cost of supervising interns, as well as the cost of providing salary and tuition for paid internships.

With two exceptions, these employer partnerships are informal. Only GCPI and Nurse Return to Work have established formal relationships with employer partners, developing signed memorandums of understanding (MOUs) with the employers that provide paid internships to TBL students. These MOUs spell out the roles and responsibilities of both the employer and the program in providing those internship opportunities.

Partnerships and Linkages with the Public Workforce System

In addition to developing partnerships with employers, TBL grantees were encouraged by ETA to develop or strengthen relationships with the public workforce system, including local WIBs

and One-Stop Career Center system partners. Thus far, however, only two Cohort I programs—CareerLink and the OWATC program—have strong partnerships with their local WIB or One-Stop Career Center system, while two others, Nurse Return to Work and GCPI, have somewhat less-developed linkages. At the time of the site visits, GEM and CATS had basically no linkages with the local public workforce system.

Both CareerLink and OWATC's TBL program have strong relationships with the local public workforce system. OWATC's strongest partnerships are with the Utah Department of Workforce Services (DWS), which runs the Ogden One-Stop Career Center and provides local WIA services, and with a community-based agency called Ogden-Weber Community Action Agency (OWCAP) that is receiving American Recovery and Reinvestment Act (ARRA) funds (please see accompanying text box: *OWATC's Partnership with OWCAP*). Representatives from both of these partners sit on the TBL program's advisory board. Both, particularly OWCAP, also refer individuals to the TBL program. In the case of OWCAP, most of these individuals are also co-enrolled in the agency's ARRA-funded program. In a further linkage with DWS, the TBL program participates in a DWS-run training program that pays for about half the cost of training for incumbent workers employed by for-profit companies.

OWATC's Partnership with OWCAP

OWATC has a strong informal partnership with OWCAP, a local recipient of ARRA training funds. The main purpose of this partnership is recruitment for the TBL program. Initially, OWCAP was supposed to provide computers to those TBL students who lacked access to one; but since most students come in to OWATC's lab, it has not been necessary. Instead, OWCAP has used ARRA funds to create the Education to Careers program, which pays for dislocated workers who are below the poverty line to participate in the TBL training at OWATC. The organization supplements whatever source of funding these dislocated workers have already set up to pay for tuition and books. OWCAP also provides these co-enrolled students with child-care subsidies, case management, bus passes, laptops, and job-readiness training. To work with these students, OWCAP recently co-located two counselors at OWATC; in addition, OWCAP staff regularly attend the TBL program's advisory committee meetings. Thus far, this co-enrollment partnership has been very successful, with 40 of OWATC's 159 TBL students co-enrolled in this OWCAP program by mid-October 2009.

CareerLink also has multiple linkages with the local public workforce system. First, A-DA (the grantee that runs CareerLink) has staff co-located at San Diego's South County One-Stop Career Center who can assess eligibility for CareerLink. Also, as part of the integrated intake and assessment system used at all San Diego One-Stop Career Centers, customers who are assessed as having a disability and have an interest in IT are referred to the CareerLink program.

Many of these customers are first co-enrolled in vocational rehabilitation (VR) or WIA programs before being sent to A-DA.[3] To ensure the success of this referral and co-enrollment partnership, A-DA makes sure that both WIA and VR staff are kept aware of any changes to CareerLink requirements or program features. Finally, the local WIB, the San Diego Workforce Partnership, has assisted CareerLink with developing relationships with employers and finding job placements. The WIB also helped A-DA make the determination to focus on the IT industry at CareerLink's inception.

Both GCPI and Nurse Return to Work have some linkages with their local public workforce systems, but these linkages are not as well developed as those of CareerLink and the OWATC program. Both programs have relationships with staff at local One-Stop Career Centers who refer individuals to the TBL programs for training. When referred individuals are co-enrolled in both WIA and the TBL program, the WIA program covers the cost of students' tuition and books, as well as providing them case management and support services. One of these co-enrolled students in GTC's Nurse Return to Work program was also allowed to use a local One-Stop Career Center's computer lab to complete her training.

However, the number of students in Nurse Return to Work and GCPI who are co-enrolled in WIA programs is small. According to the program's July–September 2009 quarterly report, only two Nurse Return to Work students were co-enrolled in WIA. One reason for this low co-enrollment in GTC's program is that local WIA programs mostly co-enroll LPN students, and these students make up a small portion of Nurse Return to Work students. At GCPI, co-enrollment has been limited due to concerns over how likely GIS students are to become employed after completion of the program. Co-enrollment has also been low because the cost of the TBL program is just over the two local WIBs' training caps and its length is just slightly longer than what is usually allowed. GCPI has been meeting with local WIB representatives to see how to overcome these challenges and increase co-enrollment.

Finally, GEM and CATS have little or no relationship with their local public workforce systems. Although GEM originally had plans to coordinate with the local WIB and One-Stop Career Center system regarding recruitment of participants—even developing a formal MOU calling for the local WIB to market the program and refer ten candidates a year for three years, with the TBL program covering $4,500 in WIB administrative expenses—no referrals had been made as of late August 2009. Similarly, CATS originally planned to coordinate with local WIBs to receive referrals, but had also not done so by the time of the site visit in early November 2009.

[3] At least 75 percent of CareerLink students were reported to be co-enrolled in VR programs.

The main reason neither of these programs has developed these relationships is that the TBL programs have been very successful in generating program enrollment on their own. At GEM, program staff also found it hard to coordinate with the local WIB, as WIB staff had not followed through with planned meetings.

Other Partnerships and Linkages

In addition to partnerships and linkages with employers and the public workforce system, most of the Cohort I TBL programs have formed strong relationships with one or more other programs. For example, in creating its TBL program, A-DA developed a deep partnership with the SDFF. As part of this relationship, SDFF was heavily involved in program design, including in determining the program's certification tracks. SDFF is also intimately involved in conducting employer outreach and finding placements for TBL students, serving on the Employer Committee described earlier and cold-calling potential IT employer partners. Foundation staff also take part in the assessment of applicants, helping to decide if they are suitable for the program. SDFF provided computer equipment for A-DA's computer lab and has pledged to donate a laptop to any TBL student who does not have access to a computer at home. Finally, SDFF is planning to provide assistance with resume writing, interviewing, and professional attire for TBL program graduates.

To encourage enrollment in its GIS Career Studies certificate program and in the field in general, GCPI has developed formal partnerships with three local high schools. Through this partnership, each school will provide GIS training onsite by providing an instructor and a classroom, with GCPI providing textbooks and 25 computer workstations and global positioning system units.[4] Students from these high schools will also be able to enroll in online courses offered by GCPI and receive up to eight college credits. Due to delays in grant implementation, these high school GIS courses have only begun at one of the partner schools, with courses at the other two schools set to commence in 2010.

Similarly, GTC has developed formal partnerships with other South Carolina community colleges to expand the geographic range of its TBL project. These partner colleges provide lab space and instructors for students who live closer to the partner college than to GTC. To support its partners, GTC provides laptops, printers, and other supplies to be used at the satellite labs. At the time of the site visit, GTC's main community college partner was Florence-Darlington College, but the program hopes to extend to Aiken Technical College in 2010, if Aiken is able to

[4] Global positioning system units provide positioning, navigation, and timing services to worldwide users on a continuous basis anywhere with an unobstructed view of four or more global positioning system satellites.

enroll at least four local students and can find a qualified lab instructor. GTC is also working with York Technical College in eastern South Carolina on recruitment and pays a finder's fee for students York Tech refers.

Finally, TGC has developed a major partnership with the DWCCMHA. This agency and TGC's Virtual Center for Excellence have had a long-standing partnership. In fact, the concept for developing the virtual center came from DWCCMHA, which saw a need for increasing online training opportunities for mental health and direct care workers and a system for capturing data on mental health workers. DWCCMHA has provided significant funding for both VCE and CATS and is active on VCE's advisory board and plays a strong oversight role in administering CATS.

Challenges in Developing Partnerships and Linkages

Several of the TBL programs have faced challenges in developing partnerships and linkages. For example, OWATC's TBL program has had difficulty developing relationships with some employer partners. At the outset of the grant, OWATC's TBL program approached three large local employers, proposing that they provide tuition assistance to match the assistance provided through the grant, actively promote the program and refer interested employees, and participate on OWATC's advisory board. However, due to the economic downturn, these employer partners have not been actively playing any of these roles.

Similarly, OWATC has had difficulty developing partnerships with a number of local CBOs that the college had expected would play a role in the TBL program. OWATC had hoped these partners would participate in the TBL program's advisory board and actively refer potential students. However, as of mid-October, these partners were not typically attending advisory board meetings, nor was it clear that they were referring many participants.

Three other TBL programs have not developed partnerships with local workforce system partners that are as extensive as originally planned. For example, as discussed in the previous section, neither GEM nor CATS has developed planned referral relationships with local WIBs or One-Stop Career Centers, primarily because the TBL programs have been so successful with recruitment on their own. GCPI has struggled to strengthen its referral relationship with two local WIBs due to the WIBs' training policies and expected outcomes.

Communication challenges were cited in relation to the partnerships maintained by two of the TBL programs. GTC's TBL program manager noted that despite the program's large number of existing employer partnerships, the program still struggles to find enough clinical sites for internships. While she asserted that this shortage of clinical sites is partly due to the recession,

she also attributed it to problems communicating clearly with partners about requirements for externships. In relation to another TBL program, a staff person at a workforce agency commented that she felt the need for more regular communication between herself and the TBL program with which her agency has a partnership.

Two programs faced challenges related to their advisory committees. At one of these programs, both staff and employer respondents reported that members of the program's advisory committee sometimes did not understand that their role was only advisory and that program staff made final decisions about program operations. In addition, these same respondents reported that some advisory board members did not understand that as a government-funded project, the TBL program could not engage in political advocacy. Respondents from two programs (one of them the afore-mentioned) also noted that it was proving too difficult to make their advisory boards representative of their programs' targeted industries.

Summary

The six Cohort I TBL grantees include four public institutions of higher education—three community or technical colleges and a university—and two private non-profit organizations. At the institutions of higher education, the TBL programs are housed within an academic department, the corporate and career development division, or the business school, while at the non-profit organizations, the TBL grants are administered in units with similar programs.

Each of the six Cohort I TBL programs has from four to seven staff, excluding instructors, who devote at least part of their time to the program. Typically these staff include a program manager/grant administrator, an instructional designer, a staff person who oversees the LMS and other technology, and a student liaison.

Have TBL Grants Led to Improved Partnerships?

Despite some challenges related to the poor economy and communications issues, all six Cohort I grantees have developed or strengthened partnerships and linkages related to their TBL programs. Employers, in particular, are a focus of partnership efforts for all six programs, with GEM, CATS, GCPI, and Nurse Return to Work the most successful in developing employer partnerships thus far. CareerLink, although it has good relationships with employers overall, is still working on making better connections with IT employers, and the OWATC program is still struggling to get certain targeted employers to participate in its advisory board and help pay for incumbent workers to participate in its TBL training.

At the time of the site visits, four of the six programs had relationships with local WIBs and One-Stop Career Center systems. Of these four programs, CareerLink had the strongest connections, followed closely by the OWATC program. Nurse Return to Work and GCPI had also developed limited referral and co-enrollment linkages with the local public workforce system, and GCPI was in the middle of trying to strengthen its relationship. By contrast, GEM and CATS had little to no relationship with local WIBs or One-Stop Career Center systems and did not see a need to focus on developing such partnerships in the near future.

Finally, five of the six Cohort I TBL programs have strong linkages with partners other than employers and workforce system agencies. A-DA's CareerLink has established a strong partnership with SDFF, while GCPI has created relationships with four local high schools. The Nurse Return to Work program has developed a strong partnership with Florence Darlington Technical College, and CATS has a close relationship with DWCCMHA.

VI. EARLY OUTCOMES

There are a number of expected outcomes for the ETA-funded TBL programs. Primary among these is an increase in the number of individuals who receive training in high-growth industries and achieve industry-recognized credentials. In addition, TBL programs are expected to help individuals overcome geographic and time-related barriers to participate in training that enables them to find and maintain employment. Other expected outcomes for the TBL programs include meeting the workforce needs of employers in targeted industries and successfully accommodating different learning styles.

Because ETA awarded the TBL grants only a year ago, it is still very early to discuss the status of most of these expected outcomes. Consequently, this report will provide only a very brief discussion of some preliminary outcome data and participant feedback, with a more complete and detailed discussion of outcomes to come in the final report.

Increasing Enrollment

One of the primary expected outcomes for ETA's TBL grants is to use TBL methods to increase the number of students trained by each grantee. Consequently, in the statement of work submitted in response to ETA's SGA, each of the grantees included enrollment goals for its TBL program that will achieve this outcome. Since each of the TBL grants still has more than two years before its completion, it is too early to know whether the six Cohort I programs will be successful in reaching these goals. However, early signs are encouraging. As shown in Exhibit VI-1, these programs had enrolled, by mid-fall 2009, from 20 to 53 percent of the total number of students they had targeted for enrollment, putting these programs either on or ahead of schedule to meet their enrollment goals over the three-year grant period.

Exhibit VI-1:
Baseline and TBL Enrollment[1]

	CareerLink	CATS	GEM	Nurse Return to Work	GCPI	OWATC
Baseline Annual Enrollment	0	0	0	72	82	85
TBL Enrollment through Sept/Oct 2009	28	885[2]	58	78	8	59
Expected Cumulative TBL Enrollment[3]	80	1675	192 (6 cohorts of 32 students)	291	355	300
Percent of Total Enrollment Achieved	35%	53%	30%	27%	2%	20%

Lowering Barriers to Participation

Another expected outcome of the TBL grants is to make it easier for individuals to overcome barriers that might otherwise have prevented or discouraged them from participating in training. Although it is still too early to know exactly how successful grantees have been in this area, site visitors did collect limited information related to this outcome.

One common barrier to receiving training is living too far from the school or organization offering the training to make regular to-and-from transportation practical. If transportation options are poor, this kind of barrier can arise even for students living in the city in which the training site is located. In theory, TBL methods lower this barrier very effectively by reducing

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[1] Data for CareerLink, GTC and CATS were from the most recent quarterly report and as of 9/30/09; data for GEM were as of 12/9/2009 from the most recent performance report to DOL; data from OWATC were from the site visit and as of 10/21/09; data for GCPI were not available at the time of the site visit and the grantee had not submitted any quarterly reports that included these data as of the time this report was completed.

[2] This is not an unduplicated count as it includes participants in each of the four CATS trainings (Recipient Rights Annual Update, 801; Medicaid Fair Hearings, Local Appeals, and Grievances, 21; Health Insurance Portability and Accountability Act, 45; Person-Centered Planning, 18), and participants may have taken part in more than one of these trainings.

[3] These data are taken from either the grantee's original grant proposal or from site visitor notes.

the need to be physically present at the training site, opening up participation to students living at otherwise impractical distances from the training site.

Due to variations in their target populations, the programs have service areas of varying size, giving different meanings to the lowering of geographic barriers. Of the six programs visited, only two—GEM and Nurse Return to Work—are specifically targeting students from outside their local regions for enrollment.[4] GEM, which is open to qualified individuals anywhere in the world, has a number of students who live outside the greater Denver area, including one in Abu Dhabi. The Nurse Return to Work program has also served a large number of students from outside the Greenville area, although most have been from South Carolina. In most cases, students from outside the Greenville and Denver areas would have been unable to participate in these programs without the use of TBL online methods. A Nurse Return to Work student who lived several hours by car from Greenville affirmed that the online nature of the program had made it easier for her to participate.

While CareerLink targets only the San Diego area, and the program's required bi-monthly in-person classes make it infeasible for students to live too far away, TBL methods have still made it easier for CareerLink students to complete the training. For example, arranging transportation can be a major hassle for CareerLink's students since a number cannot drive and must rely on public transportation or paratransit services to get around. Consequently, the fact that they need to travel to A-DA only twice a month during the online portion has made it much easier for these students to participate in training.

The other common barrier to participating in training is having time constraints related to employment or family obligations. Limited evidence collected during the site visits indicates that the self-paced, asynchronous structure of all six Cohort I programs has made it easier for students with time constraints—such as incumbent workers or individuals with young children—to participate in training. For example, a student in the OWATC program commented that the self-paced nature of the TBL program allows her the flexibility of participating in training during the hours her children are in school and returning home by mid-afternoon when they return.

The CATS program has also made it much easier for Wayne County direct care workers to access training. For example, one local employer said that before CATS, she found it very difficult to allow her workers to go off-site to participate in training because her organization needs its on-duty staff available at all times. Since the CATS trainings have become available,

[4] The CATS program is also considering opening up its online offerings to users in other parts of the country, but is unclear when or if this will occur.

however, she no longer has this problem as she has set up a computer in her office for staff to use to access CATS trainings whenever they have a few spare minutes.

Similarly, having much of GCPI's GIS certificate program online has made it easier for TBL students to avoid the congestion on Northern Virginia's roads. This is particularly important since the program director reported that 70 to 80 percent of GCPI's students are working adults with limited time to travel to in-person classes.

Early Experiences of TBL Students and Employers

Site visitors had opportunities to interview a number of students in the TBL programs, as well as several employers who have hired or plan to hire program graduates. Their experiences and views provide some indication of the programs' progress in achieving some of the expected outcomes.

Students interviewed during the site visits generally expressed strong satisfaction with the TBL programs. For example, one GEM student commented that the "delivery of the program is excellent," and other GEM students asserted that their level of understanding of course content is higher than it would have been in a traditional class. These students attributed this improved comprehension to GEM's TBL structure, which allows them to watch and re-watch recorded video lectures and podcasts whenever convenient, rather than only once at the same time each week. A student who had participated in a CATS training also had good things to say about her experience. She noted that the content of the course she completed is useful to her, and that she strongly encourages her colleagues to make use of CATS trainings. Students in other Cohort I programs expressed similar positive views.[5]

A few students also had some suggestions for improvement. For example, two students at one of the primarily online programs described how they would like the program to offer more opportunities for in-person, hands-on instruction. Students at another program that requires group projects said that they preferred the groups to be organized based on grades, with the strongest students assigned to the same groups. These same students and those from another primarily online program also wanted more detailed course syllabi to allow them to plan for how to complete course assignments despite work and family obligations.

[5] As the site visitor was not able to arrange a focus group or interviews with students in the GCPI GIS Career Studies certificate program, no data on student satisfaction was collected for that program.

Due to the fact that most of these programs had served relatively small numbers of students by the time of the site visits, program respondents had only limited ideas about why some students performed better than others in TBL programs. Respondents at five grantees did note that the most successful students appeared to be strongly self-motivated. In addition, GEM's associate director of programs commented that because course work is completed at home during a student's spare time, having support from family and friends is also important. According to the program manager from the Nurse Return to Work program, flexibility and openness to new teaching methods are other important characteristics of successful TBL students.

Although it is similarly too early to judge whether TBL programs have been successful in assisting students with finding and maintaining employment, employers were generally very positive about the programs and several had hired or said they intended to hire TBL graduates. For example, two employers that provided internships to CareerLink students reported that they hoped to hire them as regular employees. Another employer who has hired several Nurse Return to Work graduates said she is "extremely pleased" with their skills, particularly in the areas of communication and critical thinking. One employer who hired GCPI interns and one graduate said that the program graduate was as well-trained as graduates he has hired from traditional programs. Finally, two direct care employers in Wayne County, Michigan said they are very happy with the CATS program, with one calling it a "Godsend" because it makes it easier for him to ensure that his direct care workers receive needed training.

Summary

After only a year of implementation, it appears that Cohort I TBL programs are on target to achieve a number of expected outcomes. Most programs are either on or ahead of schedule to achieve their goals of increased enrollment. The use of TBL methods does seem to have helped students overcome barriers related to distance and time, making it easier for these students to participate in training. Employers report being happy with Cohort I TBL programs and graduates, with several noting that they have hired or would like to hire program graduates. In addition, students report being generally quite satisfied with their experiences in the programs.

VII. CONCLUSION

Less than a year after receiving their TBL grants, the six Cohort I grantees have designed and begun implementation of their TBL training programs. During this process, they have faced a number of challenges and developed some possible promising practices. Although these challenges and promising practices have been noted in the previous chapters, they have not yet been brought together and summarized. Doing so is the purpose of this final chapter.

Promising Practices

Cohort I grantees have developed a number of possible promising practices in the areas of teaching methods, technology, instructors, and partnerships:

Teaching Methods

- **Requiring in-person activities to help students maintain motivation and develop relationships.** Three of the primarily online TBL programs in Cohort I—CareerLink, GEM, and Nurse Return to Work— specifically require certain in-person activities. These activities are designed to meet a number of program objectives, one of which is to help students remain motivated, partly by developing closer relationships with their instructors and fellow students. Another objective of in-person activities is to facilitate information sharing, both among students and between instructors and students. After meeting in person, students also find it easier to set up virtual study groups and instructors find it easier to assess student comprehension and progress, adjusting their teaching accordingly.
- **Recording training content and making it available in multiple, easy-to-use formats.** By making recorded lectures available via simple and easy-to-navigate technology—such as that used by CATS courses or via podcasts as at GEM—some TBL programs have made it extremely trouble-free and convenient for students to access training content. Some students asserted that the ability to easily review course materials has enabled them to more efficiently master training content.
- **Exploiting the potential for online interaction**. Due to the importance of student–instructor and student–student interaction in online courses, some

Cohort I programs have developed additional techniques for such interaction. One such technique, used by both GEM and GCPI, is to require students to use discussion boards to respond to instructor questions. GEM instructors noted that this ensures ongoing participation by all students, something that's difficult to engender in traditional in-person classes. Another technique, used by GCPI, is to use a social networking site where students can network with one another and the instructor and share information about a variety of program-related matters.

Technology

- **Giving in-person orientations to key technologies**. To lessen the chance that students will face problems using the technology required for their online training, three primarily online Cohort I programs provide in-person orientations to using their technology. GEM, one of the programs that does this, even encourages students to bring their laptops to this orientation so that the students can try to log in to the program's LMS during the session. That way, program staff can provide immediate technical support if needed, making it less likely that students will have to call in or email for technical support the first time they try to log in at home.
- **Technological solution to problems related to installing and using certain software on home computers.** To eliminate the problems GCPI students have faced in purchasing and running GIS software programs on their home computers, the program plans to install desktop virtualization on a computer server at NOVA, thereby allowing students to access GIS software from this server, rather than from their own hard drives.

TBL Instructors

- **Providing software that helps instructors adapt content for online teaching**. GTC has begun using a software program called SoftChalk LessonBuilder, which allows instructors to publish training content to the college's LMS with no knowledge of programming. This software is likely to make it easier for the Nurse Return to Work program's Internet instructor to create online content, without requiring technical support or assistance from an instructional designer.
- **Providing training to support online instructors**. Each of the TBL programs in Cohort I provides training for both new and continuing online instructors. This training has been particularly critical in helping new online instructors understand how to create course content or revise it so that it works in an online environment.

Partnerships and Linkages

- **Engendering extensive employer involvement**. Through deep and extensive relationships with employers, GEM has developed a truly employer-driven program. One consequence of this is that even in a poor economy, GEM has

continued to receive support—including financial contributions—from employers.

- **Developing strong co-enrollment partnerships**. Through its co-enrollment partnership with OWCAP, OWATC has provided a significant source of support—both financially and otherwise—for about a quarter of its students. These co-enrolled students are able to have 100 percent of their books, tuition, and fees covered and receive services such as case management, job readiness training and transportation assistance, substantially easing the burden of participating in OWATC's training.
- **Developing strong linkages with the public workforce system to increase employer and student referrals**. CareerLink's multiple partnerships with the public workforce system have resulted in numerous referrals of potential students to its program from local One-Stop Career Center staff and VR. In addition, the local WIB has agreed to assist the program in developing relationships with additional employers. Both CareerLink's partnership with its local WIB and OWATC's partnership with DWS have assisted those programs in understanding the needs of their targeted industries.

Challenges Faced by Cohort I Grantees

In addition to the above-noted promising practices, Cohort I grantees have thus far faced a number of challenges in the areas of teaching methods, technology, instructors, and partnerships:

TBL Methods

- **The appropriate amount of structure can be difficult to determine at the outset.** Two primarily online programs have had to recalibrate the degree of structure in their programs in order to meet students' needs. To address a student need for greater specificity about course assignments, GEM has already required instructors to provide more detailed syllabi (and during the site visit, students requested even more information). Another program, CareerLink, has also included more structure in its program, adding to its test preparation component a second in-person orientation, bi-weekly study assignments, a detailed study plan and a planned date for certification.
- **The right balance between in-person and online activities can be difficult to set**. CareerLink students wanted more in-person activities to provide them with additional opportunities for hands-on practice in the program's computer lab.

Technology Used in TBL Programs

- **Server problems may interfere with program operation.** The Nurse Return to Work program faced major problems with the college's computer server during the summer of 2009. Due to these problems, Nurse Return to Work students were unable to access program content as needed, and some

students were even interrupted during testing and lost partial test results. To remedy this problem, GTC contracted with BlackBoard, a major commercial provider of e-learning services, to host all of the college's online programs, including the Nurse Return to Work program.

- **Software program glitches may interfere with program operation**. Respondents from several programs had problems using their LMS as well as other types of software, such as Adobe Connect and WIMBA. GCPI students had difficulty using several types of GIS software on their home computers because of the software's memory requirements.

TBL Instructors

- **Some instructors have difficulty adapting to online teaching**. Instructors who were new to teaching in an online environment sometimes had difficulty, partly because they did not understand that online learning required a different approach to instruction. In addition, some of these instructors said that they had a hard time adjusting to certain requirements of online teaching, such as the need to divide lectures into shorter segments and to use alternative modes of communication, such as discussion boards.
- **Students' needs for assistance can put unreasonable demands on teaching staff.** As OWATC's TBL program is self-paced and students require a significant amount of one-on-one assistance, instructors faced a significant challenge in trying to meet the needs of all of the program's students. Due to this problem, the program had to cap the number of students allowed to enroll.

Developing Partnerships and Linkages

- **It can be difficult to develop co-enrollment linkages with the public workforce system.** Both GCPI and GEM faced challenges in developing co-enrollment partnerships with the public workforce system. In the case of GCPI, these challenges were due to local WIBs' policies for funding training, which clashed with the characteristics of the TBL program. For GEM, when faced with a string of cancelled meetings, the program saw little need to continue to push for a relationship with its local WIB since it had been very successful in recruiting on its own.
- **Some employers can be reluctant to partner under the strain of the recession**. OWATC's TBL program and the Nurse Return to Work program faced challenges in developing strong partnerships with some employers; in both cases this was at least partly due to the poor economic conditions. These employers were less interested in being extensively involved either because they no longer had the budget or the staff to work with a TBL program to provide training for their workers, or because their lower hiring needs reduced their interest in partnering with a program that could meet those needs.
- **Some employer partners may want too much control**. One program faced a challenge in having employers assume too much ownership over the

program. These employers, who participate on one or more of the program's advisory committees or subcommittees, had trouble accepting that their role is merely advisory, and that program staff make final decisions about program policies. Some of these employers also did not understand that because TBL programs are publicly funded, they must remain politically neutral.

- **CBO partners may face challenges that reduce their ability to fully participate**. OWATC has had difficulty getting CBO partners to attend the meetings of its advisory committee or make many referrals because these partners are over-stretched and too busy.

APPENDIX A:

TBL Evaluation Research Questions

Evaluation Research Questions

The evaluation's research questions are presented below organized into nine categories: (1) contextual factors; (2) planning and design; (3) program administration, organization and leadership; (4) linkages and partnerships; (5) recruitment and intake; (6) training delivery; (7) additional services; (8) outcomes; and (9) implementation challenges and promising practices.

Contextual Factors

- What is the grantee's prior experience with using TBL strategies and methods? Does the grantee already have an established eLearning component and learning management system?
- What is the status of the TBL training program? Does it need to be developed entirely, converted to a TBL format, or simply updated or improved?
- What are employer needs in targeted sectors?
- What are overall economic conditions?
- What is the capacity of partners for collaboration on a TBL project? What is the history of collaboration between partners? What experience do they have with TBL?
- What are the characteristics of the participants targeted for the TBL project? Do they have prior knowledge and experience with computers? What is their prior labor market experience? What are their demographics?

Planning and Design

- What was the planning and design process for the TBL initiative? Who was involved and what were their roles? Were partners, such as employers, involved in the design of curriculum?
- How were training programs and modules designed? Tested? Did grantees hire a program or training designer to develop their TBL programs? What innovative and effective strategies and designs do these staff bring?
- What is the initiative's philosophy and approach to TBL? How have grantees envisioned the role of e-learning at their institutions? How does this align with the grantee's mission and goals? How is this vision manifested in the design of their TBL trainings?
- What are grantees' TBL program objectives in terms of industry focus and local or regional economic development?

Program Administration, Organization and Leadership

- What are the goals and objectives that grantees establish for their initiative? How are these communicated to initiative partners and staff?

- How is each TBL grantee's initiative administered and managed? How is each TBL initiative staffed? Who is responsible for providing training? Other services?

Linkages and Partnerships

- What partnership arrangements have been established and how are resources being leveraged to achieve the grant's objectives?
    - What types of linkages have been established with local Workforce Investment Boards and other elements of the public workforce investment system (e.g., One-Stop Career Centers, WIA Title IB providers, WIRED grantees, and other One-Stop system partners)?
    - What types of linkages have been established with employers, particularly in targeted industries or sectors?
    - What types of linkages have been established with other training providers and educational institutions?
    - What types of linkages have been established with community based organizations (CBOs) or faith-based community organizations (FBCOs)?
- How were these linkages/relationships formed? What are the challenges and successful strategies? How have these linkages worked overall? How have they evolved over time? What are the "missing" or unsuccessful linkages?
- What leveraged resources—cash and/or in-kind—are available from partners and other public/private organizations? To what extent and with what effectiveness have cost-sharing agreements been established among partners?
- How are the partnerships formalized (e.g., memoranda of understanding, contractual agreements, fee-for-service or voucher arrangements, referral systems, etc.)?
- What referral system(s) have been established or strengthened between partners?
- What have been the strategies for inter-partner communication?
    - How do the various entities/partners remain informed about both grant- and client-level information? What formal and informal communication mechanisms have been established?
    - What have been the key barriers to effective inter-partner communication?
- How successful have grantees been in establishing fruitful and lasting relationships with partners?

Recruitment and Intake/Admissions

- What is the nature of outreach/recruitment efforts for the TBL initiative?

- What strategies are involved for outreach/recruitment? What partners are involved in recruitment? What value-added do partners contribute to the recruitment process?
- What is the intake/admissions process for the TBL initiative? What eligibility criteria are used? How is eligibility assessed?
- How is it decided which participants will undertake TBL versus alternative, more traditional training modes? How do the characteristics of the two groups differ?
- What assessments are conducted at intake/admission? Are computer skills assessed? Skill levels? General compatibility with a TBL learning environment?
- What is the range of basic computer skills that participants must have to successfully engage in the grantee's TBL courses? If participant computer skills are assessed to be low, what computer training or support is provided?
- What equipment or infrastructure must students have to successfully participate in the TBL courses? If students lack sufficient or appropriate equipment, how do grantees address this?
- Who is the program targeting for services (demographically, geographically)? How does TBL meet the unique needs of grantees' target groups?
- What is the enrollment of each grantee's TBL initiative programs? What are the characteristics of these enrollees? Do they match with the target group?

Training Delivery

- What faculty or instructors conduct classes and training? What preparation, training or support do TBL program faculty or instructors receive? Is this training and support sufficient to effectively conduct TBL courses?
- What types of TBL training programs do grantees develop and implement?
- What specific occupations, degrees and credentials do the TBL programs target?
- What delivery modes and methods do the grantee's TBL programs employ? Asynchronous or synchronous delivery? Are programs strictly online or do they blend in-person components? Are they self-paced?
- What other TBL tools do programs use? Discussion boards? Wikis? Multimedia? Chat rooms? How do these additional tools contribute to the learning experience?
- What type of orientation or introduction do grantees offer students before taking the TBL courses? How useful are these introductions?
- How do TBL training modes and methods differ amongst grantee programs based on the training goals or student needs?
- How long do training programs last? How does this differ between self-paced and instructor led programs?

- What is the nature and frequency of instructor-student and student-student interaction during TBL courses? Does this interaction lead to adequate learning experiences? What are the challenges and promising practices in increasing instructor and peer interaction?
- What learning management systems (LMS) do grantees use for their online courses? What are the challenges and benefits to using various LMS? What are the minimum functions that grantees believe are necessary in an LMS for a successful TBL program?
- What are the characteristics of effective user support/help desk components for TBL courses?
- What are the characteristics of user-friendly online training interfaces?
- What additional educational support or tutoring is available to students during TBL programs? How effective is this support? Is it technology-based or in-person?
- What accommodations are made to incorporate ADA requirements and increase training accessibility to students with disabilities?
- How is student progress assessed in the TBL courses? What mechanisms do TBL programs use to inform students of their progress and provide constructive feedback? Are they sufficient?
- How is academic integrity maintained in grantees' TBL courses? What are the methods for ensuring students' compliance with educational or training institutions' academic integrity rules? What are the challenges that grantees face and the promising practices that they employ in this effort?
- What accommodations are made to ensure identity security/maintain the privacy of student identity? What are the challenges that grantees face in this effort?
- How are intellectual property rights for TBL program training content protected?
- What innovations do the TBL grantees incorporate into their implementation, and how do these innovations mesh with the more traditional mechanisms of delivering content also used by the grantees and their partners?

Additional Services

- What other services, such as placement assistance, career counseling or job readiness training will grantees make available to participants? Do TBL participants have access to the same services as non-TBL training program participants?
- Do TBL program participants receive case management services? Who provides these services? What is the scope and frequency of these services?
- Are participants referred to other agencies for additional services? What types of referrals are most common?

Outcomes[1]

- What is the number of participants enrolled in TBL programs? How many more students were enrolled in training as a result of the initiative?
- What is the duration of participation in training programs? How many enrollees complete TBL programs?
- What specific services do participants receive while enrolled in TBL programs?
- What credentials, certificates or degrees are attained by TBL participants?
- Do TBL participants become employed following completion of participation in TBL programs? At what wages?
- Does program completion, attainment of certificates or credentials or labor market success vary by participant characteristics? By program characteristics or services (e.g., blended vs. online only, extent of computer or educational support, etc.)
- How satisfied are TBL program participants with their experience? How satisfied are faculty?
- How does this initiative advance the grantees' ability to provide training for skills demanded by their regional economies and for high-growth/high-wage occupations and industries?
- Has the initiative resulted in strengthened partnerships between training providers, employers and WIBs?
- How successful are TBL programs in helping to accommodate different learning styles and paces among trainees.
- How successful are TBL programs in expanding the geographic reach of training and education to students who are outside of a commutable distance?
- Do TBL programs make it easier for individuals with limited time (e.g., single parents, incumbent workers) to participate and complete training programs?
- Has the TBL initiative strengthened the local work force system's e-learning capacity?

Implementation Challenges and Promising Practices

- What major challenges in design and program delivery have the grantees encountered? How have they been addressed? With what success?
- What are promising practices that can be gleaned from grantee experiences with TBL. Which of these practices are replicable?

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[1] Because of the relatively short period of the evaluation, especially compared to the grantees' period of performance, the evaluation will only be able to capture short-term outcomes and results from early enrollees.

APPENDIX B:

Cohort I Grantee Summaries

Grantee: Able-Disabled Advocacy (A-DA)

Primary Service Area: San Diego County, California

TBL Initiative Funding: $584,600

Industry/Sector: Information Technology (IT)

Approximate Number to be Served by TBL Program: 80

Program Summary

The goal of Able-Disabled Advocacy's CareerLink program is to enable or enhance the employment of disabled individuals using TBL strategies, while simultaneously addressing the local area's IT workforce needs. The program provides participants with the opportunity to receive IT industry-recognized certifications in six areas.

- **Contextual Factors:** The decision to focus on the IT sector developed through labor market research and collaboration with the local WIB, the San Diego Workforce Partnership. The San Diego area has a long history of being a high-tech community, and other high-growth industries are also expected to need various types of IT professionals. The grantee also hopes to lower the need to bring in foreign IT workers through the H1B visa process.
- **Experience with and Approach to TBL:** A-DA's primary experience has been in workforce development and case management for persons with disabilities. While A-DA had previously administered some small, short-term technology-focused training programs, CareerLink is the first to use online learning.
- **Planning and Design:** The design of the program was a collaborative effort between A-DA, the San Diego Futures Foundation and SkillSoft. SDFF has extensive experience and connections to the IT industry and provided A-DA with guidance on curriculum design and the types of certifications to offer. SkillSoft is a national leader in IT certification programs and worked closely with A-DA and SDFF to adapt SkillSoft's existing online IT training programs for CareerLink.
- **Program Administration, Organization, and Leadership:** There are two dedicated staffers responsible for administering CareerLink. The project director oversees day-to-day operations, including student recruitment, employer/partner outreach, student tracking and reporting. The director of e-learning provides assistance and support for the online training component and serves as the program's instructor. The program also has an advisory council that is primarily composed of employers.
- **Linkages and Partnerships:** CareerLink's primary partner is SDFF. SDFF has been instrumental in program development and continues to assist with employer outreach, equipment donation, and soft-skills training. CareerLink has also developed close partnerships with the San Diego Workforce Partnership and the California Department of Rehabilitation.

- **Recruitment and Intake:** The program primarily recruits via its website and referrals from partners. To ensure that participants are both adequately prepared and dedicated to the program, CareerLink has a multi-stage intake/enrollment process involving both a skills assessment and multiple in-person interviews with both program and SDFF staff.
- **Training Delivery:** CareerLink's online component involves asynchronous interactive training modules. Students are required to complete at least one training module per week and supplement their online training with bi-weekly in-person classroom sessions. This ten to twelve-week training component is followed by approximately four weeks of preparation for the relevant industry certification exam.[57] Following successful certification, CareerLink students are placed in 16-week internships. After completion of the internship, students receive up to ten weeks of job search and placement assistance from the program.

[57] As a result of a low certification exam success rate, the program recently revamped its test preparation component, shortening it from eight to four weeks and adding additional structured activities.

Grantee: Greenville Technical College (GTC)

Primary Service Area: Greenville and other parts of South Carolina

TBL Initiative Funding: $154,018

Industry/Sector: Health Care/Nursing

Approximate Number to be Served by TBL Program: 291

Program Summary

Greenville Technical College's Nurse Return to Work through Technology Expansion (Nurse Return to Work) program offers courses that allow registered nurses and licensed practical nurses to have their licenses reinstated.

- **Contextual Factors:** South Carolina currently ranks 42nd in the ratio of nurses to general population and has one of the highest rates in the country for cancer, heart disease and stroke, and diabetes. However, nursing schools in the state are not currently graduating enough nurses to meet the need for approximately an additional 15,000 nurses by the period from 2015-2020. Nurses that were previously licensed require a relatively short training time to reactivate their licenses and represent a speedy solution to the challenge of supplying health care employers with additional nurses.
- **Experience with and Approach to TBL:** The Nurse Return to Work program was begun in 2000, several years before GTC received its TBL grant. The college's nursing outreach program decided to use the college's existing radiation technician program as a model.
- **Planning and Design:** The TBL grant is being used to upgrade, improve and expand an already existing online-based nursing program. Specifically, GTC is using the TBL grant to fund: (1) new equipment; (2) updated videos for online streaming and lab use; and (3) updated software to enhance training delivery.
- **Program Administration, Organization, and Leadership:** The program is administered through GTC's Corporate and Career Development Division and has the same staffing pattern as other continuing education courses at the college. The nursing outreach department head is program manager and she is supervised by college's dean of corporate development.
- **Linkages and Partnerships:** The Nurse Return to Work program's primary partner is Florence-Darlington Technical College, which provides the in-person lab skills component for nurses located closer to it than Greenville. A number of local health care employers provide students with required internships that often lead to jobs.
- **Recruitment and Intake:** The course is publicized on GTC's website and on the websites of the South Carolina Board of Nursing and those of 16 other state boards of nursing. Nurses can enroll by phone, via the Internet, or in person. To be eligible, they must have been trained in an accredited nursing program and must have once held a US nursing license.

- **Training Delivery:** The training program lasts from four and a half to six months and includes three months of online study, a ten-day skills lab, an 84-hour externship, and assistance with licensing. Online materials include lectures, videos and written materials. The instructor also regularly posts questions on a discussion board for the class to answer and occasionally conducts "live classroom" meetings that are archived for later viewing. Exams are also completed online. They are generated randomly from a test question bank and graded automatically.

Grantee: Northern Virginia Community College (NOVA)

Primary Service Area: Northern Virginia, VA

TBL Initiative Funding: $492,458

Industry/Sector: Geographic Information Systems (GIS)

Approximate Number to be Served by TBL Program: 355

Program Summary

Northern Virginia Community College's Geospatial Career Pipeline Initiative (GCPI) is designed to increase the number of geospatial technology professionals in the local workforce. The program's main activity is a comprehensive GIS Career Studies Certificate program that includes courses offered in either a traditional in-person setting or online and a required internship. This certificate program aims to (1) give students entry-level GIS skills; (2) provide students who already have a master's or baccalaureate degree with the skills necessary to increase their competitiveness in the profession or switch careers; and (3) give students the ability to gain an associate's degree or transfer to a four-year institution. The program also has partnerships with three local high schools to provide assistance to those schools to provide GIS instruction. In addition, some students at those high schools will be co-enrolled in certain GCPI GIS courses and receive college credit. Finally, the program is also putting an introductory GIS course online (GIS 195) for NOVA students who are interested in the GIS certificate program.

- **Contextual Factors:** GIS is a rapidly expanding industry, ranked third on the President's High-Growth Jobs Initiative. The need for GIS personnel within the U.S. is increasing, unlike the demand for jobs in many other industries. In the Northern Virginia/Washington, D.C. metropolitan area specifically, these jobs are particularly in demand, with a large number of government-related positions requiring both GIS skills and US citizenship for security clearance.
- **Experience with and Approach to TBL:** NOVA has considerable experience with online learning, as this is a major component of the college's educational structure. The college has a virtual campus called the Extended Learning Institute, which has been in existence since 1975 and offers online courses, telecourses and blended online courses. The first GIS class has been online since 2007, and TBL grant funds are providing the resources to put the other three GIS courses required for certification online. GCPI staff feel that GIS courses are particularly well-suited to online learning, due to their inherent focus on computer technology.
- **Planning and Design:** The Director of Grants and Special Projects at NOVA held an internal competition to determine which of the college's programs would best fit ETA's TBL SGA. Once the GIS program was selected, she contacted the faculty member who could become GCPI's program director. The design for the program primarily entailed migrating existing in-

person courses to an online format. This design process took two semesters to complete and included a pilot period.

- **Program Administration, Organization, and Leadership:** The GCPI program is overseen by the program director, who is also the program's primary instructor. The Director of Grants and Special Projects at NOVA also assists with administering the program. There is also a GCPI project coordinator who assists the program director.
- **Linkages and Partnerships:** GCPI has developed linkages with three local high schools, two local Workforce Investment Boards, and at least three employers. With help from GCPI, the high schools offer GIS courses on campus and allow students to dual-enroll in some GCPI courses. The program also has three employers that provide paid internships to students in the program and cover some tuition costs. Finally, the two local WIBs have informal agreements with GCPI to refer and cover tuition costs for qualified candidates to the program.
- **Recruitment and Intake:** GCPI recruits students through open houses, information sessions, college fairs and media advertisements. The program also holds a GIS career day at a partner campus, where both current and potential students can learn about educational and professional opportunities in the field. Although the two WIBs were also expected to make referrals and cover tuition for these students, only a few such referrals have been made thus far.
- **Training Delivery:** Currently, all but two of the courses required for certification are online, and these last two are also slated to go online at some point in the near future. None of the current online courses have any in-person requirements and all course material is available asynchronously.

Grantee: Ogden-Weber Applied Technical College (OWATC)

Primary Service Area: Weber County, Utah

TBL Initiative Funding: 500,000

Industry/Sector: Information Technology (IT)

Approximate Number to be Served by TBL Program: 300

Program Summary

The TBL grant is used to support the IT Certification program at OWATC, which provides training for students seeking industry-approved credentials in a range of IT arenas. The majority of TBL grant funds are being used to provide financial aid to IT students, and a smaller portion are being used for infrastructure improvements. The program's goals are to support its student population, many of whom are unable to afford the cost of continued education, as well as to increase the quality and quantity of the local IT workforce.

- **Contextual Factors:** The IT sector is identified as one of four "high-growth" industries in Utah. Increasing the IT workforce is beneficial not only for the various technology-based companies in Weber County, but also for the manufacturing and aerospace industries, both of which were touted as the "main economic drivers" in Weber County. Local IT employers express challenges in recruiting workers from outside the region and therefore rely on OWATC to help build a local, appropriately-trained IT workforce.
- **Experience with and Approach to TBL:** TBL methods are not new to OWATC, whose IT certification program had been in place for several years prior to the TBL grant. However, OWATC currently only offers four online courses. The majority of OWATC students prefer to take courses in person and local employers also prefer in-person trainings, as they perceive them to be of higher quality than online learning.
- **Planning and Design:** The planning and design process for OWATC's TBL program was primarily in-house, using input from instructors, counselors, OWATC's financial aid and marketing offices, and local employers who already served on the IT program's Employer Advisory Board. After an internal investigation into attrition rates revealed that financial hardship was a primary factor behind dropout rates, the design team decided to use grant funds to provide scholarships for students.
- **Program Administration, Organization, and Leadership:** OWATC's TBL program is overseen by two people: the grants administrator, who takes care of processes and procedures (including report writing, administration of funds, and program monitoring), and the program director, who takes care of the faculty and resource needs of the program. An administrative assistant works with an IT program counselor to track student progress and to ensure that student needs are met. The program also has two primary instructors and an advisory

committee made up of employer advisors, community and faith-based partners, and a Utah Department of Workforce Services representative.

- **Linkages and Partnerships:** Program partnerships are informal in nature, and some partnerships, such as those with local employers and the Utah Department of Workforce Services (DWS) are stronger than others due to the school's pre-existing relationship and history with the partnering organization. Partnerships include organizations that provide computers for student use (e.g. the local library system) and those that serve the program's target populations (e.g. the DWS' Custom Fit Program and community and faith-based organizations that serve unemployed populations.) The primary roles of these latter organizations are to market and serve as referral mechanisms into the IT program.
- **Recruitment and Intake:** OWATC relies primarily on its program partners for recruitment. The only requirement for admission is that students pass a computer literacy test in order to ensure that they have the baseline math and computer skills necessary to begin the program. Students who do not pass the literacy test may retake the exam after having completed courses designed to help them fill their knowledge gaps.
- **Training Delivery:** OWATC's IT program is open entry/open exit and employs a blended approach to learning. Courses are asynchronous in nature but students do a majority of their work in the OWATC computer lab, in the presence of an instructor. Students are provided with guidelines for how long a course should take to complete and thus are able to work at their own pace but within reasonable limits. Most courses involve students reading from a textbook, then completing activities and taking tests via the LMS. This is also true of the online courses, the only difference being that assignments and tests can be completed online as opposed to in the lab setting. Hands-on training opportunities (e.g., computer or network building) are provided to supplement textbook learning.

Grantee: The Guidance Center (TGC)

Primary Service Area: Wayne County, Michigan

TBL Initiative Funding: $500,000

Industry/Sector: Mental Health Direct Care

Approximate Number to be Served: 1675

Program Summary

The Care and Training Supports (CATS) project is designed to expand access to training opportunities for direct care workers in Wayne County, MI. The program is aimed at increasing the number, skills, and abilities of mental health direct care workers in Wayne County and to increase their standing in the profession. CATS provides online training to complete Michigan training requirements for individuals who have just begun work in the field and experienced workers.

- **Contextual Factors:** In total, the current mental health workforce in Detroit-Wayne County is approximately 15,000, and about half of those are direct care workers. This portion of the workforce suffers from extremely high turnover rates due to inadequate preparation and ongoing training opportunities, as well as low pay.
- **Experience with and Approach to TBL:** Since its launch in 2008, the TGC's Virtual Center of Excellence (VCE) has been providing online training opportunities for the mental health workforce. The CATS initiative is VCE's newest program and specifically targets direct care workers in the mental health field.
- **Planning and Design:** TGC designed the CATS initiative by gathering and incorporating feedback from various stakeholders including employers, other training agencies, mental health service recipients, and mental health service providers. The grantee then developed a design committee comprised of mental health employment and training agency representatives who were responsible for determining course content and identifying instructors for the courses.
- **Program Administration, Organization, and Leadership:** The CATS initiative is operated by VCE, which is in turn overseen by TGC. CATS has a grant administrator, and VCE's continuing education coordinator, customer support specialist, event planner for direct care initiatives and director all do some work for the CATS program.
- **Linkages and Partnerships:** TGC works closely with Detroit Wayne County Community Mental Health Agency, which has been its main funding source. Leaders from both organizations meet frequently to discuss trends and training needs in the mental healthcare workforce. TGC also works closely with the three other Wayne County mental health direct care training and employment agencies. Representatives from each of these agencies are

responsible for advising TGC on what courses to include as a part of the CATS program and what content is necessary within those courses.

- **Recruitment and Intake:** CATS recruits by sending out emails with class announcements to VCE's registered members as well as through emails sent out by other Wayne County direct care training and employment agencies. The program's most successful recruitment strategy has been the attachment of informational fliers to employee paychecks. Other than working in direct care in Wayne County, there are no eligibility requirements for registering with VCE and accessing the training resources.
- **Training Delivery:** Four courses are currently available online, and several more are in the editing process. The courses are online videos of lectures or presentations on a given topic, combined with quizzes to test content retention. Courses range from 30 minutes to three hours to complete. When new courses are being filmed, participants can also attend if they prefer. By the end of 2009, the program also expected to be able to provide users with access to the College of Direct Support's online training courses, including those leading to the Direct Support Provider certification.

Grantee: The University of Colorado, Denver (UCD)

Primary Service Area: Nationwide

TBL Initiative Funding: $502,696

Industry/Sector: Energy Management

Approximate Number to be Served: 192

Program Summary

The Global Energy Management (GEM) program at UCD is focused on providing experienced professionals with training to assume mid-to-upper level management positions in the energy industry. The GEM program offers a Master of Science degree developed out of close collaboration between UCD's business school and Denver-area energy companies. The 18-month program has a blended learning model, which includes a four-day in-person component each quarter, along with online instruction via a LMS and Adobe Connect. While a majority of students are from the Denver area, GEM also has students from across the country and some international students as well.

- **Contextual Factors:** The Denver area is a logical location for the GEM program because the area has emerged in recent years as a major hub for both domestic and international energy companies. Until recently, the energy industry—both locally and worldwide—experienced annual growth of around 30 percent. In addition, many senior managers in the industry are expected to retire soon, which is expected lead to high demand for new managers.
- **Experience with and Approach to TBL:** UCD has been offering online courses since 1994. The blended, online/in-person nature of the GEM program makes it unique when compared to other online classes at the university. While the program is original in many ways, a number of important components for the TBL program (the Blackboard LMS, Adobe Connect availability, etc.) were already in place prior to the development of the GEM program.
- **Planning and Design:** GEM was conceived two and a half years before the TBL grant, when local energy executives requested development of a graduate management program to provide students with the unique skills necessary for energy management. UCD worked closely with these executives to develop the GEM program.
- **Program Administration, Organization, and Leadership:** Housed within the UCD Business School, the GEM program has seven full-time dedicated staff members in addition to contracted faculty. GEM also has a voluntary Advisory Council consisting primarily of energy industry representatives.
- **Linkages and Partnerships:** GEM works closely with a number of local energy companies, which provide input on numerous issues, including curriculum design and faculty recruitment. These partners also provide financial support to GEM, both directly and in the form of covering tuition for their workers who are enrolled in the program.

- **Recruitment and Intake:** Recruitment primarily occurs via the program's website and presentations at energy and graduate school career fairs. GEM applicants have to complete a standard UCD Business School application, but are ranked for admission based on years of experience in the energy industry, whether they have an undergraduate energy degree, and professional references.
- **Training Delivery:** At the beginning of each quarter all GEM students must attend an intensive four-day in-person session, which includes both an orientation and delivery of course content. For the remainder of the quarter all coursework is conducted online. Program instructors pre-record weekly lectures to coincide with assigned readings and mandatory responses to questions posted on the course's discussion board. Each course also includes a group project component, with students collaborating and communicating through Adobe Connect. Similar to a traditional graduate program, all courses conclude with a final project and/or exam.