FINAL REPORT OF THE CHARLES STEWART MOTT BREAKING THROUGH INITIATIVE

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Last, the evaluators acknowledge that the contents of this report do not necessarily represent the positions or policies of the Charles Stewart Mott Foundation, Jobs for the Future, or the NCWE, and should not be assumed as an endorsement by these organizations.

EXECUTIVE SUMMARY

The Breaking Through (BT) initiative promotes an expanded and enhanced role for community colleges in providing access to college for low-skilled adults. BT is uniquely important in its systematic integration of adult education, developmental/remedial education, professional-technical education (PTE), and career planning and preparation in community colleges geographically distributed throughout the United States. Through the creation of a variety of models, BT envisions a new, sequential curriculum and instruction to assist low-skilled adults to progress through adult basic education (ABE) and/or remedial/developmental education to college credit PTE course work that leads to family wage-sustaining careers.

The BT initiative originated with six leadership colleges and ten learning colleges, all of whom are funded by the Charles Stuart Mott Foundation and administered by Jobs for the Future (JFF) in association with the National Council for Workforce Education (NCWE). Leadership colleges receive funds to implement BT programs and policies whereas learning colleges receive funds to support participation in professional development sessions that emphasize promising practices and program implementation strategies. Fundamental to BT is implementation of four "high leverage" strategies: integrated institutional structures and services, accelerating the pace of learning, labor market payoffs, and comprehensive supports. Implementation of these strategies is expected to meet students' needs, help institutions overcome barriers, and favorably influence institutional change. BT also encourages the systemic facilitation of peer learning during semi-annual meetings to encourage an active dialogue about program implementation among local practitioners.

The two-year evaluation of BT examined implementation according to the four high leverage strategies and other emergent strategies, and it documented institutional change. In addition, concerted attention was paid to student participation and outcomes to assess the impact of BT programs on the target audience of low-skilled adults. The evaluation design, including personal and small group interviews, site visits, surveys, and review of documents and reports on program implementation, overcoming barriers, peer learning, etc., yielded an extensive amount of information to assess the BT initiative. The evaluation also examined institutional change, institutional restructuring, and community college leadership awareness and support.

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INTRODUCTION

Despite the growth in adults participating in education and training during the 1990s, a large segment of the adult population does not engage in formal education beyond high school. National studies find more than half of working adults do not participate in postsecondary education and training of any kind, which poses a problem for the individual as well as the economy (Lingenfelter & Voorhies, 2003). The financial well being of the individual and his or her dependents as well as the well being of the economy depend on a workforce that possesses knowledge and skills beyond the high school level (Bosworth et al., 2007). Increasingly employment that provides family-sustaining wages requires postsecondary education and training of one, two or more years duration. Adults who do not complete high school and who lack fundamental literacy and workplace skills are at much higher risk of living in poverty than individuals who participate in postsecondary education and training (Levy & Murnane, 2005).

The national adult literacy surveys show getting and retaining reemployment is a particularly serious challenge for low-skilled adults (Kutner et al., 2007). Low pay and unstable jobs contribute to a cycle of poverty that is very hard to break (Hart-Landsberg and Reder (1993). Bailey and Morest (2006) contend that, despite their modest funding and competing multiple missions, community colleges are the most likely of all types of higher education institutions to meet the needs of underserved students. Community colleges have a historical orientation to offering low cost and locally accessible options for underserved populations, including low-skilled adults. Already, they are a primary provider of education and training to meet adult workforce needs by aligning disconnected programs and implementing new programs, practices and services (Carnevale, 2000).

Despite efforts of community colleges to meet their needs, low-skilled adult learners struggle to access and succeed in college. In a widely cited study, Prince and Jenkins (2005) used student record data from the Washington State Community College and Technical Education System to report that low-skilled adults experience serious barriers to program and degree completion in community and technical colleges. Only 13% of non-native English speaking, low-skilled adults who start English Language Learning (ELL) programs persist to earn college credits; less than 30% of adult basic education (ABE) students make the transition to college-level courses. Referred to as the "tipping point" study, Prince and Jenkins found that adult learners who attend at least one year of college (equivalent to at least 30 credit hours) and earn a postsecondary professional-technical education[1] (PTE) credential over as much as a five-year period experience a substantive boost in labor market outcomes, both employment and earnings. Taking basic skills courses concurrently with college courses produces significant improvements in average rates of employment and quarterly earnings. Despite the potential benefits, these types of programs are relatively rare.

Increasingly, community colleges are exploring an array of programs and services that may address the needs of low-skilled adults (Grubb, Badway, & Bell, 2003), including non-credit ABE, GED, ELL, developmental (or remedial) education, and credit-bearing college-level instruction. Relatively short-term programs designed to help adults gain needed foundational

[1] Professional-technical education (PTE) is used as an umbrella term to refer to career, occupational and workforce education and training programs designed to prepare students for entry or advancement in employment.

skills and knowledge and transition into college, often called "Bridge programs" are increasing in number throughout the nation (Bosworth et al., 2007). These programs often integrate GED or developmental education with workforce training and PTE, drawing on funding from the Workforce Investment Act (WIA) and the Carl D. Perkins IV legislation. Alssid et al. (2002), Jenkins (2006), Henle, Jenkin, and Smith (2005) and others have called for "career pathways" that offer curriculum that extends beyond bridge programs, recognizing the importance of an entry point but calling for a sequential and sustained educational experience that leads to postsecondary credentials. The idea of career pathways that link adult education to college, particularly community and technical colleges, are receiving increased attention nationally (see, for example, Bragg et al., 2007; Jenkins & Spence, 2006). Fully implemented, career pathways offer a means of enhancing the economic and personal circumstances of low-skilled (low-income, low-literacy) adults, they suggest that improving the financial well-being of low-skilled adults would have important pay-offs for the economy as well.

Despite these promising results, there is no disputing that low-skilled adults experience obstacles that impede their participation in and completion of formal education (Duke & Strawn, 2008). Economic, cultural, social or other factors often mitigate transition completion of high school, let alone continuation to college. Moreover, postsecondary institutional and curricular policies and procedures, albeit unintended, often marginalize low-skilled adults and magnify their hardships. Completion of educational programs is exacerbated by inadequate student services to address the wide ranging challenges low-skilled adults experience in life (Matus-Grossman, Gooden, Wavelet, Diaz, & Seuersad, 2002). The presence of an adult who guides and supports the learner has been shown by numerous studies to be an indicator of retention and success for vulnerable student populations, including low-skilled adults (Strawn, 2007).

Beyond the challenges of college attendance, employer skepticism about low-skilled adults' ability to fulfill employment obligations creates hurdles at the hiring stage and limits opportunities for training in the workplace. With rising workforce skill requirements, technology innovations, and global competition (Jacobs, 2007), low-skilled adults are likely to continue to be marginalized. By 2014, more than 63% of all U.S. job openings will require at least some postsecondary certification or associate, baccalaureate, or graduate degrees (Hecker, 2005). The current economic crisis looms as a further complicating factor in the employment picture for low-skilled adults. The magnitude of the population currently in need of adult literacy coupled with the growing demand for increased literacy and the uncertainty of the economy presents a challenge to educators and policy makers alike (Mazzeo, Roberts, Spence, & Strawn (2006). . Attempting to find a solution to this problem, private and not-for-profit foundations, governmental agencies, and local institutions are working together to marshal resources needed to pilot new programs and determine whether more low-skilled adults can transition to college and ultimately secure family-sustaining wage employment.

THE BREAKING THROUGH INITIATIVE

A national initiative funded by the Charles Stewart Mott Foundation called Breaking Through (BT) has supported education and training for low-skilled adults by facilitating the development of local programs that implement sequential curriculum leading to self-sustaining employment. The overarching goal of BT is to prepare low-skilled adults to be successful in aligning and

strengthening curriculum, provided needed support services, and expanding labor market opportunities for low-skilled adults. By low-skilled, the project means adult learners who are below college-level in reading, writing and mathematics, often lacking a high school diploma, and frequently low-income.

Administered by intermediary organizations, Jobs for the Future (JFF) in association with the National Council for Workforce Education (NCWE), BT seeks to enhance adults' knowledge and skills by recruiting and enrolling students in pathways leading to postsecondary PTE certificate and degree programs. The BT initiative also strives to promote institutional policies intended to improve student outcomes, advocate for public policies at the state and federal levels that enhance the chance of positive outcomes for low-skilled adults and develop community college leaders who promote these educational opportunities[2].

> Our funding is designed to expand the efforts of institutions that already are developing or implementing innovative practices and are displaying a commitment to creating accelerated pathways to advancement for low-skilled adults. Several different models, generated by the community colleges themselves, will be tested and evaluated in *Breaking Through*. The demonstration is designed to help 'knock down the walls' between basic, developmental, occupational/technical, and academic education in community colleges. (Litzenberg, 2006, p. 2)

To lay the groundwork for BT, Liebowitz and Combes-Taylor (2004) conducted site visits to community colleges that were thought to be doing groundbreaking work in serving low-skilled adults. Their findings indicated a pressing need for more experimentation in the development and delivery of curriculum that extends from ABE and developmental education into postsecondary PTE. They recommended the development of new models that engage low-skilled adults in the attainment of sufficient education and training, including postsecondary credentials (certificates and degrees), to be successful in the labor market. Fundamental to the findings of Liebowitz and Combes-Taylor was that early adopters of curriculum pathway programs tend to implement what they called "high leverage" strategies:

- **Integrated institutional structures and systems** emphasize new linkages between disconnected programs such as ABE, English as a Second Language (ESL), non-credit workforce training, developmental (or remedial) education, and postsecondary PTE.

- **Accelerating the pace of learning** emphasizes intensive time in instruction, or time on task, to address the urgency of low-skilled students to enroll in college-level coursework and obtain college credentials.

- **Labor market payoffs** follow from offering work-related PTE content along with curricular and instructional approaches that accommodate adult learners, resulting in credentials linking advanced learning to jobs.

[2] The Breaking Through (BT) website, maintained by Jobs for the Future (JFF), contains additional background information; it can be accessed at http://www.breakingthroughcc.org/.

- **Comprehensive supports** offer low-skilled students enrolled in ABE, developmental education, and PTE programs the support services they need to juggle work, parenting, and educational tasks successfully.

The design of BT targets grant funding to two groups of community colleges: leadership colleges and learning colleges. Leadership colleges receive funds to implement BT programs and policies whereas learning colleges receive funds to support participation in professional development sessions that emphasize promising practices and program implementation strategies. Efforts to share knowledge and encourage communication among personnel associated with leadership colleges and learning colleges is referred to as "peer learning".

Originally, six community colleges were designated as leadership colleges and awarded funding from the Charles Stewart Mott Foundation for program implementation extending from 2006 through 2008. A community college in North Carolina was added to the ranks of the leadership colleges after the program began, drawing on funding from the Glaxo-Smith Kline Foundation. In addition, ten learning colleges operated during the initial year, and that number has more than doubled. Again, the Glaxo-Smith Kline Foundation has been a generous contributor to supporting numerous community colleges in North Carolina to participate as learning colleges.

EVALUATION QUESTIONS

This final evaluation report summarizes results from year one (Bragg & Barnett, 2007) as well as year two that extended from September 2007 through September 2008. As in year one, the evaluation was limited the original six leadership college and ten learning colleges. The original questions for the evaluation were oriented to understanding the development of the program (process) and the ways that BT influenced the colleges where these programs were located (institutional change). The specific questions that guided the original evaluation are as follows:

<u>Process Evaluation</u>

1. How did BT community colleges, along with JFF and NCWE, contribute to the development of pathways to connect low-income, low-skilled adults to college-level professional-technical programs?

2. What barriers emerged in the development of pathways within the colleges, and how are they being overcome?

3. To what extent did community college practitioners learn from each other during the process of implementing pathways associated with BT?

<u>Institutional Change</u>

4. How have the pathways associated with BT addressed the four high leverage strategies:
    - Integrated institutional structures and services
    - Labor market payoffs
    - Accelerating the pace of learning

- Comprehensive supports

5. Has BT (and, specifically, peer learning) enabled the leadership colleges to begin to restructure their colleges, and has it enabled the learning colleges to lay the groundwork to restructure to accommodate low-skilled adults' progress towards degree attainment?

6. Has BT increased the awareness of community college presidents and other leaders in the field about promoting the success of low-skilled adults in college (and in the labor market)?

Student Participation and Outcomes

During the second year of the evaluation, it became clear that to fully understand the BT initiative, it would be important to study student outcomes. The six original leadership colleges agreed to compile and supply results on student participants' characteristics, participation and outcomes, based on a template supplied by the evaluators. The evaluation template addressed the following areas:

- Access and participation
- Adult education
- Developmental education
- College placement test scores
- Gatekeeper courses
- College success
- Program completion/success
- Employment

METHODS

The evaluation design is mixed method, including: 1) document review by the evaluators, self-assessments and surveys completed by program leaders, 2) site visits to understand how the programs facilitate or impede student participation and outcomes, including examining how low-skilled adults participate and persist in sequential curriculum (career pathway) programs, and 3) tracking of quantitative student outcomes. With respect to the BT program, the evaluation took an especially close look at emerging models and how the models align with the four high leverage strategies identified by Liebowitz and Combes-Taylor (2004) as necessary to meeting the needs of low-skilled adults.

Multiple data sources were sought to amass information to characterize the level of implementation of BT. We reviewed bi-annual reports submitted by the sites, gleaning from these documents the intended goals, activities, and challenges faced by the local projects during implementation, including lessons worthy of wider dissemination and efforts made to sustain BT beyond the life of the grant. Another form of data collection involved the administration of survey instruments, including a self-assessment instrument that was completed by BT project leaders (or teams) at each site and a survey on peer learning completed by participants in the 2007 peer learning meeting in Savannah, Georgia.

The self-assessment instrument was a modification of an instrument developed and used previously by Bragg, O'Banion and Barnett (2005) for the College and Career Transition Initiative (CCTI).[3] This self-assessment included multiple items on the following dimensions: program design, the four high leverage strategies (integrated institutional structures and systems, accelerating the pace of learning, labor market pay-offs, and comprehensive supports), leadership and organizational outcomes, project evaluation, and sustainability. The self-assessment was administered two to four weeks prior to the visit to each site in late fall 2006 through winter 2007 and again in late fall 2007 through winter 2008.

In addition to the above methods, a peer learning survey was administered by evaluators Debra Bragg and Elisabeth Barnett, with review and modification by Judith Taylor and Randall Wilson of JFF. The instrument drew on prior research on the conditions that facilitate peer learning. It was administered during the BT convening held in Savannah, Georgia in November of 2007 and completed by representatives of the leadership and learning colleges as well as other attendees.

Site visits were a primary means of data collection for the leadership colleges; these visits were conducted between mid-October 2006 and early February 2007 and again between November 2007 and April 2008. Prior to the visits, the evaluators prepared by reviewing documentation, including curriculum guides and other supplementary materials, websites and other information provided by the sites that was identified during pre-visit phone calls. Each visit was characterized by individual and small group meetings with project leaders, faculty, support staff, and students. Visits to partner organizations such as CBOs and employers (hospitals, construction sites, and businesses) were undertaken to gather perspectives of partner organizations. Field notes were transcribed after each site visit and member checking was conducted to allow for critical review and feedback by site representatives.

To obtain data on student outcomes from the six leadership colleges, the evaluators developed a three-stage data collection and analysis system. The system was informed by the work conducted by Peter Ewell during 2006-07 in which he catalogued data items already collected by each college and developed recommendations for ways to collect and present data that would show program activities, students served, and key outcomes obtained. It was further informed by data systems used in other projects such as the evaluation of Shifting Gears initiative funded by the Joyce Foundation in Illinois conducted by Bragg and Harmon (see: http://occrl.ed.uiuc.edu/Projects/shifting_gears/shifting_gears.asp), and various adult education program evaluations at the state level, including the "tipping point" study by Prince and Jenkins (2005) in Washington state. Project leaders were asked to enter data points on each student served into an Excel spreadsheet, following guidelines provided in the form of a data dictionary. The site representatives used the spreadsheets to compute descriptive statistics portraying each of the student cohorts engaged in BT, including demographic characteristics, test scores (gains), enrollment (credits earned), certificate and degree completion, and BT-related employment. Using these worksheets, the evaluators produced the outcomes included in this final report.

[3] CCTI is an initiative funded by the Office of Vocational and Adult Education, United States Department of Education (USDE) that is geared toward local models that encourage student transition from high school to the community college, emphasizing secondary to postsecondary curriculum alignment and the integration of academic and career-technical education (CTE). Though CCTI focuses on youth transition and BT focuses on adults, the apparent commonalities in curricular strategies made modification feasible and appropriate.

RESULTS

This section begins with a brief summary of the features of the BT programs implemented by the original six leadership colleges and ten learning colleges. The section continues with a discussion of results pertaining to each evaluation question, giving insights into models, peer learning, high leverage strategies, sustainability, leadership, and student participation and outcomes.

The Leadership Colleges

The six community colleges selected as the initial recipients of leadership-college funds are a primary focus of this evaluation. Each leadership college is identified below, along with the BT program's goal and design.

Central New Mexico Community College

Goal: Create and demonstrate the success of a pathway for low-skilled students (<8th grade) into an apprenticeship or a certificate/degree program in the construction trades through a sequence of remedial/developmental education courses including contextualized pre-apprenticeship instruction.

Primary Target Population: <8th grade

Predominant Model: Career Pathway

Program Design: The Construction Apprenticeship program, located at Central New Mexico (CNM) in Albuquerque, NM, provides accelerated, contextualized ABE and remedial education and multiple supports so students can pursue certificates and degrees in the construction trades. It is managed by a specialized student services professional called an "achievement coach" whose job is dedicated to supporting BT students. This BT pathway program has evolved to include two linked introductory courses for which students earn college credit. The first of these is a 3-week intensive course that combines hands-on carpentry skills with contextualized math. The second is a 7-week intensive course in which students learn contextualized math and reading as well as job readiness skills. The CNM BT team, with membership from three college departments, meets regularly to advance the program and discuss student progress.

Implementation: The BT pathway is designed to help low-skilled adults accelerate the pace with which they acquire the knowledge and skills needed to qualify for entry into construction apprenticeship programs in carpentry, electrical technology, plumbing, and welding. This effort started during a period in which the construction industry was booming and demand was high for apprentices. Because the industry has since experienced a slow-down, opportunities have diminished. The program is responding by guiding students into either apprenticeship or associate degree options. An Achievement Coach forms a strong bond with participants and the they attribute much of their success to her. Students have access to many other resources because student support is a college-wide. In addition, the college employs full-time tutors in career-specific and general purpose learning labs, including WorkKeys labs. The faculty and administrators also lend extensive support. Table 1 provides a summary of mean results on the self-assessment completed by personnel associated with the BT program. The change in mean

from year one to year two is also provided, with the most substantial self-reported change being in the areas of accelerating the pace of learning and program evaluation.

Table 1. Central New Mexico Community College Implementation Self-Assessment

BT Strategies	Mean Rating Year One Self-Assessment	Mean Rating Year Two Self-Assessment	Change in Mean Year One to Year Two
Program Design	3.70	4.04	+0.34
Integrated Institutional Structures and Services	3.67	4.24	+0.57
Accelerating the Pace of Learning	3.13	4.44	+1.31
Labor Market Payoffs	3.53	4.11	+0.56
Comprehensive Supports	4.07	4.38	+0.21
Leadership and Organization Outcomes	3.58	3.50*	-0.08
Program Evaluation	3.33	4.33	+1.00
Sustainability	--	4.07	--

*Rating provided by one respondent only.

Community College of Denver

Goal: Demonstrate that programs can be created for developmental education students that both accelerate their progress through the remediation sequence and result in higher retention rates as well as advancement into degree-level programming. In addition, CCD strives to develop, implement, and test a developmental "bridge" program to prepare GED completers for college-level work.

Primary Target Population: Developmental education students

Predominant Model: Developmental Bridge

Program Design: The BT program titled "FastStart" is headquartered at the Community College of Denver (CCD), which is located in downtown Denver with branch campuses in the larger metropolitan area. This program supports the preparation of students who test too low to enter PTE degree programs directly on entering college. Progression through the developmental education sequence is accelerated by having students take two courses in the time students normally take one. Taking math as an example, students progress through the lowest and moderate level of developmental education during one semester rather than two. This acceleration approach limits the redundancy that occurs in each course and allows students immersion in the subject to propel them farther and faster through the curriculum than would normally occur. Students also take a "college success" course that is paired with the accelerated developmental education courses. A spin off of FastStart is an intensive 8-week summer program

for students who recently completed the GED and who aspire to enter college. "College Connection" was the inspiration for a federal grant to replicate the model in community colleges throughout the state of Colorado. Professional development of the instructional staff is an important aspect of the program.

Implementation: In addition to the "intensive" curriculum sequence (mentioned above), contextualized instruction, tutoring, and case management are integrated into the FastStart program. Active learning strategies encouraged, and classroom instruction is supplemented with computer-based instruction. Acceleration has been accomplished through the elimination of duplicative content and the use of talented adjunct instructors who are committed to the concept and adept at motivating underprepared students. In addition, support structures are refined to meet students' needs by recognizing that underprepared students are especially challenged and will likely fail if not given adequate attention and support in all aspects of their educational, career and personal lives. Table 2 provides a summary of mean results on the self-assessment conducted by personnel associated with the BT program. The change in mean from year one to year two is also provided, with the most substantial self-reported change being in the areas of labor market payoffs and accelerating the pace of learning.

Table 2. Community College of Denver Implementation Self-Assessment

BT Strategies	Mean Rating Year One Self-Assessment	Mean Rating Year Two Self-Assessment	Change in Mean Year One to Year Two
Program Design	4.13	4.57	+0.44
Integrated Institutional Structures and Services	4.33	3.77	-0.56
Accelerating the Pace of Learning	3.00	4.17	+1.17
Labor Market Payoffs	2.00	3.86	+1.86
Comprehensive Supports	4.6	4.79	+0.19
Leadership and Organization Outcomes	4.0	4.25	+0.25
Program Evaluation	4.0	4.4	+0.40
Sustainability	--	4.50	--

Cuyahoga Community College

Goal: Increase the number of low-skilled students who enter certificate/degree programs in clinical and allied health care by creating a sequence of contextualized courses with support services that start with pre-State Tested Nursing Assistant (STNA) and STNA training and placement.

Primary Target Population: <8th grade

Predominant Model: Professional-Technical Bridge

Program Design: The State Tested Nursing Assistant (STNA) program is located at Cuyahoga Community College (Tri-C) in Cleveland, Ohio. This program provides a PTE bridge to college, specifically into the STNA Plus program, that focuses on improving academics while introducing low-skilled adult learners to core concepts in health care, optimally leading them to the nursing pathway. Students in pre-STNA continue in the program until they achieve 8th grade levels on the TABE test, and then transition to the next available STNA Plus program. These students are often referred by community agencies including WIA and TANF, from whom they receive supplementary support. Students are also supported by program staff who encourage them to pursue further education while working as STNAs. An active leadership team guides the program's direction and also looks for ways to help individual students to progress.

Implementation: The program is designed to help students attain the math and English skills needed to enter and succeed in STNA programs. Students who attain 8th grade skill levels can move into the STNA Plus program and emerge with a credential that enables them to work in readily-available jobs in home health care, and to sit for the state test that will allow them to seek employment opportunities in long term care facilities and local hospitals. Table 3 provides a summary of mean results on the self-assessment conducted by personnel associated with the BT program for year one and two. The change in mean from year one to year two is also provided, with the most substantial self-reported change in several areas: accelerating the pace of learning, program evaluation, integrated institutional structures and services, and comprehensive supports.

Table 3. Cuyahoga Community College Implementation Self-Assessment

BT Strategies	Mean Rating Year One Self-Assessment	Mean Rating Year Two Self-Assessment	Change in Mean Year One to Year Two
Program Design	3.20	4.11	+0.91
Integrated Institutional Structures and Services	2.67	4.14	+1.47
Accelerating the Pace of Learning	2.00	4.33	+2.33
Labor Market Payoffs	3.20	3.83	+0.63
Comprehensive Supports	3.00	4.00	+1.00
Leadership and Organization Outcomes	4.00	4.25	+0.25
Program Evaluation	2.00	4.00	+2.00
Sustainability	--	4.07	--

Owensboro Community Technical College

Goals: Increase the number of low-skilled incumbent workers and unemployed adults who enter and succeed in degree-level programs in industrial maintenance, business management, and health care through provision contextualized remedial instruction and the provision of support services.

Primary Target Population: Incumbent workers and unemployed

Predominant Model: Career Pathway

Program Design: The Owensboro Community Technical College (OCTC) in Owensboro, Kentucky offers an accelerated workforce development program model that integrates adult education, PTE and customized and contract training. The program seeks to integrate low-skilled adults into employer-sponsored training programs by emphasizing workforce development linked to accelerated, modularized basic skills curriculum, along with highly personalized support service activities that encourage student engagement. Leaders of the BT project and a "student engagement counselor" take a keen interest in the adult learners, getting to know them and taking an active role in supporting their success. Three pathways are offered that focus on incumbent workers who seek to advance in the workplace: manufacturing, health care/nursing, and business management/supervision. Local leaders attribute BT with helping OCTC acquire funding from the Robert Wood Johnson Foundation/Jobs to Careers to support curriculum development and program implementation of the health care pathway. The BT pathway program is also cited for making curricular changes that go beyond BT students, offering an accelerated approach to developmental education for the general OCTC student population.

Implementation: The goal is to prepare adults for professional career pathway options in manufacturing, business, and health care. Each of these pathways is designed to assist the target population of low literacy adults to be successful in the workplace by integrating students into various training initiatives. Whether currently employed nor not, students are supported in bringing their academic skills up to college level and integrating academics with college-level technical training. This curriculum is offered at the Center for Community and Economic Development and in the workplace. Table 4 provides a summary of mean results on the self-assessment conducted by personnel associated with the BT program. The change in mean from year one to year two is also provided, with substantial self-reported change reported in all BT strategy areas, especially program evaluation and comprehensive supports.

Table 4. Owensboro Technical Community College BT Implementation Self-Assessment

BT Strategies	Mean Rating Year One Self-Assessment	Mean Rating Year Two Self-Assessment	Change in Mean Year One to Year Two
Program Design	3.0	4.78	+1.78
Integrated Institutional Structures and Services	3.17	5.00	+1.83
Accelerating the Pace of Learning	3.00	4.67	+1.67
Labor Market Payoffs	3.60	5.00	+1.40
Comprehensive Supports	2.86	4.82	+2.00
Leadership and Organization Outcomes	3.50	5.00	+1.50
Program Evaluation	2.00	4.50	+2.50
Sustainability	--	5.00	--

Portland Community College

Goal: Demonstrate that the retention and transition rates of development education students into professional-technical degree programs can be improved though the provision of wrap around support services, access supported developmental education and "college success" courses; and a smooth hand-off into degree programming.

Primary Target Population: Developmental education students

Predominant Model: Developmental Bridge

Program Design: The Moving On Toward Tomorrow (MOTT) program is offered by Portland Community College (PCC) in Portland, Oregon. This program offers intensive and intrusive advising, with a focus on helping low-skilled students to progress from remedial education into certificate or degree programs in PTE. The MOTT program offers developmental education students cohort classes and a half-time advisor, mandatory advising, and tutoring and support services. This comprehensive approach is characterized by local leaders as "wrap around" services. MOTT students participate in a series of three linked courses, taught by a MOTT advisor or other instructor. In addition, they receive regular support and guidance from advisors who check in with students, help them to overcome barriers to college persistence, and aid in developing career/education plans. A collaboration between PCC and the Seattle Jobs Initiative has resulted in the BT Advisor Training Package that has focused on improving BT advisor skills to support students. The BT Advisory Training Package has been the focus of several professional development sessions at peer learning meetings involving other leadership and learning colleges as well as other community colleges throughout the nation.

Implementation: The MOTT program has been well aligned with the college's increasing focus on measures it can take to promote student success. Concerns about high levels of attrition are leading to expanded student services and more internal accountability for student persistence and success. Both advisors and counselors are available to all students, and specialized resource people (associated with specific grant programs such as Perkins, TRIO/ROOTS, and the MOTT program) provide more intensive support to specific groups of students. The BT grant was seen by the college as an opportunity to pilot intensive, intrusive advising for students who clearly needed extra support, with a focus on helping them to progress from developmental education into degree and certificate PTE programs. Table 5 provides a summary of mean results on the self-assessment conducted by personnel associated with the BT program. The most substantial change in mean was observed in the area of program evaluation, with more modest change observed in labor market payoffs and program design.

Table 5. Portland Community College BT Implementation Self-Assessment

BT Strategies	Mean Rating Year One Self-Assessment	Mean Rating Year Two Self-Assessment	Change in Mean Year One to Year Two
Program Design	3.76	4.05	+0.29
Integrated Institutional Structures and Services	3.97	4.00	+0.03
Accelerating the Pace of Learning	3.90	4.00	+0.10
Labor Market Payoffs	3.60	4.00	+0.40
Comprehensive Supports	3.90	4.00	+0.10
Leadership and Organization Outcomes	3.47	3.62	+0.15
Program Evaluation	3.67	4.66	+0.99
Sustainability	--	3.12	--

Southeast Arkansas College

Goal: Create and demonstrate the success of a pathway for low-skilled adults (<8th grade) to enter and complete LPN training and pass the licensing exam, through creating a sequence of contextualized, accelerated remedial programs.

Primary Target Population: <8th grade

Predominant Model: Career Pathway

Program Design: SEARK's Licensed Practical Nursing (LPN) program is offered by a community college (formerly technical college) in Pine Bluff, Arkansas. Starting as a pilot, the program was approved by the Arkansas State Board of Nursing in November 2006. The program

offers contextualized, accelerated developmental education curriculum that is integrated with the allied health curriculum. Many BT program participants are single parent females who work in entry-level jobs (e.g., certified nursing assistant) in the health care industry. A major hospital serving the region surrounding Pine Bluff, along with several long term care facilities, clinics and other health care providers, are active partners in the creation and delivery of the LPN program, offering space for classrooms and employing students throughout the program. This BT program is also unique among the leadership colleges because of the role played by a community-based organization called the Southern Good Faith Fund. Southern Good Faith has played a critical role in advocating for the program, advising on program design (curriculum, internships, employer partnerships), and providing resources so that students can participate, including financial resources. LPNs are prepared for giving direct and primary nursing care under the immediate supervision of the clinical instructor, staff RN, and/or physicians in the cooperating clinical facilities. Upon completion, the students are eligible to apply to take the National Council Licensure Examination for Practical Nurses (NCLEX-PN) for licensure as a practical nurse.

Implementation: From the start the SEARK project focused on developing a contextualized, accelerated developmental education (dev ed) curriculum in allied health field. Key elements include contextualization focused on the core allied health course work. An important goal is to ensure that the competency-based curriculum is academically and technically rigorous, that it accommodates adult students' working schedules, and that it enrolls students with a demonstrated interest and aptitude for the technical field. Course work is co-developed, co-taught, and co-assessed by technical and academic instructional personnel. Table 6 provides a summary of mean results on the self-assessment conducted by personnel associated with the BT program. The most substantial change in mean was observed in the areas of program evaluation and accelerating the pace of learning.

Table 6. Southeast Arkansas College BT Implementation Self-Assessment

BT Strategies	Mean Rating Year One Self-Assessment	Mean Rating Year Two Self-Assessment	Mean Change Year One to Year Two
Program Design	4.44	4.40	-0.04
Integrated Institutional Structures and Services	5.00	5.00	0.00
Accelerating the Pace of Learning	4.00	4.50	+0.50
Labor Market Payoffs	5.00	5.00	0.00
Comprehensive Supports	4.86	4.75	+0.14
Leadership and Organization Outcomes	4.75	4.75	0.00
Program Evaluation	3.50	4.00	+0.50
Sustainability	--	4.87	--

The Learning Colleges

The BT learning colleges are focused on learning (via peer learning) about promising practices for low-skilled adults, with some sites advancing in implementation at a similar pace as the leadership colleges and others showing less rapid advancement. Brief highlights of the programs developed by the original ten learning colleges for low-skilled adults follow.

Cerritos College, Norwalk, California: Non-credit bilingual education program for Spanish speaking adults incorporates many BT strategies, including free classes for adults in six professional-technical areas: automotive mechanics, welding, machining, plastics, pharmacy tech, and health. The program prepares students to enter non-credit and credit PTE programs leading to certificates and degrees.

Community College of Southern Nevada, Las Vegas, Nevada: Students who are unprepared to enter the CNA program participate in a pre-college class in reading, writing, and medical terminology. The class provides 12-24 hours of instruction for 7 weeks. Tutoring is also provided, much of it in English as a Second Language (ESL).

Houston Community College, Houston, Texas: Two career fields -- energy (at the Northeast campus) and health care (at the Coleman campus) -- are attempting to apply core BT practices:

LaGuardia Community College, Long Island, New York: Several bridge-type programs are offered, including programs for students entering college, for students upgrading language skills before beginning college courses, and for students seeking to complete GEDs. In addition, the college has created a contextualized health education program in collaboration with the college's Health Care Division and two CBOs.

Mott Community College, Flint, Michigan: A partnership with health care providers and CBOs offers programs in nursing and allied health, along with training in "soft" skills. The program connects ABE/developmental education and PTE programs to help students find the right service no matter where they enter the college.

Northhampton Community College, Bethlehem, Pennsylvania: A career-lattice approach links ABE with PTE programs in allied life sciences, targeting medical assistants and home health care workers. A Vocational English as Second Language (VESL) course and vocational ABE program, and a non-credit college prep class create stronger linkages between existing ABE, GED, and ESL courses and the college's PTE programs.

North Shore Community College, Danvers, Massachusetts: A career ladder associated with a Child Development Associate (CDA) is targeted to primarily ESL, Spanish language students to help them progress in content knowledge while receiving help with English skills by offering the initial child development course in Spanish.

Piedmont Community College, Charlottesville, Virginia: A number of practices are aligned with BT including a learning community in health care and efforts to improve student skills in math and writing. Work is also underway to begin offering a Certified Nursing Assistant (CNA) certificate and GED prep at a local high school.

Tallahassee Community College, Tallahassee, Florida: The Division of Economic and Workforce Development has partnered with the local workforce investment board (WIB), and the National Center for Construction Education and Research to create a program that brings low-skilled adults into the construction industry. The Florida Rebuilds program offers low-skilled adults the chance to enroll in career pathways leading from ABE into construction tracks.

York County Community College, Wells, Maine: The college offers a partnership with the Portland Naval Shipyard and a joint apprenticeship/associate degree program in which apprenticeship courses are blended with general education requirements.

Table 7 identifies promising practices that emerged during telephone and personal interviews with representatives of the learning colleges.

Table 7. Professional-Technical Focus and Key Features of Learning Colleges

Learning College	Professional-Technical Focus	Key Features
Cerritos College	Automotive mechanics Welding Machining Plastics Pharmacy tech Health	Model program and curriculum for ESL speakers; Eight years of experience of implementation as well as research to support its effectiveness.
Comm College of So. Nevada	Health care (CNA)	Transitional course to bridge ESL students into ABE and GED programs.
Houston Comm College	Energy Health care	Collaboration with community based organizations in educating and supporting ABE students with multiple needs.
LaGuardia Comm College	Health care	Contextualized curriculum as well as the development of successful practices for moving students through ABE to and beyond the GED.
Mott Comm College	Health care (nursing)	Multi-purpose centers to serve the needs of particular communities, and finding ways to tie students to other campuses.
Northhampton Comm College	Health care (medical assistants and home)	Ways to plan for acceleration of learning in literacy and math across the student population.
North Shore Comm. College	Child development	Outreach to, advising, and teaching of English language learners (ELLs); Commended by the Massachusetts Departments of Education and

Learning College	Professional-Technical Focus	Key Features
		Early Education.
Piedmont Comm College	Health care (CNA)	Instructional labs that support student learning in reading, writing and math.
Tallahassee Comm College	Construction	A large and diversified system for serving low-skilled students.
York County Comm College	Apprenticeship (Portland Naval Shipyard)	Multi-level apprenticeship programs combine classroom and hands-on instruction leading to valued credentials.

Answering the Evaluation Questions

The questions guiding the evaluation were oriented to understanding the development of the various BT programs and processes and the ways that BT influenced the institutional and curricular structures, processes, and practices employed by the colleges (institutional change). In year two, the original set of questions was supplemented by an assessment of student outcomes. The following section provides a discussion of results pertaining to each evaluation question, ending with a discussion of student outcomes that reflects student participation and outcomes as of late summer/early fall 2008.

Process Evaluation

1. How did BT community colleges, along with JFF and NCWE, contribute to the development of pathway programs to connect low-income, low-skilled adults to college-level PTE programs?

Consistent with encouraging practitioner dialogue to create home-grown programs and practices, BT implementation on the local level became a test bed for new and emerging models, practices and approaches. Not surprisingly, different models and approaches emerged in the local BT initiatives, and the different models present particular strengths and weaknesses. Of the various approaches that seemed to take root most consistently across all of the sites, the models that evolved among the leadership colleges (and some of the learning colleges) fell into three categories. A description of each model and its key features (as observed through qualitative research involving each of the leadership colleges) is discussed below:

The Developmental Bridge Model is offered by the Community College of Denver (CCD) and Portland Community College (PCC). This model emphasizes enhanced preparation in math, reading and/or writing for students who test too low to enter PTE degree programs directly. In actuality, this shared goal is approached quite differently by the two sites. CCD's approach emphasizes an accelerated curriculum that facilitates rapid progression through the developmental education course sequence and into college-level academic gatekeeper courses.

Once students enter college, they pursue the PTE curriculum that interests them. A college and career success course is integrated into the program to assist students to make decisions about college and careers. The PCC program also focuses on developmental education but it emphasizes intensive advising services to assist highly at risk students to overcome educational and personal challenges. The MOTT (Moving On Toward Tomorrow) program ensures that developmental education courses are supplemented with intrusive advising wherein a half-time advisor/program coordinator sets up and/or offers cohort classes, mandatory advising, and tutoring services. Similarly to CCD, students who are successful progressing through the developmental curriculum are encouraged and supported in their pursuit of PTE programs of study. Key features of the two programs associated with the Developmental Bridge model appear in Table 8.

Table 8. Key Features of Developmental Bridge Programs

Leadership College	Key Features
Community College of Denver	• Strong commitment to developmental education, drawing upon the expertise and experience of national experienced professionals. • High level of experimentation with and actual implementation of accelerated developmental education. • Careful and creative implementation of accelerated programs and processes to meet the needs of low skilled youths and adults. • High level of sophistication about academic, career and support services that are needed to meet the needs of the targeted student population.
Portland Community College	• The use of structured student success courses and developmental education as preparation for PTE programs • Multifaceted student support, including MOTT Advisors and a College Success course. Students are linked to community resources, including personal counseling and health care. • Infrastructure in place for data driven decision making, with support from the Institutional Effectiveness office. • A strong professional development component, created in partnership with the Seattle Jobs Initiative.

The Professional-Technical Bridge Model is offered by one BT leadership college: Cuyahoga Community College (Tri-C). This model emphasizes entry-level technical skills, integrated with basic academics, including completing the GED in some cases. The program links adults with less than 8th grade academic competencies to a PTE certificate that offers entry-level employment. The PTE Bridge program at Tri-C can be viewed as offering the first step – an "on ramp"– to a career pathway program. Students continue in the curriculum until they achieve 8th

grade levels on TABE test scores and then transition to the next relevant PTE program. Students at Tri-C enroll in the State Tested Nursing Assistant (STNA) program and advance to the STNA Plus program, providing them with a means of entering a career pathway program. Key features of the Professional-Technical Bridge program appear in Table 9.

Table 9. Key features of the Professional-Technical Bridge Program

Leadership College	Key Features
Cuyahoga Community College	• Bridge between existing strong GED/ABLE program and the State Tested Nursing Assistant (STNA) Plus program. • Explicit teaching of basic academic skills, workplace success skills, and job search skills in tandem with STNA coursework. • Integration of health occupations materials and concepts into the teaching of math, reading, and English. • Well-developed connections between departments on the non-credit side and good relationships with schools and employers.

The Career Pathway Model is evident at three BT leadership colleges: Central New Mexico Community College (CNM), Owensboro Community Technical College (OCTC), and Southeast Arkansas College (SEARK). Despite their shared emphasis on a career pathway, the three programs offer slightly different features, due in part to the need to customize each model to fit the local context and meet the needs of learners. CNM offers clear curricular pathways to construction apprenticeship programs, along with multiple supports toward pursuing certificate and degree programs in the construction trades. This program, similar to the other programs offering the career pathway model, provides accelerated ABE or developmental education. OCTC's program focuses on low-skilled adults who are participants in employer-sponsored training programs. This program emphasizes PTE courses integrated with a local workforce/economic development strategy that offers accelerated, modularized basic skills curriculum. Along with coursework, the program provides a student engagement professional who supports the students and facilitates their retention to college-level certificates and degrees. SEARK offers a one-year program that emphasizes contextualized, accelerated developmental education curriculum in the LPN curriculum track. Students participate in a learning community that supports their retention in classroom as well as clinical experiences. Common to all of these programs is comprehensive support services, including enhanced student engagement and intrusive advising. Key features of the career pathway model programs appear in Table 10.

Table 10. Key Features of the Career Pathway Model Programs

Leadership College	Key Feature

Leadership College	Key Feature
Central New Mexico	• Commitment to working with highly at risk adults. • Intensive, accelerated preparatory courses that integrate math, English, job skills, and construction trades. • Apprenticeship in varied construction trades. • Extensive student supports coordinated by a highly-involved achievement coach. • Hands-on program oversight with active participation from two major divisions within the college.
Owensboro Community Technical College	• Vision and commitment to serving the needs of adult learners while addressing the economic needs of the community. • Clearly identified PTE areas: students gain PTE competencies crucial to future employment. • A modularized, contextualized curricular approach, including the use of accelerated online instruction. • Support services in the form of a student engagement specialist and success coach.
Southeast Arkansas College	• A long tradition of providing PTE programs of study. • A strong partnership between SEARK and the Southern Good Faith Fund, a CBO that is a staunch supporter of programs and comprehensive support services geared to low-skilled, low income populations. • Accelerated, contextualized developmental education curriculum, including team teaching by general education and technical education faculty. • Curriculum emphasis on learning communities (cohorts) as a pedagogical strategy.

2. What barriers emerged in the development of programs within the colleges, and how are they being overcome?

Barriers and challenges were discussed by various program leaders, instructors, staff, students, and others affiliated with the leadership colleges during qualitative interviews conducted by the evaluators. Major themes that emerged are summarized below:

- Despite progress in linking programs to help students to make smooth transitions across traditionally separate departments and divisions within each college, hurdles persist. Students face challenges transitioning at various points along the pathway continuum, especially advancing through the multi-layered developmental education curriculum and from developmental education to college-level academic courses. Where improvements are being made colleges are employing cross-functional teams, advisory groups or steering committees that are looking at ways to lower barriers across the college.

- A challenge that all programs face in serving low-skilled students face is the diversity of academic and technical skills and dispositions that students bring to the colleges, combined with a multitude of personal and life challenges. To address the needs of low-skilled students who possess multiple challenges, practices that should by employed include:

    · Recruit students from the target audience (low-skilled, low income) who have a strong desire to participate in college, who understand challenges they may face in attending college, and who show a commitment to addressing challenges that may emerge while attending college.

    · Adopt institutional strategies that meet the needs of the low-skilled adults, including requiring staff members (instructional as well as support service personnel) possess skills and knowledge about the target audience that go beyond the competencies of community college personnel who serve traditional-aged learners.

    · Adopt research and communication strategies that help to explore and explain high drop-out rates that do not place blame on persistent, hard work of dedicated staff.

    · Institute professional development opportunities and other human resource strategies that help to address the burn out of instructors and support staff who working most directly with low-skilled adults.

    While there are no easy solutions, the BT colleges learned ways to cope by offering staff training and professional development, creating partnerships with community organizations, and involving a wider range of college staff in student support. Importantly, many of the BT initiative's peer learning strategy helped to move local conversations about the challenges of serving low-skilled adults to a larger level, providing an avenue where professionals can hear from others and share their stories.

- All the BT leadership colleges continued to refine their approaches to accelerated learning, particularly accelerated developmental education. Some are assessing and selecting students more carefully, attempting to determine who will benefit most from accelerated instruction. For students who require a traditional pace, several of the leadership colleges sites have begun to offer differentiated curriculum, including offering varied pace for learners at different levels. Refinements are also being made to other instructional practices, ensuring that the faculty possesses the necessary skills to reach low-skilled adults.

- As the BT initiative approached the end of the first phase of funding from the Charles Stewart Mott Foundation, concerns arose about the cost of the program and its sustainability.

Despite these concerns, most of the leadership colleges and many of the learning colleges found ways to sustain critical aspects of their programs. The involvement of executive-level leadership and the decision to continue programs was mostly on careful consideration of cost and limited information about student outcomes.

3. To what extent did community college practitioners learn from each other during the process of implementing programs associated with BT?

A core belief of the BT initiative is that professional development is most likely to be effective when learning occurs among peers who are engaged in like-minded endeavors, a concept the BT initiative called "peer learning". Moreover, peer learning refers to the process of helping and supporting peers through exchanging expertise and ideas through two-way, reciprocal learning. To assess the extent to which peer (reciprocal) learning has taken place, the evaluators conducted interviews with individuals associated with the leadership colleges and learning colleges, and they surveyed participants attending a peer learning meeting in Savannah, Georgia in November, 2007. Items on the survey focused on the benefits of peer learning, the environment for peer learning, and the impact of peer learning meetings. Respondents rated each item on a scale from 1 for strongly disagree to 5 for strongly agree, with 3 for neutral. A total of 22 individuals affiliated with leadership colleges completed the survey, providing results for all six leadership colleges. Results also reflect input from a total of 35 individuals representing 16 learning colleges, including nearly all the original 10 learning colleges.

Table 11 shows numerous features of the peer learning meetings are viewed as positive by both the leadership college and learning college respondents. Results suggest the typical respondent agreed or strongly agreed that he or she "feel[s] safe to speak my mind", "[can] freely express my opinions", and "[feels] a sense of trust within the group". Most respondents from both groups also agreed or strongly agreed that they learned something valuable from peers during and after the meetings, although results about learning outside (and after) the meetings are less compelling. Confirming a key tenet of the BT initiative, the vast majority of both groups agreed or strongly agreed that they were: "learning from people who are implementing programs" and "learning from people who are doing the same job". Further, both groups rated learning from peers higher than learning from nationally known experts and policy makers. This result lends credibility to the idea that practitioners acting as peers highly value learning from one another.

Table 11. Peer Learning Questionnaire Results

In Breaking Through (BT) conferences and meetings, I generally benefit from:		Mean All (n=70)	Mean LDSHP Colleges (n=22)	Mean LNG Colleges (n=35)
1	Learning from people who are implementing programs.	4.56	4.50	4.51
2	Learning from nationally known experts.	3.77	3.82	3.86
3	Learning from people who do the same job I do.	4.39	4.41	4.29

In Breaking Through (BT) conferences and meetings, I generally benefit from:		Mean All (n=70)	Mean LDSHP Colleges (n=22)	Mean LNG Colleges (n=35)
4	Learning from policy makers.	3.63	3.55	3.46
In Breaking Through (BT) Peer Learning meetings:				
1	I have learned new ideas for ways to improve students' experiences.	4.28	4.27	4.14
2	I have benefited from interacting with my peers.	4.62	4.59	4.54
3	I have learned ideas that I have implemented at my college	4.06	4.18	3.91
4	I have met people from other colleges who I have later turned to for assistance.	3.69	3.48	3.74
Peer learning in Breaking Through (BT) events has helped me to:				
1	Better align ABE, developmental education, and college programming.	3.84	3.91	3.73
2	Accelerate student learning.	3.80	3.86	3.67
3	Assessing who can benefit from accelerated learning.	3.65	3.59	3.52
4	Contextualize remedial math instruction.	3.64	3.86	3.42
5	Connect programs and students to employers.	3.50	3.36	3.44
6	Strengthen support services for students.	4.08	4.05	4.06
7	Improve training for staff who provide support services	3.75	3.82	3.55
8	Use data to track student progress.	3.88	3.73	3.79
Environment for peer learning in Breaking Through (BT) events				
1	I feel safe to speak my mind amongst my peers.	4.58	4.55	4.60
2	I am able to freely express my opinions.	4.61	4.59	4.52
3	My comments are respected when I share with my peers.	4.47	4.18	4.51

In Breaking Through (BT) conferences and meetings, I generally benefit from:		Mean All (n=70)	Mean LDSHP Colleges (n=22)	Mean LNG Colleges (n=35)
4	My role as a peer learner is clearly defined.	3.99	4.09	3.69
5	There is a sense of trust within the group.	4.48	4.45	4.43
6	I have learned something from my peers during our time together.	4.64	4.64	4.60
7	I have learned something from my peers outside of our allotted group time together.	4.47	4.41	4.38
8	There is enough time spent learning from my peers in a group format.	4.07	4.05	3.85

Reviewing the survey results as a whole, the data show the peer learning meetings are a primary and pivotal vehicle to sharing information among professionals, but the respondents are not as active in sharing information outside (after) the meetings. Leadership college and learning college respondents were less likely to agree or strong agree with the statement about having "met people from other colleges who they later turned to for assistance" than to indicate that they shared information during peer learning meetings. In essence, the peer learning meetings provide the time and space to support communication among busy working professionals; however, results suggest dialogue after meeting participants return home is not as likely to occur. These results suggest that practitioners may benefit from more sustained conversation among members of the BT community between peer learning meetings. It is important to explore this question more fully as the notion of peer learning continues to evolve, including investigating the use of online and Internet technologies that facilitate on-going communication at relatively low cost.

Leadership and learning college respondents provided slightly different results on a number of survey items pertaining to the way peer learning is conducted at meetings. Though no items were statistically significant using a t test of independent samples, one item was approaching significance at p= .08 (92% confidence level). That item was: "my comments are respected when I share with my peers". It is curious that respondents associated with leadership colleges rated this item lower than learning college respondents since the BT peer learning model calls for valuing the expertise of leadership college professionals and encourages sharing with learning college representatives. These results suggest different strategies may be needed to encourage and support peer learning among the more experienced leadership college professionals. Alternative strategies may also be needed to encourage leadership colleges engagement with learning colleges in a meaningful dialogue.

Whereas nearly all of the open-ended survey responses were relatively short, the responses of leadership college respondents tended to offer specific ideas such as 'we are working with the nursing faculty', or 'we are implementing peer mentoring' where as the input of learning college

respondents was more general. Learning college respondents tended to make positive but general comments such as 'we learned a lot about the BT program' and 'we are excited about trying new ideas' (these ideas are paraphrased from actual responses contained in the results).This variation in specificity of ideas may corroborate the difference in experience with BT program implementation between the leadership college and learning college participants. Table 12 captures quotes and categorizes them according to emergent themes.

Table 12. Summary of Respondent Statements about the Value of Peer Learning

Category	Respondent Statements about the Value of Peer Learning
General Value of Peer Learning	• Ideas to be replicated • Exposure of BT with credit side of the house (2) • BT lends credibility • Using other colleges' programs and techniques rather than developing new ones • Growing familiarity with technology, approaches, techniques • Having info from JFF/BT on successful programs and results • Building a sense of community and shared purpose • Planning and evaluating the project as a team • Affirming many of the things we are doing • Renewed/infused energy for the work we're doing • Hearing how different schools deal with similar issues • Developing ideas and procedures to implement the BT process • Hearing what other states are doing • Helping to hold us accountable and evaluate what we are doing and why we are doing it
Help from Other Colleges or Individuals	• North Carolina's (Leadership College) college readiness model • Brought CCD to our college • Implement models for BT from PCC • SEARK modular math • Visited other learning college • Contacting other college individuals for advice • Great "sounding board" • Ideas from BT to use in preparing ABE students for college
Specific Topics or Ideas-Admin	• Creative ideas for working with nursing faculty • Connecting careers and educational planning • New positions in student services to provide financial aid counseling

Category	Respondent Statements about the Value of Peer Learning
	• Recruitment and marketing ideas (2) • Establishing linkages to other funding sources • Bridging non-credit with credit • Importance of partnerships • Info on how to measure success • Data tracking • Formulating how to communicate what we are doing (elevator speeches)
Program Elements or Ideas	• Modules • Student supports (23) • Contextualizing curriculum • Curriculum sharing, improvement • Career pathway • Non-credit to credit articulation agreements • Connections with Department of Labor (DOL) apprenticeship • Accelerating learning • Peer mentors (2) • Advisor Training (2) • Case management (2) • Goal setting workshop for students

Institutional Change

4. **How have the pathways associated with BT addressed the four high leverage strategies:**

   - **Integrated institutional structures and services**
   - **Comprehensive supports**
   - **Accelerating the pace of learning**
   - **Labor market payoffs**

Representatives of the six leadership and ten learning colleges completed a self-assessment instrument during year one (fall 2006/winter 2007) and year two (fall 2007/winter 2008) that asked them to rate their colleges' progress in implementation. The self-assessment allowed for measurement of self-reported growth of key components, including the four "high leverage" strategies. Items were rated on a 5-point scale, extending from not implemented (1) to

institutionalization (5), with institutionalization referring to strategies considered fully implemented and sustainable.

This section also compares self-assessment results with qualitative results conducted by the evaluators through field visits, personal interviews, and document review. Other strategies that emerged from qualitative field work are also discussed.

Integrated Institutional Structures and Systems

Items included in the self-assessment pertaining to *integrated institutional structures and systems* are associated with the adoption of various curricular and instructional strategies linked to BT programs, including roadmaps to chart the student's course through the program and multiple entry, exit, and re-entry points. Six items were included in the self-assessment instrument in year one, and one item was added in year two. Aggregate results of the six leadership colleges appear in Figure 1. The black bar represented year-two results, and the white bar shows year-one results.

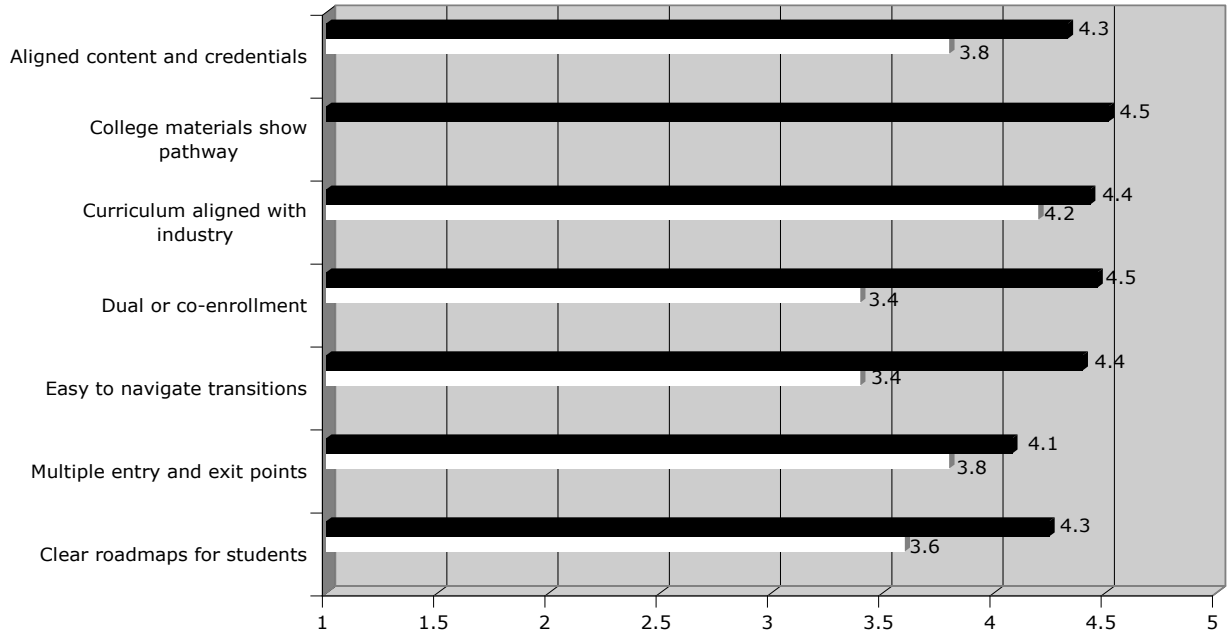

Figure 1. Mean Leadership College Self-Assessment Ratings (Year 1 and Year 2) on Integrated Institutional Structures and Systems

Qualitative results revealed that the leadership colleges adopted numerous strategies to address institutional structures and systems. Some of the specific ways that colleges are addressing this strategy are:

- Enhancing communication and collaboration to establish common values, language and commitments to serving low-skilled students
- Charging specific personnel with forming relationships with other parts of the college
- Involving instructors and/or administrators from different parts of the college in coordinated course planning, teaching, counseling, tutoring, or administrative functions such as admissions and registration
- Recruiting business partners and community organizations to serve on BT related committees
- Creating materials that display pathways extending across different segments of the college

Qualitative data collected on items associated with integrated instructional structures and systems provided insights at the curricular and organizational levels, including the roles and responsibilities that project leaders, faculty and support staff plays in delivering curriculum and instruction. More than one local participant, particularly project leaders, referred to communication and collaboration as the "glue" that holds disparate instructional and institutional structures together. Through conversation that comes about through dedicated time working together, the BT leadership colleges were able to leverage change in the system.

A barrier to integrated instructional structures and systems that was noted in multiple sites is the historic divide between the non-credit and credit functions of the community college. Besides the obvious fiscal differences, local project leaders mentioned that many pre-college courses in adult education or development education as well as some workforce-oriented courses do not provide students with credits toward a college credential (certificate or degree). Thus, while students engage in skill-building that is critical to their future success in the workplace, they are not making progress in a tangible way through the formal education pipeline. For adult students targeted by the BT initiative who are already marginalized, this limitation poses serious challenges to a student's ability to progress in education and employment. In all cases, the leadership college sites were cognizant of this challenging and working on multiple levels to address it. BT sites implementing career pathways represent some of the best examples of how barriers, especially turf problems, created by different units in the college were addressed most directly through enhanced communication and the development of new innovative curriculum.

An example of enhanced communication that facilitates institutional structures and systems appears in the MOTT initiative, wherein the BT program operates on multiple campuses. MOTT advisors are particularly important to the communication process in that they emphasize regular communication with campus professionals in charge of testing, tutoring labs, guidance and counseling, and they speak frequently with instructors who teach courses that the MOTT students take. Until BT students are ready to make the transition to a PTE program, they work with a MOTT advisor who assists them to meet PTE program admission requirements. Without

the continuous relationship between student and advisor, local project leaders are convinced that a preponderance of the students would not make the transition to college.

In yet another example, professionals working inside a community college and external partners contribute to communication and collaboration that enhances institutional structures and systems. The LPN program at SEARK draws upon the expertise of professionals associated with an active CBO partner and employers. The college works collaboratively with these partners to get information to students who desire health care-related educational and employment opportunities. Students who are assessed and determined likely to succeed in an accelerated developmental sequence (offered during the first semester of enrollment) continue to the LPN program, while students not at grade level are given the opportunity to enroll in a contextualized ABE program that addresses reading, writing, and math. By collaborating to provide options, the ABE providers and the community college give adult students multiple options to secure entry-level employment in health careers.

Accelerating the Pace of Learning

The items included in the self-assessment pertaining to *accelerating the pace of learning* are associated with the adoption of various strategies that compress the curriculum and/or speed up the rate at which students can complete ABE or developmental education. The items are rated on the same 5-point scale, with 5 indicating institutionalization. Figure 2 shows the leadership colleges' ratings on their own implementation of aspects of this strategy over the two years of the evaluation. The black bar represented year-two results, and the white bar shows year-one results.

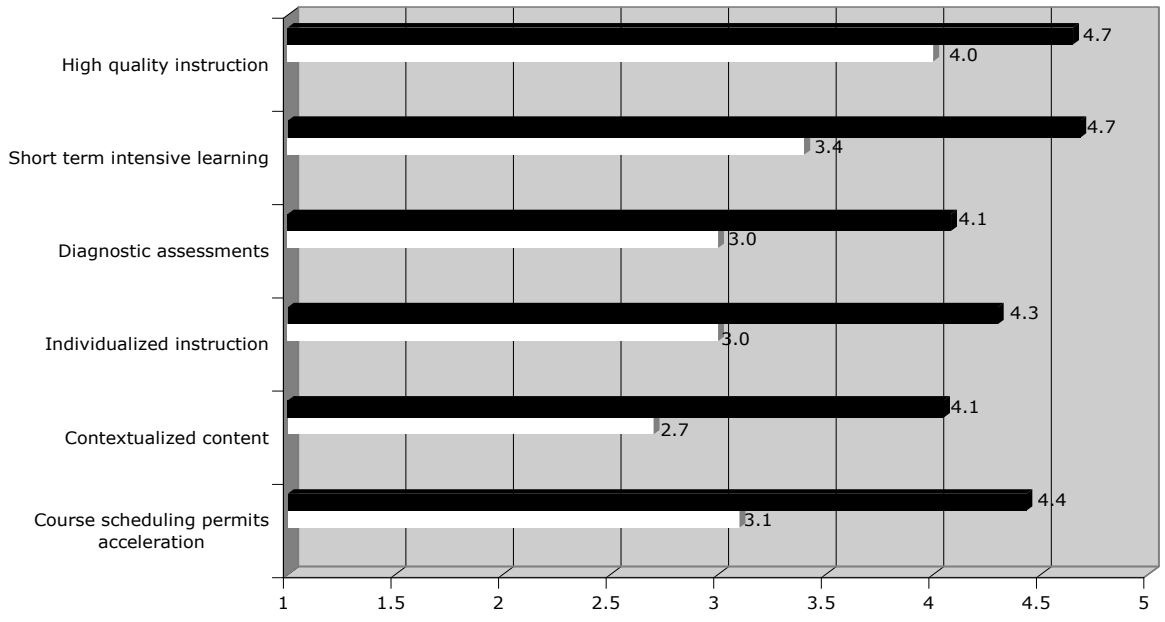

Figure 2. Mean Leadership College Self-Assessment Ratings (Year 1 and Year 2) on

Accelerating the Pace of Learning

Though acceleration was an element of program implementation at the six leadership colleges on some level, a few BT programs did not emphasize it. For example, the MOTT program placed more emphasis on students developing knowledge and skills that they need to succeed in college than on accelerating students through ABE or developmental education. Some leadership colleges that were committed to accelerated developmental education experienced challenges in identifying students who are likely to benefit from the fast-paced delivery mode integral to accelerated learning. At other colleges, accelerated learning opportunities were a major emphasis. For example, at CNM, students were encouraged to enroll in two complementary accelerated, contextualized courses.

Some of the specific strategies used by the leadership colleges to accelerate the pace of were:

- Short, intensive courses or modules that kept student motivational level high
- The blending of traditional and computer based instruction
- Contextualized instruction to increase its relevance, making acquisition of basic skills (math, reading, writing, and English language) more meaningful and worthy of greater effort
- The use of selection criteria to place students into accelerated courses who were most likely to succeed using that format

Acceleration operates differently in the different models. Indeed, different forms of acceleration are evident in the BT sites. As mentioned above, CNM offered two types of accelerated learning opportunities—one involving the short intensive course through which students enter the program, the other an accelerated, contextualized developmental math and reading course. Local leaders at several leadership colleges commented on the importance of getting the right students placed in accelerated versus traditional-paced developmental courses. Some hypothesized that the accelerated format may be best for students who need to brush up on material they had already learned but forgotten, whereas the traditionally-paced courses are best for students who have not mastered the material in the first place. CNM leaders also emphasized that it is important to be realistic about what it takes to help students with an 8th grade (or lower) background to achieve the knowledge and skills to qualify for an apprenticeship in the construction industry. They observed that there are limits to how quickly students can accomplish this milestone.

Similar issues emerged in the FastStart program at CCD where students are encouraged to advance through two levels (sometimes more) of developmental math, reading and/or writing during one semester. Depending on where they score on the Accuplacer test, students take a sequence of two developmental education courses that combine the first and second levels, the second and third levels, or the third level and the first college-credit "gatekeeper" course. The program attempts to provide various forms of support for students who are participating in accelerated instruction, including employing an educational case manager who assists student to address their educational goals and personal challenges. Students also have access to other instructional supports including tutoring and one-on-one computer-based instruction.

Labor Market Payoffs:

The items included in the self-assessment pertaining to *labor market payoffs* are associated with high demand occupations, employer involvement, short-term credentials, and hands-on learning. The items are rated on the same 5-point scale, with 5 indicating institutionalization. Figure 3 shows the leadership colleges' ratings of their own implementation of various aspects of this strategy over the two years of the evaluation. The black bar represented year-two results, and the white bar shows year-one results.

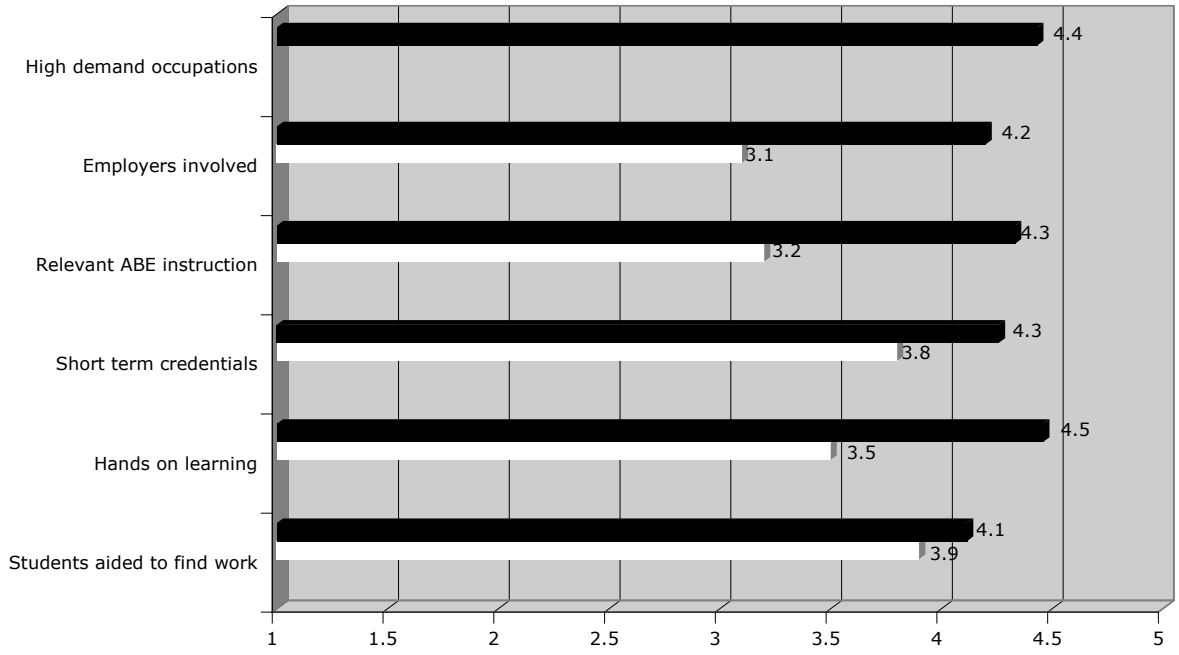

Figure 3. Mean Leadership College Self-Assessment Ratings (Year 1 and Year 2) on Labor Market Payoffs

The six leadership colleges have taken different stances on the degree to which they connect the BT curriculum to the labor market. For some programs the emphasis on developing pathways that lead to family-wage sustaining employment has been a clear and explicit goal from the start. For other programs, the emphasis on enrollment in PTE programs takes priority only after students complete developmental education courses and participate in career exploration activities. The latter approach is taken because project leaders believe low-skilled adults have had little encouragement or support to think about careers thus far in their lives. If students have never had the opportunity to explore careers, how can they make a decision to pursue a career? For these students, the incorporation of career exploration into college orientation, college success courses, and foundational coursework is thought to be important to helping students set realistic goals for college and career and to pursue those goals.

Distinct approaches to dealing with the labor market or workforce development component of the pathways is contrasted by the two sites (CCD and PCC) emphasizing developmental bridge models versus the four sites (CNM, Tri-C, OCTC, and SEARK) implementing bridge and career pathways. Without doubt, the connection to employers and their active engagement was more evident in career pathway programs that prepared students for specific career fields. For sites implementing bridge and career pathway programs, the focus of the local initiative was on PTE preparation, with developmental education and support services being viewed as an important launching point for the career preparation of the students.

Some ways the colleges worked to incorporate labor market payoffs included:

- The formation of partnerships with businesses and community organizations that helped students to enter or advance in the labor market
- Assisting students to select appropriate careers
- Helping students to earn short-term certifications that allowed them to work while pursuing further education
- Checking in with BT students or alumni who were employed to encourage them to continue to pursue further education in their field
- Creating a document that would help ex-offenders to figure out where they would be eligible to work and where they would be likely to be hired.

Linking the BT initiative more directly to labor market preparation, the SEARK program developed a close connection to local employers, with BT project leaders developing a deep and intimate knowledge of the local labor market and then using this knowledge to design the BT program. The three areas in which local project leaders are developing pathways–business, health care and manufacturing—are closely tied to the local workforce needs. Besides meeting the needs of students, the project leaders contend the pathway programs are seen by business leaders as potentially enhancing the local economy.

Also demonstrating the complexity (but also the importance) of connecting education to local labor markets, CNM's Construction Apprenticeship program started when the construction industry was strong. However, a sharp economic downturn played havoc with the BT program's initial goals, weakening opportunities for new workforce entrants in the last few years. Even so, the program found ways to help students think about and prepare for work by completing GEDs, certificates and associate degrees. The lessons learned here is that when employers get to know students intimately and buy into helping them be successful they are more confident that the students they accept into jobs or apprenticeships are ready to undertake the challenges of the occupation.

Comprehensive Supports

The items included in the self-assessment pertaining to *comprehensive supports* are associated with ways that colleges assist students to overcome obstacles that can interfere with their success

in college. Supports may be both academic and social/affective. The items are rated on the same 5-point scale, with 5 indicating institutionalization. Figure 4 shows the leadership colleges' ratings on their own implementation of aspects of this high leverage strategy over the two years of the evaluation. The black bar represented year-two results, and the white bar shows year-one results.

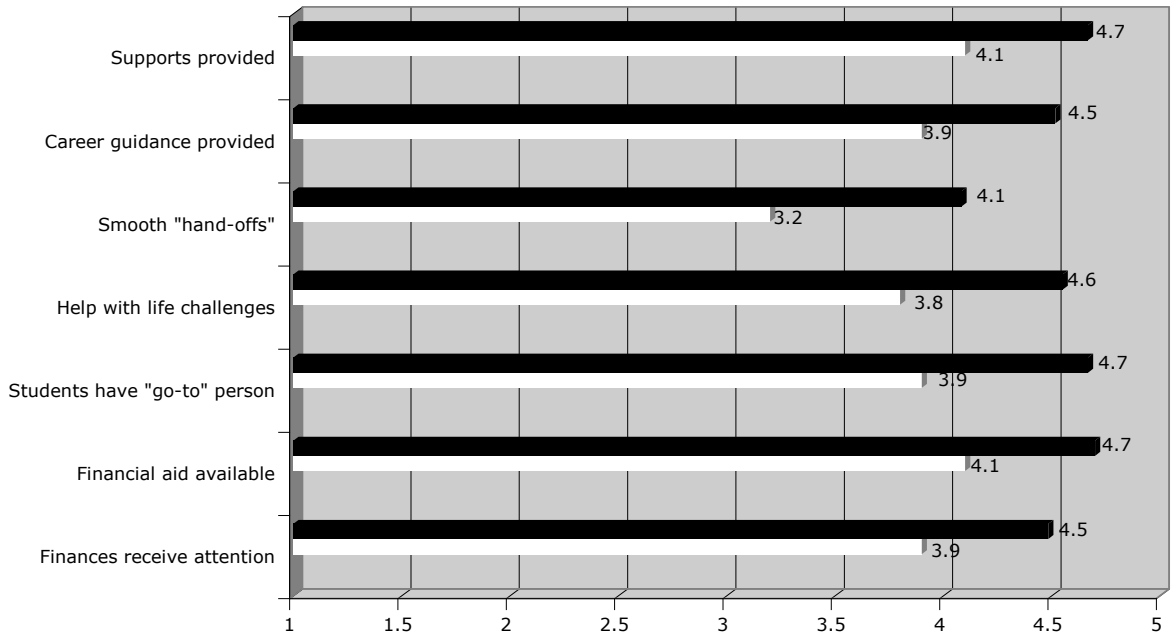

Figure 4. Mean Leadership College Self-Assessment Ratings (Year 1 and Year 2) on Comprehensive Supports

All six leadership colleges and many of the learning colleges implemented a wide range of services intended to support students' educational achievement, to address their personal challenges, and to enhance their employment opportunities. A number of colleges utilized case management systems with several dedicating a trained professional to work closely with the students in an advising or guidance and counseling role. Other comprehensive support services included assistance with financial aid, transportation, child care, physical and mental health, and substance abuse problems. In a number of cases, these additional services were provided at considerable additional cost, which made them difficult to sustain beyond the life of the grant, especially when provided to large numbers of students.

Some of the specific strategies used to provide comprehensive student supports included:

- Case management or wrap-around services

- The use of an "achievement coach," charged with being the go-to person for the BT students, helping them overcome barriers to attaining their goals and coaching

- The involvement of members of the BT advisory or leadership group in supporting students directly or by reviewing challenging cases during regular meetings

- Assisting students to take full advantage of tutoring systems available through the college

- Partnerships with community organizations with experience in assisting low-income and/or low-skilled adults as well as trained staff and financial resources

The six leadership colleges implemented many different services intended to support students' educational achievement, to address their personal challenges, and to enhance their employment opportunities. Most of the leadership colleges referred to their support services as "wrap-around", suggesting the importance of addressing the students' multiple needs. A number of colleges utilized case management systems with several dedicating a trained professional to work closely with the students in an advising or guidance and counseling role. Other comprehensive support services included assistance with financial aid, transportation, child care, physical and mental health, and substance abuse problems.

Indicative of the approach taken by several colleges, CNM offered comprehensive supports through a professionally trained individual whose job title is "achievement coach." This person is charged with being the go-to person for the BT students, helping them overcome barriers to attaining their goals and personally investing in their success by getting to know the students extremely well. In addition, the program links students with a network of adults (faculty, employers, co-workers) to whom they can turn for support. A college-wide tutoring system is made available to students in the program.

Financial aid, career counseling, and academic advising are among an array of support services available to students enrolled in FastStart. Of these, the BT leadership suggests financial aid and academic advising are most important to student retention and performance. Career services offered through classroom experiences and online come in a close second. An "educational case manager" works closely with the students to boost their retention. FastStart students spoke especially enthusiastically about the difference the educational case manager made in their decision to participate in the program and to remain enrolled. Students also have access to the Center for Educational Advancement, offering academic support for any student who participates in developmental education in the college. Vocational tutoring is available to students who participate in the PTE curriculum.

Other High Leverage Strategies

Two additional strategies emerged during the two-year BT initiative that deserve mention in this report. Professional development and data collection and utilization are especially important strategies that were integrated into the local BT programs implemented by leadership colleges and learning colleges as well as at the larger cross-site level operated by JFF and NCWE.

Professional Development. The evaluation showed the professional development of instructors was an extremely important aspect of BT. When instructors were knowledgeable about low-skilled adult learners and well-informed about instructional strategies geared toward reaching the target population, positive impact was document. We heard numerous examples from students about positive learning experiences, sometimes glowingly so. Relatively rare but important to note, we also heard stories of stress, burnout and conflict when instructors and students were not engaged in a productive learning experience. To address this concern, some BT programs placed considerable priority on professional development for both full- and part-time instructors. CCD's FastStart program is an example of a well-development professional development approach that is geared to enhancing instructors' knowledge, skills and dispositions toward teaching low-skilled adult learners. Project leaders said they emphasized professional development because they worried that if instructors did not fully understand the unique educational and personal needs of low-skilled adult students, they may not be effective instructors regardless of their content knowledge. At SEARK, a college-wide commitment to raising the level of understanding of instructional and support staff in learning to poverty in America had important effects across the college. Professional development associated with helping staff understand the effects of poverty was attributed with laying the groundwork for spreading BT-related practices to the entire college. Professional staff told us they understood that the challenges faced by their BT students were attributable to a sizeable proportion of many other learners enrolled at the college.

In addition to the professional development activities happening at the local level, efforts to support peer learning are a core component of the overall BT initiative operated by JFF and NCWE. Data on peer learning presented elsewhere in this report demonstrates the importance of this notion of professional development to practitioners.

Data Collection and Utilization. Initially focusing BT on the implementation of innovative practices, local practitioners recognized the need for data to assess student participation and outcomes. Colleges with a longer history developing programs for low-skilled adults and with some organizational capacity for institutional research, such as PCC and CCD, began tracking student enrollment and outcomes during the initial year of BT (or before). The rest of the leadership colleges demonstrated limited experience and modest capacity to develop an evaluation system and monitor students, but the strong desire to do so. Over time, all six leadership colleges recognized the importance of collecting and utilizing data to assess the successes (and challenges) of their students. They acknowledged that valid and reliable data are needed to report results to funders and to key constituents internal to their colleges, including institutional leaders, program developers, instructors and support staff. Without data to inform practice, practitioners are unsure of what to do to refine their programs and better meet student needs once the initial program design is under way. As the BT programs unfolded, a concerted effort to track student progress was adopted by all six leadership colleges, providing the basis for initial results discussed later in this report.

5. Has BT (and, specifically, peer learning) enabled the leadership colleges to begin to restructure their colleges, and has it enabled the learning colleges to lay the groundwork to restructure to accommodate low-skilled adults' progress towards degree attainment?

The BT self-assessment (self-reported) results provided evidence that practitioners associated with the leadership and learning colleges believed they were making advancements in structural

changes in conjunction with the BT initiative. Field visits involving interviews and observations over time by the evaluators confirmed that these changes were indeed occurring.

As shown in the above Table 13, the leadership colleges rated themselves at an average of 4.2 on these items, up from 3.7 the previous year. The learning colleges rated themselves at 3.3, up from 2.2 the previous year. In the case of the leadership colleges, this is consistent with observations made during site visits. Colleges had worked diligently to restructure different facets of their policies, procedures and programs to accommodate low-skilled adults' progress towards degree attainment.

Table 13. Results on Structural Changes Associated with the BT Self-Assessment

Items on Structural Change in BT Self-Assessment	Learning College		Leadership College	
	Mean Year One	Mean Year Two (Change)	Mean Year One	Mean Year Two (Change)
Collaboration on curricular connections	2.7	3.5 (+.8)	3.8	4.4 (+.6)
Clear pathways to workforce programs	2.1	3.1 (+1.0)	3.9	4.3 (+.4)
Clear roadmaps for students	2.0	3.4 (+1.4)	3.6	4.3 (+.7)
Multiple entry and exit points	1.9	3.3 (+1.4)	3.8	4.1 (+.3)
Easy to navigate transitions	2.1	3.3 (+1.2)	3.4	4.4 (+1.0)
Non-credit to credit bridging occurs	3.1	NA	3.5	NA

NA – Not Applicable - the item was not included in BT Self-Assessment instrument used in year one of the evaluation project.

Sustainability

Sustainability of policies and practices associated with BT is increasingly important as the initiative unfolded. During year two, leaders of the leadership colleges were asked to complete an instrument rating items associated with sustainability. Items in the instrument are based on a model proposed by Shediac-Rizkallah and Bone (1998) who studied the sustainability of community-based health programs and proposed a framework for sustainability research, practice and policy. The 15 items provided in the BT Sustainability Index were also identified in and corroborated by educational literature on sustainability and institutionalization.

Mean ratings for the six leadership colleges are shown in Figure 5, with items aligning BT with institutional needs, goals, and mission being rated near 5.0, the highest point on the scale. These

items suggest the leadership colleges are integrating BT policies and practices into their institutions and that they are receiving support from their institutions to continue their programs. Less evident in the data is on-going financial support for the BT programs as evidenced by lower ratings on items having to do with funding. Specifically, items related to the colleges being able to afford to sustain BT (3.58), business partners being invested in continuation of BT (3.42) and other partners being invested in BT continuation (3.87) received the lowest ratings.

Site visits revealed all six leadership colleges are employing strategies within their schools to sustain BT or elements of the BT model. Leadership teams operating within the six colleges are working deliberately toward modifying institutional and curricular policies that can help to support the programs. In some cases, local funds have been committed to fund part of the salary of a program coordinator, such as the ½-time funding of a program coordinator at CCD. In other cases, institutions have applied lessons learned from BT to the entire institution, institutionalizing a policy or program so that it applies to all learners. Changes in developmental education requirements at OCTC provide an example of how lessons learned about accelerating learners through developmental education were recognized as beneficial for all students, leading the college to provide accelerated developmental education options for all learners. So, while it is true that dedicated courses for BT cohorts are difficult to sustain, when BT is treated as a demonstration project, acting as a test bed for innovative ideas, it has important implications for larger institutional operations and policies.

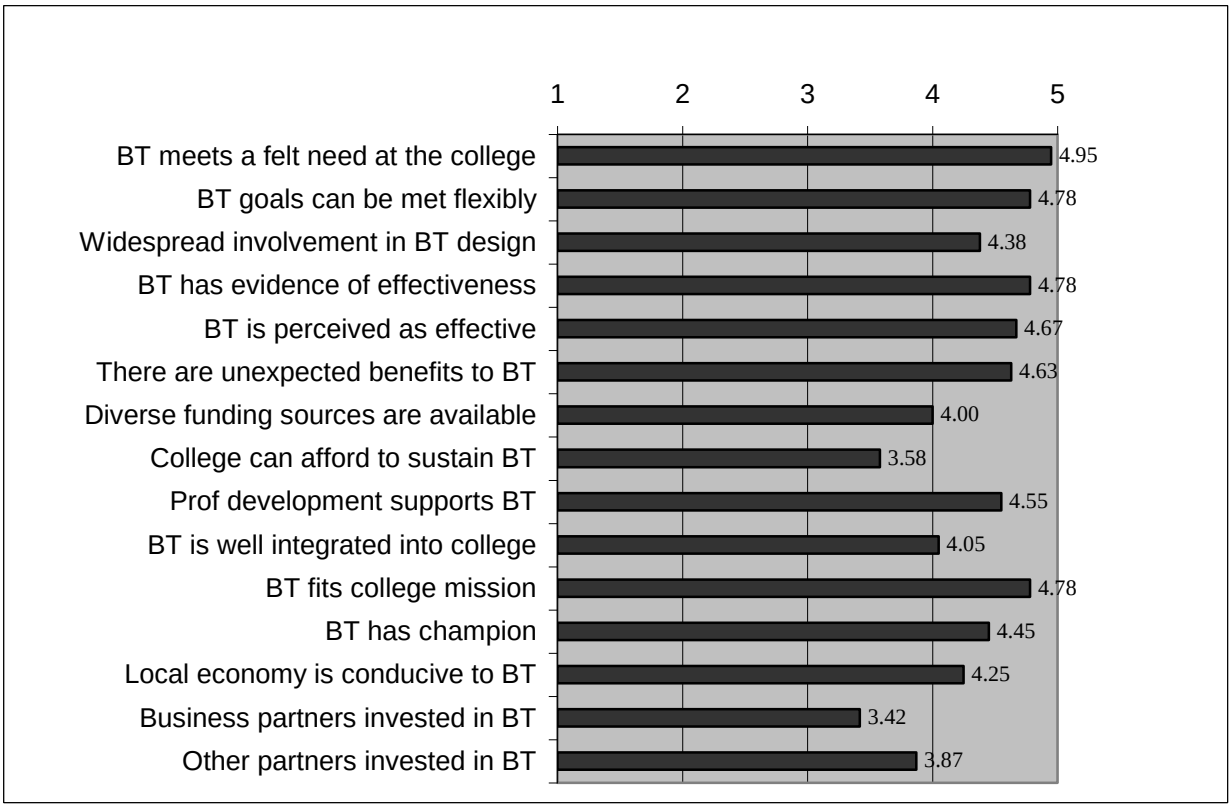

Figure 5. Mean Leadership College Ratings on Sustainability

It is important to mention that a particularly thorny area pertaining to sustainability relates to student supports. Recognized as an important component of BT, student support services involving dedicated personnel are critically important to serving low-skilled adults but difficult to sustain. Some leadership colleges called this individual's their "achievement coach" or "success coach", and others spoke generally about advisors who assist students to be successful. Regardless of the title, qualitative data collected confirm the importance of a professional employee who understands the target population of low-skilled adults and has the knowledge and skills to assist them to be successful. Of all aspects of the programs, these positions may be the most difficult to sustain when BT funding goes away. Because local community colleges build budgets on full-time equivalent (FTE) enrollment that are tied to instruction, there is a tendency to underestimate the cost and value of student support services. This is unfortunate, because the integration of academics and supports shown to be critically important to all college learners (see, for example, Levin, 2007), is tantamount to the success or failure of low-skilled learners.

6. Has BT increased the awareness of community college presidents and other leaders in the field about promoting the success of low-skilled adults in college (and in the labor market)?

In the first year of the evaluation, leadership colleges rated support or BT by the college president at an average of 4.3 on a 1 to 5 scale (with 5 being high). In the second year, the college presidents' support was rated at an average of 4.2, while "leadership commitment" more generally was rated at 4.12. For the learning colleges, support by the college presidents was rated at 4.14 during the second year, while "leadership commitment" was rated at 4.0. Thus, those who completed the self-assessment instruments believed that BT programs were well supported throughout the two years of the grant, without substantial change from year one to year two. This finding is undoubtedly linked to the already high level of commitment that college leaders showed for BT at the time the colleges signed on and began their efforts. The fact that commitment remained high throughout the grant period is an important finding because it suggests campus leaders have not lessened support during and after implementation. These findings were corroborated during site visits. While we did not always meet with college presidents, upper level administrators generally expressed considerable interest in and support for the BT initiative. Their remarks demonstrated careful thought was given to the BT initiative and to its implications for improving programs and services for low-skilled adults and other students as well.

Interviews by the evaluators of BT also included leaders associated with administration of the project, including officials associated with JFF and NCWE. Consistently, we learned of the sustained commitment and enthusiasm for the initiative, despite turnover of individual professionals in both organizations. Concerted efforts have been undertaken to identify new leadership within NCWE to champion the BT into the future, and several individuals have expressed an interest in stepping forward. With respect to JFF, continued conversations with Charles Stewart Mott have resulted in continued funding, targeted at scaling up selected BT programs. New conversations with the Bill and Melinda Gates Foundation has yielded additional resources to assist BT in capturing student outcomes and demonstrating the potential of the models to meet low-skilled adult learner needs on a wider, potentially national, scale.

Student Participation and Outcomes

Midway through the BT initiative it became clear that gathering information on student outcomes was an essential part of the BT evaluation. Funders and other stakeholders were intrigued by the programs and pathways created, as well as by the peer learning design. Without results on student outcomes, the evaluation could not provide detailed information about how student outcomes were affected by program participation. Thus, this piece of the evaluation was added well after programs were designed and students enrolled, making it necessary to integrate student outcomes data collection into existing administrative and data collection structures. Fortunately, this aspect of the evaluation was facilitated by earlier work completed by Peter Ewell of the National Center for Educational Management Systems (NCHEMS) to guide the community colleges and programs on data that they were already collecting.

To obtain student outcome data, each leadership college was asked to complete a two-stage data template as part of their final report. The first stage involved entering a set of data into a spreadsheet related to each student's characteristics and progress through the BT program as defined at each college. In the second stage, program directors synthesized the information on each BT cohort into a report form that highlighted measures of special interest in student progress and success across the BT initiatives.

Measures of student progress and success for BT focus on student participation and educational and employment outcomes. BT attempts to promote access to and success in college by low-skilled adults. Success refers to retention in the program so that students transition from the levels relevant to their circumstances, including moving from ABE or developmental education to PTE, in some cases strategically integrating these types of education. BT also attempts to assist students to accumulate enough college credits to qualify for credentials that hold value in the labor market.

At some leadership colleges, the outcomes data consisted of student progress through ABE, reported via pre- and post-testing on the TABE. At other sites, the emphasis was on developmental education wherein progress was measured using college placement test scores (e.g., COMPASS, Accuplacer). At some colleges, PTE courses are considered part of the BT initiative. In others, the BT program prepares students to enter PTE courses. Related to program duration, the two-year period of the grant allowed leadership colleges offering programs of shorter duration to enroll multiple cohorts and show relatively large numbers of student enrollees and completers. Leadership colleges offering programs of longer duration showed fewer enrollees and completers because insufficient time had passed for students to progress from start to finish.

The evaluators used each college's data on the BT cohorts to prepare the leadership college outcome tables attached to each of their reports (see *Report of Breaking Through Leadership College Cases*.) Because the models adopted by the leadership colleges vary, the evaluators chose not to aggregate the leadership college results. Rather, a summary is used to display results for all six leadership colleges (see Table 14). This table sheds light on the successes and challenges of students enrolled in the six leadership college BT initiatives. In addition, college-specific tables are provided in the *Report of Breaking Through Leadership College Cases* available under separate cover.

Table 14. Student Outcomes for the BT Leadership Colleges

STUDENT OUTCOMES	CCD	CNM	Tri-C	OCTC	PCC	SEARK
Students served (included in this report)	94[i]	160	54	90	329	45
ACCESS AND PARTICIPATION						
Percent adult (23+)	33%	83%	66%	92%	54%	87%
Percent female	66%	20%	89%	48%	62%	93%
Percent non-white	83%	91%	91%	3%	48%	73%
Percent entering w/o high school credential or GED	33%	39%	30%	1%	84%	0%
Percent Pell grant recipient	51%	23%	NR	0%	57%	27%
Percent native language is English	59%	58%	78%	100%	NR	100%
ADULT EDUCATION (TABE) GAINS						
Average gain in TABE *math* scores	NA	NA	2.0	-.8	NA	NA
Average gain in TABE *reading* scores	NA	NA	1.0	--	NA	NA
DEVELOPMENTAL EDUCATION PERFORMANCE						
Percent of students originally placed into DevEd *math* who passed at least one DevEd math course	65%	-	NA	100%	11%	96%
Percent of students originally placed into DevEd *math* who are college ready	53%[ii]	54%[iii]	NA	100%	NA	82%
Percent of students originally placed into DevEd *reading* who passed at least one DevEd reading course	88%	-	NA	100%	14%	-
Percent of students originally placed into DevEd *reading* who are college ready	64%	72%	NA	100%	NA	91%

COLLEGE PLACEMENT TEST GAINS						
Percent of students taking *math* College Placement Test (CPT) 2+ times who improved their score[iv]	NA	31%	NA	100%	NA	74%
Percent of students taking *reading* CPT 2+ times who improved their score	NA	16%	NA	-	NA	63%
GATEKEEPER COURSE PERFORMANCE						
Percent of students passing gatekeeper course in *math*	14%[v]	1%	NA	69%	NA	NA
Percent of students passing gatekeeper course in *reading*	49%[vi]	1%	NA	61%	NA	NA
Percent of students passing gatekeeper in *CTE* area	7%	43%	NA	64%	NA	91%
College Success						
Percent of students passing any college course	76%	46%	NA	98%	NA	96%
Average college credits earned	6	25	NA	51	6.5	53[vii]
Average CTE college credits earned	3[viii]	27	NA	17	1.3	NA
Average college GPA	2.15	1.99	NA	3.36	2.38[ix]	2.57
GATEKEEPER COURSE PERFORMANCE						
Percent of students earning certificate	NA	3%	85%	23%	NA	47%[x]
Percent of students earning degree	NA	3%	7%	9%	NA	0%
Percent of students completing BT	66%[xi]	56%[xii]	85%[xiii]	29%[xiv]	32%[xv]	47%[xvi]
EMPLOYMENT						
Percent of students who moved into BT related jobs during/following program	NA	NA	72%	21%	NA	0%
Percent of cohort employed in a BT related job	NA	NA	72%	100%	NA	40%[xvii]

[i] Sample cohort only (August 2007)
[ii] Based on percentage of students who are college ready from 060/090 cohort
[iii] Based on requirements for entry into Carpentry pathway

[iv] The figures in College Test Placement Gains are based on very small sample sizes (n)
[v] Of the 57 who tested into developmental math
[vi] Of the 42 who tested into developmental reading
[vii] Cohort that began in 2008 has only had time to earn an average of 6 credits; they are included in this calculation.
[viii] Figure shown is the average of credits earned for 17 CTE students
[ix] Figure shown is an average of the cohort GPAs
[x] 2008 cohort not included; they have not had time to earn certificates or degrees or complete the BT program
[xi] Defined as students completing 2 levels of developmental education in 1 semester
[xii] Defined as students who completed initial accelerated course(s)
[xiii] Defined as students who earned an STNA certificate
[xiv] 24 Manufacturing students and 2 Business students earned degrees and certificates and were considered BT completers.
[xv] Defined as students who completed 2 terms of initial MOTT courses and enrolled at PCC for at least one of the three subsequent terms.
[xvi] Defined as students who earned a certificate
[xvii] Does not include 2008 cohort

Access and Participation

The BT initiative is designed to serve low-skilled adults with an emphasis on groups traditionally underrepresented in higher education. Figure 5 shows most of the leadership colleges were enrolling students representing the adult target population of 23 years of age or older. Nearly all the students enrolled at SEARK, OCTC and CNM fit this category. Interestingly, all three of these sites employed the Career Pathway model where students are recruited into a pathway program with accelerated developmental education that leads to a PTE program and credentials. Two-thirds of the students in the BT program at Tri-C fit this age description. This program utilized a bridge model that also emphasizes gainful employment, providing students with the opportunity to continue their education after assuming an entry-level position. The lowest proportion of adult students appears at the two community colleges offering Developmental Bridge programs (CCD and PCC). Just over half of the PCC students and one-third of CCD students were 23 years of age or older. Both of these programs were targeting low-skilled learners who require extensive developmental education and support services to help them select career path. Though speculative, it's possible that the blending of developmental education with career exploration appealed to younger learners who were uncertain of employment options.

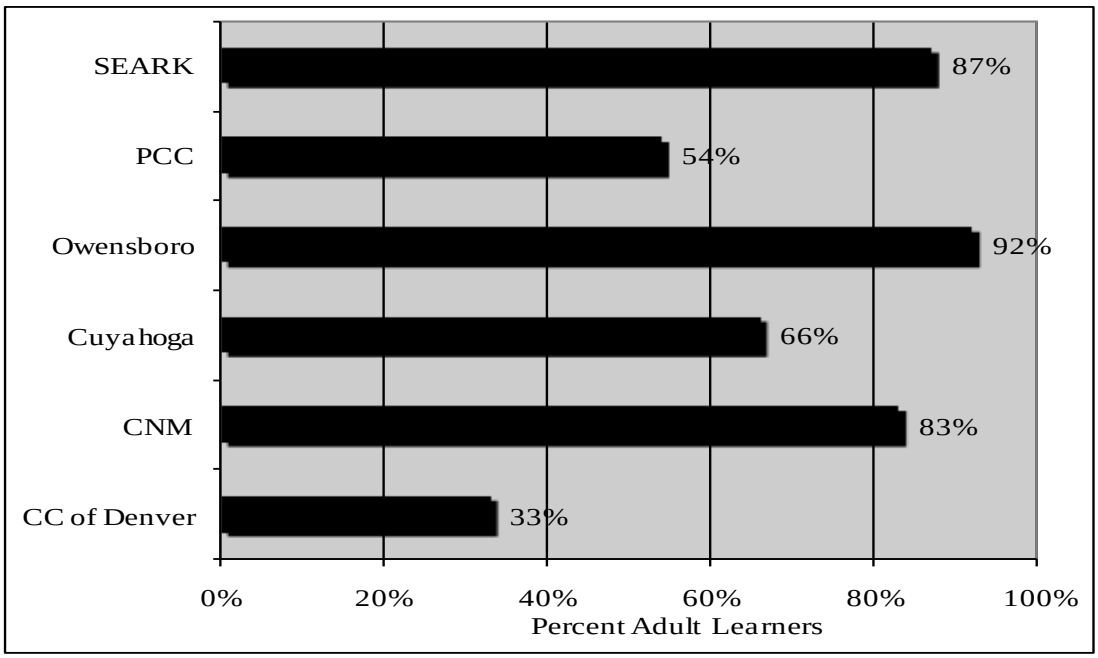

Figure 5. Percent of BT Students Who Were Adults (23 or older) on Entry to Program

Figure 6 shows the number of students who entered the BT programs without a high school credential or the GED. Despite the majority of students served by BT having achieved this milestone before entering BT, test data showed most students were not college ready. Like many other recent high school graduates and adult leaders entering community colleges in the U.S., instruction in foundational academics is needed to assist students to meet the requirements for entry into PTE or other college level programs.

Most BT programs served large numbers of minority students. The exception was programs located in communities where low numbers of minority groups reside. With regard to the gender composition of the BT population, the two colleges offering the Developmental Bridge model enrolled slightly over 60% women, a proportion that is aligned closely with community college enrollments in general. The gender balance of the BT programs at the PTE Bridge program and the three Career Pathway colleges was influenced by the PTE program of study in which the students enrolled, with more women enrolling in health careers, and more men in construction and manufacturing.[4]

[4] We had hoped to use Pell grant recipient status as an indicator of socio-economic status. It appears, however, that students were not consistently offered access to Pell grants making it an inadequate indicator of income level.

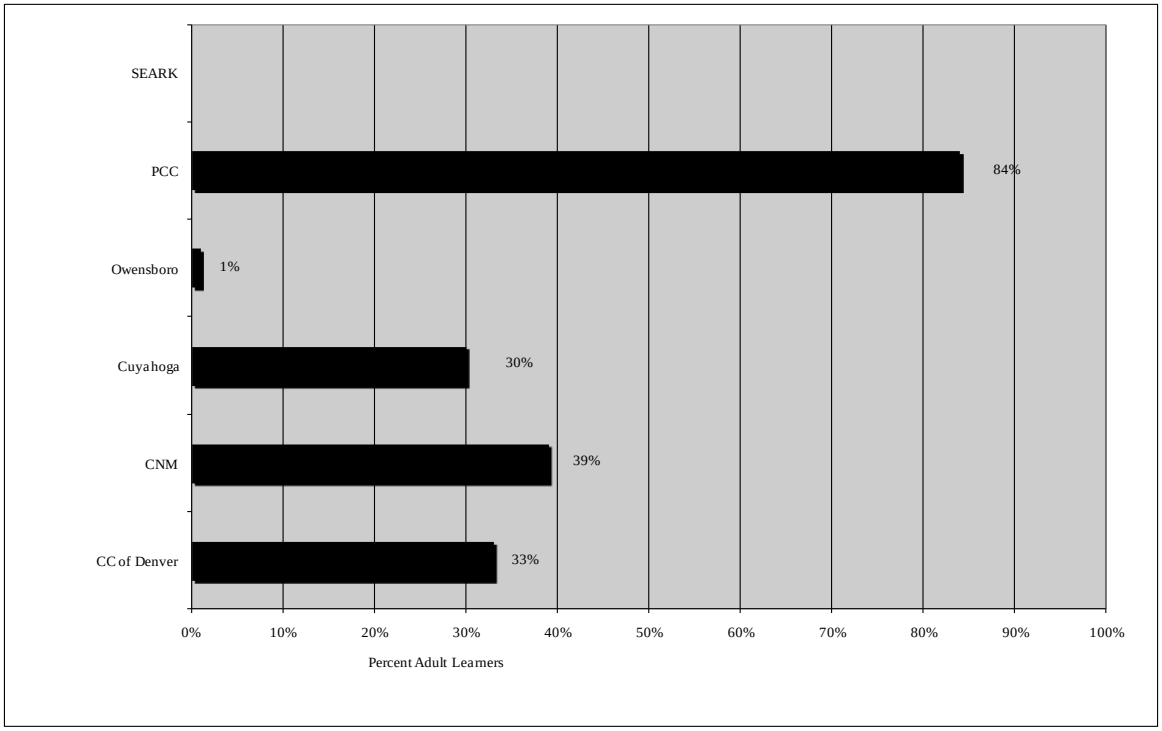

Figure 6. Percent of Entering BT Students Without a High School Credential or GED

Learning Gains: TABE and Developmental Education

Of the six leadership colleges, only two administered the TABE and very few students took it two or more times. Rather than emphasizing ABE/GED level, the majority of the BT sites employed the developmental bridge and career pathway models that began with an instructional sequence that offered contextualized developmental courses. Because of the low number of sites employing TABE, we cannot draw cross-site conclusions about learning gains associated with TABE scores.

More information is available about student progress in developmental math and reading. As mentioned above, students took developmental education courses at all but one leadership college as part of their BT program experience. In most cases, the students made progress with gains evidenced by their improvements in college placement test scores, or by considering the proportion of students passing one or more developmental education courses. Four of the leadership colleges (CCD, CNM, OCTC, and SEARK) provide sufficient data to conclude that large percentages of students originally placed into developmental education became college ready in both math and reading, as shown in Figure 7.

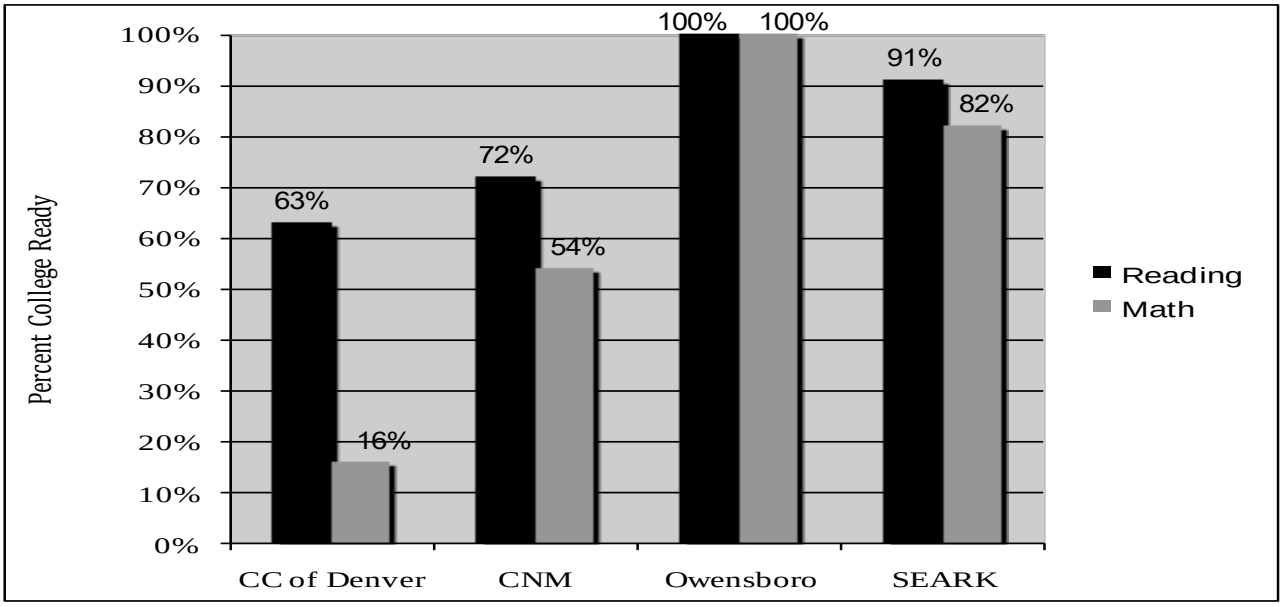

Figure 7. Percent BT Students Passing One or More Levels of Developmental Education and College Ready

Gatekeeper Courses and College Success

Four of the colleges (CCD, CNM, OCTC, and SEARK) were provided data on students who took gatekeeper courses in math, reading, and PTE. Clearly, many students progressed into these gatekeeper courses as shown in Figure 8. The majority of these students also passed at least one college level course. At two colleges, almost all completed this milestone. With regard to college credit accumulation and college GPA, there was wide variation. At the five colleges with data on credits earned, the average credits accumulated per student at the time of the report ranged from 6 to 53, reflecting differences in program design combined with the academic qualifications of students served. Student average GPAs at these colleges ranged from 1.99 (C) to 3.36 (B+).

Acknowledging the promising outcomes of some colleges, it is important to recognize that it is difficult to draw cross-case conclusions or make direct comparisons among colleges for several reasons. First, some of the sites were enrolling students had joined the BT program quite recently and had not yet had time to enter gatekeeper courses by the time data were collected. In addition, there are wide variations in the academic skills of students entering BT programs, with students needing considerable time to matriculate through the course work, even with accelerated pacing of instruction. Thus, some students may need a longer time before they qualify to enter college courses than others. Finally, PTE gatekeeper courses vary widely in the prerequisite course requirements, with some requiring substantial course work even within the same PTE field [e.g.,

nursing requiring considerable prerequisites versus certified nursing assistant (CNA) requiring minimal or none.]

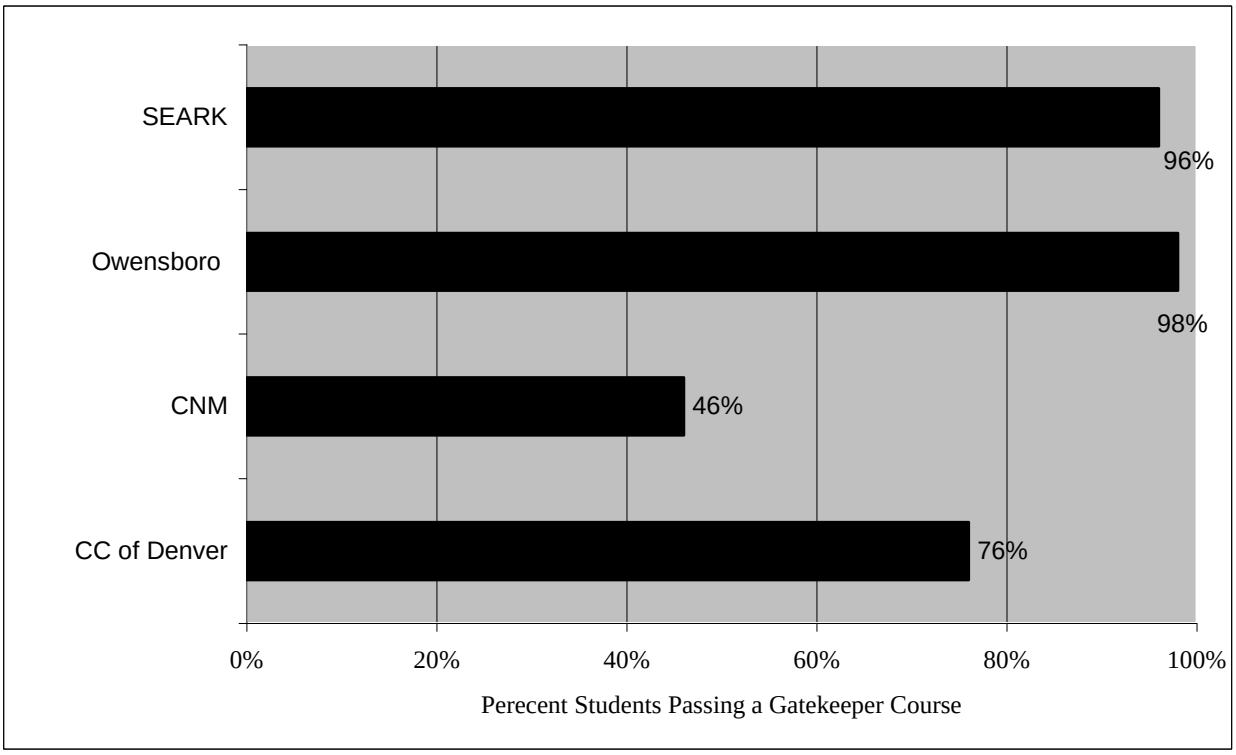

Figure 8. Percent of BT Students Passing a Gatekeeper Course

Credentials Earned, BT Completion, and Employment

The three colleges (CNM, Tri-C, and SEARK) implementing the Career Pathway model, as well as the one college using the PTE Bridge model, enrolled BT students who earned certificates, with a few students earning degrees. Logically, program leaders at the two Developmental Bridge colleges did not report this information since they do not consider PTE course work a part of their BT programs (i.e., these BT programs prepare students to enter the PTE curriculum). The largest number of certificates was in the short-term program in health care at Tri-C and the LPN program at SEARK, and with the career pathway program in manufacturing at OCTC completing a sizeable proportion of manufacturing students. Three colleges (CNM, Tri-C, and OCTC) enrolled students who completed the BT program who then went on to complete degrees. Once again, it is important to remember that many other students are likely to complete certificates and degrees in association with their enrollment in BT, but need more time. At the time of this report, many students had been enrolled in BT for one year or less.

With regard to employment outcomes, only three colleges (Tri-C, OCTC, and SEARK) reported employment-related data on their students. For those providing employment data, substantial proportions of BT students or completers were employed in BT related jobs by the end of the program.

CONCLUSIONS AND RECOMMENDATIONS

Evaluation results collected over the two-year period of 2006-2008 showed the Breaking Through (BT) initiative has demonstrated considerable success in meeting its goal of enhancing access to college for low-skilled adults. The evaluation of the six leadership colleges and ten learning colleges geographically distributed throughout the United States produced important insights into implementation of educational programs for low-skilled adults enrolled in community colleges. The designation of leadership college versus learning college represents an important idea. Identifying community colleges that had begun to engage in local program development as leadership colleges and of providing them with financial resources, information, and support to bring their ideas to fruition has had a lasting impact on the entire initiative. Mingling leadership colleges and learning colleges generated a high level of energy and enthusiasm for BT. Another tenet of BT, the notion of encouraging peer learning, provided the fuel to support collaborative dialogues among the community colleges engaged in BT, with semi-annual peer learning meetings playing an especially vital role in creating a common language and conceptual framework to serve the target population.

Fundamental to BT is implementation of four "high leverage" strategies: integrated institutional structures and services, accelerating the pace of learning, labor market payoffs, and comprehensive supports. Implementation of these strategies was expected to meet students' needs, help institutions overcome barriers, and favorably influence institutional change. The four high leverage strategies were evident in all six leadership colleges, though some strategies were more present in some community colleges than others. Advancement was evident from year one to year two, especially in the area of accelerating the pace of learning

Status of the Outcomes Evaluation

The evaluators developed the data collection process and analysis framework in the spring of 2008. Due to the hard work of program leaders, we were able to obtain a considerable amount of information on student characteristics, progress through BT, and attainments. At the same time, due to the late start and difficulties with locating all of the desired data points, the data set is incomplete and does not permit a full understanding of student outcomes under BT. All the same, it is a huge step forward and offers valuable information that can be used in moving the initiative forward.

We learned a great deal through this process. The program designs at each college became clearer, to them and to us, as they clarified their goals and identified key milestones for students progressing through pathways. The process also revealed the unique challenges of data collection that spans disparate internal data collection systems within colleges. We hope that awareness of these differences will contribute to local, state and national discussions about the creation of compatible data systems. Further, several program leaders became more data-savvy in the process of working with the evaluators on completing their templates. In addition, the evaluators learned more about the data points that are readily available and those that are not.

Future evaluations of BT and related initiatives will be more effective due to the lessons learned, as well as improvements to data collection and analysis systems that will be possible due to our collective experiences here.

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[i] sample cohort only (August 2007)