

THE BREAKING THROUGH PRACTICE GUIDE

Accelerating the Pace of Learning

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ACCELERATING THE PACE OF LEARNING

Introduction

Perhaps the most formidable barrier facing the adults targeted by *Breaking Through*—those with lower than eighth-grade levels of reading and math—is the long time it takes to close the gap between their current skills level and the level needed for college work. This gap deters many adults, both young and old, from seeking further education, and causes many others to drop out before completion.

In analyzing the factors responsible for lengthy remediation, the 2004 *Breaking Through* report focused first on pedagogical issues: how remediation is provided (Liebowitz & Taylor 2004). Three factors related to instructional method and content appear to contribute to the problem:

First is the fact that almost all adult remediation is provided in sequential courses: a student must take and pass each course before moving on to the next one. For students in need of serious remediation, the number of courses that must be taken sequentially adds up to a long time before the student becomes eligible for credit-level college coursework.

The second factor is how instruction is provided inside the classroom. Usually, adult remediation is taught with a one-size-fits-all approach, and all students receive the same attention from the teacher. But adult students vary widely in a number of dimensions. These include, among others, their career interests, learning styles, and extent of academic preparation (for example, some never received any instruction in fractions, some have forgotten what they learned, and some have mastered the concept). Nevertheless, each student sits through the same lesson taught the same way. For some students, all that time is needed. But for many others, the time is wasted.

The third factor is that adult remediation is often provided in the abstract, without context. For many low-skilled adults, this approach did not work well the first time around, when they were in school, and it is even less compelling—even more forbidding—the second time around. The result is low motivation, low persistence, and often several starts and stops.

Accordingly, the *Breaking Through* report recommended this high-leverage strategy: accelerate the pace of learning. In practice, *Breaking Through* programs have addressed the challenge of reducing the time it takes adults to complete education in three ways:

- > They compress the material for two or more courses into the time span of one course—an approach sometimes called “accelerated learning.” Some *Breaking Through* colleges have had great success with it, but they also have learned the importance of identifying students whose skill levels and life situations enable them to benefit from what is often a very intensive approach.
- > They customize the content and delivery of remediation to meet individual students’ needs. *Breaking Through* colleges have created innovative practices that can be implemented by instructors in single classrooms.
- > They contextualize remedial content for the occupation or industry in which the student seeks to advance. For students seeking career and income advancement, contextualization provides strong motivation and often makes abstract concepts like fractions easier to understand.

The goal of all of these acceleration approaches is to expedite students' completion of precollege skills or training courses so that students can enroll in courses and programs that lead to higher wages and career advancement. Moreover, acceleration aims to motivate students to persist; help students retain focus; maximize efficiencies; and provide content in a meaningful context for students.

Compression: Adapting Accelerated Learning Strategies for Low-Skilled Adults

Colleges are under pressure to meet the needs of working adults seeking postsecondary degrees—individuals who have less time and money than traditional college students to invest in education. Accelerated learning responds to this pressure: according to the Commission for Accelerated Programs (www.capnetwork.org), it reduces “programs in both duration and contact hours as compared to the traditional semester degree program.” For example, a sixteen-week course may be compressed to five weeks, or class time halved from forty hours to twenty.

The term “accelerated learning” emerged in the 1970s as education professionals began developing a better understanding of the unique needs and interests of adult learners. Initially, acceleration strategies targeted K-12 students, with the implementation of Advanced Placement exams and dual enrollment policies. Yet as Raymond Wlodkowski, former director of the Center for the Study of Accelerated Learning at Regis University, writes, accelerated programs are so popular in higher education now that “any postsecondary program targeted for working adults has either started or considered the initiation of an accelerated learning format” (Wlodkowski 2003).

One challenge is how to design and implement compressed courses that speed up student learning without compromising academic rigor, teaching quality, and the retention of concepts that students need to advance to the next education/training level. There is evidence that adults in these programs “learn satisfactorily and in a manner that meets the challenge of conventional college coursework,” writes Wlodkowski. “These adults also consistently report a positive outlook toward their accelerated learning experience” (Wlodkowski 2003). Since the 1960s, research has compared the learning outcomes of compressed versus traditional-length courses, with many findings in favor of compression (Bowling, Ivanitskaya, & Ries 2002). A comprehensive literature review by Patricia Scott and Clifton Conrad (1991) concluded that compressed courses yield short-term and long-term learning outcomes that equal and sometimes surpass those produced by traditional courses. Scott and Conrad also concluded that compressed courses are effective across academic disciplines. Eileen Daniel's (2000) review of time-shortened courses validated these conclusions.

However successful accelerated learning strategies may have been, they were usually limited to “college ready” students. The challenge that *Breaking Through* colleges have taken on is to adapt the accelerated learning strategy for low-skilled adults.

Compressed courses can motivate low-skilled adults because students are able to complete more coursework in a shorter amount of time. When students see progress—advancing their career and academic goals—they are often more likely to be retained and enroll in additional courses. Moreover, students often feel a sense of pride about being enrolled in fast-paced courses, which can help counteract the stigma that may be associated with precollege skills courses. Some students view compressed courses as a kind of “boot camp” requiring focus and discipline.

Support services are crucial for many low-skilled adults facing multiple life and academic challenges. Students in compressed courses may need even greater supports because of the intensity in time, workload, and content. Some supports offered to students in compressed *Breaking Through* courses include learning communities/cohorts to develop a sense of connection to the college and peer support; instructors as “coaches”; employer beneficiaries of the program providing tutoring; student advisors; and case management. Compression without adequate supports may compromise students’ success in these programs. Student support is addressed in detail in “Providing Comprehensive Support Services.”

Compressing courses can lead to efficiencies. For example, compression that combines sequential courses (e.g., combining low- and medium-level math courses) diminishes the need to recap what had been covered in previous courses and eliminates the break or time off between courses, which sometimes leads students to forget content. When compression includes block instruction, instructors can reduce the time associated with administrative tasks at the beginning and end of each class; instructors have more time to develop a rapport with students; and students can focus on school during the concentrated time, instead of succumbing to competing time demands from work or home. Ultimately, because compression requires that more content is covered in a shorter amount of time, it results in dense and intensive instruction that focuses on teaching the most important skills, streamlined content that avoids duplication, a heavier homework load, and an impetus to ensure that instruction is highly effective.

There is a limit to how much compression most low-skilled students can handle at one time. Specifically, CCD suggests that students accelerate either in math or reading, but not both, because that is too demanding. There is evidently a tipping point: some acceleration is motivating for students and they rise to the increased challenge, but too much acceleration can result in students becoming overwhelmed and potentially failing the course. Intake interviews and case management may help to find the right balance of compression for each student. The goal of intake for compressed courses is not a matter of “screening out” students, rather, giving students information so that they can make informed decisions about enrolling, taking an honest look at their challenges, time, support, and motivation.

Community colleges will need to carefully consider the skill-level bar for compressed courses, weighing the interests of inclusion and success/completion. One college found that compression worked with the second level of developmental reading, but not with the lowest level (CCD). By contrast, another college was able to compress with students at a fourth-grade skill level, and saw tremendous gains, with some students able to do algebra by the end of the course (SEARK). Setting the skill bar too high and not compressing this low-level course would have excluded these students from the benefits of compression. When determining the course skill level to compress, community colleges may want to consider the content of the course/program, the cohort of students in terms of needs and motivation, and the level of support services available.

Faculty members sometimes challenge the notion that speeding up instruction is preferable or even possible. This resistance may be even more pronounced when advocating compression for low-level courses. Good data demonstrating the superior gains of students in compressed precollege skills courses can deflate faculty resistance. Data may include measures of time in class, pre- and post-achievement levels, retention and persistence, and success in subsequent courses. Another strategy to obtain faculty support is to include them in peer learning meetings so that they learn more about the approach and programs that have been successful using it.

COMPRESSION AT *BREAKING THROUGH* COLLEGES

Central New Mexico Community College's *Breaking Through* program includes a six-week intensive bridge program incorporating both the development of precollege skills and an introduction to the construction trades. Rolling enrollment dates increase the opportunities to enter the program, a flexibility that is especially important for students who must meet parole conditions or Temporary Assistance for Needy Families (TANF) requirements. Students take one or both of two six-week blocks.

In each six-week block, the bridge program covers the reading and math content that students would have received in the semester-long lower-level developmental courses to which they were assigned based on ACCUPLACER test scores. The six weeks also incorporate a focus on employability skills and college success through two additional courses. Finally, students take several survey courses about various construction trades such as carpentry, electrical systems, heating, and air conditioning. Students appreciate the hands-on component of the program.

The college's Developmental Studies and Applied Technologies faculty collaborate to decide what will be taught in bridge courses and how to implement them. The courses are offered as "special topics," which means the college's curriculum committee does not have to approve them. This provides considerable flexibility in adapting courses to meet student needs. The inclusion of an enrollment-services staff member on the *Breaking Through* team is instrumental in addressing scheduling issues and administrative challenges.

Students receive "institutional credits" (credits that do not count toward a degree) for the basic skills courses, which are precollege level; they receive one elective credit hour for the employability class and each of the two three-week trades courses held within each course block, since these are college-level classes. Thus, students qualify for financial aid, even though they do not earn credits toward a college certificate or degree.

Staff and faculty members are committed to adapting the program to help students succeed. Given the intensive nature of the *Breaking Through* program, "achievement coaches" help students access additional academic or social supports. The shorter time frame and the additional supports help even struggling students finish at least one six-week cycle. In general, students report that the accelerated format enables them to gain more content in less time.

Community College of Denver's FastStart@CCD program accelerates learning by compressing two to four levels of developmental math, reading, or English into one semester. The content in the accelerated developmental courses covers the same competencies as the traditionally paced courses, while the increased pace translates into a heavier homework load. Students receive additional support for their academic courses in the form of study groups with their current class peers and instructor. They also receive ongoing personal and academic support from an educational case manager, including referrals to community supports, and from the college's academic-support services, including access to learning labs and assistance from student ambassadors.

The program case manager interviews students interested in FastStart to familiarize them with all learning formats and class offerings and helps them make informed decisions about participation, as the courses



Tip: Include employability skills in accelerated courses to help students make the connections between school and work.

are time and workload intensive. Students who find the pace too challenging transfer to a regular-paced developmental class or join a self-paced course. A student who stays with the accelerated course but is unable to finish it during the semester may drop the second course in the sequence, reregister, and pay tuition the following semester. Students are advised about the implications of different formats during the intake interview so they can make informed decisions.

During the intake interview, the case manager also helps students assess whether an accelerated program is the best choice for them, based on their personal goals, as well as their work and family situation: number of hours worked, stable housing, and any other aspects of the students' lives that would impact the ability to succeed in an accelerated format. Front and center in this assessment is whether the student has the motivation to pursue an accelerated path.

North Shore Community College is developing a six-week, noncredit, intensive preparatory course, building on a two-week prep course it already offers. The current course acts as a “bridge,” linking ESL students (both intermediate and advanced) to the first credit-level class in a program leading to a Child Development Associate (CDA) credential. The bridge course introduces students to the major themes and concepts in the CDA class, reviews vocabulary, and presents class content that builds on knowledge gained in the CDA/ESL track. Faculty from the credit courses help familiarize students in the prep course with what they can expect as they move forward. An ESL lab and a mobile lab use cutting-edge technology and audiovisuals to aid instruction.

The credit-level CDA classes are compressed: the first lasts ten weeks, using four-hour modules. The two higher-level CDA courses are combined into one intensive offering, which reduces duplication, allows for more hands-on instruction, and improves retention. Previously, some students struggled with the advanced CDA course and often dropped out; the more hands-on, integrated course addresses these difficulties and reinforces the early-childhood content. Students receive six credits for the integrated course, which can go toward their Associate's degree.

The Community College of Denver also uses compression in its College Connection program, which serves GED recipients who test into developmental English, reading, or math and want to enroll in college courses. The program is offered for eight weeks or one semester on a credit or noncredit basis, with a minimum of 110 contact hours. The developmental education curriculum includes math, integrated reading/English, technology, and a one-credit college-experience course incorporating goal setting and career exploration. There is a focus on honing critical thinking skills and exposing students to a college atmosphere and college material to build their confidence in their ability to succeed in college. Some supports offered in the program include learning communities; study skills development; study groups; and “navigators” who function as advisors and assist with financial aid, registration, and career exploration/planning and are readily accessible to support retention.



Tip: Identify which courses can be accelerated yet still allow enough time for students to master content material.



Tip: Assess how the student fits with the program; make sure they are ready for an intensive program, and have a fallback option if they are not ready.



Tip: Introduce hands-on learning in integrated classrooms; it can be easier, for example, to mix students of varying skill levels in vocational, hands-on ESL than in traditional classroom ESL.

Southeast Arkansas Community College, Arkansas

CREATING A COMPRESSED, CONTEXTUALIZED PATHWAY FOR ALLIED HEALTH

When Southeast Arkansas Community College joined *Breaking Through* as a leadership college, program staff knew they needed to address developmental education. At the time, 95 percent of students entering SEARK needed remediation, and many were dropping out or using up their Pell Grant eligibility and funding before advancing to credit-bearing courses. SEARK staff considered asking the college's adult education providers to provide remediation for low-skilled students; after all, adult education courses are free. However, the adult education providers did not want to enroll students who already had high school credentials, which included many of the *Breaking Through* students. Also, that approach would do nothing to preserve students' Pell Grant funds.

- ☑ Determine what type of basic skills education to contextualize and accelerate. At SEARK, starting with developmental education made the most sense. Depending on the relationships across adult education providers, workforce development departments, and the college, it may work better to contextualize adult education courses or add basic skills to workforce education.

SEARK staff chose nursing and allied health as the content for contextualization. The school has had a nursing program for many years, and the region has a strong demand for health care workers. SEARK wanted to accelerate the nursing program just as it had for students in the college's Fast Track Developmental Education program, who advanced beyond remediation quickly.

- ☑ Focus on career fields that are in demand and in which the college has expertise.
- ☑ In redesigning the pathway to career credentials, accelerate not only the technical training but also the on ramps to each step of the pathway.

With the new program, students complete two to three semesters worth of remediation in one term, all contextualized for nursing and allied health. The next year is devoted to an accelerated nursing or allied health program. The traditional nursing pathway took at least three years—three semesters of remediation, two to complete general education requirements, and a year and a half of nursing coursework. Students can complete the new sequence in just three semesters

- ☑ Remind students of the payoffs that come from fast-tracked courses. Support staff can reinforce the importance of persisting through the program.

- ☑ Compress courses in terms of time, not content. At SEARK, the content is the same as the traditionally paced courses. In some cases, the program includes extra content to better prepare students for the workplace.

Program staff demonstrate to students the relevance of what they are learning to their future employment. Instructors draw content from the national NCLEX tests that are part of the requirements for earning nursing credentials. Reading assignments have nursing and health care themes. Employers also play an important role in showing students how their learning will pay off, and in some cases employers referred incumbent employees to the program. Working nurses also visit classrooms to show how skills learned in the contextualized program translate to the workplace.

- ☑ Use "field specialists" to demonstrate how classroom learning applies to the skills needed for work.
- ☑ Engage industry employers to review and refine career pathway maps.

The Community College of Denver's accelerated ESL program features a learning community and reading, writing, and speaking in one block, offered three hours per day and three days per week. There are intermediate and high levels in the program. Graduates from the program go into compressed reading/writing courses. Using this approach, students complete more courses faster, thereby improving retention because they feel successful.

Macomb Community College uses compression in a bridge to career-training classes called the Basic Skills Upgrade Program. The program targets adults, some of whom are displaced workers, with fourth to eighth grade reading/math levels that are too low for workforce training programs. The program contextualizes the courses for life themes and common work skills such as resume writing. The program is ten hours per week of intensive instruction using direct and computerized instruction. Students can continue the computerized instruction outside of class, enabling them to accelerate faster. Upon completion of the program, a counselor works with students helping with the career search and providing referrals to a noncredit certificate trades program, an academic course at the college, or another program in the area.

Tacoma Community College's I-BEST program accelerates the pace of learning by teaching basic skills or ESL and technical content concurrently. The integrated, industry-specific courses are cotaught by an ESL/ABE instructor and a professional/technical instructor. Students are able to build their basic skills and/or English language proficiency while they prepare for a certificate or degree, rather than having to wait to enter their chosen program of study. Students have access to a student support specialist while they are in the I-BEST program; more on Tacoma's support services can be found in "Providing Comprehensive Support Services."

Pamlico Community College helps students complete remedial math requirements more quickly by combining a pilot developmental course in basic math with an elementary algebra course for those testing below college level in math. Upon completing the new course, students retake the college placement test. All of the students in the small group that participated in the *Breaking Through* pilot placed into college-level math.

Customization: Adapting Differentiated Instruction Strategies for Low-Skilled Adults

As early as the 1980s educators began exploring ways to apply research suggesting that providing equal educational opportunities does not mean teaching all students in the same way. Concurrently, advances in technology were providing teachers with the means to customize lesson plans for individual students. "Teaching to the norm," or standardized instruction, was failing to meet the spectrum of developmental needs inherent in diverse classrooms. Tailoring instruction to lesson plans often forced educators to "teach to the middle of the class," presenting the remaining students with either too much or too little intellectual challenge. At the same time, K-12 practitioners were questioning the traditional "one-size-fits-all" teaching approach as the increasing cultural diversity in classrooms highlighted each student's unique set of learning needs, abilities, and interests.

Differentiated instruction emerged in K-12 education as an innovative approach to maximizing the learning potential of all students through "student-centered" teaching. Simply stated, differentiated instruction responds to learner variance. Teachers first assess each student's readiness levels, interests, and preferred modes of learning. Based on these assessments, teachers modify what and how they teach, the tools they use, and the "temperature" of the learning environment. Ideally, differentiated instruction can empower teachers to reach each and every student wherever he or she is in the learning process.

While differentiated instruction has been a hot topic in elementary and secondary education for over 20 years, it is fairly new to adult education. Adult educators are now exploring how customization can benefit learners of all ages and skill levels. Customizing instruction for individual students has proved especially valuable in *Breaking Through* colleges, where adult learners are far more diverse in learning needs than is typical in K-12 classrooms. As noted, remediation needs may also vary significantly, from students who were never exposed to a critical concept to those who have mastered it. Customizing instruction gives colleges a way to address this diversity. While more empirical research is warranted to assess student achievement and teacher effectiveness in programs using customization, *Breaking Through* programs are showing promising results.

CUSTOMIZING LEARNING FOR DIVERSE LEARNERS

Davidson County Community College basic skills instructors have created customized learning plans for their students by taking college-level texts from introductory occupational courses and extracting the parts applying to basic skills competencies (e.g., fractions, paragraph development). Instructors emphasize that students are doing college-level work, which can increase students' motivation and confidence that they will be successful in college. The relevant portions of the texts, kept in a three-ring binder, are organized by basic skills competencies and occupational areas. Instructors receive training in using these resources to pull out readings and assignments for each student based on his or her skill gaps and occupational interest, identified in a survey completed by each student at the beginning of the course. Because the binders are accessible in the classroom, teachers can easily customize instruction. This is particularly important when students in a classroom have varying career interests and skill needs.

Davidson County Community College also uses customization in its Achieving College/Career Entry (ACE) program, which serves college students who test into the lowest levels of developmental education. The program expedites students' completion of remediation by targeting specific skill deficiencies. ACE uses the TABE (Test of Adult Basic Education) to ascertain students' grade-level of functioning, obtain a benchmark, and determine where to focus skill development. Small groups, computerized instruction, and individualized texts are some of the approaches used in the classroom. Students can receive extra assistance from peer tutors, professional writing and math coaches, and a Learning Assistance Center. The program averages three to four months for precollege skill development, and offers students the ability to dually enroll in ACE and developmental education or college-level courses.



Tip: Use the requirements of higher-level training courses and occupational competencies to shape the curriculum development of introductory courses.

Owensboro Community & Technical College has three modes of delivering customized instruction to adult learners:

- > Delivering preparatory remediation in short-term blocks to students whose low math or reading skills would otherwise prevent them from entering a training program in the upcoming term.
- > Providing “pull-out” remediation to students identified by instructors as failing to grasp a particular topic. A remedial instructor works with the selected students, who are pulled out of regular class for a short-term series of lessons. For example, students in a welding class who are struggling with angles and degrees can get quick lessons on these concepts within the welding context.

- > Early on, the college provided easily accessible Web-based remediation through SkillTrain, its self-paced learning center. Now, through intensive enrollment management strategies, staff can provide assistance to students as needed. Students who have weak computer skills also receive help from students who have strong skills.

Building on its SkillTrain capacity, Owensboro developed a hybrid developmental math course that combines instructor-led workshops with self-paced computerized instruction. Owensboro also uses Web-based courses to provide customized, college-level, technical instruction. All Web-based instruction is accessible through one resource center, which is supported by staff and open during flexible hours. Students can work toward the Industry-based Modularized Accelerated Credential. The IMAC program offers each adult learner the ability to learn at his or her own pace, complete Web-based coursework anytime and anywhere, and demonstrate—and receive credit for—knowledge already attained. In this competency-based model, students spend less time reviewing what they already know. By customizing learning for these students, the college has dramatically improved retention rates.

LaGuardia Community College, which sees a wide range of academic skills among students entering its bridge programs, customizes its program and instruction to meet their needs in several ways. For example, in math learning stations, students work independently on exercises while the instructors assist individual students when appropriate. Students engage in self-directed activities at varying degrees of difficulty. When learning how to calculate area and perimeter, for example, students choose among three exercises at different levels of difficulty. They can move up a level if they feel confident, or do a lower-level skill-building exercise if they are struggling. Students complete a “reflection” sheet on different math exercises, identifying their skill gaps. Because students select their own activities, they feel more in control of their education and do not perceive the customization as “tracking.” Students also work together to fill in knowledge gaps and help complete the problems.

Many of the resources used in the classroom are created by the instructors based upon students' career interests. To customize lesson plans appropriately, instructors must be well versed in each student's needs and goals. Also available is a computer-based writing lab where the instructor rotates among students and helps them individually. In addition, extra materials and assignments are always available to allow students to do more advanced work.



Tip: Make acceleration strategies student-centered, utilizing a variety of remediation approaches to meet students' diverse needs.



Tip: Identify strategies that mitigate a student's fears associated with starting an accelerated program, which has been acknowledged as one barrier to enrollment..

Pamlico Community College, because it is small, has utilized a “one-room school” approach in its adult education/basic skills program for more than a decade. With a rich learning environment blending many forms of media, students proceed at their own pace and draw on varied learning techniques, including working with an instructor, using video resources alone or in groups, making presentations, working on computers to do research or take tests, and learning as a group. An important element in the classroom is encouraging students to find their strengths and become teachers to other students who may need help in that particular area.

Another way that Pamlico customizes learning is by offering targeted instruction to students who lack some of the required academic preparation for courses they wish to take. For example, a noncredit on-line occupational math course helped prospective paramedic students brush up on math and cover material usually dealt with in the basic math and elementary algebra classes. The course included live tutoring sessions. All students enrolled in the pilot courses placed into college-level math at its conclusion.

TECHNOLOGY AS A TOOL FOR CUSTOMIZATION

A number of colleges utilize software and online programs to help them customize instruction for students.

North Shore Community College for example offers ALEKS, a computer-based mathematics tutorial program for students struggling with math.

Cerritos Community College utilizes Aztec software, which uses visual learning and can be accessed anywhere with an Internet connection. Teachers can easily monitor student progress and identify individual needs. The software works well for multilevel classes and ESL students.

Central New Mexico Community College students have access to KeyTrain during class time, which allows self-paced tutorials that are completed independently to address skill weaknesses. The WorkKeys assessment indicates which KeyTrain modules students should address. Students can continue KeyTrain work on their own, outside of class time. In addition, students can access the Math Learning Center to do skill building. A number of *Breaking Through* colleges use the WorkKeys assessment and KeyTrain; for more information, see the appendix.

Contextualization: Developing Contextualized Remedial Instruction for Low-Skilled Adults

The insight that some students learn abstract concepts better in an applied context is a venerable one. According to the adult learning expert Thomas Sticht (1995; 1997), the military conducted extensive programs in World War II aimed at providing recruits with reading skills of a functional nature. During the 1960s and 1970s, Sticht (1995; 1997) developed content-based literacy programs with specific content for recruits whose skills averaged on the fourth- to sixth-grade levels.

Interest in contextualized approaches to literacy instruction intensified during the 1980s and 1990s, in both secondary and adult education. The Carl Perkins Vocational Education Act of 1984 focused attention on using the content of vocational education to strengthen math and reading skills. Similarly, President Reagan’s

Adult Literacy Initiative of 1983, and subsequent interest from business groups in workers' literacy, laid the foundation for the Workplace Literacy Act of 1991. However, the Workplace Literacy Act was not renewed, and many have wrongly interpreted the Workforce Investment Act's distinctions between literacy and technical training as meaning that federal funds could not be used for contextualized learning. Still, despite challenges in federal policy, interest in contextualization among educators, researchers, and policymakers remains strong.

Sticht (1995; 1997) concluded that content-based approaches to literacy offer "the fastest way to get adults from basic literacy to entry-level competence in reading in some desired domain" such as job training. Contextualization provides an immediate application of learning to adults' career and education goals, which can help students remain motivated to continue their studies. An adult literacy teachers' manual recommends that classroom activities "directly relate" to learners' goals so that students can see the connection between literacy instruction and achieving their goals, increasing the likelihood that they will continue coming to class (McShane 2005).

Contextualization was one highlighted approach in a National Research Center for Career and Technical Education examination of best practices for helping low-skilled adults transition to career pathways (Park, Ernst, & Kim 2007). More recently, based on a careful reading of available research, the Center for Law and Social Policy recommended integrating adult education and postsecondary education and training in order to help low-skilled adults access high-demand occupations with good wages (Strawn 2007).

Anecdotal reports from students indicate their responsiveness to contextualized learning. For example, an applied developmental mathematics student at Central New Mexico Community College's *Breaking Through* program indicated that he learned the exact math skills needed for electrical work. He believed that he would have struggled in this course without the contextualized math course background. Similarly, a student in LaGuardia Community College's GED Bridge to Health Careers program said, "This is good to know because nurses really do that," while taking notes on a patient in a book using the same charting format a nurse would use. This career skill was blended with skill development in note taking, reading comprehension, and summarizing.

The Contextualization Toolkit

In 2005, many of the colleges applying to participate in *Breaking Through* indicated that they viewed the initiative's unrestricted funds as an opportunity to contextualize their remedial curricula. When asked to identify their primary technical-assistance needs, the colleges most frequently cited assistance in contextualization. Contextualization was a topic at every peer learning meeting of the initiative, and arguably the most fertile area for innovation among *Breaking Through* colleges.

Responding to this strong interest, *Breaking Through* has developed the Contextualization Toolkit, aimed at colleges seeking to develop their own contextualized learning programs. The Toolkit, which is part of the *Breaking Through Practice Guide*, is designed to help community colleges and other educators accelerate learning for low-skilled adults by integrating career subject matter with precollege skills development.

CONTEXTUALIZATION AT *BREAKING THROUGH COLLEGES*

Central New Mexico Community College uses contextualization in its accelerated bridge program focused on the construction trades. Students in the developmental reading course read a construction textbook and practice reading strategies (e.g., summarizing, note taking, outlining, mapping, identifying and paraphrasing main ideas, and learning word parts and vocabulary related to construction). Developmental math faculty draw heavily from a math textbook that is contextualized for the construction trades. Students solve real-life problems in the construction trades, such as calculating the area of a roof using the Pythagorean theorem, determining the volume of a concrete slab for a house, and interpreting scale drawings.

Community College of Denver has contextualized the FastStart@CCD developmental education program to career exploration; this helps adult learners identify the career pathways that best match their interests and goals. All daytime students at CCD enroll in a college experience course that is contextualized around career exploration and planning (evening students are not required to take the class concurrently as they tend to be working full time). The developmental reading and English courses also focus content on career exploration, including reflections about students' strengths and interests, informational interviews, interviews with individuals in students' careers of interest, and an "I-Search" paper documenting students' career research.

Davidson County Community College has contextualized its basic skills program (adult secondary education, GED, and adult basic education) in the areas of math, reading, and writing, using specific occupations and job areas: certified nursing assistant, pharmacy technology, phlebotomy, medical office worker, truck driver, automotive technician, HVAC, welding, and early childhood education. By completing these programs, community college students get a head start on their college-level career pathways content, while addressing basic skills deficiencies. The college uses contextualization to help motivate students to move into credit-level programs after obtaining their GEDs. Students receive the contextualized curricula if their aptitude and identified career interests correspond to curricula that have been developed. ABE and GED students have varying career interests, so they receive the contextualized curricula on an individual or small group basis. The college is developing contextualized content for several additional occupations and job areas: biotechnology, industrial systems, computer information, technology, business, motorcycle mechanic, and cosmetology.



Tip: Develop relationships with local employers to ensure that the program is providing students with the right skills to succeed.

LaGuardia Community College has contextualized its GED to College Bridge curricula using health and business/technology content. Each GED Bridge program operates as a single course, and the contextualized curriculum covers the GED subject areas, health or business/technology content, and career-skills training and exploration. Students develop GED-related skills, professional knowledge and competencies, and work-readiness skills. For example, in one activity in the GED Bridge to Business class the students conducted a community-needs survey, analyzed the survey results and other community data, and proposed a business or service based on the data. The skills addressed through this activity included number conversion, research and academic writing, and "entrepreneurship" skills. In another example, the GED Bridge to Health class required that students read an historical fiction novel chronicling the 1850 cholera epidemic. Students practiced critical reading and developed visual literacy skills as they mapped the spread of the epidemic and graphed modern epidemics for comparative purposes.

Davidson Community College, North Carolina

DEVELOPING CONTEXTUALIZED CAREER PATHWAY PROGRAMS

Davidson Community College's *Breaking Through* goal was to develop contextualized programs that would connect adult education, GED, and ESL students to credit-level career-pathways programs.

The first step was choosing what career pathways the program would develop.

- ☑ Meet with department chairs and associate deans on the credit side of the college to develop sector-based pathways.
- ☑ Assess local employment data: The local Workforce Investment Board was a good source of data and information.
- ☑ Determine the criteria for selecting a career field: At Davidson, the goal was to focus on career fields with good employment prospects in pathways that lead to certificates, diplomas, and/or college credit.

Once Davidson had identified its career fields, the next step was identifying the specific credentials students could earn. The for-credit side of the college and the Workforce Investment Board were good resources for this process as well.

Davidson started with the following credentials:

- > Health care: CNA level 1, medical office assistant, pharmacy technician
- > Child care: Child care center worker, public school teaching assistant, day care administrator
- > Transportation: Truck driver training, automotive technology

Davidson also recently added programs in heating and air conditioning, motorcycle mechanics, and cosmetology.

With the pathways created, the next step was to contextualize instruction to those career fields. (See the Contextualization Toolkit for detailed information about how Davidson developed its contextualized, customizable coursework.) The final step was to connect with basic skills students and recruit them into the pathway programs.

- ☑ Develop students' understanding of the credentials needed for a well-paying job in today's marketplace: This was especially important for recently unemployed factory workers.

- ☑ Ensure that students are focused on an area that interests them; A student orientation, including career assessments, helped ensure that students were making good choices. Davidson uses the MECA computer software to help students explore career options.
- ☑ Show students how the contextualized coursework related to more advanced technical training: By using materials from college-level texts, students began to see themselves as college ready.

With the pathways in place and the students recruited, Davidson piloted its program. During the pilot phase, Davidson worked on further improving the curriculum and program.

- ☑ Collect data on pilot participants: The data were used to assess effectiveness and improve curricula.
- ☑ Create staff development activities: The staff who taught the pilot classes were a good resource for training other faculty, and their enthusiasm helped spread support.
- ☑ Continue to improve and expand the program even after the pilot ended: Success with the *Breaking Through* project has led to the development of more contextualized courses throughout the college.

Davidson's advice for colleges developing similar programs is simple:

- ☑ Get input from the credit side of the college. Such advice and support is important.
- ☑ Get ongoing feedback and do continuous evaluation.
- ☑ Identify the resources you need to support your work.
- ☑ Let your core staff act as ambassadors to the rest of the college: their enthusiasm and buy-in can help promote your practices among peers.

North Shore Community College has contextualized its noncredit ESOL classes to early-childhood education, opening up this pathway to incumbent child care providers for whom English is not their native language. A thirteen-week series of bilingual workshops covering early-childhood content are infused with ESOL instruction and designed for lower-skilled ESOL individuals. A Spanish-speaking achievement coach uses children's storybooks and related literacy materials as tools for teaching child care providers about early-childhood practice. English for Childcare Workers I, a noncredit, contextualized ESOL course, has been offered using various schedules in order to meet the needs of participants (e.g., Saturday mornings and one evening a week for ten, twelve, or thirteen weeks or twice a week for six or eight weeks). The course is designed for students with higher English proficiency levels. They use an ESOL book, read children's books, improve their English, and build professionalism. In the future, the college would like to make the class more intensive so that students develop their English proficiency more rapidly.

Owensboro Community & Technical College has contextualized developmental education and general education for two career pathways: health care and industrial maintenance. For the remedial math course in the nursing program, the college's Workforce Solutions Division facilitated discussions that brought together the math teacher for the course, the math division chair who approves course competencies, hospital personnel who understand math competencies required on the job, and the nursing faculty who know the skills necessary for nursing courses. All of this helped develop a framework for the course. For the Industrial Maintenance program's basic communications course, the division worked with faculty from Industrial Maintenance who approved the assignments, ensured that the vocabulary was appropriate, and suggested different ways of teaching the material. The Industrial Maintenance and advanced welding courses, now in development, will have a math curriculum taught along with the technical content.

Southeast Arkansas Community College uses contextualization in a, fast-track developmental education bridge program in English, reading, and math for students entering nursing or allied health programs. The program serves lower-skilled adults employed in health care jobs at the regional medical center. As examples of contextualization, faculty incorporate questions from the nursing licensure exam into writing assignments, identify math problems from the television program *House*, and include information from medical textbooks in the curricula. To develop the contextualized curricula, developmental education faculty researched information about nursing and allied health, including anatomy and physiology, and incorporated medical terminology and medical reading into the curriculum for their courses. Students' feedback informs modifications to the curricula. Developmental education instructors were paired with a "field specialist"/ content teacher (e.g., an employer such as a nurse practitioner or a member of the occupational faculty) in the classroom. This helped with curriculum development and delivery of the courses. The "field specialist" demonstrated how the skills apply in the workplace. The developmental education instructors now have a strong base of experience and solid curricula, so the paired instruction will be discontinued for cost considerations. SEARK is currently working on contextualizing and accelerating developmental education for early childhood-education.

Henry Ford Community College offers contextualized learning in its JET Plus and Weatherization programs. The JET Plus program serves students below a fifth-grade reading level through "work readiness" offerings, while students at a sixth-seventh grade reading level and beyond can participate in certified nursing assistant training. The CNA training program is forty-two weeks, including eight weeks of preparatory classes, contextualized reading and math classes, contextualized ESL classes, noncredit CNA training, and two college-level classes: Computers and Health Careers and Customer Service. CNA students also receive customized training through KeyTrain, case management, and field experience through health care internships. Important partners in the program include a community-based organization serving the Arab community, called ACCESS, and healthcare employers.

The Weatherization program was created through a partnership among Henry Ford Community College, local community-based organizations, and the City of Detroit Workforce Development Department. Their goal was to provide training in anticipation of federal stimulus funding for “green jobs.” Recently, the program held its first job fair and twelve out of thirty program completers were hired; some of the remaining students had interviews scheduled. The program offers occupational training and contextualized learning for dislocated workers operating at a seventh-eighth grade reading level or higher. Cohorts of students attend classes five days a week, eight hours a day, for ten weeks in topics such as energy efficiency, the anatomy of a house, the construction site and tools, the weatherization process, energy savings in homes, renewable energy, occupational safety and health considerations, and lead-abatement and air quality issues. A developmental education reading instructor, a math instructor, and staff from a community-based training center called WARM collaborated to develop and contextualize the curriculum. The contextualized math curriculum for the training topics has been very effective; as an example, students estimate the economic returns on energy efficiency investments in homes. The community-based organizations who are partners in the program offer recruitment, screening, on-site training, and wraparound services. GTE, a large utility company, is part of the training program’s advisory committee.

Scaling Up Accelerated Learning: Case Study of Community College of Denver

The Community College of Denver’s *Breaking Through* demonstration tackled one of the major challenges facing community colleges today: decreasing the time students spend in remediation while maintaining or increasing the quality of their learning. CCD tested the hypothesis that an accelerated program—that is, compressing the same amount of instruction into half the time—which is structured as a learning community and situated in a strong network of support for students could improve retention and completion rates for students in developmental education.

The program, FastStart@CCD, offers accelerated, intensive developmental education courses along with case management and an array of other supports for students. The design has succeeded beyond expectations: when FastStart math students are compared with a control group of developmental education students, their outcomes are significantly better in several measures of academic success and retention. These outcome data have persuaded the college to scale up the FastStart program, making accelerated course options and supports available to all eligible developmental education students at the college as well as expanding the number of innovative course offerings to include new pairings of developmental and college-level courses.

At the heart of the design of FastStart@CCD is accelerated learning, a strategy that is commonly used with college-ready adult students, but that has not been adapted or tested for students with multiple deficits in college readiness—CCD’s challenge and goal. CCD’s approach to accelerated learning is to compress two to four levels of developmental education—either math or reading and writing—into one term, pairing it with a first-year college-experience course. As the project has progressed, FastStart has expanded its course pairings to include the highest level of developmental math with college algebra and the highest level of developmental English with college-level speech and communications. Contextualization, using career exploration as the context, is used extensively in the developmental reading and writing course pairings. Resources and activities that help students identify career and education goals are integrated into class activities and assignments, which are coordinated with career-exploration activities in the college-experience course.

FastStart@CCD draws on the theory and practice of learning communities, which views the cohort as the agent of change, both in learning and in the process of becoming a successful member of the college community. The first point of contact for the prospective FastStart student is the case manager, who walks each student through the program, helping students assess whether the intensive coursework required in FastStart is compatible with their individual learning style and with their work and family obligations. Enrolled students maintain contact with their case manager and participate in weekly study groups with faculty, as their schedules permit. Experienced student “ambassadors,” working under the supervision of the case manager, are another part of the team that maintains contact with students, and throughout the program students have access to tutoring, technology labs, and other college and community resources.

Recognizing that they would need evidence of the program’s successes—for college administrators and other potential funders—Elaine Baker, director of *Breaking Through* at CCD and the college’s director of Workforce Initiatives, worked with program coordinator, Lisa Silverstein, to institute a process for collecting and evaluating progress and outcomes data. Comparison groups of students demographically comparable to those in FastStart were constructed, and their progress was compared over a period of 24 months. Data collection and analysis are ongoing, but the findings so far are impressive: FastStart students have done better than the baseline group on several measures of academic performance, including completion of developmental math courses, accumulation of credits in developmental math, and passing college math “gatekeeper” courses. Once it is remembered that the FastStart students must master their course content in half the time of the comparison groups, the FastStart students’ higher rates of success are especially impressive:

COURSE COMPLETION BY ACADEMIC YEAR

Developmental Math		
	CCD	FastStart
AY 07	61.3%	68%
AY 08	55.2%	68.2%

Developmental English		
	CCD	FastStart
AY 07	65.2%	83.6%
AY 08	63.9%	70.4%

FastStart staff also anticipated that they would need to address the issue of program cost in order to make the case that their model could be sustained and expanded. In particular, they wanted to know whether the higher investment made “up front” in this innovative program would pay off over time. With support from the Ford Foundation Bridges to Opportunity Project and the Lumina Foundation for Education, a cost-benefit tool was developed; analysis using this tool showed additional program costs associated with FastStart were recouped through increased retention within a few semesters.

Baker says that the scaling-up process is proceeding well, but she emphasizes that it will take several years and require active leadership. The first step, she says, is to demonstrate program quality on a small scale, then use the results to gain support from staff and administrators throughout the college.

“Scaling up has been a slow process of institutionalization,” Baker says. “The key is proving the model, then it grows pretty organically. You have to start out with quality, and then it’s a negotiation within the college and having support of all levels from the faculty to the program chairs to the dean to the vice president of instruction to the college president.”

Given evidence that FastStart's students are performing better than those in their comparison groups and that investment in FastStart pays off very quickly, the college has committed to institutionalizing the program. The goal is to expand access to every eligible developmental education student at CCD.

Two kinds of investment are supporting CCD's progress toward this goal. The college is supporting two FastStart positions, a case manager and a part-time program coordinator. A grant from *Breaking Through* supports ongoing curriculum and resource development and tracking and analysis of student outcomes.

As anywhere, scaling up FastStart@CCD has encountered challenges. Scheduling these compressed courses can be complex, and finding additional classroom space is always a problem. In addition, professional development is needed for new and existing faculty.

Expanding the college's accelerated programs and student supports is having a major impact in terms of improved outcomes, according to Baker. "Success breeds a sense of belonging and a more realistic commitment to forbear the stress of going to college and working," she says. "Most of our folks work 20 hours a week or more, and most have families. They have to see the value [of their efforts]—that I can succeed in this, I can do this, I can get there. The process is seeing yourself as a competent student, someone who can achieve a goal and have a career."

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