PROMISING INSTRUCTIONAL REFORMS IN DEVELOPMENTAL EDUCATION

A Case Study of Three *Achieving the Dream* Colleges

Elizabeth M. Zachry
December 2008

ACHIEVING
THE DREAM™

COMMUNITY
COLLEGES
COUNT

Promising Instructional Reforms in Developmental Education

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with

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Overview

A large proportion of first-time community college students enter schools each year in need of developmental education, but few succeed in making it through these programs to college-level courses, let alone earning a certificate or a degree. As a result, many community colleges participating in Achieving the Dream: Community Colleges Count — a bold, multiyear, national initiative launched in 2003 by Lumina Foundation for Education — are focusing on improving developmental education through a variety of interventions.

The colleges participating in Achieving the Dream receive professional coaching and grants totaling $450,000 over the course of five years. They commit to collecting and analyzing data to improve student outcomes — a process known as "building a culture of evidence." Specifically, colleges mine transcripts and gather other information to understand how students are faring over time and which groups need the most assistance. From this work, they implement strategies to improve students' academic outcomes. Achieving the Dream colleges are expected to evaluate their strategies, expand effective ones, and use data to guide budgeting and other institutional decisions.

This report examines the experiences of three of the 83 colleges currently involved in Achieving the Dream and their efforts to improve instruction in developmental classrooms: Guilford Technical Community College in Greensboro, North Carolina; Mountain Empire Community College in Big Stone Gap, Virginia; and Patrick Henry Community College in Martinsville, Virginia. Using the Achieving the Dream model as a framework, each of these colleges implemented a system of reforms aimed at reaching developmental learners who have a variety of skill levels and experiences.

Key Findings

- Each of the three colleges took a unique approach to reforming developmental education instruction. Their reforms sought to meet the varied needs of their student populations, including techniques to increase the success of developmental education students who have low skill levels, techniques to reach developmental education students with higher skill levels, and techniques suitable for learners with a variety of abilities.

- The particular instructional reforms that the colleges instituted tried to accelerate students' progression through developmental education, to reduce their financial aid challenges, and/or to increase student engagement.

- Most of the instructional reforms that these colleges implemented were still in the pilot stages, but each of them showed promising trends in increasing students' achievements, as evidenced by evaluations undertaken by the colleges.

- The colleges emphasized that Achieving the Dream had given them a more structured framework for tackling the challenges facing their institutions. The colleges found that they had a greater focus on student success than they had had before joining the initiative.

The report concludes with lessons about the implementation of instructional reforms in developmental education, both for colleges hoping to institute similar reforms as well as for policymakers and leaders who hope to help colleges undertake this work.

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Preface

As the most affordable and most accessible institutions in higher education, community colleges currently enroll 40 percent of all college students nationwide. For low-income people, in particular, these colleges offer a pathway out of poverty and into better jobs. Yet nearly half of students who begin at community colleges do not transfer to a four-year college or complete a certificate or degree program within eight years of initial enrollment. Completion rates are even lower for the 60 percent of students who enter community college unprepared and need to take remedial — or developmental — courses.

Unfortunately, too few students who start in developmental classes make it through to college-level courses, and too many end up dropping out of school. A number of colleges participating in Lumina Foundation for Education's ambitious Achieving the Dream initiative are tackling this important problem. This report examines the experiences of three of them: Guilford Technical Community College in Greensboro, North Carolina; Mountain Empire Community College in Big Stone Gap, Virginia; and Patrick Henry Community College in Martinsville, Virginia.

Each college is following the Achieving the Dream philosophy of "building a culture of evidence" — examining data to understand which groups of students need the most assistance, using this information to develop and implement strategies to improve academic outcomes, and evaluating these strategies to determine which programs to expand or enhance.

We hope that this report offers useful lessons about how to improve developmental education both for the Achieving the Dream initiative and for the larger community college field.

Gordon L. Berlin
President, MDRC

Acknowledgments

Executive Summary

A large proportion of first-time community college students enter schools each year in need of developmental education, but few succeed in making it through these programs to college-level courses, let alone earning a certificate or a degree. Such discouraging outcomes have spurred many colleges across the country to focus on improving developmental education through a variety of interventions, including increased student advising, more professional development for faculty, and revision of the instruction and curriculum within developmental education courses themselves. In recent years, much of this work has been undertaken as part of Achieving the Dream: Community Colleges Count, a bold, multi-year, national initiative launched in 2003 by Lumina Foundation for Education. Achieving the Dream seeks to help more community college students succeed by reshaping the culture and practices inside community colleges and the external forces that affect their behavior. More specifically, the initiative encourages colleges to:

1. Commit to improving student success

2. Identify and prioritize problems

3. Engage stakeholders in developing strategies for addressing priority problems

4. Implement, evaluate, and improve strategies

5. Institutionalize effective policies and practices

To assist in this work, Achieving the Dream provides colleges with a number of supports, including professional coaching and grants totaling $450,000 over the course of five years.

This report examines the experiences of three of the eighty-three colleges currently involved in Achieving the Dream: Guilford Technical Community College in Greensboro, North Carolina; Mountain Empire Community College in Big Stone Gap, Virginia; and Patrick Henry Community College in Martinsville, Virginia. Using the Achieving the Dream model as a framework, each of these colleges chose to focus on improving developmental education as one of its priority areas, and each developed interventions to reach developmental learners who have a variety of skill levels and experiences.

In detailing these instructional interventions, this report has three primary aims: (1) to highlight the components of several instructional reforms in developmental education, (2) to examine how colleges used the Achieving the Dream model of institutional reform to

implement these interventions, and (3) to document ways in which such interventions can be implemented at other colleges across the nation. Unlike many MDRC studies, this analysis is based not on a random assignment evaluation of these instructional reforms but, rather, on a qualitative study of the implementation of these reforms. As such, the instructional reforms highlighted here are suggestive of promising practices in developmental education, rather than definitive judgments about their effectiveness.

Key Findings

Guilford Tech, Mountain Empire, and Patrick Henry each took a unique approach to reforming developmental education instruction. Their reforms sought to meet the varied needs of their student populations, including techniques to increase the success of developmental education students who have low skill levels, techniques to reach developmental education students with higher skill levels, and techniques suitable for learners with a variety of abilities.

When instituting new reforms on their campuses, each of the colleges closely followed the three broad steps recommended by Achieving the Dream. Each undertook an analysis of their students' achievement and developed specified priority areas for reform, around which they then instituted interventions to improve students' success. Most of the instructional reforms that these colleges implemented were still in the pilot stages, but each of them showed promising trends in increasing students' achievements, as evidenced by evaluations undertaken by the colleges. Though their programs varied, their experiences hold many lessons for the implementation of instructional reforms in developmental education, both for colleges hoping to institute similar reforms as well as for policymakers and leaders who hope to help colleges undertake this work.

Considering Change: Analyzing Student Success, Developing Priorities for Improvement, and Researching Strategies for Reform

The colleges in this report tended to have similar experiences with using Achieving the Dream as a model for implementing instructional reforms in developmental education.

- **Achieving the Dream's focus on a culture of evidence helped the colleges become more comfortable with analyzing student outcomes data and using this analysis as a basis for reform.**

Each of the colleges in this report undertook a data analysis process similar to that suggested by Achieving the Dream. The colleges analyzed the student cohort data that they submitted to the Achieving the Dream database and examined such matters as graduation, persistence, and course pass rates. The colleges also undertook more detailed analyses, us-

ing state data or their own institutional data on programs and students to investigate the success of particular courses and groups of students.

- **As encouraged by the initiative, the colleges analyzed student outcomes data for subgroups defined by income status and by race or ethnicity. This analysis did not prove to be particularly useful.**

National studies have shown that low-income students and students of color tend to have lower persistence and graduation rates than upper-income and white students. Achieving the Dream encourages colleges to disaggregate student data by race and income to see whether similar trends exist on their campuses and, if so, to develop interventions that try to "close the gap." The colleges profiled in this report did not always find an analysis of differing racial and income student subpopulations to be useful, either because low-income and minority students made up a majority of their overall student population or because the achievement of these students differed little from the rest of the student body.

- **The identification of priority areas for reform grew fairly naturally from the colleges' analyses of student outcomes. However, they found that they needed more time for intensive research and planning in order to identify and develop strategies that met these priorities.**

The first year of Achieving the Dream was intended to be a planning year, with the primary focus to be on analyzing student outcomes data to identify areas of improvement. In subsequent years, colleges were expected to pilot interventions designed to make students more successful. Some of the colleges emphasized the need for a longer planning and development period before implementing strategies. The choice and development of interventions continued to take place after the colleges' initial planning year in Achieving the Dream, with some strategies being piloted during the second and third year of their implementation grant period.

Implementing Change: Piloting Interventions to Improve Student Success

Although the colleges in this report implemented differing instructional reforms, several themes can be seen in their goals and experiences.

- **The colleges' instructional reforms sought to accelerate students' progression through developmental education, to reduce their financial aid challenges, and/or to increase student engagement.**

The colleges identified three key challenges to address: students' slow progress through developmental education course levels, the depletion of their financial aid, and the lack of engagement in their learning. Two colleges developed interventions aimed at in-

creasing students' progression through developmental education, by accelerating instruction (Mountain Empire's Fast Track Math) or by providing more intensive instruction and revising the assessment of students' progress (Guilford Tech's Transitions program). These programs also had the added benefit of preserving students' financial aid for college-level courses; students could move more quickly through the programs, or, in the case of Guilford Tech's Transitions program, instruction was provided tuition-free. Two colleges also focused explicitly on increasing students' engagement in their learning, by providing more interactive instructional models (Mountain Empire's Peer-Led Team Learning and Patrick Henry's Cooperative Learning).

- **The colleges developed instructional models with differing levels of timing and intensity to meet the needs of lower- and higher-skilled developmental education students.**

The colleges' interventions provided different levels of instruction depending on students' needs. One college (Mountain Empire) developed more rapid, review-like instruction to better suit the needs of developmental education students with higher-level skills. Colleges also created more intensive instructional programs for developmental education students with lower skills, such as the Transitions program at Guilford Tech and the Peer-Led Team Learning program at Mountain Empire.

- **Faculty leadership was critical for developing and implementing instructional reforms in developmental education. The colleges' support of faculty, through paid leave time and professional development, also played an important role in the implementation of these interventions.**

The colleges highlighted the important role that faculty members played in developing and implementing the instructional reforms in developmental education. While a supportive administration was important, the colleges emphasized that instructional reforms were most successful when developed and led by faculty members. Faculty members also emphasized the important role that paid leave time and professional development played in their ability to plan and implement these instructional reforms at their schools.

Scaling Up or Scaling Down: Monitoring Program Success as an Achieving the Dream College

After implementing pilot interventions, Achieving the Dream colleges are expected to monitor and evaluate the success of these strategies. The Achieving the Dream initiative provides a set of guidelines to assist colleges in this process, since evaluation and research are new undertakings for many community colleges. The initiative lays out a sequential plan for developing evaluations, moving from (1) more qualitative, formative feedback

evaluations, which provide preliminary information on the implementation of an intervention, to (2) more sophisticated summative evaluations — quantitative analyses of student outcomes within an intervention. Regardless of their abilities on entering the initiative, Achieving the Dream hopes to help colleges improve their evaluation capacity. As described below, the three colleges in this report had similar experiences with evaluating their instructional strategies:

- **The colleges tended to have moved beyond the formative evaluation stage to the early stages of summative evaluation, which track the success of an intervention by comparing the outcomes of a group of students who received the intervention with the outcomes of an analogous group of students who did not receive the reform.**

Formative evaluations are typically conducted when a program is brand-new, to determine whether services are being delivered as intended and to offer suggestions for improvement. *Summative evaluations* try to measure program effects on student achievement or other outcomes. While their methods differed, the colleges generally compared the achievement of students who received an instructional intervention with the performance of students who did not receive the reform.

- **Based on their own evaluations, the colleges found that their instructional reforms were meeting with some level of success. Generally, the colleges found that their reforms had increased student persistence, improved their advancement through developmental education, and/or improved their engagement in their learning.**

In their evaluations of their interventions, the colleges found that the students who had received the instructional intervention tended to have greater success than a comparable group of students who had not received the intervention. The colleges examined a variety of achievement measures when looking at students' success, including students' advancement through developmental course levels, their persistence from semester to semester, and course pass rates. The colleges found that students who received their intervention had improved success in at least one of the benchmarks.

Implications for Institutional Reform: Revising Developmental Education Instruction as an Achieving the Dream College

A number of lessons can be gleaned from these colleges' experiences implementing new instructional reforms in developmental education. The implications for practice, policy, and Achieving the Dream are discussed below.

Implications for Practice: Being Faculty-Focused in Order to Become Student-Focused

- **Fostering faculty leadership was critical in the development and implementation of instructional reforms in developmental education.**

While a supportive administration was seen as important, each of the colleges emphasized the role that faculty members had in instituting instructional reforms at their colleges. Faculty leaders were seen as the main instigators in bringing new instructional and curricular reforms to the school, and they generally played a critical role in the development of the reforms. The importance of faculty leadership may have been even more pronounced with these types of reforms, given that they sought to revise classroom practices and instruction.

- **Supporting professional development for faculty, either through trainings or through release time for curriculum development and planning, was also a necessity for the successful implementation of instructional reforms.**

Supporting faculty through professional development also played an important role in the implementation of instructional reforms at these schools. The colleges tended to give faculty members leave time to research and develop their instructional interventions, and they supported the growth of these initiatives through supplemental training.

Implications for Policy: The Importance of Flexibility

- **Flexible course-credit systems may enhance colleges' ability to implement new instructional interventions.**

A flexible course-credit system, which allowed the colleges to implement courses at various levels of intensity, helped one college (Mountain Empire) to develop instructional reforms that were tailored to the needs of its student population. The State of Virginia permits colleges to create developmental courses ranging from one to five credits, which, in turn, allowed Mountain Empire to develop one- and two-credit Fast Track Math courses along with its other, more intensive three- to five-credit developmental math courses. States that have more restrictive credit systems may potentially limit this instructional flexibility.

- **Increased flexibility in the use of state funds may assist in colleges' ability to build bridges across programs and departments.**

One college (Guilford Tech) was able to develop bridges between its developmental and adult basic education departments in an attempt to better assist lower-skilled develop-

mental education students. This connection was aided by the flexibility in North Carolina's adult basic education funding, which allows a subset of students who have low skill levels to be educated using adult education funds, even if these students already have a high school diploma or a General Educational Development (GED) certificate. Such flexibility in funding streams may aid other colleges in connecting programs and departments that serve similar types of students.

Implications for Achieving the Dream: Reflections on the Initiative's Support and Guidelines

- **Achieving the Dream grants played an important role in colleges' ability to pilot new interventions and strategies.**

Each college that joins Achieving the Dream receives $450,000 over the course of five years to support the implementation of the initiative and its goals at their schools. Guilford Tech, Mountain Empire, and Patrick Henry each discussed how the Achieving the Dream grant provided important seed money for developing new interventions at their colleges. They emphasized that the grant gave them greater flexibility to support staff in researching and implementing new strategies at their schools.

- **The colleges emphasized that Achieving the Dream had given them a more structured framework for tackling the challenges facing their institutions. The colleges found that they had a greater focus on student success than they had had before joining the initiative.**

While each of these colleges had some level of experience with institutional research, they all emphasized that Achieving the Dream had helped them create a broader interest in student achievement and the results of new reforms. The colleges believed that Achieving the Dream had helped them better focus on student success and the development of specific interventions toward this end.

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Many colleges are looking to improve the success rates of developmental education students, and Achieving the Dream has played an integral role in helping colleges undertake this work. This report is a beginning look at specific type of reforms that colleges undertook in developmental education: the revision of instruction and curriculum as a means of increasing student success. Subsequent reports will examine the implementation and trends in student achievement at all 26 Round 1 Achieving the Dream colleges (in Florida, New Mexico, North Carolina, Texas, and Virginia) and at 13 Round 3 Achieving the Dream colleges (in Pennsylvania and Washington State). In addition, specialized reports will focus on

the costs, student perceptions, and impacts of specific educational interventions or student services at selected Achieving the Dream colleges.

Chapter 1

Developmental Education and Achieving the Dream

Approximately 60 percent of first-time community college students take one or more developmental courses on entering college.[1] However, while many community college students enter developmental courses, few successfully complete them. According to a recent study, around 70 percent of developmental students pass their reading and writing courses, but only about 30 percent of students pass every developmental math course that they are required to take.[2] Even more daunting, less than half of developmental students earn a certificate or degree or transfer to a four-year institution within eight years of entering community college.[3]

Statistics such as these have spurred many community colleges to focus on improving developmental education. Colleges are pursuing a variety of ways to help developmental education students succeed at higher rates; their methods range from restructuring developmental education programs to increasing the support services for students. Several studies document promising ways to structure and manage developmental education programs.[4] Additionally, researchers have begun looking at the effects of specific types of interventions — such as learning communities,[5] student success courses,[6] and supplemental instruction programs[7] — and they have found some promising results on student achievement.

The Achieving the Dream: Community Colleges Count initiative has been a vocal presence in the national effort to reform developmental education over the last several years.[8] Launched by Lumina Foundation for Education in 2003, this bold, multi-year, na-

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[1]Bailey, Leinbach, and Jenkins (2005).

[2]Attewell, Lavin, Domina, and Levey (2006).

[3]Adelman (2004). Of students entering the Achieving the Dream colleges in 2002, 80 percent were referred to developmental courses; of these students, only 8.5 percent completed any credential within four years (Bailey, 2007).

[4]Boylan (2002); Gabriner (2007); Massachusetts Community College Executive Office (2006); Schwartz and Jenkins (2007).

[5]Tinto (1997); Bloom and Sommo (2005); Scrivener et al. (2008); Zhao and Kuh (2004); Brock and LeBlanc (2005). While some learning communities focus on revising classroom instruction, these instructional changes are often related to coordinating between two or more courses rather than to best practices in teaching particular course content (for example, math, English, or reading) to struggling students.

[6]Zeidenberg, Jenkins, and Calcagno (2007).

[7]Blanc, DeBuhr, and Martin (1983); Congos and Schoeps (1993); Ramirez (1997).

[8]For more information about Achieving the Dream, see the MDRC and Community College Research Center (CCRC) baseline report on the initiative, *Building a Culture of Evidence for Community College Student Success: Early Progress in the Achieving the Dream Initiative* (Brock et al., 2007). A larger evaluation is also under way to understand the implementation and effects of the full initiative.

tional initiative pushes community colleges to develop evidence-based interventions to improve the chances of success for students who are most at risk of failure. With the partnership of 82 colleges across 15 states, one central goal of the initiative is to help colleges "increase the percentage of students who . . . successfully complete the courses they take [and] advance from remedial to credit-bearing courses."[9] In order to reach this goal, the initiative urges colleges to reevaluate their practices and develop new, evidence-based interventions to improve the success of their student populations.

Many Achieving the Dream colleges have taken up the call to improve student success by implementing multiple types of interventions targeted specifically toward developmental education students. All 34 Round 1 and Round 2[10] Achieving the Dream colleges have focused on reforms in at least one of the three developmental education subjects: math, reading, and English. The most popular interventions focus on providing supplemental instruction, improving student advising, revising curriculum and instruction, and developing learning communities. (Appendix Table A.1 summarizes the strategies used by the Round 1 and Round 2 colleges.) Additionally, it is interesting to note that nearly all the colleges are focusing on providing professional development training for their developmental education faculty.

Many of the reforms undertaken by the Achieving the Dream colleges align with current research that emphasizes the importance of active or student-centered learning models in improving developmental education students' success.[11] This research has contributed to a rich body of theories and recommendations for improving practice in developmental education.[12] However, while promising practices have been documented, less has been written about how these reforms are actually implemented within a college and on what grounds colleges can base their justification for such interventions. Moreover, very few studies have focused on specific reforms in developmental education instruction and curriculum. Those that do so tend to be small-scale evaluations of interventions implemented at a single college, led by in-house institutional researchers.[13]

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[9]Achieving the Dream: Success Is What Counts (2007).

[10]Colleges have entered the Achieving the Dream initiative during multiple years and are identified by the "round" in which they joined. Currently, there are four rounds of Achieving the Dream colleges: Round 1 schools entered Achieving the Dream in 2004; Round 2 entered in 2005; Round 3, in 2006; and Round 4 entered the initiative in 2007. This report discusses only the reforms in Round 1 and Round 2 colleges, primarily because Round 3 and Round 4 colleges were still in the early years of planning and implementation.

[11]Boylan (2002); Gabriner et al. (2007); Massachusetts Community College Executive Office (2006).

[12]For example, American Mathematical Association of Two-Year Colleges (2006); Boylan (2002).

[13]For example, Clack, Dixon, and Short (2000); DeMarois (1997); Coscia (1999).

In response to these gaps in the scholarship, this analysis seeks to illuminate several instructional interventions that three Achieving the Dream colleges have undertaken to improve the achievement of their developmental education students: Guilford Technical Community College in Greensboro, North Carolina; Mountain Empire Community College in Big Stone Gap, Virginia; and Patrick Henry Community College in Martinsville, Virginia. (Appendix Table A.3 presents selected characteristics of the three colleges.)

With these instructional reforms as its focus, this report seeks to accomplish three primary aims:

1. To highlight the content and components of several instructional reforms in developmental education

2. To examine the important lessons learned as colleges seek to implement the institutional transformation process that Achieving the Dream promotes

3. To document the ways in which these programs can be implemented by other colleges that may wish to revise the instructional practices of their developmental education programs

Creating Reform: How Are Achieving the Dream Colleges Reforming Developmental Education Instruction?

Among the Round 1 and Round 2 Achieving the Dream colleges, 20 out of 34 are focused on reforming some aspect of curriculum and instruction in developmental education. More colleges are focused on revising the instruction in developmental math courses than in developmental English or developmental reading (Appendix Table A.1). However, important reforms are being made in all three developmental subject areas, with colleges using a variety of techniques to improve students' success.

As can be seen in Table 1, many colleges are focused on changing the timing and length of developmental education courses. Some colleges have chosen to extend the length of a class by spreading course material over two semesters or by adding extra instructional time into a one-semester course. Other colleges have shortened the length of class time, thereby making "fast-track" courses that get through material more quickly. Finally, some col-

Achieving the Dream: Community Colleges Count

Table 1

Strategies for Reforming Developmental Education Curricula and Instruction in the Round 1 and Round 2 Achieving the Dream Colleges (34 Colleges Total)

Curriculum and Instructional Strategies (Number of Colleges Implementing)	Developmental Subject Area			Total (Unduplicated)
	English	Math	Reading	
Changes in class length or timing				
Fast Track course (fast-paced, often with fewer credits than regular course)	1	5	3	7
Slow-paced course (such as 1-semester course extended over 2 semesters)	-	3	-	3
Develop "lab" hour for class	-	2	-	2
Self-paced course	-	2	-	2
Instructional or pedagogical strategies				
Use diagnostic tests to revise instruction	1	1	1	1
Common examinations and grading system in developmental math; math workshops	-	1	-	1
Incorporate active or learner-centered strategies in classroom	3	3	2	4
New tools or instructional techniques used in class (such as manipulatives or Navigator calculators)	-	1	-	1
Study skills and time management taught in developmental math courses	-	1	-	1
Incorporate experiential learning	-	1	-	1
Incorporate peer-lead team learning	-	1	-	1
Incorporate computer-assisted instruction	1	2	1	2
New courses or curriculum changes				
Transitional programs for select groups of students (such as students out 1+ years, low-scoring students)	2	2	1	2
Revise curriculum and pedagogy in courses (general)	-	7	-	7
Align curriculum between developmental education and gatekeeper classes	2	3	2	3
Create parallel developmental education program for English as a Second Language students	1	1	1	1
Eliminate lowest-level developmental education class	-	3	1	4
New course offerings created	-	-	2	2

(continued)

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Table 1 (continued)

SOURCES: Categorizations of programs are based on site implementation proposals and annual reports.

NOTES: Round 1 and Round 2 colleges are the colleges that entered the Achieving the Dream initiative in 2004 and 2005, respectively. Round 3 and Round 4 colleges are not discussed in this report, primarily because they had not yet implemented strategies or were in the early stages of implementation.

leges are offering a menu of these course options in an attempt to reach students who have a variety of needs and challenges.

Another approach that colleges have taken is reforming the pedagogical or instructional approach within the class. Some colleges have focused on incorporating new instructional aids (such as manipulatives, computers, and interactive calculators), while others are using new pedagogical approaches (such as experiential learning and active learning strategies) to revise how instruction takes place. Other colleges are incorporating new people or practices in their teaching, such as using peer leaders as supplementary instructors or integrating study skills training within the course curriculum. Finally, some colleges are revising course offerings or curricula. While many colleges are focused on only one of these areas, these approaches are not necessarily mutually exclusive: seven colleges have three or more interventions centered on revising developmental education curriculum and instruction.

Creating Reform Through Evidence-Based Practice: Achieving the Dream's Theory of Action

While many community colleges are focused on improving developmental education, Achieving the Dream is unique in its effort to create an evidence-based institutional change process for improving student success.

As a result of funding regulations, community colleges have traditionally been more focused on student enrollments than on student achievement: Most states fund colleges by the number of students that they enroll rather than the number of students they graduate.[14] Even colleges that have historically made an effort to examine student outcome data have rarely looked at achievement data disaggregated for different subpopulations of students. Achieving the Dream assumes that many colleges will be surprised to learn how many of their students are struggling to succeed. Indeed, given the available data on community college student success, the initiative expects low rates of student achievement and persistence

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[14]Center for Community College Policy (2000).

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to be a common theme among Achieving the Dream colleges. As colleges seek to improve the success of students who are struggling the most, their own findings should become the foundation for organizing institutional plans for reform.

Toward this end, the Achieving the Dream initiative recommends that colleges implement the principles of institutional improvement through a five-step process:[15]

- ***Step 1: Commit to improving student outcomes.*** The college's senior leadership, with support from the board of trustees and faculty leaders, commits to making the changes in policy and resource allocation necessary to improve student outcomes, and it organizes a team to oversee the process.

- ***Step 2: Identify and prioritize problems.*** The college uses longitudinal student cohort data and other evidence to identify gaps in student achievement. A key premise of this approach is that once faculty and staff see that certain groups of students are not doing as well as others, they will be motivated to address barriers to student success. To ensure that they focus their resources to greatest effect, colleges are encouraged to prioritize the student achievement problems that they plan to address.

- ***Step 3: Engage stakeholders in developing strategies for addressing priority problems.*** The college engages faculty, staff, and other internal and external stakeholders in developing strategies for remedying priority problems with student achievement, based on a diagnosis of the causes and an evaluation of the effectiveness of previous attempts by the institution and others to address such problems.

- ***Step 4: Implement, evaluate, and improve strategies.*** The college then implements the strategies for addressing priority problems, being sure to evaluate the outcomes and using the results to make further improvements.

- ***Step 5: Institutionalize effective policies and practices.*** The college takes steps to institutionalize effective policies and practices. Attention is focused on how resources are allocated to bring to scale and sustain proven strategies and on how program review, planning, and budgeting are driven by evidence of what works best for students.[16]

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[15]MDC (2008).
[16]Jenkins (2007).

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In the end, Achieving the Dream expects that this institutional transformation process will result in an increased level of student success, including increased persistence, course pass rates, and, ultimately, credential attainment. (Figure 1 illustrates the initiative's theory of action.)

Notably, Achieving the Dream has provided some key supports to colleges in order to assist them in embarking on the institutional transformation process. The initiative generally provides $450,000 over the course of five years to support a college in developing and implementing an institutional reform process: an initial $50,000 yearlong planning grant and up to $400,000 over the remaining four years to support implementation and evaluation of strategies.[17] Additionally, each college receives technical assistance from two consultants: a data facilitator, who helps with data processing and management; and a coach, who assists college leaders in spearheading a movement toward institutional transformation. Finally, the Achieving the Dream initiative hosts several professional development meetings, such as a kickoff meeting for newly entering colleges and an annual Strategy Institute, at which colleges can meet, plan, and share information about their progress toward becoming data-driven institutions focused on student success. It is expected that these supports will help colleges transition from being enrollment-focused to becoming centered on improving student achievement.

Each college in the initiative has approached the steps above with varying degrees of success. All the Round 1 Achieving the Dream colleges resonated with the goal of improving student success. By spring 2007, most Round 1 sites had analyzed their student outcome data and developed a prioritized list of student achievement problems to address.[18] Additionally, many of the colleges had begun pilot interventions based on these priorities. However, the challenges and successes of instituting this process, and its ultimate impact on improving student success, is still an unfolding story.

The Methodology of the Study

To begin this analysis, the implementation and annual reports of the 34 Round 1 and Round 2 colleges were reviewed to identify colleges that were pursuing instructional reforms in developmental education. The interventions were categorized in a matrix that also documents how colleges' strategies had been revised over the course of their participation

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[17]Over the four rounds of the demonstration phase, 18 funders have joined the initiative, some of whom have negotiated different funding agreements with and for their colleges. Additionally, eight colleges are using their own institutional resources to pay for some or all of their participation in Achieving the Dream. The majority of sites, however, are participating under the funding formula described here.

[18]See Brock et al. (2007) for more details.

Achieving the Dream: Community Colleges Count

Figure 1

Theory of Action for the Achieving the Dream Initiative

Improve student outcomes and reduce achievement gaps between subgroups of students based on five indicators:

- Completion of developmental courses and progression to credit-bearing courses

- Completion of "gatekeeper" courses, particularly first college-level or degree-credit courses in math and English

- Completion of attempted courses with a C or better

- Persistence from term to term and year to year

- Attainment of credentials

Supports from Achieving the Dream

Actions by the college

Step 1
Commit to improving student outcomes

Step 2
Identify and prioritize problems

Step 3
Engage stakeholders in developing strategies for addressing priority problems

Step 4
Implement, evaluate, and improve strategies

Step 5
Institutionalize effective policies and practices

Investments by the college

in Achieving the Dream. The intensity and depth of colleges' interventions were also analyzed in order to document which colleges had moved further along in developing their strategies. This process identified four colleges that had promising instructional interventions in developmental education. These colleges either had developed multiple strategies for reforming developmental education instruction, had implemented a unique instructional reform, or had espoused a well-developed theory about how a particular instructional reform could improve students' achievement.

After this preliminary analysis, phone interviews were conducted with several selected schools in order to learn more about the instructional strategies identified and how well they were implemented. Guilford, Mountain Empire, and Patrick Henry were the three colleges selected, because they:

- Focused on changing instructional practice within the classroom (for example, an instructional activity that occurred within the classroom and was informed by the instructor)

- Had a well-articulated intervention that was far enough along in development for analysis

- Presented different approaches to reforming instruction in developmental education classrooms

During the late winter and early spring of 2008, a two-person research team undertook two-day site visits to each of these colleges to learn more about the development and design of the colleges' instructional reforms, the challenges and successes of their implementation, and the connection these reforms had to colleges' Achieving the Dream goals and plans. Focus groups and interviews were conducted with the faculty and administrators who were responsible for designing and implementing these interventions, as well as with students who were attending the restructured classes. These interviews and focus groups were audio-recorded, and extensive field notes were also taken. A summary memo of the visits was also written in order to document important components of the colleges' reforms and their implementation stories.

The interviews, field notes, and memos were then analyzed to better understand how these three colleges implemented instructional reform within the Achieving the Dream framework: performing data analysis, identifying their priorities for institutional change, implementing their strategies to improve developmental students' success, and seeking to monitor and ultimately scale up the interventions at their schools.

It should be noted that, unlike many MDRC studies, this analysis is based not on a random assignment evaluation of these instructional reforms but, rather, on a qualitative

study of the implementation of these reforms. As such, the instructional reforms highlighted here are suggestive of promising practices in developmental education, rather than definitive judgments about their effectiveness.

The Organization of This Report

The following chapters highlight how three institutions used the Achieving the Dream model to institute new instructional reforms in developmental education. Chapter 2 looks at how the colleges undertook an analysis of their student outcomes data and used their findings to identify priority areas and strategies for reform. Chapter 3 analyzes the instructional reforms that these colleges implemented and how these reforms seek to increase the success of developmental education students. Chapter 4 examines how the colleges monitored and evaluated these instructional reforms and how one institution began a larger expansion of the reform throughout the school. Chapter 5 concludes the report by examining the implications of these colleges' experiences, including the implications for practice, for Achieving the Dream, for state policy, and for research.

Chapter 2

Considering Change:
From Analysis to Reform

As discussed in Chapter 1 (see Figure 1), the Achieving the Dream initiative has posed a fairly prescribed method for considering and implementing institutional reform in community colleges. Step 1 of the reform process (*Commit to improving student outcomes*) is followed by encouraging colleges in Step 2 (*Identify and prioritize problems*) and Step 3 (*Engage stakeholders in developing strategies for addressing priority problems*) to go through an intensive diagnosis and planning process when developing new interventions.

The Diagnosis and Planning Process

Achieving the Dream colleges are asked to undertake a series of activities when identifying problems and issues and developing strategies to address them. These activities include:

1. Collecting and analyzing student outcome data and disaggregating these data by subgroups, such as race and socioeconomic status, to identify achievement gaps and document current college practices

2. Using these analyses to develop key priority areas for reform within the college

3. Researching and developing new strategies and interventions within these priority areas to improve student achievement

This chapter analyzes colleges' experiences with undertaking these activities — and the utility of the process for identifying challenges and problems and for developing strategies to ameliorate them.

Analyzing Student Outcome Data

Achieving the Dream has two recommendations for how colleges should analyze student outcome data.[1] First, colleges are expected to undertake a *longitudinal analysis* of student performance. This is accomplished by tracking entering cohorts of students from semester to semester and documenting their success based on critical benchmarks, such as

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[1]Achieving the Dream (2008).

passing developmental education courses, persistence from semester to semester, and graduation. In order to assist colleges with these efforts, the initiative requires that member colleges submit student outcome data to a centralized Achieving the Dream database. Colleges begin by submitting data on the student cohorts that entered the college during the three years prior to the college's involvement in Achieving the Dream. Colleges then begin to submit information each year about their entering student cohorts. These data are then used to track individual students, documenting which courses they passed or failed, whether they persisted from semester to semester, and, eventually, whether they received a degree or certificate. The success outcomes of the student cohorts are followed over subsequent years and are compared with the outcomes of newly entering cohorts. It is expected that students' success at each college will improve as the school spends more time in Achieving the Dream and moves further along in its institutional transformation process. Additionally, colleges are encouraged to use student cohort data to document their initial student achievement benchmarks and to monitor students' progress over subsequent years.

Second, colleges are expected to undertake an analysis of *student subgroups*. Based on findings from national studies of community college students,[2] the initiative expects that some subgroups of students may struggle more than others, and it encourages Achieving the Dream colleges to ascertain which subgroups of students could most benefit from new interventions. Although analyses of many different types of students are encouraged, the initiative recommends that colleges pay particular attention to the success of low-income and minority students. To facilitate this process, colleges are asked to submit key demographic information — such as students' ethnicity/race, gender, and income — when submitting their student achievement data to the Achieving the Dream database. Colleges may then use these data to identify achievement gaps that may exist among different subgroups of students.

Developing Key Priority Areas for Reform

The data analysis process is expected to lead to the second stage of colleges' diagnosis and planning: the identification of key priority areas for reform. In analyzing student outcome data, colleges are expected to discover a common issue for community colleges: low persistence and achievement among their student population. Achieving the Dream also anticipates that colleges will find inequities in the achievement of different subgroups of students, particularly among those from minority groups and from low-income backgrounds. The initiative expects that colleges will use this evidence to identify key priority areas for improvement, either among particular subgroups (for example, African-American

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[2]Hoachlander, Sikora, and Horn (2003); Adelman (2004).

students or female students) or in particular academic areas (such as developmental education, gatekeeper courses, and so on).

Researching and Developing New Strategies

After colleges identify key priority areas for reform, the initiative expects colleges to undergo a thorough process of program review and to begin researching new strategies that may help increase the achievement of their students. The initiative encourages colleges to develop strategies to close performance gaps among students, with the expectation that colleges will become "learning organizations" that use data to inform their choices.[3] While the initiative has provided guidelines for how colleges should analyze student outcome data, it has provided fewer recommendations for how colleges might go about identifying the most successful practices for improving student achievement. Instead, colleges are encouraged to rely on their own research and professional networks to identify "what works" in improving student achievement. Colleges are expected to choose what strategies would work best for their own institutional environment, being guided in these decisions by findings on their student success needs and their targeted priority areas.

The initiative also suggests that colleges adopt a particular leadership model for guiding this work. First, colleges are expected to engage stakeholders by involving as many individuals as possible throughout the college, from high-level administrators to lower-level staff. The college president is expected to play a particularly prominent role in developing and promoting a vision for student success. Second, colleges are expected to designate two leadership teams that will be responsible for the integration of the initiative within the college: They should create a "data team" responsible for compiling and analyzing the data on key student success indicators and should also develop a "core team" of top leaders who will implement key changes in policy and programming to promote improved student achievement. It is hoped that these two teams will integrate the student-success initiative throughout the college, so that all faculty and staff are aware of the necessity for improving student achievement.

On-the-Ground Diagnostics: How Three Achieving the Dream Colleges Created a Case for Reform in Developmental Education Classrooms

Following the initiative's recommendations closely, each of the three community colleges studied for this report — Guilford Tech, Mountain Empire, and Patrick Henry —

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[3]Achieving the Dream: Success Is What Counts (2007); Achieving the Dream Logic Model (2005).

analyzed the success of their entering student cohorts and submitted these data to the Achieving the Dream database.[4] All three saw this analysis as an integral part of their understanding of their students' needs and challenges. Mountain Empire began this investigation with a look at student cohorts before the college joined Achieving the Dream and examined these students' course pass rates, persistence, and graduation rates. The analysis noted that students were less likely to succeed as they tested into more developmental education classes. From this finding grew Mountain Empire's choice to focus on a number of different reforms in developmental math and developmental English.

Guilford Tech and Patrick Henry also used the entering student cohort data that they submitted to the Achieving the Dream database to analyze student outcomes. However, their data teams also used many outside sources to inform their understanding of students' needs. This was done in part because of difficulties setting up the student cohort data system that the initiative recommended. For instance, Guilford Tech initially found it difficult to gather and analyze the student cohort data because of its transition to a new computer system. As a result, Guilford Tech had to hire an outside consultant to help develop the required Achieving the Dream dataset and systems. In the interim, the college began analyses of other student achievement data, including information from the Integrated Postsecondary Education Data System (IPEDS) and from the North Carolina state data warehouse as well as qualitative data from surveys and focus groups with faculty, staff, and students.[5] These data revealed two key issues: (1) it took a long time for students to progress through developmental education classes and (2) developmental education had very high withdrawal rates. These findings led Guilford Tech to prioritize improving its developmental program.

Like Mountain Empire, Patrick Henry used pre-Achieving the Dream data on the entering student cohort as the foundation for its initial investigation into students' needs and challenges. Like Guilford Tech, however, Patrick Henry took pains to incorporate other data within the analyses for a fuller picture of its student body. Some of Patrick Henry's institutional researchers noted that some of the Achieving the Dream data were "relevant" but said that "we had to add a lot of stuff to it" to do a fuller analysis of what was happening at the college. In the end, Patrick Henry chose to connect Achieving the Dream student cohort data with other resources, such as information from student surveys and from student placement assessments, to do a deeper investigation of students' success.[6] Using this com-

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[4]Appendix Table A.3 presents information on the three colleges: Guilford Technical Community College in Greensboro, North Carolina; Mountain Empire Community College in Big Stone Gap, Virginia; and Patrick Henry Community College in Martinsville, Virginia.

[5]Guilford Tech implementation proposal, 2005.

[6]The student surveys included the Learning and Study Strategies Inventory (LASSI) and the Evergreen New Student Survey at Evergreen State College in Olympia, Washington.

bined database, Patrick Henry created a sophisticated "persistence/success model" to "identify characteristics of high-risk students, develop appropriate interventions, and ultimately improve the odds of success for these students."[7] These data — along with qualitative information from focus groups with students, faculty, staff, and community members — revealed that developmental math played a critical role in students' success, with 55 percent of students taking a developmental math class during their first year.[8] The college chose to focus on improving the success rates of developmental math students as one of its main priority areas.

As recommended by Achieving the Dream, each of the colleges disaggregated its student achievement data for different subgroups of students. Patrick Henry's statistical model included a comparison of different student characteristics, including the recommended race/ethnicity and income subgroups as well as many other student characteristics, such as placement test scores and previous course pass rates.[9] Guilford Tech analyzed students' success by race/ethnicity, noting that African-American and Hispanic students — and that African-American males, in particular — had the lowest success rates.[10] Mountain Empire disaggregated its student cohort achievement data by a variety of characteristics, including race/ethnicity, income, gender, age, and enrollment status. While Mountain Empire had analyzed the achievement of students before, it noted that this was the first time that the college had examined these measures in relation to socioeconomic status.[11]

Yet the colleges did not always find the results that the initiative expected they would. Sometimes the colleges found few differences in the achievement of these different populations of students. For instance, Patrick Henry's researchers found that neither race nor ethnicity had a statistically significant relationship with student persistence or degree completion. Other times, the colleges found that these student subgroups made up a majority of their populations, thus making it less important to single them out. For example, Mountain Empire found that 80 percent of its student population was considered low-income. The college did detect some differences in lower- and higher-income students' achievement and, for this reason, chose to focus some attention on improving low-income students' success. However, given that the vast majority of its student population was low-income, distinguishing those students from the general population did not necessarily result in a sharper focus. Instead, the college looked to other subgroups, such as students in developmental education classes, to hone its priorities.

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[7]Patrick Henry implementation proposal, 2005.
[8]Patrick Henry implementation proposal, 2005.
[9]Patrick Henry implementation proposal, 2005.
[10]Guilford Tech implementation proposal, 2005.
[11]Mountain Empire implementation proposal, 2005.

For Guilford Tech, Mountain Empire, and Patrick Henry, an analysis of student outcomes was a useful means for identifying the college's needs and priorities. Developmental education emerged as an important priority for each college after analysis revealed the low success rates of these students. The identification of this priority area for reform grew fairly naturally from an analysis of student subgroups, even if those subgroups did not always align with a focus on low-income and minority students.[12]

From Priorities to Strategies: Using Research to Develop Interventions

The analysis of student outcome data and the development of priority areas for reform are intended to serve a specific purpose in Achieving the Dream: to provide a stimulus for change. Colleges' data analysis process and the priority areas that are derived from it are intended to provide an organizing mechanism around which particular strategies and interventions will later be instituted. As discussed in Chapter 1, the initiative gives minimal direction on the types of initiatives that should be implemented by the colleges; instead, colleges are encouraged to gather ideas from their own research and to allow their analyses of student data to inform their choices about strategies and interventions.

After completing their analyses of student outcomes, many Achieving the Dream colleges had developed general priority areas for reform, such as improving developmental education students' success or increasing student engagement. Within these broad goals, colleges could choose a number of different approaches. For instance, a college seeking to improve the success rates of developmental education students could attempt to do this by revising the instruction within developmental education classes, by providing more support to students through more intensive advising, or by changing its course placement strategies so that students are in the correct courses.[13] These ideas are just a few of the choices open to schools. While each of these approaches could arguably improve the success of developmental education students, each has a different focus and entails widely different interventions.

For many Achieving the Dream colleges, deciding on a focus within a priority area and choosing strategies that would best meet that goal required another serious step in the planning and diagnosis process. Colleges used their own discretion in choosing strategies related to their priority areas and, as a result, often came up with different methods for solv-

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[12]The colleges also identified priority areas other than developmental education. For instance, both Mountain Empire and Patrick Henry identified as priorities the need to improve students' first-year experience and to promote active learning.

[13]Appendix Table A.1 summarizes the strategies used by the Round 1 and Round 2 colleges.

ing these problems. For instance, some colleges chose multiple strategies for meeting their priorities and implemented them quickly. Other colleges chose a more measured approach, taking more time to assess students' needs and the strategies that would meet them.

The three colleges in this study tended to chose the latter tactic. As Mountain Empire emphasized, it took some time to build the capacity to analyze student outcome data, and then another, quite different push was required to figure out which strategies would best meet the identified priorities and needs: "We didn't want to just jump into doing something . . . we wanted to be sure we had a good plan." For this college, developing "a good plan" meant taking a sequential approach to the work.

Mountain Empire first made a commitment to "pilot new research-based instructional strategies" and to develop instructional environments that "deeply engage students with the subject matter, the faculty member, and other students."[14] Within this, it chose to place an emphasis on revising the courses that had the lowest success rates before moving on to other courses at the college. As one administrator stated, "We wanted to be methodical about what we did, using lots of research and planning to implement changes that we hoped would have significant effect on course success." In order to learn more about research-based instructional practices, faculty members were encouraged to attend professional conferences and were supported to visit other colleges that were implementing promising reforms in developmental education. It was through this research that faculty members discovered several of their interventions in developmental math and sought to bring those strategies to their school. (Chapters 3 and 4 spotlight two of the interventions at Mountain Empire: Fast Track Math and Peer-Led Team Learning.)

Like Mountain Empire, Patrick Henry went through a nearly identical process in mounting an effort to increase the success rates of developmental education students, and of developmental math students, in particular. The college believed that the best way to do this was to effectively engage "students inside and outside of the classroom" with an emphasis on math and assessment.[15] In order to accomplish this aim, Patrick Henry provided "focused professional development activities and incentives for faculty to become learning facilitators,"[16] thus creating an environment in which faculty were actively engaged in the institutional reform effort. Faculty members undertook literature reviews and attended numerous conferences at both the state and the national level to learn about best practices in developmental education. Through this research, the college learned about *cooperative learning* as a technique to promote student success and persistence. Because this pedagogical approach

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[14]Mountain Empire implementation proposal, 2005.
[15]Patrick Henry implementation proposal, 2005.
[16]Patrick Henry implementation proposal, 2005.

focuses specifically on promoting students' active engagement in learning, Patrick Henry became very interested in it and began to explore its utility for meeting the college's identified needs. After a site visit to another college that used this method and after several faculty members were sent there to be trained in it, momentum for the approach grew at Patrick Henry, and the college began to seek out ways to institute cooperative learning within several of its developmental math classes.

Like the other two colleges in the study, Guilford Tech also sought to better understand the needs and challenges of its developmental student population before choosing strategies to improve their success. In order to better identify which developmental students were most in need of assistance, the college disaggregated its student outcome data by developmental course level. Doing this revealed a disturbing fact: Only 12 percent of the students taking the lowest level of developmental math, reading, and writing courses ever made it through developmental education to college-level courses.[17] Additionally, many Guilford Tech faculty members had noted that these students often arrived at the lowest-level developmental classes with very basic skills and often required extensive remediation before they could move on to another level. These faculty members also noted that many basic-level skills, such as numeric functions and phonics, had traditionally not been taught in developmental education courses.

Thus, Guilford Tech saw that these low-level developmental education students may not have been receiving the instruction that they needed, and so the college decided to find ways to provide more intensive instruction by adding a component of basic skills to the curriculum. It was able to do this by connecting with its well-established adult education program, which has a stronger focus on basic skills instruction, including more elementary reading skills (phonics, word reading, and fluency), basic math (addition, subtraction, multiplication, division), and writing (basic grammar and sentence structure). Because some of these skills might also be useful for low-level developmental education students, the college explored how the two programs could work together to better meet the needs of these students. It began this process by administering the adult education assessment, the Tests of Adult Basic Education (TABE), to see whether these low-level developmental education students' skills justified a connection with adult education. The college was surprised to find that every low-level developmental education student whom they tested had skill levels below the ninth grade.[18] Because this level was the cutoff for students to be able to receive adult education services, Guilford Tech was able to build a solid argument for melding de-

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[17]Interview with Guilford Tech institutional researcher.
[18]Most students had skill levels between the second and the sixth grade.

velopmental and adult education instruction, and the school began plans for its new Transitions program for low-level developmental education students.

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As can be seen from the stories above, the three community colleges covered in this report went through an extensive planning and research process when moving from the creation of priorities for institutional improvement to the development of strategies for student success. While the movement from priorities to strategies may seem straightforward, the colleges' experiences reveal that a significant amount of time, effort, and active engagement from members of the college community are required to make the leap from the identification of priorities to the implementation of success strategies.

Chapter 3

Implementing Change:
Piloting Interventions to Improve Student Success

After developing priorities for reform and researching strategies to address those priorities, Achieving the Dream colleges are encouraged to take Step 4 in the institutional reform process: *Implement, evaluate, and improve strategies.* (Chapter 1 and Figure 1 describe the five steps in the initiative's theory of action.) This chapter focuses on the initial piece of Step 4: the implementation of student success strategies as smaller pilot programs in order to test their effectiveness in improving students' achievement.

While the initiative has a relatively hands-off approach to strategy implementation, Achieving the Dream does encourage that these strategies be organized around the colleges' identified priority areas for reform. Colleges may implement a number of different strategies, based on their own identified priorities and needs (Steps 2 and 3). As discussed in Chapter 2, the three colleges studied for this report each made improving the success of developmental education students one of its central priorities.[1] While this report highlights instructional reforms in developmental education at Guilford Tech, Mountain Empire, and Patrick Henry, it should be noted that these schools also implemented a number of other strategies in an attempt to improve developmental students' success. Their strategies ranged widely, from providing increased advising and support systems for developmental education students to changing the management and direction of developmental education itself. (Appendix Table A.1 summarizes the strategies used by the Round 1 and Round 2 colleges.)

Among these varied strategies, all three colleges hoped to improve students' success by revising the instruction and curriculum in developmental education classrooms. The instructional reforms that these colleges implemented provide interesting lessons for how actual classroom practices might be reformed to better reach this struggling student population. This chapter highlights the different components of these colleges' instructional reforms and the challenges and issues that the colleges faced during their implementation. (Table 2 summarizes the key features of these interventions.) In the discussion below, the colleges' strategies are organized by skill-level subgroups of developmental education students, including (1) strategies for improving instruction with low-level learners, (2) strate-

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[1] Appendix Table A.3 presents information on the three colleges: Guilford Technical Community College in Greensboro, North Carolina; Mountain Empire Community College in Big Stone Gap, Virginia; and Patrick Henry Community College in Martinsville, Virginia.

Achieving the Dream: Community Colleges Count

Table 2

Highlights of the Programs Implemented by the Colleges in This Report

Program Component	Transitions (Guilford Tech)	Fast Track Math (Mountain Empire)	Peer-Led Team Learning (Mountain Empire)	Cooperative Learning (Patrick Henry)
Course structure	Intensive 5-day a week, 5-hour a day (25 hours per week) instructional program	1-credit and 2-credit courses that meet on a truncated schedule (either 2-week course in the summer or half-semester course during the academic year)	5-credit course that meets 6 hours a week; scheduling of peer-led hour closely correlated with class time	Same number of credit hours as traditional developmental education courses
Instruction/curriculum	Course taught by 2 instructors; curriculum mirrors lower-level developmental education curriculum as well as including basic reading, writing, and math skills	Traditional developmental Arithmetic and Algebra I curriculum with review focus and fast-paced instruction; covers 3 times as much material in 1 class meeting as a traditional developmental math course	Traditional developmental math curriculum, with addition of workshop hour led by peer leader	Structured pedagogical approach which revamps traditional lecture format to create active student learning; small-group learning activities (both formal and informal)
Student population	Students testing into the lowest-level developmental reading, writing, and math courses	Currently 2 courses offered (Arithmetic and Algebra I)	Currently offered in 2 Algebra I courses	Currently offered in 35 courses, including developmental math, English, and reading as well as college-level courses
Assessment (for placement)	Developmental education placement exam (COMPASS) and adult basic education assessment (TABE); enrollment in Transitions program voluntary	Developmental education placement exam (COMPASS), with score minimum and attendance requirements	Developmental education placement exam (COMPASS); enrollment in PLTL courses voluntary	Developmental education placement exam (COMPASS)

(continued)

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Table 2 (continued)

Program Component	Transitions (Guilford Tech)	Fast Track Math (Mountain Empire)	Peer-Led Team Learning (Mountain Empire)	Cooperative Learning (Patrick Henry)
Assessment (for monitoring student success)	Developmental education placement exam (COMPASS) and adult basic education assessment (TABE)	Course grades	Course grades (no grading by peer leader)	Course grades; student self-assessments and group assessments
Cost to student	Free to student, including books	Tuition based on credit hours	Tuition for 5 credit hours (no charge for PLTL hour)	Tuition based on credit hours
College's financial support of program	North Carolina state funding; federal funding;[a] Achieving the Dream grant money to help support development of program	Achieving the Dream grant money to research program and develop curriculum at college; Virginia state funding; student tuition	Achieving the Dream grant money to research program and develop curriculum at college; Virginia state funding; student tuition	Achieving the Dream grant money to research program and develop curriculum at college; Virginia state funding; student tuition

SOURCES: Interviews with college administrators and faculty; colleges' Achieving the Dream implementation proposals and annual reports.

NOTE: [a]State funding provided through North Carolina Administrative Code 23 NCAC; federal funding provided under Title II Workforce Investment Act of 1998, which provides the main source for adult basic education funding throughout the United States.

gies for improving instruction with high-level learners, and (3) strategies that can be used to reach learners at multiple skill levels.

Reaching Low-Level Developmental Education Students: The Transitions Program at Guilford Tech

As highlighted in Chapter 2, one priority of Guilford Technical Community College centered on improving the success of low-level developmental education students. During the initial data analysis process, the college identified several barriers that kept these students from being more successful:

- **Progression through developmental course levels.** Low-level developmental education students had to progress through several levels of developmental education, often in several subject areas (math, reading, and English). This meant that students often spent several semesters, if not years, trying to reach college-level courses.

- **Financial burdens.** Because low-level developmental education students were required to take a number of developmental courses, they often depleted their financial aid before matriculating into college-level courses — a situation that greatly hampered their ability to persist in college.

- **Academic challenges.** Even though they were high school graduates, students who tested into the lowest-level developmental education classes often had limited skills and were in need of some basic instruction in elementary reading, writing, and math. Sometimes low-level developmental education courses did not offer enough basic skills instruction, and thus students were not receiving instruction in some of their needed academic skills.

Given these barriers, Guilford Tech sought to build a developmental education program that would better meet the unique challenges that its students faced. The college's primary goal was to build an alternative academic system that would allow students who had low skill levels to progress more quickly through the developmental education curriculum. Another goal was to help these students, who often fail one or more levels of developmental courses, to preserve their financial aid and academic standing while working on their skills. Additionally, the college wished to provide a more intensive learning program, which also included some basic skills instruction, in order to meet the deficits that low-level developmental education students often had.

In order to meet these goals, Guilford Tech decided to build a bridge with their well-established adult basic education (ABE) program and to develop a new "Transitions"

program, which blended aspects of both the adult and the developmental education programs. (See Table 3 and Box 1.) Because the programs were focused on students with low-level skills, the college restricted their target population to those students who had who tested into the lowest level of developmental education in all three academic areas (reading, English, and math). Interestingly, when the college retested these students with the Tests of Adult Basic Education (TABE), they found that these students had a real need for basic skills instruction: Nearly all the students had reading, writing, and math skills below the sixth-grade level. This finding bolstered the college's decision to incorporate elements of basic skills instruction into the traditional developmental education curriculum.

In developing this new Transitions program, Guilford Tech laid several ground rules in order to distinguish this program from both its traditional ABE classes and its developmental education classes. First, the college wanted to be attentive to developmental education students' desire to be college students, and so it chose to offer classes on a traditional college schedule. Classes are held in semester-long units, which met intensively for five hours a day, five days a week. However, the five-hour classes are broken up into different modules, and students are given breaks between these classes — mimicking the traditional class movement in regular college classes. Also, unlike ABE's open-entry, open-exit policy, the Transitions program allows entry only at the beginning of a semester. The college also chose to hold classes on the main college campus, where the traditional college-level courses are held, rather than on the satellite campus, which offers ABE classes and is often identified with that program. Finally, in order to model the roles and responsibilities needed for success in college, the Transitions program has stricter attendance and behavioral policies than traditional ABE classes do.

Classes in the Transitions program also differ from traditional developmental education classes, in several ways. Most important, perhaps, is that students do not pay tuition for the courses, nor do they receive traditional college grades for their work. The Transitions courses are supported through ABE funding, meaning that classes can be offered to students tuition-free. Unlike in many states, North Carolina's ABE regulations allow adult education programs to educate a limited number of students who have high school diplomas or General Educational Development (GED) certificates, if they have skills below the ninth-grade level.[2] Thus, Guilford Tech is able to use adult education monies to support a limited number of developmental education students (who have high school credentials) if they have lower-level skills. Since the program is supported through Guilford Tech's adult education grant, students can attend class without depleting their financial aid resources, allow-

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[2]These regulations are discussed under North Carolina Administrative Code 23.

Achieving the Dream: Community Colleges Count

Table 3

Key Components of Guilford Tech's Transitions Program, Compared with Traditional Developmental Education Courses

Program Component	Transitions Program	Traditional Developmental Education Classes (Lowest Level)	Adult Basic Education Program
Course structure	Intensive 5-day a week, 5-hour a day (25 hours per week) instructional program	Classes held 5 hours a week (total of 15 contact hours per week for reading, writing, and math courses)	3 course levels offered, for 0 to 12th-grade skill levels; courses offered in flexible schedule throughout week; generally 1.5 to 3 hours per class meeting
Class size	Up to 25 students; currently no more than 20 students per class	18-20 students per class	Up to 30 students per class
Instruction/curriculum	Course taught by 2 instructors; curriculum mirrors lower-level developmental education curriculum; includes basic reading, writing, and math skills, such as: 1. Basic phonics, fluency, vocabulary, oral reading, and comprehension 2. Grammar and basic sentence structure 3. Basic math functions ($+, -, \div, \times$) and beginning pre-algebra concepts (decimals, fractions, percentages)	Each developmental education course is taught by one instructor: 1. Math: Properties, rounding, estimating, comparing, converting, and computing whole numbers, fractions, and decimals 2. English: Fundamentals of standard written English, effective word choice, recognition of sentences and sentence parts, and basic usage 3. Reading: Basic word attack skills, vocabulary, transition words, paragraph organization, basic comprehensive skills, and learning strategies	Course taught by one instructor; curriculum depends on student skill level: 1. <u>Below 6th-grade skills:</u> Basic phonics, sentence structure, oral reading, grammar, basic math functions ($+, -, \div, \times$) 2. <u>6th to 8th grade:</u> Comprehension, higher-level grammar, reading, fractions, decimals, percentages 3. <u>9th to 12th grade:</u> Comprehension, academic writing, algebra, and geometry
Program management	Overseen jointly by the Dean of High Point campus, Director of Adult Basic Education, and Division Chair of Developmental Education	Overseen by Division Chair of Developmental Education and Developmental Reading, English, and Math Chairs	Overseen by the Dean of High Point campus and the Director of ABE

Table 3 (continued)

Program Component	Transitions Program	Traditional Developmental Education Classes (Lowest Level)	Adult Basic Education Program
Student population	Students testing into the lowest level of developmental reading, writing, and math courses	Students who test into the particular developmental area (Reading, English, or Math); Guilford Tech offers 4 levels of developmental math, 3 levels of developmental English, and 3 levels of developmental reading	Students who do not have a high school credential
Assessment (for placement)	Developmental education placement exam (COMPASS) and adult basic education assessment (TABE); enrollment in Transitions program voluntary	Developmental education placement exam (COMPASS); enrollment in developmental education mandatory based on cutoff scores	Tests of Adult Basic Education (TABE)
Assessment (for monitoring student success)	Developmental education placement exam (COMPASS) and adult basic education assessment (TABE)	Course grades	Tests of Adult Basic Education (TABE)
Cost to student	Free to student, including books	Students pay college tuition (per credit hour), books, and fees	Free to student, including books
College's financial support of program	North Carolina state funding; federal funding;[a] Achieving the Dream grant money to help support development of program	North Carolina state funding, based on colleges' Full Time Equivalent Student (FTES) hours in developmental education; student tuition	North Carolina state funding; federal funding[a]

SOURCES: Interviews with college administrators and faculty; college's Achieving the Dream implementation proposals and annual reports.

NOTE: [a]State funding provided through North Carolina Administrative Code 23 NCAC; federal funding provided under Title II Workforce Investment Act of 1998, which provides the main source for adult basic education funding throughout the United States.

Box 1

What Do Students Say About Guilford Tech's Transitions Program?

Financial benefit The course "being free — it's a privilege. You don't go everywhere and have this kind of opportunity."

Instruction One of the advantages is that when I "didn't meet the standard to go into the curriculum courses," I had an opportunity to come back to "work on increasing my scores."

The length of the classes "gives you a sense of responsibility — that you have to come to class, you have to be serious to do this."

Additional support services "You get to visit programs you're interested in. I like that you can talk to the instructors."

"It gives you some one-on-one" time. Instructors will "work an extra hour in tutoring [with you]. If you don't get it, they'll still work with you and try to help you."

Transitions program versus high school In the Transitions program, "they don't give you as much work" as they did in high school. And "I learn a lot faster."

"Instead of doing five hours of homework" that I didn't understand, we have less work, "and then they review it with you. It's almost like they're reviewing it with you and it helps you learn faster."

Suggestions for change "A lot of people don't know about the program . . . [and] a lot of people out there that have the same problem that we do." They feel "afraid" or "ashamed because they are older. I'd like them to find a way to let other people know about the program."

SOURCE: Student focus groups conducted by researchers.

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ing them to preserve these monies for use later, when they matriculate into higher-level courses.

Guilford Tech's Transitions program also differs from traditional developmental education classes in that it allows students to move through multiple developmental education levels at once. Unlike traditional developmental programs, in which progression through the course sequence is based on grades, Transitions students show progress by re-

taking the COMPASS[3] and TABE assessments. A student who places higher on the COMPASS exam is able to move into the newly assessed course level; this could include passing out of developmental education altogether. Using the COMPASS assessment as a measure of academic progress allows students the opportunity to move up multiple course levels, if their skills improve, rather than having to move sequentially through each developmental education course level. This situation actually occurred for a number of Transitions students, who were able to place out of multiple developmental course levels after only one semester of work. (See Chapter 4.)

Using the COMPASS assessment, rather than grades, as the standard for course progression has several other advantages for low-level developmental education students. For instance, it keeps students who learn more slowly from being penalized for their slow progress. Normally, in a traditional developmental education course, students who do not master all the course material within a given semester would receive a failing grade for the class. As well as being disheartening to students, multiple failing grades have the further disadvantage of jeopardizing their academic standing and financial aid, as students must maintain good academic standing in order to continue to receive financial aid. However, in the Transitions program, students' progress is officially measured by their TABE and COMPASS scores, rather than by course grades.[4] Therefore, students who make slower progress receive a lower score on these assessments rather than failing grades.

Should Transitions students not progress as quickly as others, they also have the bonus of being able to continue in the class. As Guilford Tech has currently implemented the program, students may retake Transitions courses from semester to semester if their skill level has not improved enough for them to move to higher-level developmental education courses. This opportunity allows students to continue to build their skills over additional semesters without being penalized with failing grades for their lack of progress.

Finally, the Transitions program is tailored toward the needs of low-level developmental education learners in one other important way: It provides intensive academic instruction and support services as well as some basic skills instruction not generally taught in traditional developmental education classes. As noted above, the Transitions class is run five days a week, for five hours a day, providing 10 hours more of instruction per week to low-level students than they would receive in the traditional, lowest-level developmental education course series (reading, English, and math). When designing the Transitions cur-

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[3]The COMPASS is one of several types of placement exams that community colleges often use to gauge entering students' skills and knowledge. Students' scores determine whether they will be placed in developmental or regular curriculum courses.

[4]Students also receive grades for their work within the course. However, these grades are not recorded on their official academic transcript.

riculum, Guilford Tech sought to meld the developmental education curriculum with that of adult education, which resulted in a unique blend of basic skills instruction and the more traditional developmental education curriculum. The Transitions curriculum starts with a review of the basic skills that are rarely covered in traditional low-level developmental education courses, including phonics, basic math functions (addition, subtraction, multiplication, and division), and grammar. Because the course is taught by two instructors, the Transitions class can also be divided, on occasion, so that slower students can be separated from those who are progressing more quickly. These components allow for a greater degree of flexibility and intensity of instruction than traditional developmental education classes can provide.

The Transitions program also provides intensive support services that are not generally offered to developmental education students. These services include a weekly Friday seminar in which students learn more about the services that Guilford Tech offers and have the opportunity to explore different academic areas and career possibilities. The program also provides an instructor-led tutoring hour, during which students can receive additional help on their coursework. Finally, the program has a mobile computer lab, which students use during class time to develop their technological skills.

In sum, Guilford Tech's Transitions program is designed to help low-level developmental education students succeed in the following ways:

- **Progression through developmental course levels.** By measuring student progress using the COMPASS assessment, the Transitions program offers an opportunity for low-level developmental education students to bypass multiple developmental education course levels in a single semester, should their skills improve accordingly.

- **Financial burdens.** By providing courses tuition-free, the Transitions program reduces the financial burden on students and preserves their financial aid for future use.

- **Academic challenges.** By offering an intensive academic program with supplemental support services, the Transitions program helps students build their basic skills in a nonpunitive environment. Students may reenroll in the Transitions program in subsequent semesters without the stigma of failing grades or jeopardizing their academic standing.

Reaching Higher-Level Developmental Education Students: Fast Track Math at Mountain Empire

Fast Track Math at Mountain Empire Mountain Empire Community College sought to meet a slightly different set of challenges than Guilford Tech's when considering what program might help developmental education students. Mountain Empire noted that its students arrived into developmental education classes, and particularly developmental math, with a variety of skill levels. Two issues were noted:

- **Students with differing skill abilities.** Some students came into developmental math classes with much stronger skills than others and learned the course material more quickly. These students came in with a stronger background in math and argued that they needed only minimal review to remember the skills that they had learned previously.

- **Persistence.** Like Guilford Tech, Mountain Empire was concerned that developmental education students were taking longer than needed to progress through developmental math. The college hoped to find a way to help students progress more quickly through the developmental sequence.

To address these issues, Mountain Empire chose to implement its Fast Track Math program. (See Table 4 and Box 2.) Rather than providing full instruction to students, these classes provide a quick review of math concepts for students who already have a solid background in the course material and need a "refresher" to be brought up to speed. Modeled after a similar program at Montgomery College in Maryland, Mountain Empire's Fast Track Math courses condense a full semester of developmental Arithmetic and Algebra I into a one-credit and two-credit review class, respectively. The classes meet on a truncated schedule, so that students have the opportunity to take two courses within one semester. The courses are designed to articulate with one another so that students who complete the Arithmetic course are prepared to take the Algebra I Fast Track course.

While Fast Track Math gives students a good opportunity to move quickly through two lower-level developmental math courses, Mountain Empire stresses the importance of having a well-managed intake process for such a program. Because the students who take these courses need to have strong skills, a school needs to ensure that those who take the course are knowledgeable about its structure and that they are capable of succeeding with its fast-paced nature. As described in Table 4, Mountain Empire has restricted the course to a small subset of students who:

1. Meet with an instructor and are given a thorough introduction to the class and its status as a review course

Table 4

**Key Components of Mountain Empire's Fast Track Math Program,
Compared with Traditional Developmental Education Courses**

Program Component	Fast Track Math Program	Traditional Developmental Education Courses
Course structure	1-credit and 2-credit courses that meet on a truncated schedule (either 2-week courses in the summer or half-semester courses during the academic year)	3- and 5-credit courses that meet 3 or 5 hours a week, respectively
Class size	Dependent on enrollment; generally small because of restricted entry	Up to 30 students per class
Curriculum	Same curriculum as traditional developmental Arithmetic and Algebra I classes, but fast-paced instruction; provides review of developmental math curriculum that covers 3 times as much material in 1 class meeting as a traditional developmental math course	Arithmetic (Math 2): Whole numbers, fractions, decimals, percentages, measurement, graph interpretation, geometric forms, and applications Algebra I (Math 3): Real number, equations and inequalities, exponents, polynomials, Cartesian coordinate system, rational expressions, and applications
Program management	Developed and taught by 1 developmental math faculty member	Arts and Sciences Department Chair oversees developmental education program; total of 6 full-time math faculty (who teach developmental and college-level courses)
Student population	Currently 2 courses offered (Arithmetic and Algebra I)	4 developmental math levels offered (Arithmetic, Algebra I, Algebra II and Geometry)
Assessment (for placement)	Developmental education placement exam (COMPASS); enrollment restricted to students who: 1. Meet with an instructor and are given a thorough introduction to the class and its status as a review course 2. Have a borderline placement test score 3. Are able to meet the course's 100 percent mandatory attendance policy 4. (For the Fast Track Algebra course) Have taken Algebra in high school and received a grade of C or higher	Developmental education placement exam (COMPASS); enrollment in developmental education mandatory based on cutoff scores
Assessment (for monitoring student success)	Course grades	Course grades

Table 4 (continued)

Program Component	Fast Track Math Program	Traditional Developmental Education Courses
Cost to student	Tuition based on credit hours	Tuition based on credit hours
College's financial support of program	Achieving the Dream grant money to research program and develop curriculum at college; Virginia state funding; student tuition	Virginia state funding; student tuition

SOURCES: Interviews with college administrators and faculty; college's Achieving the Dream implementation proposals and annual reports.

2. Have a borderline placement test score

3. Are able to meet the course's 100 percent mandatory attendance policy

4. (For the Fast Track Algebra course) Have taken Algebra in high school and received a grade of C or higher

Mountain Empire notes that these restrictions are essential for the courses to function properly; otherwise, students taking them would not be able to succeed in the fast-paced instructional environment.

Other than being condensed, the curriculum in the Fast Track Math courses differs little from that offered in a traditional developmental math course. In Arithmetic, instructors cover similar concepts, including basic math functions, fractions, and decimals. In the Algebra course, the curriculum focuses on real numbers, equations and inequalities, exponents, algebraic equations, and the Cartesian coordinate system. However, rather than the lecture-then-practice format of traditional developmental math courses, the instructor tends to give a brief overview of a concept and then allows students to try one problem before moving on to the next concept.

In summary, Mountain Empire's Fast Track Math program is designed to help developmental education students succeed in the following ways:

- **Students with differing skill abilities.** The Fast Track Math program provides fast-paced review courses on developmental math concepts in both arithmetic and algebra for students who have some background in the math content.

- **Persistence.** Fast Track Arithmetic and Fast Track Algebra developmental math courses are offered back-to-back in one semester so that Mountain Empire students can finish two developmental math courses in a single semester.

Box 2

**What Do Students Say About Mountain Empire's
Fast Track Math Program?**

Instruction "You have to read the fine print. This is a refresher course. You have to have an understanding of [the] math [being taught]."

"I liked that [the class] gave me a chance to prove I knew what I was talking about — that I knew this math . . . it's a way for me to voice that I know how to do it."

Fast Track "would be great" for many other subjects.

Progression through developmental education "If it wasn't for [Fast Track Math], it could have been another year that I would have needed [to be at the college]."

Suggestions for change "It's an expensive course to refresh your memory."

Reaching Developmental Education Students at Multiple Skill Levels: Peer-Led Team Learning at Mountain Empire

In addition to providing a faster-paced math program for developmental education students, Mountain Empire also sought to develop a wider menu of programs to reach other types of developmental education students. More specifically, other challenges that were noted included:

- **Accessibility of additional instructional support.** While noting that developmental education students could benefit from additional academic support, Mountain Empire found that students often had difficulty creating additional time in their schedules for tutoring and other academic support services. Mountain Empire wanted to find a way to provide more instructional supports during times when students could take advantage of them.

- **Student engagement.** Mountain Empire noted that many developmental education students did not appear engaged in their classes, particularly in developmental math courses. They sought a way to more actively engage students in their learning.

In response to these challenges, Mountain Empire turned to the help of experienced math students and created a new math sequence that included Peer-Led Team Learning (PLTL). Originally developed by a consortium of researchers in New York state colleges and universities, PLTL utilizes student leaders who have succeeded in a particular subject area (in this case, developmental math) to teach interactive workshops on the material covered in the course.[5]

While PLTL is somewhat similar to tutoring or supplemental instruction, Mountain Empire's program has several unique aspects that distinguish it from traditional peer tutoring. (See Table 5 and Box 3.) Peer tutors often have little connection to students' classes and instructors; by contrast, the peer leaders in PLTL classes at Mountain Empire are required to attend students' classes and are trained to teach students in a manner similar to the course instructors. Additionally, the workshop hours themselves are closely connected to the course instructors' classes; the instructors design the workshop lessons so that they build on each week's lesson. Furthermore, course instructors supervise and monitor the peer leaders, meeting with them regularly to discuss students' progress during the workshop hours. Thus, unlike tutoring or supplemental instruction — which are generally offered as review or practice sessions separate from class — the PLTL hour is designed to closely mirror class instruction and to allow students to develop the skills that they are learning in class.

In addition to the design of the PLTL program, Mountain Empire also paid close attention to the scheduling of the course so that students could actually attend the PLTL hour. Rather than offer PLTL as a separate hour disconnected from class time, Mountain Empire made a pointed effort to include the peer-led workshop hours during a free period just before class on Fridays. Because developmental math classes meet for two hours on Mondays and Wednesdays and one hour on Fridays, all developmental math students had a free hour available before class on Fridays. Mountain Empire chose to take advantage of this scheduling and developed the PLTL hour in that block of time, which meant that students did not have to find available time in their schedules for this additional support. The college noted that this scheduling was critical for students to be able to attend the peer-led hour — a fact that was also emphasized by students in their comments about the program (Box 3).

Both faculty and students emphasized the important role that the PLTL hour played in increasing students' understanding of math concepts. Because the hour was not led by an instructor, the college could neither mandate students to attend nor charge them tuition. Despite its voluntary nature, many students often attended the PLTL hour. Mountain Empire also offered another bonus to make the hour more attractive: Students receive five extra credit points for each PLTL hour that they attend, which can add as much as 10 percentage points to their final grade.

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[5]See Gosser et al. (2001) for details.

Table 5

**Key Components of Mountain Empire's Peer-Led Team Learning Program,
Compared with Traditional Developmental Education Courses**

Program Component	Peer-Led Team Learning Program	Traditional Developmental Education Courses
Course structure	5-credit course that meets 6 hours a week; scheduling of peer-led hour closely correlated with class time.	3- and 5-credit courses that meet 3 or 5 hours a week, respectively
Class size	Limited to 24 students per class; in peer-led sessions, there is 1 peer leader per 6-8 students	Up to 30 students per class
Curriculum	Traditional developmental math curriculum, with addition of workshop hour led by peer leader. Critical components of PLTL: 1. Initial peer leader training in workshop facilitation and ongoing trainings throughout the semester 2. Peer leader in students' classes and is trained to use same methods of instruction as teacher 3. Workshop lesson designed and monitored by course instructor 4. Workshop lesson encourages active participation among students	Algebra I (Math 3): Real number, equations and inequalities, exponents, polynomials, Cartesian coordinate system, rational expressions, and applications
Program management	Developmental coordinator oversees Achieving the Dream developmental education projects; PLTL classes taught by two full-time math faculty members (who teach developmental math); peer leaders under direction of MECC's Tutor Coordinator	Arts and Sciences Department Chair oversees developmental education program; total of 6 full-time math faculty (who teach developmental and college-level courses)
Student population	Currently offered in 2 Algebra I courses	4 developmental math levels offered (Arithmetic, Algebra I, Algebra II, and Geometry)
Assessment (for placement)	Developmental education placement exam (COMPASS); enrollment in PLTL courses voluntary	Developmental education placement exam (COMPASS); enrollment in developmental education mandatory based on cutoff scores
Assessment (for monitoring student success)	Course grades (no grading by peer leader)	Course grades

(continued)

Table 5 (continued)

Program Component	Peer-Led Team Learning Program	Traditional Developmental Education Courses
Cost to student	Tuition for 5 credit hours (no cost for PLTL hour)	Tuition for 3 or 5 credit hours
College's financial support of program	Achieving the Dream grant money to research program and develop curriculum at college; Virginia state funding; student tuition	Virginia state funding; student tuition

SOURCES: Interviews with college administrators and faculty; college's Achieving the Dream implementation proposals and annual reports.

Finally, the faculty members who instituted PLTL at Mountain Empire explain that the PLTL workshop provides a less threatening and more engaging environment for developmental math students to hone their math skills. Since students are not graded by peer leaders, they do not need to fear a critical assessment of their work. Instead, the peer-led workshop hour is structured so that students may learn from someone who has struggled, and succeeded, with similar coursework. Additionally, the workshops are designed to promote active group learning. Students are assigned to work with one another in small groups in interactive projects, such as developing an algebra equation from smaller functions. These projects are purposely designed so that students work with one another and help each other in their learning. As the Mountain Empire PLTL students noted, this active engagement with a peer leader was a critical element in their learning (Box 3).

In summary, Mountain Empire's PLTL-augmented developmental math classes seek to improve students' success in the following ways:

- **Accessibility of additional instructional support.** The PLTL program increases the instructional support in developmental math, by including a peer-led hour that allows for more active engagement and practice of course concepts. Because the peer-led workshops are designed and monitored by course instructors, they closely align with class instruction and lessons.

- **Student engagement.** The PLTL developmental math courses allow students to more closely engage with one another in practicing the math skills that they learn in class.

Mountain Empire sees both of these features as central to improving developmental math students' learning and, ultimately, to helping them have higher success rates.

Box 3

**What Do Students Say About Mountain Empire's
Peer-Led Team Learning Program?**

Instruction   [Because the tutors attend classes with the students] "they don't just say, 'So, what are you doing?' and then we say, 'Well, I don't know!' Instead, they know what we are doing."

"[Peer-Led Team Learning is] really good if you don't have time. . . . I can show up and get extra help, especially with the stuff I didn't get to do during the week. . . . It's great for people who are working."

"When you're out of school for a long time, you need to brush up on things. Those who work with you help you to feel more re-laxed."

Suggestions for change   "It should be offered more than once a week."

SOURCE: Student focus groups conducted by researchers.

Reaching Developmental Education Students at Multiple Skill Levels: Cooperative Learning at Patrick Henry

Like Guilford Tech and Mountain Empire, Patrick Henry Community College also struggled with how to improve the success rates of its developmental education students. In looking at the challenges that these students faced, Patrick Henry identified three crucial issues:

- **Student engagement.** Based on student surveys, Patrick Henry noted that students often felt disengaged in their classes, particularly in typical lecture courses. Patrick Henry also noted from its research that individuals learn best and retain information when they are actively involved in problem solving in their courses. Thus, Patrick Henry hoped to find new ways to actively engage students in their learning.

- **Workforce skills.** From both background research and community net-works, Patrick Henry noted that employers seek to hire individuals who can think critically and work well together in teams. Further developing students' social and interpersonal skills thus became an important focus.

- **Persistence.** Patrick Henry's persistence/success model revealed that a quarter of the entering student class — the majority of whom took one developmental course or more — failed to persist in school.[6] Patrick Henry decided that helping students persist from semester to semester was an important goal for the college, and it began to research instructional strategies aimed at increasing persistence.

As Patrick Henry faculty members began to research different instructional strategies that might improve students' engagement, workforce skills, and persistence, they discovered that active, or cooperative, learning strategies were commonly discussed as a way to improve student learning. Patrick Henry chose to implement Roger and David Johnson's *cooperative learning model,* which revamps traditional lecture-format instruction into an interactive, student-centered model.[7] Based on a fairly rigorous and structured learning theory, Johnson and Johnson's cooperative learning model suggests that students can learn more effectively when working together in small groups toward a common goal, if students are fully invested in the group and feel a sense of responsibility for its success. Patrick Henry saw cooperative learning as a particularly attractive method for engaging developmental education students, who often lack many of the social skills demanded by today's work world. The college hoped that this approach would help students gain self-confidence and team-building skills while also increasing their ability to think critically about course material.

In implementing cooperative learning, Patrick Henry has adopted the major theoretical underpinning of Johnson and Johnson's model, arguing that five key conditions need to be in place in order for the strategy to succeed. (See Table 6 and Box 4.) In sum, cooperative learning pushes students to work together on problem-solving activities in which each student has a specified role and responsibility and plays an active part in the group's success. Additionally, it encourages students to be active in the assessment process, in that they as well as instructors evaluate the functioning of the group and themselves. Cooperative learning tends to be centered on three types of activities, which allow for (1) more intimate, small-group check-ins (*base groups*); (2) informal ad hoc groupings to assist with cognitive processing during a lecture (*informal activities*); and (3) more formal, high-stakes group activities in which students take on more specified roles and responsibilities (*formal activities*).

Patrick Henry sees cooperative learning as meeting a number challenges that developmental education students face. First, Patrick Henry urges that cooperative learning

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[6]Patrick Henry Community College (2008).

[7]Johnson and Johnson (1994); Johnson (1992). For more information, please refer to the University of Minnesota's Cooperative Learning Center Web site: http://www.co-operation.org/.

Achieving the Dream: Community Colleges Count

Table 6

Key Components of Patrick Henry's Implementation of Cooperative Learning, Compared with Traditional Developmental Education Courses

Program Component	Cooperative Learning	Traditional Developmental Education Courses
Course structure	Same number of credit hours as traditional developmental education courses	1 to 6 credit hour course
Class size	Class size similar to traditional developmental education classes	20 to 30 students per class
Curriculum	Similar content as traditional courses, with structured pedagogical approach that revamps traditional lecture format to active student learning; essential pedagogical components: 1. Positive interdependence, whereby students work together toward a common goal 2. Frequent face-to-face interaction 3. Individual accountability, in which each student plays a role and is accountable for both individual and group work 4. Frequent use of social and group-building skills 5. Frequent group processing, whereby students evaluate and seek to improve the overall functioning of the group Learning based around 3 types of small groups: 1. Base groups: Group of 3-4 students who meet throughout the semester 2. Formal activities: Structured small-group learning activities, which encourage the learning of course content or problem-solving skills 3. Informal activities: Ad hoc, temporary small groups for processing newly learned material in lecture	Developmental reading (2 levels): Word forms and meanings, comprehension techniques, controlled reading; comprehension skills (inferences, conclusions, relationships, charts and graphs) Developmental English (2 levels): Process of writing, including starting, composing, revising, and editing; improve clarity and argumentation Developmental Math (5 levels): Arithmetic (basic functions), Algebra I (real number, equations, exponents, etc.), Algebra II (rational expressions, quadratic equations, etc.), Developmental Geometry (basic geometric principles), and Pre-Algebra (simple equation applications)
Program management	Originally researched and implemented by 3-4 faculty members; 5 faculty members now certified as trainers	Dean of Developmental Education oversees developmental education program; total of 5 full-time developmental education faculty
Student population	Currently offered in 35 courses, including developmental math, English, and reading as well as college-level courses	5 developmental math levels (Arithmetic, Algebra I, Algebra II, Basic Geometry, and Pre-Algebra), 2 developmental reading levels, and 2 development English levels offered

(continued)

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Table 6 (continued)

Program Component	Cooperative Learning	Traditional Developmental Education Courses
Assessment (for placement)	Developmental education placement exam (COMPASS)	Developmental education placement exam (COMPASS); enrollment in developmental education mandatory based on cutoff scores
Assessment (for monitoring student success)	Course grades; student self-assessments and group assessments	Course grades
Cost to student	Tuition based on credit hours	Tuition based on credit hours
College's financial support of program	Achieving the Dream grant money to research program and develop curriculum at college; Virginia state funding; student tuition	Virginia state funding; student tuition

SOURCES: Interviews with college administrators and faculty; college's Achieving the Dream implementation proposals and annual reports.

Box 4

What Do Students Say About Patrick Henry's
Cooperative Learning Classes?

Instruction "What's good is [the teacher] gets to know the students — knows who's weak and who's strong — and can group them together."

"If you're having issues, then somebody else can take you step by step through it" whereas sometimes the teachers "go too fast" and "teach you like you already have your master's degree.

Group interaction "You are more comfortable to speak out" when you are in smaller groups with other students.

When you're with someone who won't do the work: "If the teacher tells them, a lot of times they won't pay attention. We can talk to them in a nonprofessional way . . . [and say,] 'You need to straighten up!'"

Suggestions for change "It's just hard dealing with a group of people when I can just do it and get it done."

"You have to worry about someone else grading you. [The instructor] grades us on attendance, group homework. . . . If someone is missing from your group, then you get a zero!"

SOURCE: Student focus groups conducted by researchers.

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helps students to actively engage in their learning by applying theoretical concepts in ways that they may not have done in the past. Rather than the traditional stand-and-deliver lecture format, cooperative learning encourages instructors to lecture on key ideas, which equip students with enough knowledge to understand a concept and apply it to a problem when working with their small-group team. With each student playing a specified role in the group, cooperative learning also seeks to increase students' sense of responsibility for their own learning and the learning of others. Patrick Henry sees this as a stark contrast to developmental education students' traditional lecture classes. Rather than having students sit and passively absorb information that they may or may not understand, the college sees cooperative learning as a way for developmental education students to become actively involved in understanding a concept.

Patrick Henry also sees cooperative learning as further developing these students' critical thinking skills, as it actively pushes students to consider multiple ways of solving a problem. An example of this can be seen in a formal learning activity, in which students learn about three different methods for solving an algebraic equation and then choose among these methods in solving a problem with their small group. Next, students present their solutions to one another in front of the class, with each group discussing which method they chose and why. Patrick Henry faculty members explain that this type of multi-method problem-solving encourages students to consider critically different paths for tackling a problem while also pushing them to justify the choice of a particular method to their class-mates. In the faculty's view, such learning is particularly critical for developmental education students, as they learn how to envision multiple ways to solve a problem and gain confidence in explaining their thinking to others.

In addition to improving developmental education students' critical thinking skills, Patrick Henry sees cooperative learning as helping build students' social skills and connections with one another. All students in the class work in small groups and are thus required to interact with one another regularly. Additionally, students must play a role in the group and are often graded on how well they and others contribute to the group's success. Patrick Henry urges that mandating such teamwork, and making it a high-stakes part of student learning, encourages students to learn how to work cooperatively with others who may differ from them ethnically, culturally, or physically. Patrick Henry argues that working together in teams like this helps students become more work-ready, as local employers have been pushing for individuals who are able to work well in teams, communicate effectively, and think critically about the situations that confront them. The college explains that while students may not always enjoy teamwork (Box 4), these group activities help them to learn how to compromise and how to delegate responsibilities.

In summary, Patrick Henry's implementation of cooperative learning within the classroom seeks to improve developmental education students' success as follows:

- **Student engagement.** Cooperative learning promotes active student learning within the classroom, thereby revising the stand-and-deliver lecture format to an instructional model in which students are actively working toward their own learning and the learning of others.

- **Workforce skills.** By pushing students to learn from others who are different from themselves and to develop the ability to negotiate and compromise with their team, Patrick Henry sees cooperative group work as developing the interpersonal skills that employers most often seek.

- **Persistence.** Patrick Henry sees this type of active learning — which further connects students to one another and their classes — as resulting in increased persistence among the developmental student population.

Summary

Guilford Tech, Mountain Empire, and Patrick Henry each have a unique approach to reforming developmental education instruction. Their reforms seek to meet the varied needs of their student populations, including techniques to increase the success of low-level developmental education students, techniques to reach developmental education students who have higher skill levels, and techniques suitable for learners with a variety of abilities. However, the implementation of reform strategies is just one component in the larger framework of Achieving the Dream. The initiative expects colleges to complete the tasks of Step 4 and to move onto Step 5 — *Institutionalize effective policies and practices* — by evaluating their new interventions and increasing the scale of those that prove successful. As Chapter 4 describes, Guilford Tech, Mountain Empire, and Patrick Henry each took on these challenges of monitoring and evaluation, which provided a deeper understanding of their new reforms and a foundation for further expansion.

Chapter 4

Scaling Up or Scaling Down:
Monitoring Program Success as an
Achieving the Dream College

As described in the preceding chapters, the process of developing educational interventions in the Achieving the Dream initiative does not end with their implementation. Instead, as reflected in Step 4 of the initiative's theory of action (see Chapter 1 and Figure 1), colleges are expected to evaluate the success of their strategies and to scale up successful interventions into larger programs. Additionally, in Step 5 — *Institutionalize effective policies and practices* — the theory recommends that colleges then focus on building their improved strategies into the longer-term plans that they develop.

This chapter describes how the three Achieving the Dream colleges in this study have made strides in evaluating their developmental education programs and on how their findings have served as the basis for expanding and institutionalizing successful reforms.[1] To assist such evaluation efforts, the initiative has developed guidelines that explain that colleges should "gather and analyze data on specific strategies and broad institutional reforms to determine whether they are being implemented as planned; what barriers prevent that planned implementation; and whether the interventions lead to improvement in student outcomes."[2]

Achieving the Dream recognizes that colleges enter the initiative with varying skills and capabilities for research and evaluation. Additionally, it is understood that few colleges have previously undertaken extensive evaluation work. Colleges may enter Achieving the Dream anywhere along a continuum of experience, from having never evaluated their programs to having taken beginning steps to track student outcomes to more advanced analyses that introduce comparison groups to attain a better understanding of a program's effects. Regardless of colleges' skills on entering Achieving the Dream, however, the initiative hopes to help them further develop their research and evaluation capabilities and advance along this continuum.

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[1]The three colleges in the study are Guilford Technical Community College in Greensboro, North Carolina; Mountain Empire Community College in Big Stone Gap, Virginia; and Patrick Henry Community College in Martinsville, Virginia. Appendix Table A.3 presents information on selected characteristics of the colleges.

[2]Achieving the Dream (2008).

To assist in this process, Achieving the Dream has laid out guidelines for the types of evaluations that colleges should undertake. First, the initiative asks that colleges begin with a clear description of their planned reform activities. It is suggested that colleges use a *logic model* to articulate the expected effects of an intervention and to distinguish between strategies that have direct versus indirect effects on students. Second, while piloting a reform, the colleges are asked to conduct a *formative evaluation* of the new intervention.[3] Formative evaluations are intended to provide preliminary information about the reform's implementation, including whether it was implemented as designed, which students it affected, and the appropriateness of the reform's content for meeting students' needs.

After a college is confident about a reform's implementation, it is then encouraged to undertake a *summative evaluation* of the program's effects. In a summative evaluation, the college is encouraged to introduce a comparison group by which it can "assess what difference a program or policy makes in student outcomes beyond what would occur in the absence of the program or policy."[4] The initiative hopes to help colleges gain a more sophisticated understanding of different types of groups that they could use for comparison. Studies of comparison groups can range from relatively simple designs, which might use cross-tabulations to compare program participants with eligible nonparticipants, to more sophisticated designs, which might use multiple regression or other statistical methods to control for students' background characteristics. At the most rigorous end of this continuum are random assignment designs, whereby study participants are assigned to a program group or a control group through a lottery-like process. Random assignment designs account for such issues as differing motivation levels and background characteristics, because participants who have different attributes are divided equally between the program group and the control group. This ensures that the measured effects of the new intervention are not a result of more-motivated students' enrolling in the intervention. It is only through this method that institutions can state with certainty whether an intervention caused changes in student outcomes. (Chapter 5 discusses this issue further.)

Given the need for timely data and the resources required to undertake random assignment evaluations, Achieving the Dream expects that few colleges will be able to mount these more rigorous evaluations. Therefore, although colleges may track a reform's success by comparing the outcomes of students who received it with the outcomes of a similar group of students who did not receive it, such an evaluation will fall short of being able to say that a particular intervention *caused* the improved student outcomes. Rather, the comparative analyses undertaken by the colleges provide insight into *trends* in student achieve-

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[3]Achieving the Dream (2008).
[4]Achieving the Dream (2008).

ment, which certainly creates valid grounds for program buildup. This is the case with the colleges' research that is discussed below.

Regardless of which evaluation method is used, Achieving the Dream colleges are expected to make decisions about scaling up a program on the basis of their findings. In deciding whether and when to scale up a program, Achieving the Dream colleges are encouraged to use student outcome data — such as course pass rates, persistence, and graduation rates — to document the program's success. If a pilot program shows promising trends in student achievement, then a college is expected to bring it to fuller scale throughout the college. On the other hand, if a new intervention has no or negative effects on student outcomes, the initiative expects a college to revise the implementation of the reform or to eliminate it altogether. Finally, the initiative hopes that college administrators will use the findings from their evaluations for the purposes of planning and resource allocation. It is further hoped that colleges will put more resources into successful programs while scaling back programs that are evaluated as being less effective.

Documenting Success: Evaluating Achieving the Dream Strategies on the Ground

The evaluation plans of the three colleges studied for this report tend to have moved beyond the formative evaluation stage to the early stages of summative evaluation. Each of the colleges tracked the success of its interventions by comparing the outcomes of a group of students who received the intervention with the outcomes of an analogous group that did not receive the reform. For instance, Guilford Tech compared the success of students in the Transitions program with developmental education students who were taking the lowest level of all three developmental education subjects (reading, English, and math). Mountain Empire analyzed the success of students in Peer-Led Team Learning and Fast Track Math classes with students who were taking the same courses but were attending classes that did not have these interventions. Patrick Henry used a statistical method, *survival analysis,* which seeks to account for differences in students' characteristics. It thus compared the persistence of students who had attended one or more cooperative learning course with the persistence of those who had not received this intervention.

Guilford Tech's institutional research department tracked the progress of the first cohort of students in the Transitions program against a comparable group of students who tested into and took all three of the lowest-level developmental courses (reading, English, and math). Because the program began in the Fall 2007 semester, only one Transitions program class and one semester of data were available for the writing of this report. Nonetheless, some of the results look promising: 95 percent of Transitions students remained in the program throughout the semester, compared with 43 percent of students who took regular

developmental courses (see Table 7). However, the number of students who returned the next semester to Guilford Tech fell slightly short of the number among the comparison group. Semester-to-semester persistence for Transitions students was 65 percent, compared with 71 percent for students who took regular developmental education courses.

Guilford Tech also analyzed the number of course levels that students passed after completing a semester of the Transitions program. As discussed in Chapter 3, a goal of the program is to help students pass through multiple developmental education course levels in a single semester. Guilford Tech found that this did, in fact, take place with Transitions students. Table 7 shows that while only 20 students took Transitions classes, they passed out of a combined total of 34 developmental education levels — an average of 1.7 levels per student. The results are better than for the 14 students who were enrolled in the lowest-level reading, English, and math courses, who each passed an average of 1.2 levels in one semester.[5] Therefore, the Transitions students were making quicker progress through developmental education, as they were passing out of more course levels, on average, than were non-Transitions students.

Based on these data, Guilford Tech argues that the Transitions program has been successful in meeting two of its goals: helping students progress through developmental education levels more quickly and helping students be more successful in overcoming their academic challenges. Guilford Tech continued to implement Transitions during the Spring 2008 semester, although the program had lower enrollment numbers.

Mountain Empire also sought to evaluate both its Peer-Led Team Learning and Fast Track Math interventions (described in Chapter 3) using an analogous student comparison group. The college compared the success of the students in classes that implemented these two interventions with the outcomes for a similar group of students who were in classes that did not use these instructional strategies. Like Guilford Tech, Mountain Empire found promising results: As shown in Table 8, more students passed the Peer-Led Team Learning (49 percent) and Fast Track Math (60 percent) courses than did students in nonintervention developmental classes of the same level (27 percent). The persistence rates of students in the intervention courses are high (70 percent to 80 percent), though they do not differ greatly from the rates of nonintervention students (65 percent). Based on this evidence, Moun-

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[5]In traditional developmental education courses, students who take the lowest-level reading, English, and math courses in one semester have the opportunity to pass out of a total of three developmental education course levels (one for each subject) per semester. Both Transitions students and the comparison group received instruction in all three developmental education levels. The numbers reported here reveal that students did not pass out of all the developmental course levels that they attempted; however, Transitions students passed out of more levels, on average, than did non-Transitions students.

Achieving the Dream: Community Colleges Count

Table 7

**Findings from Guilford Tech's
Evaluation of the Transitions Program**

Indicator	Transitions Students	Comparison Group
Developmental levels moved up per semester (average number)	1.7	1.2
Within-semester persistence (%) Fall 2007	95	43
Semester-to-semester program persistence (%) Fall 2007 to Spring 2008	65	71
Sample size	20	14

SOURCES: Interviews with college administrators and faculty; college's Achieving the Dream implementation proposals and annual reports

NOTES: The evaluation used a simple comparison design. Outcomes for students in the Transitions program were compared with outcomes for students taking all three lowest-level developmental education courses (reading, English, and math) who did not participate in the Transitions program. Chief limitations of the evaluation design: Does not control for background characteristics and motivation levels of students in each group; sample sizes are small; does not measure statistical significance.

tain Empire has tentatively concluded that these two strategies are successful in helping increase students' academic achievement, and the college continued to implement two Peer-Led Team Learning and two Fast Track Math courses during the Spring 2008 semester.

Patrick Henry has also evaluated the success of its cooperative learning strategies (discussed in Chapter 3). Although the college has not yet reported the success of cooperative learning on students' course pass rates, credit hours, or grade point averages (GPAs), its survival analysis model shows that students who took two or more cooperative learning classes were more likely to persist than those who had no cooperative learning classes (Table 9). Most of Patrick Henry's evaluation centered on the results of a survey that assessed students' attitudes about cooperative learning. Administered to 847 students taking classes using this instructional strategy, the college found that a substantial proportion of students

Table 8

**Findings from Mountain Empire's
Evaluation of its Programs**

Indicator	Fast Track Math	Peer-Led Team Learning	Comparison Group
Course pass rates (%)	60	49	27
Semester-to-semester persistence (%) Spring 2007 to Fall 2007	80	70	65
Average GPA	2.74	2.13	2.04
Sample size	10	47	26

SOURCES: Interviews with college administrators and faculty; college's Achieving the Dream implementation proposals and annual reports

NOTES: Evaluation used a simple comparison design. Outcomes for students in the Peer-Led Team Learning program and the Fast Track Math program were compared with outcomes for Algebra I students who did not participate in either of these programs. Chief limitations of the evaluation design: Does not control for background characteristics and motivation levels of students in each group; sample sizes are small; does not measure statistical significance.

(82 percent) felt that working with other students had improved their understanding of course content and that such results held up over different racial/ethnic groups, full-time/part-time students, and students with varying GPAs. Patrick Henry has used data like these to expand cooperative learning into numerous classes and academic areas.

Undertaking Evaluations: Some Considerations

The evaluations discussed in the preceding section reveal a couple of interesting issues. First, it should be noted that these evaluations tended to follow Achieving the Dream's recommended guidelines for program monitoring. Each of the colleges attempted to find an analogous comparison group by which to estimate the effects of a particular intervention. Additionally, each college used one or more of the recommended measures of student success — such as grades or persistence from semester to semester — to examine the effectiveness of its programs. Finally, each of them felt emboldened by the evaluation research and discussed plans to either revise or scale up the approaches that improved student out-

Table 9

Findings from Patrick Henry's
Evaluation of the Implementation of Cooperative Learning

Indicator	Students in Two or More Cooperative Learning Classes	Students in One Cooperative Learning Class	Comparison Group
Semster-to-semester persistence (%)			
Fall 2005 to Summer 2006	95	81	74
Sample size	56	235	737

SOURCES: Interviews with college administrators and faculty; college's Achieving the Dream implementation proposals and annual reports

NOTES: Evaluation used a quasi-experimental "survival analysis" design. Outcomes for students in classes that incorporated cooperative learning were compared with outcomes for students who did not participate in cooperative learning classes. Chief limitations of the evaluation design: Not a randomized study, though quasi-experimental methods attempt to control for background characteristics; small sample size for students taking two or more Cooperative Learning classes.

comes. Thus, just as with their initial diagnosis and planning work, the colleges' evaluations seemed to motivate them to push their programs forward.

Along with these successes, however, the colleges also noted some difficulties that they had in evaluating the interventions. Several of their concerns are highlighted below.

Considering Multiple Interventions

In discussing the challenges of evaluation, the colleges most often noted issues concerning overlap among the multiple strategies that they were implementing and the difficulty of separating the effects of one strategy from the effects of another. The colleges rarely saw the limited success of developmental education students as being a result of only one issue; rather, they discussed how students faced a multitude of challenges, which may or may not be interrelated. For instance, a college may make it a priority to improve the success of developmental education students but then may see a number of issues affecting student success, including such things as too few support services, low financial aid, confusing assessment practices, and poor instruction. Colleges that saw several such inequities sought to create or revise a variety of systems to improve student success. Thus, as well as introducing revised instructional practices, these schools also sought to shore up students'

support systems through increased advisory services, to improve academic support through such services as tutoring or walk-in centers, and to achieve better course placement for students through revised assessment practices — to name just a few strategies.

For instance, while Mountain Empire had implemented Fast Track Math and Peer-Led Team Learning as two means of improving developmental education students' success, it also implemented a number of other strategies for this population, including a summer "bridge program" and incorporating active-learning strategies, manipulatives, and computer-based calculators into some classes. The college's institutional researchers (and those at the other colleges) noted that it was often difficult to separate out which of these strategies had influenced students the most and which, if any, accounted for changes in students' success.

Considering Program Size

Another interesting issue to note about the evaluations is the relatively small size of the programs implemented at these colleges. Half the programs discussed in this report affected 25 or fewer students in a given semester. The programs were small despite the fact that these colleges began participating in Achieving the Dream in 2004 and were in their third year of implementation. The relatively small scale of these programs could be of particular concern for Achieving the Dream, as the initiative hopes that colleges will be scaling up pilot interventions during the later years of participation initiative. The small scale of these programs could also mean that it may take longer before the initiative may see noticeable changes in the student achievement measures that are being tracked in the Achieving the Dream database.

Several factors may help explain why some of the colleges' programs were small. First, the colleges often stated that the process of developing and implementing pilot strategies took longer than expected, thus delaying the implementation of chosen strategies. This meant that the colleges began implementing strategies later in their participation in the initiative and had not yet had enough time to consider expanding the programs.

The colleges also discussed two other deterrents to scaling up their strategies: too few students and limited monetary resources. Even in the pilot stage, the colleges sometimes noted that they had small populations of students who were qualified for the particular programs being implemented. Additionally, they noted that the smaller class sizes and the intensity of the programs made it financially difficult to support a full scaling up of these interventions. Furthermore, policy considerations — such as North Carolina's restrictions on adult education funding — sometimes limited the colleges' ability to devote additional resources to a program.

Considering What to Scale Up

As discussed above, when colleges begin participating in Achieving the Dream, they often pilot a number of different strategies in attempt to improve student success from a variety of angles. Each of the strategies described in this report is one of many interventions that the colleges implemented as part of a multidimensional approach to improving student success. (Appendix Table A.1 summarizes the strategies used by the Round 1 and Round 2 colleges.) For instance, Guilford Tech implemented over 15 strategies aimed at improving both the culture of evidence at the school and the overall success of students. Its development of the Transitions program is one strategy (in one of three priority areas) among many efforts to improve the success of its students.

The colleges' implementation of multiple interventions poses a potential difficulty for their ability to fully scale up programs as recommended by Achieving the Dream. While the implementation of multiple strategies may be useful in meeting the varied challenges of their student populations, it also may make it more difficult to assess the effectiveness of a single intervention and/or to scale up interventions that show promise. Additionally, should multiple strategies show promise but a college is unable to support a full scale-up of all of them, the college may have difficulty choosing which strategies to enlarge and which to reduce. Finally, even when a strategy is found to be successful, it may intentionally target small groups (as is the case with Mountain Empire's Fast Track Math) in order to meet the specific needs of particular students. Such considerations could potentially limit colleges from scaling up some promising strategies into fully developed interventions.

From Success to Scaling Up: Lessons from an Achieving the Dream College

Despite the challenges described above, one college in this study did succeed in developing a more wide-scale implementation of its program. By the Spring 2007 semester, Patrick Henry had implemented cooperative learning in over 35 courses; 43 instructors had been trained to use these learning techniques, and nearly 850 students were taking at least one such course. Cooperative learning was implemented in programs far beyond developmental education, in courses ranging from Public Speaking to Sociology to Anatomy. In bringing cooperative learning to full scale, Patrick Henry had to overcome a number of obstacles common in attempts to develop a schoolwide reform. Its experience in negotiating these challenges and moving toward full-scale implementation provides lessons both for the Achieving the Dream initiative and for the colleges that make up its base.

Patrick Henry faced a number of challenges in integrating an intensive pedagogical method like cooperative learning into courses throughout the college. First, such wide-scale

reform required a high level of faculty commitment and excitement. Thus, the school had to find a way to bring on board those faculty members who were not trained in the technique. Additionally, the faculty needed to go through an intensive training period in order to learn about and develop the capacity to use cooperative learning in classes. They attended a three-day orientation training to begin learning about this pedagogical approach, and also attended monthly on-site meetings, and they observed other faculty using cooperative learning in their classrooms. Perhaps most challenging is that cooperative learning required that faculty members revamp — and, in some cases, throw out — their old lesson plans, as this technique takes an entirely different approach to teaching.

Such intensive training and preparation requires a substantial commitment of time and resources, both for the faculty and the college. In instituting cooperative learning more widely at the school, Patrick Henry's faculty also emphasized the need to work against an oversimplification of the theory. As they stated: "This *isn't* traditional group work [in which faculty] put the students in a group, give them an assignment, and say 'Go to it!'" Rather, it's a multifaceted, structured learning approach that requires careful preparation and facilitation by the instructor. Allowing time to institute cooperative learning with fidelity required that the school revise its work on a number of different levels, including professional development offerings, resource allocation, and administrative procedures.

Patrick Henry found several ways to deal with the challenges of this intense planning and implementation process. First, the college developed a core group of faculty who were well trained and articulate about the theory behind cooperative learning. These individuals then played a critical role in encouraging and inspiring others at the college to take on the method. As one instructor explained: "When the faculty came back and modeled what they had learned, . . . they sold us. That was a big deal in terms of getting people to buy in." Another important element of scaling up was that Patrick Henry encouraged faculty members, rather than administrators, to lead the reform. As one instructor pointed out: "You're not going to get any faculty, at any college, anywhere, to do it if it's top-down"; instead, "[we needed] people who've gone to the training and come back excited [to] get the rest of us excited and let it grow." The vice-president of Academic and Student Development further underscored this need: "The administration has got to provide a climate in which ownership can thrive through faculty. . . . You have to have support from the top, but the passion really has to find itself in the faculty." Having faculty lead the reform was a key factor in Patrick Henry's ability to gain interest among other faculty members and bring the theory to fuller scale at the school.

While faculty leaders played a key role in the scaling up of cooperative learning, strong administrative support was also critical in getting the program institutionalized at Patrick Henry. One important role that high-level administrators played was managing the

college's budget and reallocating resources to support larger-scale implementation of the reform. As several administrators emphasized, this type of work required that "the institution [make] a commitment" to cooperative learning and be flexible enough with its budget allocations to bring in the needed resources for full-scale implementation. For instance, Patrick Henry chose to bring the authors of the approach to the college for a professional development day, in order to inspire additional faculty to use cooperative learning methods. While expensive, this visit was seen as a key component in getting more faculty excited about the new pedagogical technique.

Patrick Henry has also revised key policies and statements to reiterate its commitment to cooperative learning. For instance, the college recently revamped its mission statement, recasting itself as a "learning college" and including collaborative learning as one of its principal goals.[6] Additionally, through the support of faculty, the college has revised job descriptions in some program areas to emphasize a commitment to cooperative learning instructional techniques. Now, new faculty who are hired agree to be trained in cooperative learning and to incorporate its techniques into their teaching. Furthermore, faculty members are given small stipends for their efforts as they implement and continue to use cooperative learning methods within their classrooms. Perhaps most impressive, the college is also paying close attention to adjunct faculty, making a commitment to train them in cooperative learning methods and giving slight pay increases to those who receive the training.

As might be expected, these efforts did require some budget reallocations. Patrick Henry's administrators and faculty leaders emphasized the important role that the Achieving the Dream grant played in helping them get cooperative learning off the ground. In particular, the grant allowed the college to support the training of faculty and staff, to make site visits to other colleges that were using cooperative learning, and to provide additional in-house supports, such as monthly training meetings for new faculty members. The Achieving the Dream grant provided a much needed monetary cushion that allowed Patrick Henry to bring cooperative learning to scale at the school.

However, as implementation moved forward and energy built for the program, the college began to reorganize some of its funding priorities to support a fuller implementation of cooperative learning. Some of this support has come from other grants, such as Title III funding, while other monies have come directly from Patrick Henry's budget. The college has also sought out ways to cut some of the startup costs of this instructional reform. One way that it did this was by having faculty members become trained as cooperative learning educators, so that they then could provide the service at a reduced cost on campus. While initially using Achieving the Dream funds to support the reform, Patrick Henry now esti-

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[6]Patrick Henry implementation proposal, 2005.

mates that it uses approximately two-thirds of its own funds to support the integration of collaborative learning techniques throughout the school.

Summary

The Achieving the Dream colleges studied for this report have made substantial strides in monitoring, evaluating, and scaling up their instructional interventions. Each of the colleges had gathered evidence of students' progress and compared these outcomes with the outcomes of an analogous group of students. The colleges found promising results from their evaluations and, in some cases, were using these findings as a stepping stone toward program expansion.

While these successes are noteworthy, the experiences of Guilford Tech, Mountain Empire, and Patrick Henry with program evaluation and expansion reveal that the movement from pilot strategies to larger interventions is not always seamless. As is discussed in Chapter 5, the knowledge that these colleges gained as a result of developing, implementing, and monitoring their programs reveals some important lessons for the Achieving the Dream initiative, for state policy, and for community colleges as a whole.

Chapter 5

Implications for Institutional Reform:
Revising Developmental Education Instruction
as an Achieving the Dream College

This report of three college's experiences in planning and institutionalizing new instructional reforms for developmental education reveals lessons for all colleges interested in implementing similar reforms. Additionally, their experiences underscore some important "learnings" for the Achieving the Dream initiative and how its proposed theory of action for institutional transformation works as a model for reform. Finally, these colleges' experiences reveal several ways that state policy can influence the development of instructional reforms.[1]

This chapter offers suggestions and implications for these three constituent groups.

Implications for Practice

The implementation of different instructional reforms in developmental education classrooms at Guilford Tech, Mountain Empire, and Patrick Henry reveals the important ways that colleges can seek to create change within the classroom. While many colleges have focused on increasing academic and support services offered to students outside of class, fewer have discussed the ways that they are revamping the instruction that developmental education students receive within the classroom itself. These three colleges' interventions represent an important model for undertaking such reforms.

Each of the colleges first committed to an intensive research and planning period in order to identify interventions that would best meet its students' needs. The colleges found that the Achieving the Dream model of analyzing student outcome data to identify priority areas for reform was a useful first step. Finding strategies to meet these priorities, however, involved another extensive research and planning process that often required colleges to undertake literature reviews, attend conferences, or make site visits to other colleges to learn about new interventions. Based on the experiences of Guilford Tech, Mountain Empire, and Patrick Henry, other colleges that undertake reforms in developmental education

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[1]The three colleges are Guilford Technical Community College in Greensboro, North Carolina; Mountain Empire Community College in Big Stone Gap, Virginia; and Patrick Henry Community College in Martinsville, Virginia. Appendix Table A.3 presents information about the colleges, and the Achieving the Dream theory of action is detailed in Chapter 1 and Figure 1.

instruction may wish to allow for an extended period of research and planning before choosing and implementing any interventions within their classrooms.

Fostering faculty leadership also appears to be a critical mechanism by which these colleges instituted instructional reforms. While a supportive administration was important, the faculty members were the primary instigators of newly revised instructional and curricular reforms at these schools. The role of faculty leaders was perhaps even more pronounced with these types of reforms, given that instructors have the primary responsibility for instituting instructional changes in the classroom. Because these reforms sought to change classroom practices, gaining the interest and trust of faculty was critical to successful implementation. This is particularly true when trying to scale up a pilot intervention, as faculty leaders can serve as "ambassadors" to guide their uncommitted or untrained colleagues.

Making time and resources available to train and educate faculty members on how to institute particular instructional reforms was also critical to the implementation of the colleges' interventions. Professional development — in the form of either trainings or release time for curriculum development and planning — played a key role in the colleges' ability to institute new instructional interventions. At some colleges, learning about instructional reforms required intensive day- or weeklong trainings; at other colleges, professional development took the form of providing release time to faculty to learn about the instructional strategies from trained professionals.

While faculty members were largely responsible for bringing the instructional reforms to developmental education, strong administrative support was also critically important for the implementation of the reforms. Given administrators' power to reallocate funding and revise schoolwide policies and procedures, they have the ability to create an institutional environment in which reforms can flourish. This is particularly true when moving pilot reforms into whole-school interventions. Wide-scale intervention requires many more resources for faculty training and, eventually, for revising the college's hiring practices and policies. In both the short and the long term, such changes require the strong involvement and support of administrators.

Implications for State Policy

The study colleges' experiences in using the Achieving the Dream model to implement reforms in their developmental education programs also have several implications for state policy. First, their experiences demonstrate how state policies on education funding and practice can greatly affect the timing and intensity of an intervention. In Virginia, for instance, community colleges have the flexibility of developing courses that range from one to six credit hours, which means that colleges can develop courses with different timing and

levels of intensity. This policy played an important role in the development of Mountain Empire's instructional strategies in developmental math, as it could create one- and two-credit Fast Track Math courses while also offering more intensive five-credit math courses. As long as students had the skills required for entry, they could choose among these different course offerings based on their own needs and preferences.

In states that don't allow such flexible credit systems, these differing intensity levels would be more difficult to implement. If states have more restrictive credit-hour policies, colleges may be unable to offer courses with reduced credit or may be forced to ask students to take and pay for more credit hours than they need. In fact, Guilford Tech had this type of difficulty when trying to implement another reform, which extended a developmental math course over two semesters. The State of North Carolina refused the change because the proposed classes did not follow any of the officially approved state courses. Guilford Tech was thus forced to discontinue this approach, despite its promising results.

State policies can also limit colleges' ability to connect with their own programs and resources. For example, many states place restrictions on different funding streams, such as funding for adult education versus funding for regular community college courses. Most states mandate that adult education funds can be used only for individuals who have not attained a high school credential. Guilford Tech was able to bypass this issue because North Carolina allows colleges to use a small proportion of their funds to educate individuals who have a high school credential, as long as those individuals have skills below the ninth-grade level. Yet few states have such generous funding for adult education or allow crossovers between adult education and other sources of funding. Therefore, colleges in other states that would be interested in implementing a program for similar students would need to pursue other methods to support its development.

These situations reveal the strong influence that state policies can have on colleges' development and maintenance of interventions. As evidenced by the importance that the study colleges attributed to the Achieving the Dream grant, some colleges may be able to begin supporting pilots of such interventions with seed money but would find it difficult to maintain financial support beyond the demonstration phase unless state regulations permit more flexible funding. On other hand, colleges can be hindered by a less flexible credit or course system that does not support their proposed changes. Such restrictions may make it difficult for some colleges to begin implementing instructional strategies or to continue supporting them beyond the pilot stage.

Implications for Achieving the Dream

These colleges' experiences hold many lessons for the Achieving the Dream initiative, some of which reinforce its basic principles and others of which suggest areas for modification or improvement. Many aspects of the initiative's theory of action well fit the needs of the colleges in this report. For instance, the colleges found that an analysis of student outcome data was a useful means for identifying needs and priorities. Additionally, the process of identifying priority areas for reform grew naturally from an analysis of student subgroups, even if those subgroups did not always align with a focus on low-income and minority students, as the initiative recommends.

The college's experiences also provide important feedback for the initiative itself. First, similar to the findings of the Achieving the Dream baseline report,[2] colleges' subgroup analyses did not always reveal that the achievement of low-income or minority students warranted the closest attention. In some cases, this was because such students made up a large proportion of the college population, thus making the distinction between these groups less productive. In other cases, the colleges discovered that the achievement outcomes of low-income and minority students differed little from those of the overall student population. Thus, in addition to undertaking analyses by race/ethnicity and income, colleges also may want to consider other subgroups of students who may need extra support — such as developmental education students.

Finally, each of the colleges in this report noted the important role that Achieving the Dream's funding and support played in their ability to implement instructional reforms. Most often, the colleges emphasized how the initiative's grant allowed them greater flexibility in their budgeting to support new interventions and, in particular, the professional development that such reforms require. Given the important role that the grant played in helping these colleges' begin their work, the initiative may wish to consider how colleges can continue to be supported financially in their endeavors, both during and after their tenure in Achieving the Dream. Perhaps such work could be accomplished by having states or foundations become involved in Achieving the Dream, to provide some program development funds after the initiative's grant ends. Even modest grants, which might be extended through a competitive process, may be enough to keep the spirit of program innovation and improvement alive.

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[2]Brock et al. (2007).

Implications for Research

The study colleges' experiences reveal the important role that research and evidence can play in helping reform an institution. Data-based practice is a relatively new endeavor for community colleges. Just as the Achieving the Dream initiative had hoped, the colleges' new focus on data and student success appears to have helped them become more comfortable with analyzing and using student outcomes data as a basis for reform. Patrick Henry's president and its vice-president of Academic and Student Development noted that Achieving the Dream "got us more focused on data," which was "a positive thing . . . and which got reinforced quickly through SACS" (the Southern Association of Colleges and Schools accreditation process).

The colleges in this study also discussed how Achieving the Dream had created a broader, more structured framework for tackling the challenges facing their institutions. At Guilford Tech, the director of institutional research noted that Achieving the Dream's focus on data has "people . . . thinking about initiatives in a different way. Before, we'd do [something], and we didn't really know if it would work or not. We didn't know if it worked *after* the fact or not! Now, we're thinking ahead . . . , [and] Achieving the Dream has caused that change in our thinking." Similarly, Mountain Empire's president explained that Achieving the Dream's "biggest opportunity was in [its] . . . approach to education. . . . It helped us see the importance of using data to help us make our decisions." Achieving the Dream has not only made these colleges more comfortable with using data but also made them more comfortable with using data to help develop and define new practices.

This focus on data and on the utility of data for evaluating program development provides an impressive step toward colleges' ability to document change and move forward from recent successes and challenges. In the future, colleges may wish to consider going one step further by developing more rigorous evaluations, which would help identify whether changes in student achievement may actually be attributed to particular strategies. Currently, it is difficult to separate out how much colleges' strategies may have influenced students' success, given the nature of how students entered a program and an inability to control for students' characteristics. Evaluations are often hampered by such issues, as the students who volunteer for new initiatives may be the ones who are already more motivated and who thus might have a greater chance of success even without participation in the program.

Colleges could control for these issues by constructing a more rigorous approach to program intake and evaluation. Rather than allowing students to choose a particular program, colleges could institute a lottery system for course entry, whereby interested students are randomly assigned either to a group that receives an intervention or to a control group that does not. This approach is particularly useful when a course is oversubscribed, so that

the college can regulate course entry. Such planned course entry would allow the random assignment of students to different types of programs, and the college could then evaluate which programs may have been more effective or less effective in improving students' success. This type of evaluation could be particularly useful for colleges that are attempting to choose among a multitude of proposed strategies and reforms.

Finally, Achieving the Dream's emphasis on student success appears to have affected how the three study colleges view their purpose and the purpose of their reforms. For example, although the president of Mountain Empire said that he had always had a focus on data, he explained that conversations at the college have now shifted from general program reviews to a focus on improving student achievement: "It helped in shifting our emphasis to student success. . . . Now, [the questions are] what are your expectations for student success, for retaining students semester to semester . . . , graduation rates, students' getting jobs. . . ? Now [we are] having faculty set things up [so that they] are completing data showing how [students] did in comparison to their expectations."

These changes in the overall process of diagnosis, planning, and implementation of institutional reform best represent the central mission of Achieving the Dream and are something about which the initiative may be most proud. While many colleges have revised their practices and implemented reforms, fewer have focused on reforming the process by which such decisions are made. Creating a culture of evidence — which, in turn, spurs institutional change — had great resonance for each of the colleges in this study. For Guilford Tech, Mountain Empire, and Patrick Henry, Achieving the Dream provided an organizing mechanism that helped them further their mission to provide the best services possible to their students. While institutional change may take awhile, creating a method to help colleges evaluate their own progress and the progress of their students helps them get at least one step closer to the goal of higher student achievement.

Appendix

Strategies and Colleges in Achieving the Dream

Achieving the Dream: Community Colleges Count

Appendix Table A.1

Developmental Education Reform Strategies Implemented by the Round 1 and Round 2 Achieving the Dream Colleges, by Subject Area, as Reported in Implementation Proposals and Annual Reports[a]

Colleges Implementing Strategies (State): College Name[a]	Developmental Subject Area			Total (Unduplicated)
	English	Math	Reading	
Supplemental instruction Tutoring, math labs, writing labs, help sessions, computer-based supplemental instruction, summer bridge programs	(NC): GTCC, MCC, DTCC (FL): BCC (VA): TCC, MECC (TX): GC, STJC, EPCC (NM): UNMG, SIPI (OH): CCC, JCC, NCSC, SCC	(NC): GTCC, WCC, MCC, DTCC (FL): BCC, VCC (VA): PHCC, TCC, MECC (TX): STC, GC, STJC, CBC, EPCC (NM): UNMG, SFCC, SIPI, DABCC (OH): JCC, NCSC, SCC (CT): HCC	(NC): MCC, DTCC (FL): BCC, HCC (VA): MECC (TX): STJC, EPCC (NM): UNMG, SIPI	24
	Total: 15	*Total: 22*	*Total: 9*	
Classroom instruction/ curriculum Changes academic course pedagogy, curriculum and/or instruction, implement learner-centered strategies, transitions program for students out of school 1+ years	(NC): GTCC (VA): PHCC, PDCCC (TX): STC, STJC, BC (OH): CCC (CT): CCC	(NC): GTCC (FL): VCC (VA): PHCC, PDCCC, MECC (TX): STC, HCCS, ACCD, STJC, CBC, EPCC, BC (NM): SFCC, DABCC (OH): NCSC, SCC (CT): CCC, HCC	(NC): GTCC (FL): HCC (VA): PHCC, PDCCC, (TX): STJC, EPCC, BC (NM): SFCC, DABCC (OH): NCSC	20
	Total: 8	*Total: 18*	*Total: 10*	

(continued)

Appendix Table A.1 (continued)

Colleges Implementing Strategies (State): College Name	Developmental Subject Area			Total (Unduplicated)
	English	Math	Reading	
Student advising Early-alert system, peer or faculty mentoring programs, student success center, improved advising	(NC): GTCC, DTCC (FL): BCC, TCC (VA): PHCC, PDCCC, DCC (TX): GC, BC (NM): SIPI (OH): CCC, JCC, NCSC, SCC, ZSC (CT): CCC, NCC, HCC *Total: 18*	(NC): GTCC, DTCC (FL): BCC, TCC, VCC (VA): PHCC, PDCCC, DCC (TX): STC, GC, BC (NM): SIPI, DABCC (OH): CCC, JCC, NCSC, SCC, ZSC (CT): CCC, NCC *Total: 20*	(NC): GTCC, DTCC (FL): BCC, TCC, HCC (VA): PHCC, PDCCC (TX): GC, BC (NM): SIPI (OH): JCC, NCSC, ZSC (CT): CCC *Total: 14*	22
Student Success course	(NC): GTCC, MCC (FL): BCC (VA): PDCCC, DCC (TX): STC, BC (NM): UNMG, CNMCC, SIPI (OH): CCC, NCSC *Total: 12*	(NC): GTCC, MCC (FL): BCC, VCC (VA): PDCCC, DCC (TX): STC, BC (NM): UNMG, CNMCC, SIPI (OH): CCC, NCSC, SCC *Total: 14*	(NC): GTCC, MCC (FL): BCC, HCC (VA): PDCCC, (TX): STJC, BC (NM): UNMG, CNMCC, SIPI (OH): NCSC *Total: 11*	16
Professional development Workshops/trainings for faculty on particular interventions	(NC): GTCC, WCC, MCC (FL): BCC (VA): PHCC, PDCCC, MECC, DCC (TX): STC, GC, EPCC, BC (NM): UNMG, SFCC, CNMCC, SIPI (OH): JCC, SCC, ZSC (CT): CCC, NCC, HCC *Total: 22*	(NC): GTCC, WCC, MCC (FL): BCC, VCC (VA): PHCC, PDCCC, MECC, DCC (TX): STC, GC, ACCD, CBC, EPCC, BC (NM): UNMG, SFCC, CNMCC, SIPI, DABCC (OH): CCC, JCC, NCSC, SCC, ZSC (CT): NCC *Total: 26*	(NC): GTCC, WCC, MCC (FL): BCC, HCC (VA): PHCC, PDCCC, MECC (TX): GC, EPCC, BC (NM): UNMG, SFCC, CNMCC, SIPI (OH): NCSC, ZSC *Total: 17*	29

(continued)

Appendix Table A.1 (continued)

Colleges Implementing Strategies (State): College Name	Developmental Subject Area			Total (Unduplicated)
	English	Math	Reading	
Assessment Revising developmental education cutoff scores/placement strategies, developing common exam for each course level, offering learning or career inventory assessments	(NC): GTCC, DTCC (VA): TCC, PDCC, MECC, DCC (TX): STC, GC, STJC, EPCC (NM): UNMG, SIPI, DABCC (OH): SCC *Total: 14*	(NC): GTCC, DTCC (FL): VCC (VA): TCC, PDCCC, MECC, DCC (TX): STC, GC, STJC, CBC, EPCC (NM): UNMG, SIPI, DABCC (OH): NCSC, ZSC (CT): CCC *Total: 18*	(NC): GTCC, DTCC (VA): PDCCC, MECC (TX): GC, STJC, EPCC, (NM): SIPI, DABCC *Total: 9*	19
Learning communities Pairing 2 courses, students in same classes, revising instruction in linked courses	(NC): GTCC (FL): BCC (VA): TCC, DCC (TX): STC, HCCS, STJC, EPCC, BC (NM): UNMG, CNMCC, SIPI (OH): CCC, SCC (CT): NCC *Total: 15*	(NC): GTCC (FL): BCC, VCC (VA): PHCC, TCC, DCC (TX): STC, HCCS, STJC, CBC, EPCC, BC (NM): UNMG, CNMCC, SIPI (OH): SCC *Total: 16*	(NC): GTCC (FL): BCC, HCC (TX): HCCS, STJC, EPCC, BC (NM): UNMG, SIPI (OH): SCC *Total: 10*	20
Management/administration of developmental education Restructuring of developmental education department, review of developmental education program, early registration for students taking 2 or more developmental education classes	(FL): BCC (VA): TCC, PDCCC (TX): STC, EPCC (NM): UNMG, SIPI (OH): NCSC, SCC *Total: 9*	(FL): BCC, TCC (VA): TCC, PDCCC (TX): STC, ACCD, CBC, EPCC (NM): UNMG, SIPI (OH): NCSC, SCC *Total: 12*	(FL): BCC, TCC (VA): TCC, PDCCC (TX): STJC, EPCC (NM): UNMG, SIPI (OH): NCSC *Total: 9*	13

(continued)

Appendix Table A.1 (continued)

NOTES: Round 1 and Round 2 colleges are the colleges that entered the Achieving the Dream initiative in 2004 and 2005, respectively; there are 34 colleges total. Round 3 and Round 4 colleges are not included in this table, primarily because these colleges had not yet implemented strategies or were in the early stages of implementation.

Programs listed here are strategies that are specifically geared toward developmental education students. Some schoolwide strategies (for example, a school-wide early-alert program) may also reach developmental education students but are not listed here.

[a]Appendix Table A.2 lists the college names and abbreviations.

Achieving the Dream: Community Colleges Count

Appendix Table A.2

List of Round 1 and Round 2 Achieving the Dream Colleges, by State and Abbreviation

State and Abbreviation	College Name (City)
Connecticut	
CCC	Capital Community College (Hartford)
HCC	Housatonic Community College (Bridgeport)
NCC	Norwalk Community College (Norwalk)
Florida	
BCC	Broward Community College (Fort Lauderdale)
HCC	Hillsborough Community College (Tampa)
TCC	Tallahassee Community College (Tallahassee)
VCC	Valencia Community College (Orlando)
New Mexico	
CNMCC	Central New Mexico Community College (Albuquerque)
DABCC	New Mexico State University: Doña Ana Branch Community College (Las Cruces)
SFCC	Santa Fe Community College (Santa Fe)
SIPI	Southwestern Indian Polytechnic Institute (Albuquerque)
UNMG	University of New Mexico-Gallup (Gallup)
North Carolina	
DTCC	Durham Technical Community College (Durham)
GTCC	Guilford Technical Community College (Jamestown)
MCC	Martin Community College (Williamston)
WCC	Wayne Community College (Goldsboro)
Ohio	
CCC	Cuyahoga Community College (Cleveland)
JCC	Jefferson Community College (Steubenville)
NCSC	North Central State College (Mansfield)
SCC	Sinclair Community College (Dayton)
ZSC	Zane State College (Zanesville)
Texas	
ACCD	Alamo Community College District (San Antonio)
BC	Brookhaven College (Dallas)
CBC	Coastal Bend College (Beeville)
EPCC	El Paso Community College District (El Paso)
GC	Galveston College (Galveston)
HCCS	Houston Community College System (Houston)
STC	South Texas College (McAllen)
STJC	Southwest Texas Junior College (Uvalde)
Virginia	
DCC	Danville Community College (Danville)
MECC	Mountain Empire Community College (Big Stone Gap)
PDCCC	Paul D. Camp Community College (Franklin)
PHCC	Patrick Henry Community College (Martinsville)
TCC	Tidewater Community College (Norfolk)

Appendix Table A.3

Selected Characteristics of the Colleges Discussed in This Report

Characteristic	Guilford Technical Community College	Patrick Henry Community College	Mountain Empire Community College
Location	Jamestown, NC	Martinsville, VA	Big Stone Gap, VA
Degree of urbanization	Rural	Town	Rural
Total enrollment	9,851	2,840	2,956
Enrollment, by race/ethnicity[a] (%)			
White, non-Hispanic	56.0	76.4	97.8
Black, non-Hispanic	35.0	21.8	1.5
Hispanic	2.8	0.9	0.2
Asian/Pacific Islander	2.7	0.5	0.3
American Indian/Alaskan Native	0.5	0.4	0.2
Nonresident alien	0.9	n/a	n/a
Students receiving financial aid (%)	59.0	81.0	92.0
First-time student retention rate[b] (%)			
Full-time students	53.0	45.0	53.0
Part-time students	38.0	35.0	25.0
Graduation rate[c] (%)	11.0	19.0	15.0
Transfer-out rate[c] (%)	19.0	7.0	3.0

SOURCE: All data are from the 2006 Integrated Postsecondary Education Data System (IPEDS).

NOTES: [a]Enrollment totals represent full-time-equivalent (FTE) students.
  [b]Retention rates measure the percentage of entering students who continue their studies the following fall.
  [c]Graduation and transfer-out rates are calculated for full-time, first-time undergraduates who began their program in 2003. Graduation rates measure the percentage of entering students who complete their program in a certain time. Transfer-out rates measure the percentage of entering students who transfer to another institution within 150 percent of the normal time to program completion.

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