Accelerating Remedial Math Education: How Institutional Innovation and State Policy Interact

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Jobs for the Future

An ACHIEVING THE DREAM Policy Brief

SEPTEMBER 2007

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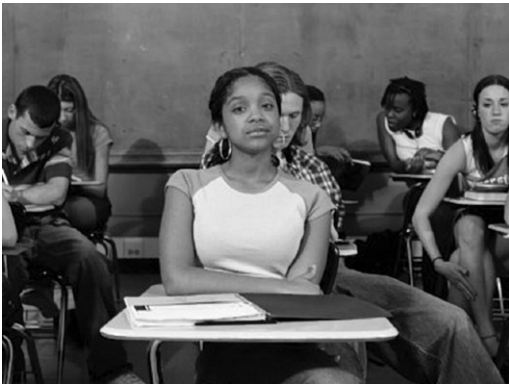# How Institutional Innovation
and State Policy Interact

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About the Author

Radha Roy Biswas researches state workforce and economic development policy at Jobs for the Future. She is the author or coauthor of several JFF publications, including *Building Skills, Increasing Economic Vitality: A Handbook of Innovative State Policies* and, for Achieving the Dream, *A Supporting Role: How Accreditors Can Help Promote the Success of Community College Students* and *Access to Community College for Undocumented Immigrants: A Guide for State Policymakers*. She received a B.A. in economics from the University of Pune (India), as well as a B.A. in economics and an M.A. in regional economic and social development from the University of Massachusetts, Lowell.

Accelerating Remedial Math Education: How Institutional Innovation and State Policy Interact

Executive Summary

One of the most pressing challenges facing community colleges is improving outcomes for students who place into developmental math courses. For example, an analysis of the progress of 46,000 students enrolled in the first 27 institutions in Achieving the Dream, a national initiative on community college success, found that students were in greater need of developmental education in math than in English: over 70 percent were referred by faculty to developmental math, compared to 34 percent referred to developmental English. The analysis, conducted by the Community College Research Center at Columbia University, also found that nearly half of those referred to developmental math were referred to courses three levels below college-level math. Of those, fewer than a fifth (18 percent) attempted a college algebra course, and only 14 percent completed that course.

No wonder, then, that success in developmental education has emerged as a top priority for Achieving the Dream institutions and states. As some institutions have dug into this problem, they have been attracted to alternative ways to structure and deliver developmental education content. Students who are assessed as unready for college-level work enter at various levels of preparedness. Some need minimal remediation, but others need much more. Students who need only limited remediation can get discouraged at having to spend a semester's worth of time and resources in a remedial course. Those who see three levels to climb might get frustrated that they will never advance to college courses.

Some colleges have begun experimenting with alternative delivery and design approaches for remedial math. These typically allow students the option of pacing their own learning or accelerating their progress. However, in doing so, institutions are guided and sometimes limited by systems and state policies—around enrollment, financial aid, funding, data systems, and accountability. These policies often reinforce the traditional design and delivery of developmental education and make flexible delivery difficult.

This policy brief looks at efforts in three community colleges, two of which are Achieving the Dream institutions, to revamp their remedial math programming. It focuses on the ways in which state and system policies interact with institutional reform efforts—and how policies can either support or slow institutional change.

Housatonic Community College, an Achieving the Dream college in Connecticut, is piloting a self-paced, modularized, competency-based, developmental math course. The course is offered in a lab setting, with open entry and exit so that students can start and finish their coursework at their own pace. State and institutional leaders are looking for ways to overcome obstacles that HCC has encountered in overcoming financial aid and other policy constraints, even as the college is trying to expand this program model more broadly across the institution.

Community College of Denver has developed "Fast Start," a developmental education design that enables students to take modules of two different courses in the same semester. This accelerates their progress through both a

traditional class setting and a self-paced option. State system policies around managing enrollment data have made it easier for CCD to offer this option.

Mountain Empire Community College, an Achieving the Dream College in Virginia, has developed short refresher courses for developmental math students. These courses take less time to complete and cost the student less than more traditional developmental courses. Students can move through more than one of the short courses in a single semester. As in Denver, Virginia's enrollment, financial aid, and student data system policies have not presented any obstacle to Mountain Empire's innovations.

These three colleges and their efforts to accelerate developmental math provide an important and instructive window on how institutional practice can be shaped by state and system policies—and by shifts in those policies. They also demonstrate how important it is for college innovators to work closely with state and system policymakers to protect and promote efforts that show promise to improve student success at the college level.

These efforts highlight the importance of enrollment policies and student data systems to innovation—and to the flexibility that can help some students move faster through developmental requirements. In all three states, policies allow for flexible calendaring and course scheduling by individual institutions. But variations in data systems and certain nuances in enrollment census and reporting policies make the critical difference in capturing the student information needed to run such programs easily and to maximum advantage for students and institutions.

Accelerating Remedial Math Education:
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and State Policy Interact

Introduction

One of the most pressing challenges facing community colleges is improving outcomes for students who place into developmental math courses. This is illustrated by a recent analysis of the progress of students enrolled in the first 27 institutions participating in Achieving the Dream, a national initiative on community college success. Analyzing the 2002 cohort from these "Round I" Achieving the Dream colleges, the Community College Research Center found troubling patterns in developmental mathematics. From a sample of about 46,000 students whose information was reported by the institutions, CCRC found that students in Achieving the Dream institutions were in greater need of developmental education in math than in English: over 70 percent were referred by faculty to developmental math, compared to 34 percent referred to developmental English. Nearly half of those referred to developmental math were referred to courses three levels below college-level math. Of those, fewer than a fifth (18 percent) attempted a college algebra course, and only 14 percent completed that course.

Improving student success in and through developmental education, especially developmental math, is a top priority for nearly every Achieving the Dream college. It is also one the main areas of focus for policy innovation in Achieving the Dream states.

As some Achieving the Dream institutions have delved into this challenge, they have realized that at least part of the problem lies in the structure and delivery of developmental education. Developmental education students enter at various levels of preparedness. Some need minimal remediation—more like a refresher course—before they advance to college-level courses. Others are so academically underprepared that they require multiple levels of developmental education courses before they are ready for college. Most colleges offer two to three levels of pre-collegiate developmental education in math and English.

Achieving the Dream colleges have also found that students who fail to complete their first developmental education courses usually do not return the following semester; nor do they complete their other requirements for continuing in college. Their frustration with their lack of progress and the financial burden of having to retake courses contribute to low rates of retention and completion.

To address the needs of different students and to avoid trapping more students than necessary in developmental courses, community colleges have begun experimenting with alternative delivery and design for developmental math that allow students the option of self-paced learning or an accelerated pathway through developmental coursework. These flexible delivery models hold promise of improving outcomes for many

The three colleges' experiences also suggest mechanisms for collaboration between institutions and policymakers that can promote more flexibility and innovation while assuring accountability and consistency.

students. However, in launching these alternatives, colleges often encounter policy frameworks and structures that reinforce the traditional design and delivery of developmental education and can make flexibility and innovation difficult.

Innovative, accelerated developmental math programs in three community colleges, two of which are Achieving the Dream institutions, provide perspective on the intersections between institutional efforts and state or system policies:
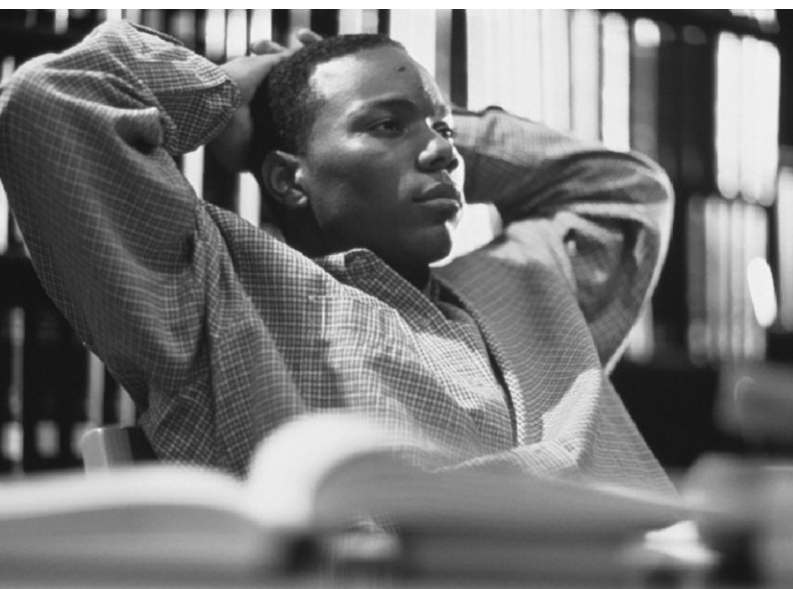
• Housatonic Community College, an Achieving the Dream college in Connecticut, created a pilot for a self-paced, modularized, competency-based developmental math course. It is offered in a lab setting, with open entry and exit so that students can start and finish their course work at their own pace. HCC has had difficulty overcoming financial aid and other policy constraints that it has faced in the course, even as

it is trying to expand this program model more broadly across the institution.

• Community College of Denver has developed "Fast Start," a developmental education design that enables students to take modules of two different courses in the same semester. This accelerates their progress through both a traditional class setting and a self-paced option.

• Mountain Empire Community College, an Achieving the Dream College in Virginia, has developed short, refresher courses for students in developmental math. These take less time to complete and cost the student less than more traditional developmental courses. Students can move through more than one of the short courses in a single semester.

Flexibility of delivery options is the common denominator for these courses. Each college works within a system or state policy framework in which enrollment and registration policies circumscribe data reporting, financial aid policies, and funding policies. As a result, the redesign of developmental programming at these colleges must conform to—or work around—policies that are, for the most part, anchored in a traditional design and delivery system, in which students typically take courses over 15 or 16 weeks and typically register at the start of the semester before a predetermined freeze date or date for enrollment. Just as important as a constraint, data collection, financial aid, college funding, and tuition and fees are all linked to enrollment calculations.

How the interaction of institutional innovation and system or state policy has played out in each case suggests where the latter might have to change if these innovations are to expand and to diffuse more broadly. The three colleges' experiences also suggest mechanisms and strategies for collaboration between institutions and policymakers that can promote more flexibility and innovation while assuring accountability and consistency across a state.
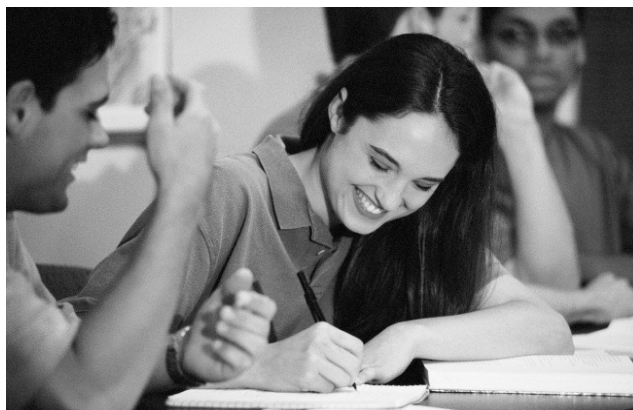
Housatonic Community College: Self-paced, Competency-based, Open-Entry/Open-Exit Course

Housatonic Community College in Bridgeport, Connecticut, is one of twelve colleges in Connecticut Community Colleges. It serves a little over 4,000 students annually, of whom over 70 percent are adults. Minorities, primarily African Americans and Hispanics, comprise just over half of HCC's student body.

In an average year, 80 percent of new students are placed into one of two levels of remedial math (Math 075 and Math 095) following their test results on the ACCUPLACER assessment. The two courses, each a semester long, lead to the first college-level "gatekeeper" math course. While these two courses should take a year to complete, they often take much longer, especially for adults. The success rate for students in these courses, defined in terms of earning "C" or better, has declined substantially in recent years—from 50 percent to 39 percent.

From annual student surveys, HCC found that students who started out in the lowest level developmental courses and did not pass did not register the next semester to retake the course. Moreover, students who elected to repeat the course used up much of their financial aid in doing so, dramatically limiting their ability to pursue degrees or credentials. The college loses 50 percent of the students in each developmental math level, before students even get to the first college-level math course. Through internal research and focus groups supported by Achieving the Dream, the college discovered that one of the main reasons for the high dropout rates was the frustration and expense of repeating a course from scratch even when students had mastered some, if not all, of the course content.

Surveys also showed that students who placed directly into first-year gatekeeper math courses had, on average, a 25 percent higher success rate in the course than students who started out in developmental math. The low passing rates of remedial math students in gatekeeper math suggested to school administrators and instructors that successful completion of remedial math courses did not necessarily provide enough knowledge and skill to succeed in higher level math courses.

Program Design

Faculty and college leadership concluded that an alternative was needed. They decided to design a course in which students could progress as they demonstrated competencies, arguing that this format would help alleviate some student frustration, save time and resources, and help improve retention and success rates. HCC created an open-entry, open-exit program for developmental math students: students would advance through a set of math competencies organized into weekly modules, as fast as they were ready. It launched the program in spring 2007, offering Developmental Math Level 1.

The pilot course lasts fifteen weeks, offered in three five-week modules to a group of self-selected students. They take a new diagnostic placement test that not only assesses their level of preparedness but also identifies where in the sequence of required competencies each student stumbles. By structuring the course in

modules, the college offers students the option of entering the course during the first, sixth, or eleventh week of classes, based on their competencies. Instruction is provided in a lab setting with two instructors, one to provide the theoretical instruction, the other, computer support. Students are tested after every module and progress to the next module only upon passing the current one. Students pay for the whole course and receive three credits for it. While the credit is not transferable toward a degree or other credential, it does qualify the students for federal financial aid.

The college has completed curriculum development for the upper level developmental math course, Math 095. As of fall 2007, it will be offered in the same self-paced format, and HCC is preparing to introduce college-level "gatekeeper" math in the same format in 2008.

Thus far, the results from the first cohort of forty-three students are encouraging. Three students finished early; nine finished by the end of the semester. About half of the students completed at least 70 percent of the course, indicating to faculty that students have progressed to higher competencies and a lower level of remedial need, and therefore have a better chance of finishing. The course was offered again in the summer, and three students returned to finish it.

Policy Implications

In implementing the open-entry, open-exit program, and in its efforts to offer other courses in this format, Housatonic Community College has encountered two main challenges: calculating and disbursing financial aid for those entering late in the semester, and generating the FTE counts on which funding is based for those

Students who enroll in a course in the sixth or eleventh weeks are not currently reported to the state for funding or financial aid purposes. As a result, students must pay out of pocket. This poses a serious barrier to participation of those most in need.

enrollments. The challenges stem primarily from existing policies around counting enrollments and systems for reporting student data.

Census and Enrollment Reporting

As do many institutions, Housatonic requires its students to register before an established date early in the semester. The college, in turn, must report enrollment data, based on registrations, to the systems office through its student information and data management system, Banner.

As in some other states, community colleges in the Connecticut system have different start dates/calendars to promote the flexible scheduling of courses. College census dates in Connecticut—the date by which institutions must collect and report enrollments—are based on a percent of the semester's duration: one-tenth of a semester, which is about 21 days into the semester from the start date. Under this census calculation system, colleges can report enrollments to the system on different specific dates. However, for each college, there is only one census date by which enrollments must be counted and reported to the system. This policy presents difficulties for Housatonic in counting enrollments for the open-entry, open-exit program because students register at three different times during the semester: in Week 1, Week 6, and Week 11.

Enrollment data and student information is also important for disbursing financial aid to low-income students, particularly federal Pell Grants, because state financial aid in Connecticut tends to be fairly small.

Enrollment information and student information contained in financial aid forms is collected by the college and reported to the system for disbursing financial aid. However, under current policies, the systems office needs to generate financial aid data early in the semester. This also poses a problem for students who enter the self-paced program later in the semester.

Data Reporting Systems

Connecticut is one of many states using the Banner information reporting and management system. Enrollment data captured in Banner and reported to

the system and the state higher education authorities are used to calculate FTE funding for colleges and to trigger disbursement of financial aid to students. While the Banner system in use in Connecticut tracks student enrollment throughout the semester, data reporting, as discussed earlier, takes place only at the selected census date. Student aid, too, is awarded in accord with this single census date. Thus far, faculty and school administrators have tracked enrollments in the self-paced course pilot manually, and they plan to continue to do so for the upper-level courses scheduled to be offered in the coming semesters. The small enrollment numbers are reported "off line" to the system office to generate the FTEs needed for funding. However, unless the data reporting policies, which follow state guidelines, are changed, the data system's capabilities cannot be used to generate funding and financial aid disbursements for all students in the program, which is necessary if the model is to be sustainable.

The financial aid dilemma is perhaps more significant because many students are low income, particularly in developmental courses, and federal financial aid—primarily Pell Grants—is critical to them. Students who enroll in the course in the sixth or eleventh weeks are not reported by the data system for funding or financial aid purposes. Students who start at the beginning of the semester and want to accelerate through different modules cannot have their financial aid adjusted to reflect the additional credits from the course work either. As a result, they must pay out of pocket. This poses a serious barrier to participation of those most in need.

Another challenge arises because many students do not complete all modules in fifteen weeks. They need additional time, especially as they progress to higher levels of competency. In fact, only 12 of the 43 students in the first course finished the course in one semester.

Instructors expect students to bridge their learning over the summer, and students are already returning to do so. Currently, the college is allowing students from the spring 2007 cohort to come back and finish their coursework over the summer without reregistering. However, once again, this arrangement is "offline" or informal, and it is possible only because the number of
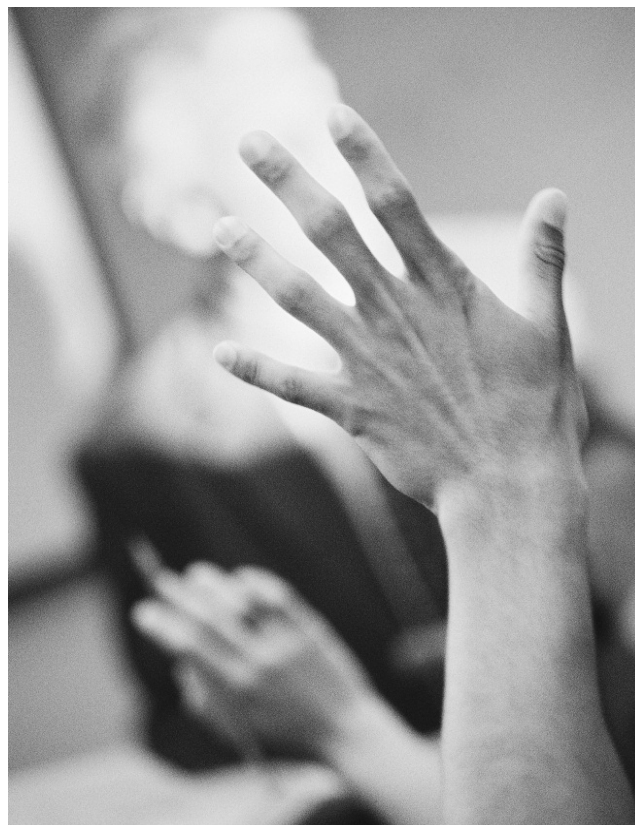
students is small. The larger numbers of students that HCC expects to serve cannot be captured through manual or informal reporting. This will leave the college no way to address the financial implications of repeating courses. If students fail to finish their coursework successfully in the summer and need to continue in the fall, the college will have to require re-registration to generate funding to support the instruction, placing a further financial burden on students.

Housatonic Community College and the Connecticut Community Colleges system office are collaborating to accommodate the needs of the open-entry program. One strategy, recommended by the systems office to HCC, would address the problem of re-registration for students who need additional time to complete some of the modules by using an "Incomplete" grade; this would allow students to complete unfinished work in the following semester without re-registering.

Community College of Denver:
Fast Start Remedial Program

All degree-seeking students in the Colorado Community College System must take the ACCU-PLACER exam or a similar assessment if they score below prescribed scores on the ACT test. They also must complete developmental course work in math and English before taking college algebra and freshman composition. The system has found that the greatest need and lowest pass rates for most of its students are in developmental math. Of recent high school graduates enrolled in its colleges in fall 2004, 83 percent needed remediation in math, while under 50 percent needed remediation in reading and English.

Community College of Denver, one of thirteen colleges in the system, enrolled 14,553 full- and part-time students in 2005-06. Fifty-six percent of CCD students are minority. Nearly half qualify for Pell Grants. In fall 2004, 75 percent tested into developmental courses in English, reading, or math, most of them in all three disciplines.

CCD's developmental education is housed in its Center for Educational Advancement, which provides a range of traditional courses, self-paced open-entry classes, and a new accelerated program called Fast Start@CCD. Launched in fall 2005 with some support from Lumina Foundation for Education, Fast Start has served 287 students to date.

Fast Start is designed to address low retention and success rates among developmental education students. Like Housatonic Community College and other institu-tions, CCD found that many students got discouraged if they failed in their first developmental course and became impatient at their own lack of progress. Many of these students did not return.

Through further research, the college found that developmental education students typically went through one to four semesters of coursework before making significant progress on degree or certificate requirements. The longer students took to complete developmental coursework, the less likely they were to persist to degree completion.

CCD created Fast Start to address these problems by accelerating movement through the developmental course sequence.

Program Design

Acceleration through Fast Start occurs in several ways. Students enroll in two levels of developmental math and/or two levels of developmental reading and English during the same semester, registering for a prescribed combination of courses at the start of the semester. Students complete the one level of each course in the first half of the semester and the second level in the second half of the semester. Instruction in reading and English is integrated into a single syllabus and taught by the same instructor. In addition to the developmental coursework, students enroll in a one-credit-hour orientation course.

Fast Start is also offered in a number of schedules and formats, referred to as sections, to accommodate students' schedules and needs.

Students may self select or be referred into the Fast Start Program in lieu of the traditional developmental education courses. Students are organized into cohorts, meeting six hours a week. They earn six to twelve credits in one semester, depending upon which developmental course pairs they take. They must complete 67 percent of the credit hours they attempt in a semester to remain in good standing for financial aid.

Another way CCD tries to increase retention and completion rates for developmental students is by putting students in a self-paced section that is offered in a lab setting, with instructors and lab aides providing sup-

Acceleration occurs in several ways. Students can enroll in two levels of developmental math during the same semester. Students can also progress through a self-paced section.

port. The self-paced section, which is much older than Fast Start, has an open-entry/open-exit structure: when students demonstrate mastery, they move forward. Faculty refer students from both regular developmental courses and Fast Track into the self-paced section. Two kinds of students are referred into the self paced-section: those who need little remediation and can complete the developmental education course in less than a semester, and those who need more time to move though the coursework. Technically, a student who can complete the course ahead of the class can also advance to other courses in the same semester.

In fall 2006, there were four sections of self-paced classes, serving a total of about 60 students. In spring 2007, three sections served 45 students.

The self-paced component addresses two important objectives of developmental education at CCD: acceleration for quick movers, and retention for students needing more time than a typical 15-week semester.

All programs in the Center for Educational Advancement are closely coordinated to ensure the same standards of competency for all students. Students earn two non-transferable credits for each of the lowest-level courses in developmental reading, English, and math, and three credit hours for the intermediate and advanced level classes. The advanced level of developmental math is a four-credit-hour course. The credits make students eligible for federal and state financial aid under Pell guidelines. Students also need to complete two-thirds of their coursework in a semester to retain financial aid.

Policy Implications

The Community College of Denver and the Colorado Community College System have a long history of offering self-paced, open-exit/open-entry classes. CCD branch campuses began offering them many years ago to accommodate working students who needed more flexibility in scheduling.

Two key system and institutional polices have enabled, and continue to enable, the successful delivery of the self-paced section and accelerated courses in general.

Enrollment and Census Dates

The Colorado Community College system has a uniform start date for colleges, but colleges can offer non-traditional courses that start later, at different times in the semester, and are shorter than the traditional 15 week format. These courses each have their own registration dates and census dates by which enrollments must be counted. Thus, if a student completes one self-paced course earlier in the semester, he or she may be able to enroll for a second course in the same semester.

Colleges report enrollment data to the community college system office several times a year. There is an initial, system-wide reporting date when colleges report enrollments, after the census for most classes is taken. Another system-wide enrollment reporting occurs at the end of each term. A final report on enrollments is done at end of the academic year.

Colleges receive funding based on an estimated enrollment. Funds are adjusted at the end of the year through a "look back." Colleges receive more funds or revert funds to the system based on actual enrollments.
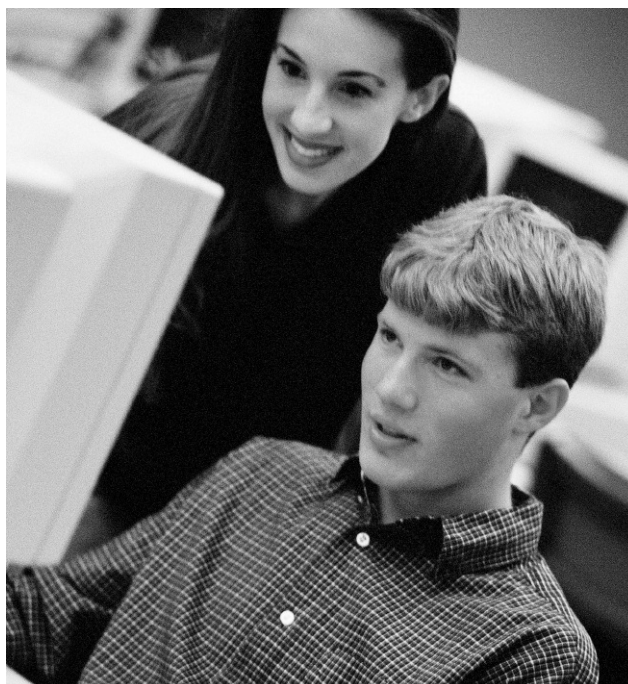
As in Connecticut, the community college system tracks enrollment using Banner. Non–traditional courses are set up as "part of 15-week term" in Banner, and colleges follow a menu of prescribed options with regard to start and freeze dates for enrollment. Once enrollments are captured, other policies tied to enrollments—financial aid disbursements, tuition and fee calculations, and FTE counts for college funding—fall into place. Most importantly for students, financial aid packages are adjusted to reflect any additional course work in accelerated courses taken later in the term.

"Satisfactory Progress" Grade

The Colorado Community College System switched to Banner about two years ago. At the time, it was not clear whether the new system would permit the flexibility in offering multiple schedules and late start classes to which Colorado community colleges were accustomed. As it turned out, the new reporting system does indeed capture and enable those same options.

Another policy that makes it possible for students to accelerate through courses and skip the traditional semester format is an institutional one. For students who enroll for a course but need to pace themselves differently from the norm, typically progressing at a rate that makes them unable to complete the course in a semester, Community College of Denver awards a "Satisfactory Progress" grade. This grade, which is lim-

ited to developmental education courses and pre-dates Fast Start, is given upon fulfillment of certain attendance requirements and some minimum course content mastery. It enables students to repeat the same course the next semester, if necessary, in the self-paced section, picking up where they left off, without having to re-register. When a student completes the course with sufficient mastery, the SP grade is changed to the grade earned. Only A, B, or C are satisfactory passing grades. Students earning a D must re-register and pay to take the class again.

The ability to continue without re-registering is critical because it enables students to continue developmental coursework without paying for it twice. The system only counts students once, for the course they registered for initially. Students can carry the SP grade for a maximum of two semesters through an SP extension. The SP grade also enables students to retain financial aid, as long as they finish 67 percent of the credits they attempt in a given semester with a passing grade. Students who fail to meet the two-thirds requirement must go through an appeal process to receive financial aid the following semester.

The SP grade was developed by CCD, where developmental education administrators found that students who earned it were more likely to return and to take more classes than those who received Fs. Using this data, the developmental education department convinced other college officials that the SP grade was not a financial loss for CCD; rather, it was a net revenue generator as well as a great retention driver.

As with flexible scheduling, there was some concern at CCD that the Banner student information system might not accommodate the SP grade. However, the system office allowed the college to maintain that grade, and the transition went smoothly.
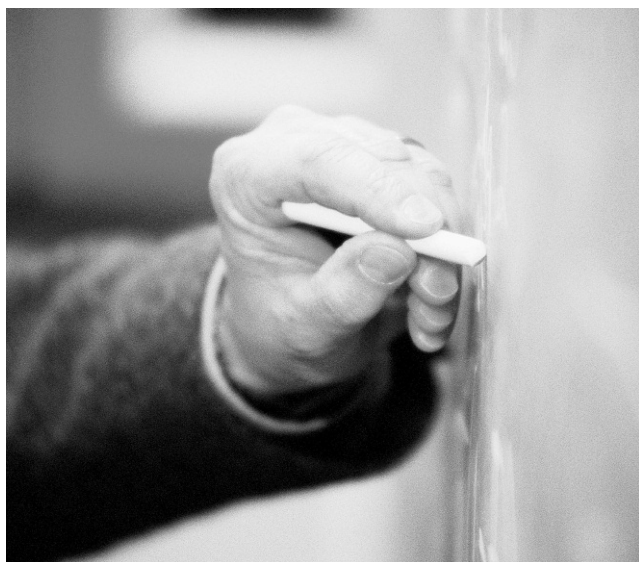
Mountain Empire Community College: Fast Track Refresher in Remedial Math

Mountain Empire Community College, one of Virginia's twenty-three community colleges, had a total enrollment of 4,227 for 2006-07. Part-time students account for nearly two-thirds of MECC's enrolled students. Minority students comprise a very small percentage of the student population, reflecting the racial distribution of MECC's service region.

In 2006, 72 percent of first-time MECC students who were admitted into an academic degree or certificate program tested into at least one developmental education course. Seeking ways to enhance student completion and retention, MECC began offering two accelerated courses in summer 2006. These "Fast Track" courses help students who need a review rather than intensive instruction in developmental mathematics. The courses were again offered in spring 2007 and will be offered in fall 2007 as well.
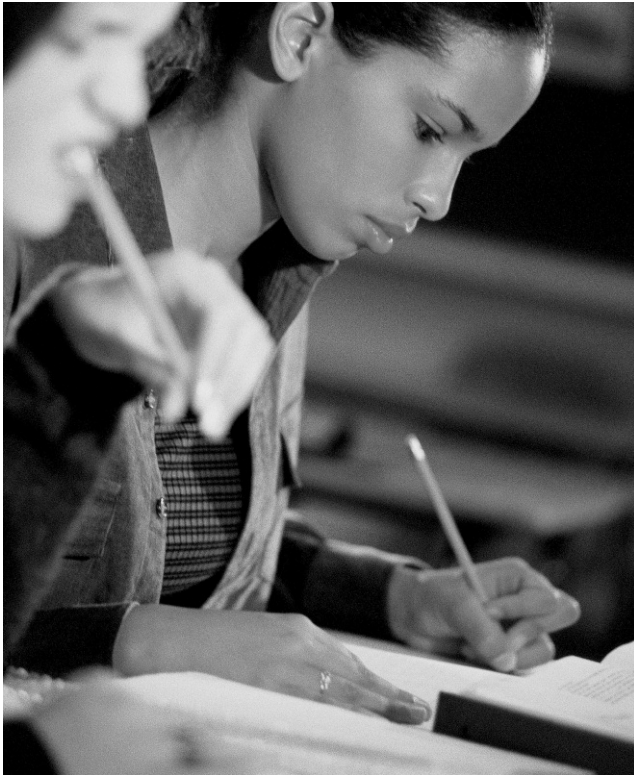
Program Design

The Fast Track program offers short refresher courses in arithmetic and algebra to a select group of students who score near the cut score on the COMPASS assessment for the next level course. Typically, students scoring below 33 on the COMPASS pre-algebra placement test are placed in basic arithmetic (Math 2), and those scoring from 34 to 99 are placed into basic algebra (Math 3). For Fast Track, students with a COMPASS score over 20 can be placed into Fast Track arithmetic (Math 2). For placement in Fast Track algebra (Math 3), students must have passed Algebra I in high school and placed into Math 3 at MECC. Faculty permission is required for enrollment in Fast Track. Fast Track courses are sequenced, with algebra following arithmetic. Each course is offered only once in the semester. In the summer, the courses are condensed: arithmetic (Math 2) was offered in summer 2006 over one week, algebra (Math 3) over two weeks. In spring 2007, arithmetic (Math 2) was offered over the first five weeks of the semester. Algebra was offered over the next ten weeks of the semester, allowing students to complete both courses in one semester. Future terms will follow the same format.
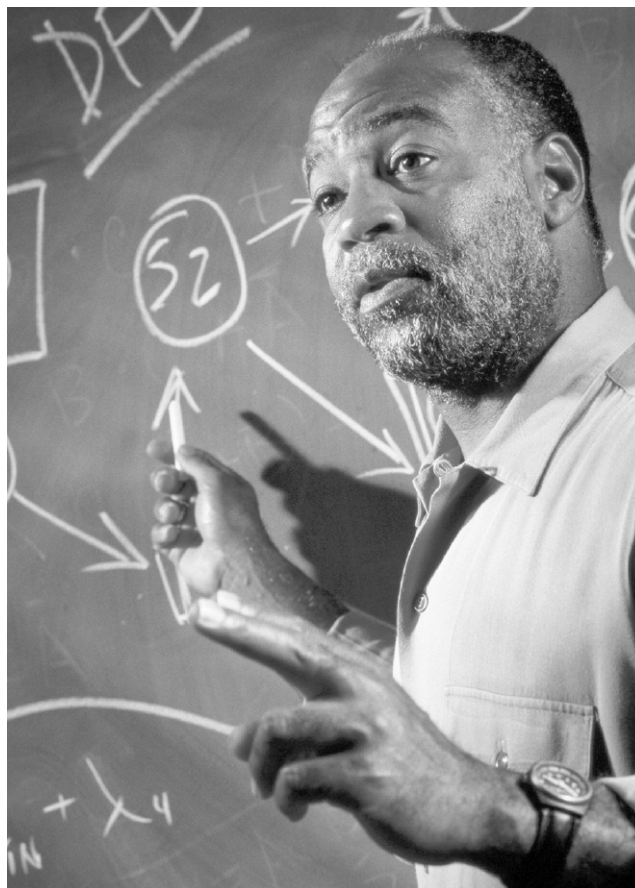
The two Fast Track courses carry one and two credits respectively. A traditional Math 2 course (arithmetic) is three credit hours; a traditional Math 3 course (algebra) is five credit hours. The Fast Track Math 2 (arithmetic) course is one credit hour, and the Fast Track Math 3 (algebra) course is two credit hours. Thus, a student spends less time in each of these developmental classes. And, because the student is enrolled for fewer credits, fewer funds are needed for tuition, whether out-of-pocket or from financial aid, saving the student both time and money. In other words, students pay only for the remediation they need.

Most students pre-register for the courses at the beginning of the semester, following their placement testing. This is true even for Fast Track algebra, which begins later in the semester. However, MECC offers many courses that begin throughout the semester.

A majority of students enrolling in Fast Track math courses depend on financial aid, primarily Pell Grants.

The summer 2006 cohort was small: six students were enrolled in Fast Track arithmetic; eight enrolled in Fast Track algebra, six of whom had completed Fast Track arithmetic. The completion rate for both courses was 100 percent.

Policy Implications

Flexible registration policies, and the use of institutional calendars as opposed to a common, system-wide calendar for course scheduling, allow Virginia's community colleges to offer accelerated programs Fast Track courses.

Institutional calendars, in turn, are linked to enrollment census. Like Connecticut, the VCCS uses an enrollment census calculation system in which census dates are based on a percentage of the course session regardless of the start date—in this case 15 percent of the calendar session. But colleges can undertake their census of enrollments for courses that start later in a term and still comply with data reporting requirements, receive funding, and provide financial aid based on those enrollments. The VCCS has a mid-term enrollment reporting date for colleges across the system, but enrollment for those sessions with census dates occurring after the mid-term reporting date are reported and captured at the end of the semester. This enables colleges to report enrollment data for non-standard courses that have a delayed start.

The other systems policy that makes Fast Track possible is that the VCCS assigns variable credits for certain developmental education courses based on instruction time. This policy of allowing developmental courses to carry different credits allows colleges to structure and offer those courses for as little as one credit or as much as six credits. The VCCS has a Master Course File, which contains a listing of all courses that are offered through the system along with common course numbers, course descriptions, and course credit values. As long as colleges adhere to the assigned credit values and other protocols outlined in the master file, they have the flexibility to restructure their courses. This is how MECC has been able to condense the developmental math courses into the Fast Track format for one and two credits.

For this reason, they must be admitted into a federally approved academic degree or certificate program and be approved for financial aid before registering. For students enrolling in Fast Track Algebra, which begins later in the semester, the college can adjust the financial aid package to reflect the additional credits (or reduced credits if the student drops the course).

Fast Track courses are counted as developmental course credits and apply toward the maximum 30 developmental credit limit for Pell Grants. For most state financial aid programs, Fast Track students and others must be enrolled for at least six credits per semester, but enrollment requirements can vary with the grant program.

Virginia colleges can undertake their census of enrollments for courses that start later in a term and still comply with data reporting requirements, receive funding, and provide financial aid based on those enrollments.

The Interaction of Practice and Policy

These three colleges and their efforts to accelerate developmental math provide an important and instructive window on how institutional practice can be shaped by state and system policies—and by shifts in policies. They also demonstrate how important it is for college innovators to work closely with state and system policymakers to protect and promote efforts that show promise to improve student success at the college level.

These colleges and their efforts highlight the importance of enrollment policies and data reporting procedures to innovation, and to the flexibility that can help some students move faster through developmental requirements. In all three states, policies allow for flexible calendaring and course scheduling by individual institutions. But variations in enrollment census and reporting policies make the critical difference in capturing the student information needed to run such programs easily and to maximum advantage for students and institutions.

To the extent that Housatonic Community College and the Connecticut Community Colleges system office want to expand the pilot for self-paced remediation, the state may need to revisit its policy of one census date for each college, which allows colleges to report enrollments only once a semester. This current policy makes it hard for HCC to report all enrollments for the entire semester and makes it harder for the college to expand the program beyond the pilot.

The experience of Community College of Denver—its use of the "Satisfactory Progress" grade to allow students to return and continue their self-paced progress without expending more resources or repeating an entire semester's work—can be instructive to Housatonic, and to any college trying to provide self paced instruction for low income students. Mountain Empire's format of offering short refresher courses for partial credit to a select group of students may offer another guidepost for the design of programs to improve developmental education retention and completion rates.

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With regard to financial aid for students who enroll in alternative format, non-traditional courses, all three states, and more generally, colleges and systems across the country, follow federal guidelines and regulations in the calculation and disbursement of financial aid. But there may be differences in how guidelines are interpreted, resulting in some states adjusting financial aid for students to accommodate changes in their course load and enrollment status based on course enrollments later in the semester.

Finally, a key driver behind system policies in all three states is the statewide student information system and policies related to data reporting. Multiple census and reporting dates are key, as both Virginia and Colorado demonstrate. Housatonic Community College's challenge stems from the design of the state's data system and its reporting rules. Connecticut determined awhile ago that its policy of a single census date was the most effective way to meet its students' needs. However, as the experience of HCC shows, this policy may need to be revisited in order to meet the more flexible delivery of instruction that the college is trying to provide. The system office recognizes this and is trying to address the issue. More generally, the experiments and programs in the states show that trade-offs between institutional flexibility and system-wide consistency can be made in ways that facilitate the kind of programming that all three colleges are experimenting with to improve student outcomes on their campuses.
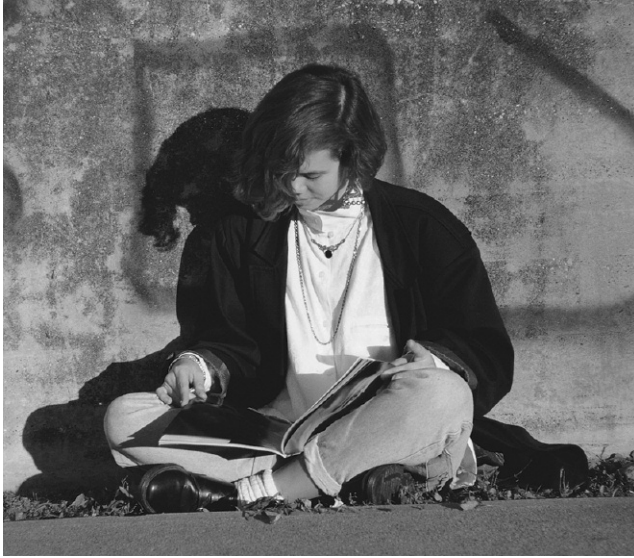
Housatonic Community College and the system office staff are meeting to explore solutions that could serve the needs of all concerned. CCD and the Colorado system had similar discussions about Fast Start. In Virginia, the policy around enrollment census dates has been recently modified by the vice presidents of the system's colleges, so there is a regular system-wide venue for addressing issues of student success.

These discussions should involve institutional and system leaders, faculty, and staff. Data system experts should be included, but the exchange should be driven by those responsible for academic policy and student supports. And, as has been the case in each of these three colleges, the discussions have to be informed by data on student outcomes and success—data from successful, innovative programs and data from the system level that identify how the interaction of policy and practice affect students' progress through and out of developmental courses.

Acknowledgements