

# Something's Got to Give

California can't improve college completions without rethinking developmental education at its community colleges



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This report draws extensively from an EdSource research study released to the public in October 2010, *Course-taking patterns, policies, and practices in developmental education in the California Community Colleges*. To access the study, go to: [www.edsource.org/iss\\_research\\_communitycollege.html](http://www.edsource.org/iss_research_communitycollege.html)

### About the study

In 2009, the California Community Colleges Chancellor's Office (CCCCO) contracted with EdSource to perform a study of developmental (or basic skills) course-taking patterns, practices, and policies within the community college system. The CCCCCO provided the study team with ample independence to pursue and report on the research as we believed was best.

The research questions included:

- What key policies and decisions have shaped developmental education in California?
- How can we describe the remedial course-taking patterns of students within the California Community Colleges (CCC)?
- Which remedial course-taking patterns correlate most highly with different student outcomes, and to what extent does this vary based on student characteristics?
- What are the current policies and practices related to remedial course-taking and developmental education more generally within the system?
- What are the current critiques, issues, and innovations related to those policies and practices?
- What are the implications of these findings for CCC practices and policies, and for state policy related to developmental education?

To develop the analysis of course-taking patterns and their correspondence with particular outcomes, EdSource contracted with Dr. Peter Riley Bahr, assistant professor of education at the Center for the Study of Higher and Postsecondary Education, University of Michigan, Ann Arbor. Using unitary Management Information System (MIS) data supplied by the CCCCCO, Bahr compiled and analyzed the course-taking history of students who enrolled for the first time in fall 2002 and—at some point prior to summer 2009—enrolled in a remedial mathematics, writing, or reading course.

The balance of the study describes relevant policies and practices in the community colleges. Researched and written by EdSource staff, it reflects literature review, policy analysis, and information gathered through interviews and other consultation with more than 40 community college stakeholders, including educators, policymakers, and researchers within and outside California.

The study was submitted to the CCCCCO on June 30, 2010.



EdSource thanks the California Community Colleges Chancellor's Office for the research contract and thanks *The William and Flora Hewlett Foundation* for its general support, which enabled the production and dissemination of this report.

# Something's Got to Give

## California can't improve college completions without rethinking developmental education at its community colleges

President Barack Obama has set a national goal that by 2020, “America will once again have the highest proportion of college graduates in the world.” On Oct. 5, 2010, the president and the U.S. Department of Education underscored the central role community colleges play in this effort by hosting a White House Summit on Community College.

California's community colleges are the single largest postsecondary system in the country, serving nearly a quarter of all community college students. It is clear that this new national challenge cannot be met unless California's community colleges ramp up their student completion rates.

In order for more students to reach that finish line of college completion, California has to get more of them to the starting gate, ready and able to do college-level work. As open-access institutions, California's community colleges play a crucial role in that effort. They are the main source of postsecondary education for the state's high school graduates, but particularly for first generation college goers, many of whom are low-income and students of color.

California's community colleges hold out hope for a better future for the more than 2 million individuals they enroll each year. Because of their commitment to open access, the community colleges serve huge numbers of students who are unprepared for college-level academic studies. Local campuses have responded to this by creating a variety of developmental education programs to help students learn the basic skills they need for college success. Over time, California's long-standing tradition of local autonomy has resulted in a myriad of approaches to this righteous but often daunting challenge, some of which are more successful than others. Students get mixed signals about what they need to do to prepare for community college and—after they enroll—are too often left to their own devices to figure out how to get the skills they need for college success.

State and national leaders say that increasing the number of students who graduate from high school ready for college and career is essential. But to meet the goal of more college completions, California's community colleges must also strengthen developmental education. That is particularly true if the state remains committed to maintaining the open-access mission it has assigned to the community colleges. But colleges are expected to improve their effectiveness at educating these unprepared students at a time when budget and enrollment pressures are constraining their capacity to respond.

Continuing to tackle the problems of readiness and remediation with the same strategies will simply not work. Something's got to give.

This report draws from a recent EdSource study that was commissioned by the California Community Colleges Chancellor's Office (CCCCO) to provide a deeper understanding of the system's challenges and opportunities

related to developmental education. It provides some insights into how well the community colleges are currently positioned to respond to these pressures. It also details how students have moved through remedial course sequences in writing and mathematics, which students take these courses, and the extent to which their starting levels and course-taking behaviors appear to relate to their achievement of long-term academic goals.

Growing concern about low levels of student success and completion—fostered in part by a plethora of recent reports on the topic—has prompted new state efforts to change policy in support of improvement. As community college officials and state leaders consider ways to pursue these goals for the system, they will be forced to confront their commitment to providing open access as well. The findings from this study can help illuminate some leverage points for reconciling those two challenges that sometimes seem so at odds.

### Terminology used in this report

Educators, policymakers, and researchers use a host of terms when discussing academic preparation for postsecondary study, and they do not all agree on how the terms should be used.

For this report, EdSource uses the following:

- **Developmental education**, the broadest and most inclusive term, refers generally to the programs that serve students who enter for-credit courses in the community colleges unprepared for college-level work.
- **Remedial courses and course sequences** refers specifically to the for-credit math, writing, and reading classes students take that are below the level accepted for transfer by California's public four-year universities.
- **Basic skills** is a common term in California that appears in state regulations and the names of major initiatives, and it is used here in that context.



## In open-access community colleges, improving completion rates depends on students being able to do college-level work

Community colleges in general—and developmental education specifically—occupy a prominent place in an increasingly vocal national conversation about improving college completion rates.

In July 2009, President Barack Obama made these connections explicit when he laid out his administration's higher education reform agenda by introducing the American Graduation Initiative (AGI). His \$10 billion proposal articulated several goals for "transforming America's community colleges for the 21st century." One goal was to stimulate innovative policies and practices to improve the quality of the community college experience. Another was to develop new data systems to track and measure student and institutional progress.

Although the measure was not fully implemented, national momentum around these goals continues, in large part due to the efforts of private foundations. For example, in April 2010, the Bill & Melinda Gates Foundation announced its commitment to provide up to \$110 million to help research and bring to scale innovative developmental education programs that accelerate students' progress. In addition, six national organizations have signed on to a Call to Action to promote changes they hope will result in 50% more students completing high-quality degrees and certificates by 2020.

Taken together, these initiatives have dramatically raised the visibility of community colleges and their work. The ambitions related to college success goals will be unattainable, however, unless the country also addresses the challenge of making sure students are prepared to undertake the academic rigors of college-level work. The principle of open access to education—which is at the heart of the community college agenda in California and many other states—means that students have access to community colleges regardless of their academic readiness. Success at taking those students from the level at which they enter to the level of academic competence required for

college success must be addressed as a precondition for meeting the larger goal.

California's importance for the success of this national effort is indisputable. The California system served a total of 2.9 million individual students in 2008–09 alone. That dwarfs the systems of other states and is the equivalent of about 1.2 million full-time students (or FTES) in credit courses and more than 99,000 in noncredit courses. One National Center for Education Statistics (NCES) report estimated that the California system served "about 23% of the nation's community college students" in fall 2005.

Those numbers include any student who enrolls in one of the state's community colleges, even for a single course. Accepting that not all enrollees hope to complete a degree or certificate, 2008–09 completions for the system as a whole still provide perspective. Data from the California Community Colleges Chancellor's Office (CCCCO) indicate that 84,907 students earned associate degrees in 2008–09 and another 41,060 earned a vocational certificate (of which more than half required at least 18 units). Another measure of completion is student transfers to baccalaureate-granting institutions, both public and private, within and outside California. In the March 31, 2010 *Basic Skills Accountability Report*, the CCCCCO reported that 99,583 students transferred in 2008–09, a number that was down more than 5,000 from the prior year.

### *California's attempts to increase academic expectations at the community colleges shine a light on developmental education*

The tension between open access and high academic expectations is not new in the Golden State, having occupied a great deal of attention within the community college system in California for several years. For

example, in 2003 the minimum statewide requirements in mathematics and English for an associate of arts (AA) or associate of science (AS) degree were completion of Elementary Algebra (the equivalent of Algebra I) and a course one level below College Composition. A survey by the Academic Senate (ASCCC) revealed that local expectations varied, with many campuses requiring College Composition and Intermediate Algebra (Algebra II) for the associate degree.

Subsequently, the Community College Board of Governors (BOG) established these higher requirements for the system as a whole, beginning with students who entered in fall 2009. Under the new rules (Title 5, §55063 of the Education Code), students who want to earn an associate degree must pass:

- College Composition or another English course at the same level (transfer-level) and with the same rigor.
- Intermediate Algebra or another mathematics course at the same level (one level below transfer), with the same rigor and with Elementary Algebra as a prerequisite.

It was clear that these higher standards would put an associate degree out of reach for many underprepared students unless colleges did a better job of providing developmental instruction. California's Basic Skills Initiative (BSI) was created to address this concern. Since 2005, it has focused on "best practices" in developmental education in order to enrich the expertise of practitioners. It emphasizes supporting and encouraging the colleges to make greater student success an institutional responsibility. The state provided \$20 million in categorical funding for the BSI in 2009–10.

More recently, the access-versus-success debate has focused on course prerequisites. Current regulations say that a prerequisite should be established when a student would

be highly unlikely to pass a course without certain prior knowledge and skills. The community college system is contemplating a state policy change related to how local officials set English and mathematics courses as prerequisites for college-level work in other disciplines. The process for setting such prerequisites has included a statistical validation that many say discourages faculty from limiting student access to any discipline or course based on students' communication or computation skills. Currently, the use of these prerequisites is relatively uncommon.

The statewide Academic Senate is leading an effort to revise the current regulations and allow such prerequisites to be set based on a content review by faculty. This proposal has proven to be quite controversial, with those focusing on academic rigor colliding with those most concerned about student access to the curriculum. There is general agreement, however, that the quality and accessibility of developmental courses (the presumed prerequisites) need to be addressed.

### *National foundations are focusing on developmental education*

Increasingly in the past few years, foundations interested in community college issues have supported initiatives through a number of research and advocacy organizations. One of the best-known and longest-standing is Jobs for the Future (JFF), which began in 1983.

JFF's current work focuses on changing developmental education policy at the state level. JFF has worked with other organizations to advance specific state policy changes they believe will improve student success. Many of these changes are closely aligned with the Obama administration's proposed community college initiatives. For example, Complete College America convened a discussion in October 2009 that resulted in policy recommendations for "revamping developmental education" to improve completion rates, shorten time to degree/credential, and define and support more effective and efficient pathways to credit-bearing classes and degrees/credentials.

This discussion and a variety of other national initiatives have identified several

### Major national community college initiatives funded by private foundations

Private foundations have provided the funding to support most of the efforts listed below. The Bill & Melinda Gates Foundation and the Lumina Foundation are the most active, but a wide range of organizations are interested in college access, success, and workforce development.

#### Broad, overarching initiatives

- **Achieving the Dream: Community Colleges Count** is a national initiative begun in 2003 to help more community college students succeed. It acts on multiple fronts, including efforts at specific community colleges and in research, public engagement, and public policy. Achieving the Dream is funded by the Lumina Foundation and 18 partner foundations; its lead policy partner is Jobs for the Future.
- The **Call to Action** is a compact aimed at promoting changes that will produce 50% more students with high-quality degrees and certificates by 2020. The six national organizations co-signing the compact are the American Association of Community Colleges (AACC), the Association of Community College Trustees (ACCT), the Center for Community College Student Engagement, the League for Innovation in the Community College, the National Institute for Staff and Organizational Development (NISOD), and the Phi Theta Kappa Honor Society.

#### Initiatives focused on state policy

- The **Developmental Education Initiative** is a new, three-year, Achieving the Dream project that focuses on ways community colleges can leverage state policy to make developmental methods more effective. The initiative involves six state partners that have created state policy frameworks and strategies aimed at dramatically increasing the number of students who complete college preparatory work and move on to college.
- **Complete College America** was formally launched in 2010 with the express goal of increasing the nation's college completion rate through state policy change. The group said it will begin its work with an alliance of 17 states. At this writing, California is not among them.

#### Initiatives focused on data systems

- The **Committee on Measures of Student Success** is a group of experts appointed by U.S. Secretary of Education Arne Duncan. The group will develop recommendations for "two-year degree-granting institutions of higher education to comply with the law's graduation and completion rate disclosure requirements" and recommendations "regarding additional or alternate measures of student success that are comparable alternatives."
- The **Voluntary Framework of Accountability** is a joint effort of AACC, ACCT, and the College Board. The goal of this voluntary system, according to AACC, is to measure outcomes and processes specific to community colleges and "provide opportunities for colleges to benchmark their student progress and completion data against peers and to provide stakeholders with critical information on the colleges."

areas where state policies can play a key role in leveraging change in community colleges toward these goals, including:

- Considering assessment and placement policies carefully.
- Making sure policies foster program innovations and their evaluation.
- Developing goals for developmental education, measuring performance appropriately, and evaluating improvement.
- Creating incentives that drive institutions to focus on helping their students meet the goals.

The national discussion also emphasizes reducing the need for developmental education. This is perhaps the most vital area for focus in California, given the high proportions of high school graduates who enter the community colleges and the widespread concern about their lack of readiness. But more than the other policy areas mentioned above, progress in this area is only possible if the community colleges, state policymakers, and the K–12 system all work together. But even measuring the extent of the problem is currently problematic.



## Reducing the need for developmental education is a long-term goal

There is little doubt that a large portion of students who enter the state's 112 California Community Colleges need to take one or more remedial courses to be college-ready. Meeting this need is of growing importance, given the stakes for students in a changing economy where a high school education no longer provides reliable access to a living wage.

However, precise measures of the extent of the challenge—and of who needs developmental courses and why—are not currently available. Policymakers and educators have to rely on various estimates and anecdotal information to guide their actions.

### *Only estimates exist regarding students' lack of college readiness*

The California Community College Chancellor's Office gathers enrollment data for every student in the system, including information about the remedial courses students take. Nevertheless, it is impossible to say precisely how many of California's high school graduates who enroll at community colleges need to improve their basic skills because of the following data limitations:

- California currently does not collect statewide, student-level data on the academic readiness or recommended placements of students when they enter community college.
- Not all students take placement tests.
- Not all students who are tested follow the placement recommendations they receive.

Further complicating the situation is the fact that the community colleges use different placement tests and vary even more in the additional placement criteria they employ. The majority of campuses choose from a small number of computerized, commercial tests in English and mathematics. They differ more on their policies for exempting students from these tests, the cut points they use to determine readiness for college work, and the additional criteria they use as part of their placement process.

It is clear that some students identified for remediation do not enroll in remedial

courses. For example, faculty at Evergreen Valley College recently found that, in general, the majority of their students who take a math assessment test “do not enroll in a math course, and many enroll in a course other than the one in which they placed.”

These data limitations make it impossible to do statewide comparisons of community college students who need developmental education with those who do not, at least as determined through the colleges' own assessment processes.

### *Data following high school students into community college are unavailable*

In Florida and a few other states, educators and policymakers have data systems that allow them to follow students through the K–12 system into postsecondary education and ultimately into the workforce. Such rich information can help policymakers and educators better understand how students progress through each step in the education continuum and how the systems fit together. The data also support evaluation of the extent to which various programs and innovations affect that progress.

Currently, California appears to be a long way from having even a statewide K–16 data system in place, much less being able to use it to evaluate the need for and success of developmental education programs at the broadest level. That said, many state policymakers have at least embraced the goal. Legislation passed early in 2010 as part of California's effort to apply for federal Race to the Top (RTT) grants included an expression of legislative intent. However, California's loss in that grant competition, combined with its financial woes, poses complications. The state was also passed over for Institute of Education Sciences (IES)

grant funds, provided through the American Recovery and Reinvestment Act (ARRA), which would have supported development of the longitudinal data system.

Local community colleges do have some ability to evaluate their own students in relation to local high schools, however, thanks to the California Partnership for Achieving Student Success (Cal-PASS), a locally driven initiative that has received some state funding. About a decade old, Cal-PASS is a voluntary effort organized around local and regional memoranda of understanding (MOUs) among consortia of K–12 school districts, community college districts, and state universities. It provides participating faculty and teachers with longitudinal data tools for inquiring into barriers faced by local students as they transition between institutions. Because the sharing of data among these institutions is governed by regional MOUs, however, the information generated is primarily used locally and, by its very nature, does not provide a systemwide perspective.

### *Large portions of community college students enter unprepared to do college-level work*

Although quantifying the need for developmental education in California is difficult to do precisely, some estimates do exist.

The most current source for statewide information on the recommended placements of community college students is a survey of the California Community Colleges conducted for the state's 2009 *Basic Skills Accountability Report*. These data suggest that, among credit and noncredit students assessed for fall 2007, only 16% of those tested in mathematics were deemed ready for transfer-level math—roughly the

equivalent of having met the standards of a high school Algebra II course. Only 28% of those assessed in English (excluding reading) were ready for a transfer-level course in College Composition, as were only 38% of those assessed in reading. Corresponding data for individual community colleges in California are not reported as part of the *Basic Skills Accountability Report*, but other research suggests that the range among the colleges is substantial.

Another way to address this question of need is to count the number of students who actually enroll in remedial courses. The study EdSource completed for the CCCCO provides additional perspective through data on the community college students in California who began as first-time students in 2002. The cohort identified for this study represents a subset of all students who were counted by the system.<sup>1</sup>

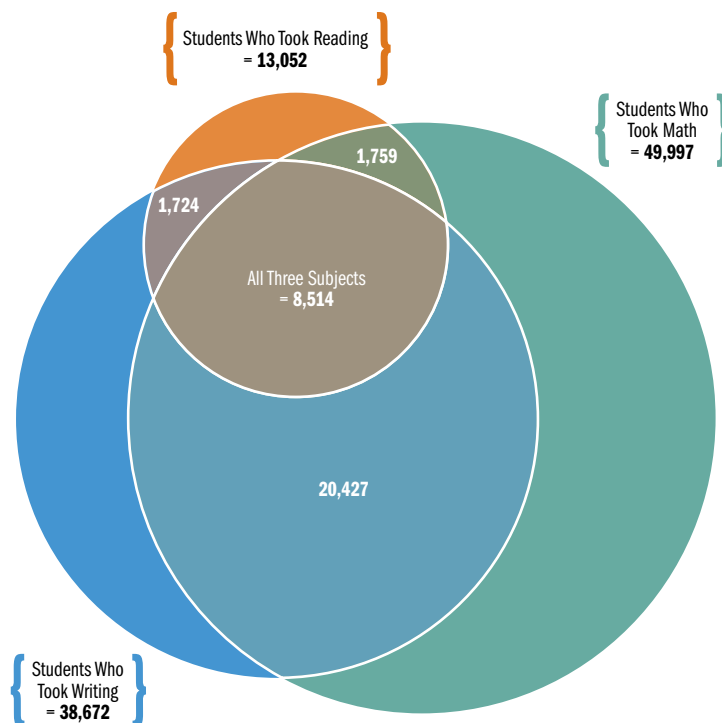
#### About half of fall 2002 first-time students enrolled in a remedial course

Among the 122,427 first-time students identified for the study, 60,783 students—nearly 50%—enrolled in at least one course in a remedial writing, reading, and/or mathematics sequence at some point between fall 2002 and spring 2009. In all, 41% of the cohort enrolled in a course in a remedial mathematics sequence, 32% took a course in a remedial writing sequence, and 11% took a course in a remedial reading sequence. A great deal of overlap existed among these three groups, with slightly more than half taking a remedial course in more than one sequence. (See Figure 1.)

#### Younger students were more likely to take remedial courses

Students who were of “traditional college age” (19 years old or younger)—in other words, recent high school graduates—were over-represented among those who enrolled in remedial courses. Nearly 80% of students who took those courses were 19 years old or younger when they entered community college. (See Figure 2.) In comparison, about 55% of the larger cohort was of traditional college age.

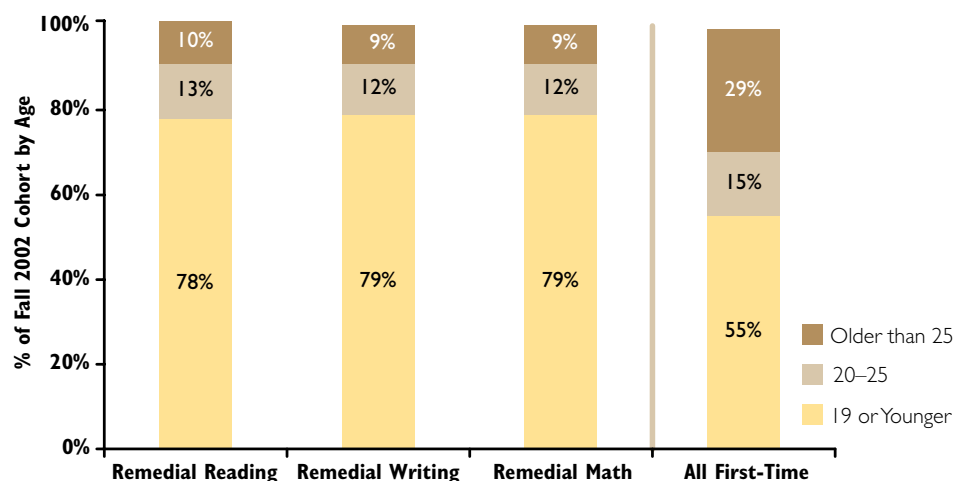
**figure 1** Fall 2002 first-time students who enrolled in one or more remedial courses in writing, reading, and/or mathematics



DATA: STUDENT COURSE ENROLLMENT RECORDS PROVIDED BY CCC CHANCELLOR'S OFFICE MANAGEMENT INFORMATION SYSTEM (COMIS) MATCHED WITH COURSE LISTINGS, DESCRIPTIONS, AND PREREQUISITES FROM THE 2002-03 THROUGH 2008-09 COURSE CATALOGS OF THE COLLEGES.

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**figure 2** Age (at the time of college entry) of students who enrolled in a remedial sequence vs. all first-time students (fall 2002 cohort)



Note: Percentages may not add to 100 due to rounding or missing age data.

DATA: STUDENT COURSE ENROLLMENT RECORDS PROVIDED BY CCC CHANCELLOR'S OFFICE MANAGEMENT INFORMATION SYSTEM (COMIS) MATCHED WITH COURSE LISTINGS, DESCRIPTIONS, AND PREREQUISITES FROM THE 2002-03 THROUGH 2008-09 COURSE CATALOGS OF THE COLLEGES.

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### *The definition and degree of readiness both vary across the system*

Improving students' preparation for community college while they are still in high school represents a complex and long-term challenge. The EdSource study makes it clear, however, that students who took remedial courses differed widely in their starting points within community college remedial sequences. Although some of the variation reflected their abilities, some of it can also be attributed to differences in how the campuses organized and labeled their remedial courses.

### *Campuses define developmental levels and organize courses differently*

Not only do the 112 community college campuses differ in how they organize their remedial sequences, but prior to 2009 there also was no common definition among the campuses of what skills and knowledge students had at various levels. To understand where students were starting in the system and how they progressed to "college ready" for the purposes of this study, it was first necessary to map the sequences of remedial courses the campuses offered. Then student-level data for the fall 2002 cohort were matched to those courses. (See the box on page 7.)

California community colleges vary most widely in how they organize remedial sequences in writing and reading. For example, the campuses differ in the number of course "levels" they offered below College Composition. (See Figure 3.)

- In writing, all campuses offered at least two levels of developmental courses and three levels was most common. However, a total of 41 campuses offered four or more levels.
- In reading, the vast majority of campuses offered between two and four levels of remedial courses, but five campuses offered just one level and eight campuses more than four.

In addition, slightly more than half of colleges provided some form of *integrated* (or *combined*) writing and reading instruction within their respective remedial sequences, with a few colleges offering them at every

**figure 3** | A wide variety of remedial writing and reading sequencing exists among the colleges  
(sample below based on analysis of course catalogs from 2002 through 2009)

Community College	Courses Below College Composition			Description
	Writing	Integrated Writing/Reading	Reading	
Bakersfield College	1 level below		1 level below	Two distinct writing and reading sequences.
	2 levels below		2 levels below	
	3 levels below		3 levels below	
Mendocino College		1 level below		An integrated sequence.
		2 levels below		
		3 levels below		
West Hills College Lemoore		1 level below		A sequence with separate writing and reading courses at lower levels, but which merges one level below College Composition.
	2 levels below		2 levels below	
	3 levels below		3 levels below	
Cypress College	1 level below		1 level below	A sequence that is integrated at lower levels, but which forks one level below College Composition.
		2 levels below		
		3 levels below		
Merritt College		1 level below		Integrated courses compose the main sequence, in conjunction with individual writing and reading classes.
		2 levels below		
	3 levels below	3 levels below	3 levels below	
	4 levels below	4 levels below	4 levels below	
Los Angeles Southwest College		1 level below		A mostly integrated sequence is interrupted three levels below College Composition by separate writing and reading courses.
	2 levels below	2 levels below		
	3 levels below		3 levels below	
		4 levels below		

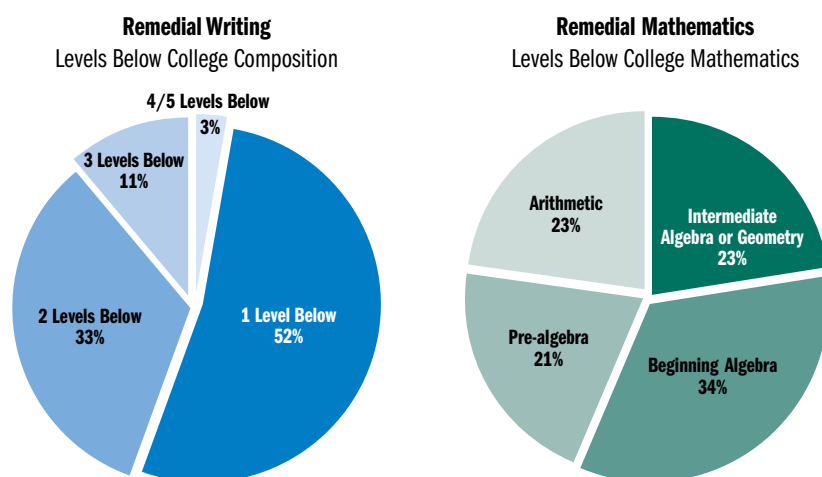
DATA: STUDENT COURSE ENROLLMENT RECORDS PROVIDED BY CCC CHANCELLOR'S OFFICE MANAGEMENT INFORMATION SYSTEM (COMIS) MATCHED WITH COURSE LISTINGS, DESCRIPTIONS, AND PREREQUISITES FROM THE 2002 THROUGH 2009 COURSE CATALOGS OF THE COLLEGES.

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remedial level. Figure 3 provides a sense of how these variations result in very different developmental course offerings in writing and reading among the campuses.

The structure of remedial mathematics sequences is more consistent. In general, colleges offered three or four levels of remedial coursework below college mathematics.

figure 4 | Students' starting levels in writing and mathematics in 2002



Note: Percentages do not sum to 100 due to rounding.

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From lowest to highest levels, these generally reflected the following progression of *content*:

- Basic Arithmetic (four levels below college math),
- Pre-algebra (three levels below),
- Beginning Algebra (two levels below), and
- Intermediate Algebra/Geometry (one level below).

Again, there were some variations among colleges. Pre-algebra was less likely to be included in the sequence. In addition, it was common for a course to be offered both as a single-semester course and as a two-semester extended sequence (e.g., Beginning Algebra I followed by Beginning Algebra II).

In 2007, the Legislature began requiring a *Basic Skills Accountability Report* that, among other things, looked at outcomes for students based on their starting levels in the sequences. The first report, published in fall 2009, shed light on the inconsistencies in course-level coding among the campuses and the extent to which this prevented accurate reporting on students' progress in developmental education at a statewide level. In response, hundreds of community college faculty, the Academic Senate, and the CCCCO undertook a process to "improve, update, and correct [the CB-21] coding used to track and report student progress through basic skills." The result is a series

of rubrics for coding the "level" of remedial courses, defined in terms of *levels below the transfer level*. The new rubrics will enable more meaningful statewide data on student progress and provide a foundation for better articulating high school courses with the remedial course sequences.

#### Variability in student readiness is most pronounced in mathematics

Students clearly entered the community colleges with a wide range of abilities, and

student readiness also differed considerably based on subject matter. (See Figure 4.) More than half of students who took remedial writing began just one level below College Composition. By contrast, less than a quarter began remedial mathematics with Intermediate Algebra or Geometry, the course just below college-level math. Notably, this is the course that high school graduates would presumably be ready for if they have mastered Algebra I.

It is difficult to know exactly how much the overall picture might have changed since 2002. In 2004, Algebra I became a minimum state requirement for high school graduation; and some algebra questions are also included on the California High School Exit Exam (CAHSEE), which became a graduation requirement in 2006. After the CB-21 coding is reliably implemented across the whole system, state leaders should be able to measure the extent to which students' starting levels have improved, if they have.

Although the community colleges have a commitment to serve all students, the costs to the state of providing these developmental programs to high school graduates who enter the system unable to adequately do basic arithmetic or writing is tremendous. Due to the data limitations described above, it is not clear precisely what percentage of the remedial course-takers from the fall 2002 cohort

### The course-taking information in the study

The study database made it possible to identify students based on various characteristics, accurately follow their progress through for-credit remedial sequences to college-level courses, and identify their attainment within the system. The study:

- Covers the timeframe from fall 2002 through spring 2009.
- Looks at statewide patterns of remedial course-taking within 107 semester-based colleges.
- Includes only credit courses in mathematics and writing that are part of subject-area sequences that lead to college-level coursework. (Noncredit courses and English as a Second Language courses are not included. Reading courses are included in this section, but not in many of the further analyses.)
- Focuses on the subset of first-time students in fall 2002 who enrolled in those courses.

Remedial sequences were identified using course catalogs for 2002-03 through 2008-09. Using course-taking data for the cohort provided by the California Community Colleges Chancellor's Office, each relevant course taken by a student was coded to specify its "level" with respect to college-level coursework.

students were recent graduates of California high schools, but it is likely that the majority of them were.

In order to reduce the need for developmental education among the state's high school graduates, policymakers and practitioners need better answers to some important questions. Both locally and statewide, they need to know:

- To what extent have reforms instigated since 2002 improved high school students' achievement and, in particular, the achievement of traditionally lower-performing groups based on ethnicity, socioeconomic level, and English learner status?
- To what extent does the lack of college readiness today reflect poor high school achievement on the part of students versus a mismatch between what high schools are teaching and what community colleges expect?

### *Current efforts target ways to signal community college expectations more clearly*

As noted above, the state remains a long way from being able to integrate its K–12 and higher education student data systems. Current community college reforms are instead focused on ways to more consistently and clearly signal to K–12 schools that readiness for college work in this system is nearly synonymous with the expectations at the four-year universities.

#### *Community colleges join the Early Assessment Program (EAP)*

The California Community Colleges are becoming more involved with the state's Early Assessment Program (EAP). First offered in 2004, the EAP enables the California State University (CSU) system to provide high school students with early feedback—during the summer before their senior year—about their readiness for college-level classes in English and math. By thus giving high school students one year to become better prepared if needed, EAP developers hope to reduce the proportion of incoming CSU students who need remediation in these subjects.

The developers of the EAP found that CSU's placement expectations and the state's K–12 standards for English and mathematics were aligned, but that CSU's placement tests and the state's high school assessments—the California Standards Tests (CSTs)—did not always emphasize the same things. The solution was to give 11th graders the option to take expanded versions of CSTs in English and math.

In 2010, 43% of high school juniors scored proficient or advanced on the regular Grade 11 CST in English Language Arts. However, among those juniors who participated in the EAP in English by taking the augmented CST, only 21% were considered “ready for college.” These students were exempted from placement testing in English upon enrollment at CSU.

Slightly less than half of high school juniors were eligible to take the EAP in mathematics in 2010 because participation is limited to those students who have reached at least Algebra II by grade 11. Among those juniors who did participate, 15% were considered “ready for college” and thus were exempted from placement testing in mathematics upon enrollment at CSU. Another 42% were “conditionally ready,” meaning that their potential exemption from placement testing was conditional on completing another adequately rigorous mathematics course during their senior year.

### *Current community college reforms are focused on ways to more consistently and clearly signal to K-12 schools that readiness for college work in this system is nearly synonymous with the expectations at the four-year universities.*

As of June 10, 2010, 31 community colleges had agreed to participate in the EAP. Doing so means they will accept some or all EAP results as a basis for exempting students from placement testing in English and/or mathematics. Another 19 colleges had the matter “under discussion.” More than 20 of these colleges had also identified an EAP coordinator to conduct outreach to local high school students in coordination with CSU. (See the CCCCO website, [www.cccco.edu](http://www.cccco.edu), for more information.)

These colleges are participating in the EAP to send a clearer signal to high school students and educators that the California Community Colleges have the same academic standards for transfer-level courses as CSU and to create new efficiencies in the matriculation process by exempting qualified students from placement testing.

Community college leaders also acknowledge that they must think broadly about high school outreach—and that it should begin before grade 11—given the open-access mission of the colleges. For example, the roughly half of students who are not far enough along in their study of mathematics in grade 11 to be eligible for the EAP in that subject are potential community college students. (See the 2008 EdSource report, *High School to Community College: New Efforts to Build Shared Expectations*, at [www.edsource.org/pub\\_transitions11-08.html](http://www.edsource.org/pub_transitions11-08.html).) Many of these students will place into a remedial mathematics sequence if and when they arrive at community college. Helping these students well before they leave high school so they can improve their math knowledge and assess into higher levels of these sequences—and thus have a shorter path to college-level study with fewer opportunities for attrition—would be of great service to both colleges and students.

#### *The move to standardize colleges' placement tests gains momentum*

Without question, the ability to collect statewide data on assessment results would enable California's community colleges to better analyze how prepared students are for college-level work and how well they are being served. The idea of a standardized placement test raises many concerns for local campuses, however. In January 2008, a task force assigned to look at the question submitted a report to the Board of Governors

that described resistance to the idea within the system.

Discussions have continued, however, and a current proposal originating in the Chancellor's Office—the Online Common Assessment Project, or CCCAssess—would take advantage of the difficult fiscal climate by providing colleges with incentives for using common assessments. Grant funding from The William and Flora Hewlett Foundation and the Gates Foundation supports exploration of the technical feasibility of the concept. Legislation directing the BOG to pursue a pilot project—Assembly Bill 2682 (Block)—was introduced in February 2010. As this publication was going to press, the governor vetoed the bill. His message indicated the mistaken assumption that the community college's uses

of the EAP made the bill unnecessary. The privately funded feasibility study and pilot is expected to proceed regardless.

The vision is that CCCAssess would provide centralized delivery of common assessments and be a repository or data warehouse for assessment scores, which are currently not collected at the system level. This centralized approach would make it possible for the system to provide assessments in mathematics, writing and reading, and English as a Second Language, with individual colleges able to administer as many assessments as needed for free.

Under the concept, colleges would retain the right to administer other, locally selected assessments but would bear the cost of doing so, creating a financial incentive for using the

common assessments. The proposed system would also enable students to take practice tests. To the extent this incentive proved compelling for colleges, students would encounter the same assessments regardless of the college in which they enroll.

It will be crucial to gather information about these changes, evaluate their effectiveness, and continue to improve their implementation in both the K–12 and community college systems. Improving the data following students from secondary to postsecondary is necessary if this is to be done for the state as a whole.



## The study of the 2002 cohort finds a multitude of factors that affected student completion

The EdSource study looked at the background characteristics, aspirations, and academic progress of students who began in fall 2002 and—sometime between then and spring 2009—enrolled in a remedial writing or mathematics course. About two-thirds of those who accessed a remedial mathematics or writing sequence neither transferred to a baccalaureate-granting institution nor completed any type of credential or certificate.

The study included a statistical analysis that examined how students' course-taking behaviors affected that and other academic outcomes, all else equal. Both the descriptive statistics about the students and the statistical analysis shed light on the extent to which students' outcomes depended on their starting level within the remedial course sequences.

### *Students' characteristics varied with their starting levels*

The background characteristics of students varied—sometimes substantially—with their starting levels in the course sequences. For example, students who started at the lowest levels in either math or writing tended to be older than those who were

placed at the top of the remedial sequences. Fully 92% of students who began in Intermediate Algebra/Geometry were 19 years old or younger, while the same was true for just 64% of students who began in Arithmetic.

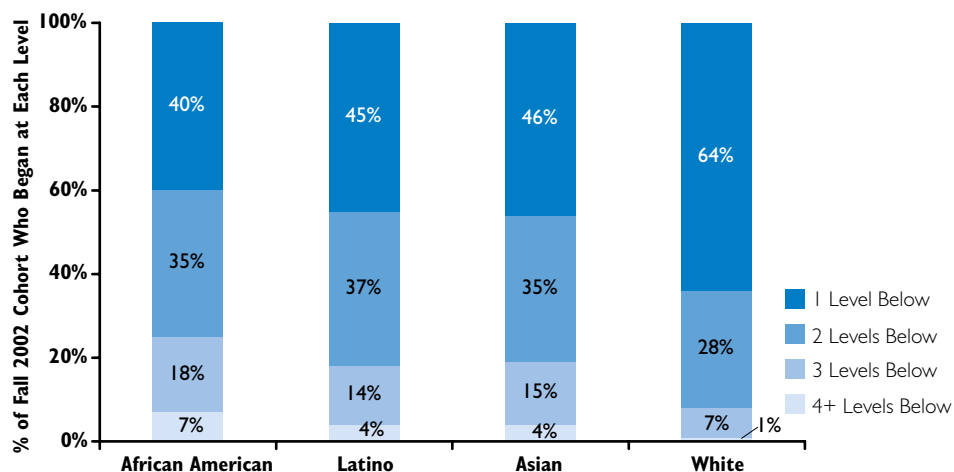
### *African American and Hispanic/Latino students were more likely to start at lower levels*

Both African American and Latino students tended to start at lower levels in both subjects. (See Figures 5a and 5b on page 10.) For example, among those students who took remedial courses, 40% and 45%, respectively, began one level below college level in writing, compared with 64% of white students. It is notable that Asian students were also less likely to be among the highest-level writing students.

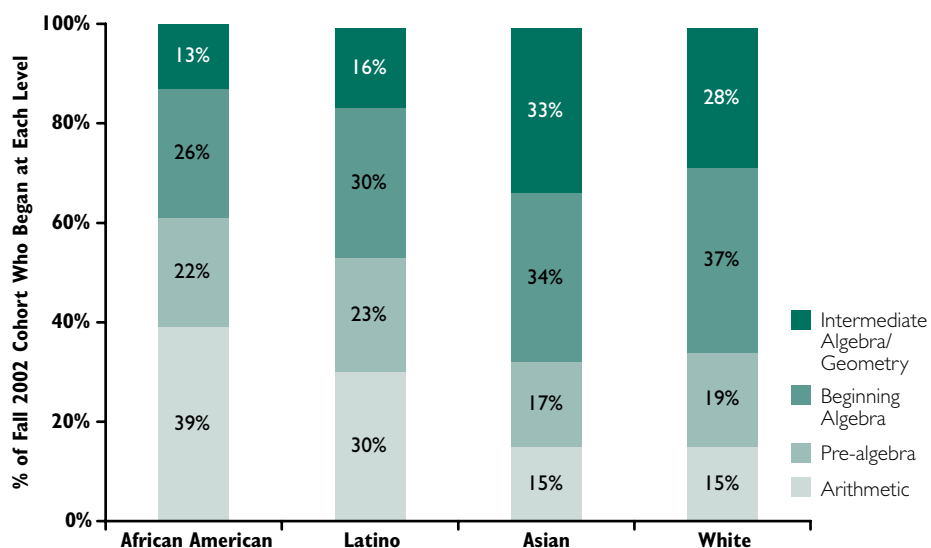
Asian students started at the top of the remedial sequence in math more often than other ethnic groups, with 33% beginning in Intermediate Algebra/Geometry. This contrasts somewhat with white students, at 28%, and more dramatically with both African American students (at 13%) and Hispanic students (at 16%). The concentration of these two groups of students at the Arithmetic level is also notable.

To the extent that policymakers and community college educators are especially interested in fostering increased academic success among Latino, African American, and other historically lower-achieving populations, the racial/ethnic distribution of students across different levels of California's remedial writing and mathematics

**figure 5a** | The distribution of students across remedial writing levels within four racial/ethnic groups for the fall 2002 cohort



**figure 5b** | The distribution of students across remedial mathematics levels within four racial/ethnic groups for the fall 2002 cohort



Note: Percentages do not always sum to 100 due to rounding.

DATA: STUDENT COURSE ENROLLMENT RECORDS PROVIDED BY CCC CHANCELLOR'S OFFICE MANAGEMENT INFORMATION SYSTEM (COMIS) MATCHED WITH COURSE LISTINGS, DESCRIPTIONS, AND PREREQUISITES FROM THE 2002-03 THROUGH 2008-09 COURSE CATALOGS OF THE COLLEGES.

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sequences is of high interest. This also has important implications for how policymakers think about the success of K-12 schools in preparing students of different racial and ethnic groups for college. Again, examining these data among current students would be particularly important for evaluating the

reforms of the past decade and identifying strategies for improvement going forward.

Among the fall 2002 first-time students who took remedial courses, about 40% received fee waivers during their first year in the community colleges. This is the most direct measure of students' socioeconomic

status. Students qualify for fee waivers based on whether they are receiving public assistance, are considered low-income, or can otherwise demonstrate financial need. Consistent with other data about the relationship between poverty and academic achievement, students that started at the lower levels in the writing and mathematics sequences were also more likely to receive fee waivers. At the lowest levels, about half did so.

#### Students at lower starting levels were less likely to aspire to transfer

Upon entry into the community colleges, students indicate their academic goals. Although some research has called into question the validity of these first goal statements, they provide one indication of what students hope to gain from their educational efforts.

Students' academic goals often differ with their starting levels. For example, 32% of students who started more than three levels below College Composition aspired to transfer compared with 54% of those who began one level below. The differences were even more pronounced for mathematics students, with 37% of Arithmetic students aspiring to transfer compared with 64% of students who started in Intermediate Algebra/Geometry. (See Figures 6a and 6b on page 11.)

#### Measures of academic progress by starting level were more mixed

Just as students at various starting levels varied in terms of their backgrounds and their aspirations, they also differed somewhat in their persistence and academic progress, at least based on the available measures.

One aspect of progress is the number of units students undertake. For the purposes of this study, that was measured by looking at students' average course unit load across their first year of community college attendance. Fewer than a third of students who enrolled at the lowest levels in either writing or math were enrolled full time (taking 12+ semester units per term). By contrast, about half of students who began just one level below College Composition were full time, as were 61% of these who began in Intermediate Algebra/Geometry.

On the other hand, the rates at which students passed their first remedial course were similar, regardless of their starting levels. In writing, about 60% of students passed their first course. In mathematics, the passage rate was closer to 52%. Among students who did not pass, nearly half withdrew from the course, with withdrawals more common in the mathematics sequence.

Yet another measure of persistence and progress is the extent to which students attempted a higher-level course in writing or math. Across all the starting levels, more than half of those students who took a first remedial course also attempted a second, more advanced course in the same subject. Fewer than half of students who began in Arithmetic continued, however.

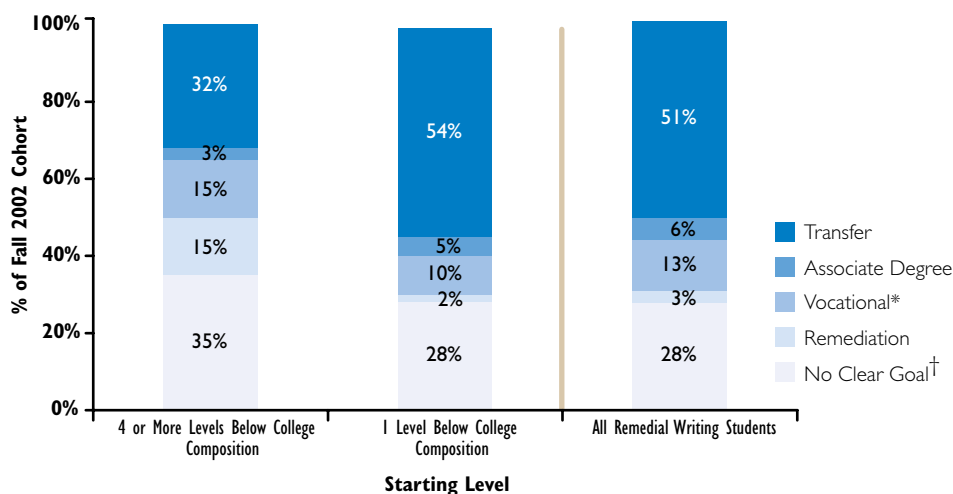
Another measure of student progress that has attracted particular interest is the extent to which students who need to take remedial courses delay doing so and the effect this may have on student success. Frequency data from this study provide some insight into this question for those students who eventually do enroll in a remedial course. They indicate that about three-quarters of the remedial students in the fall 2002 cohort began taking remedial courses during their first year. This was true for both writing and mathematics students and across all starting levels. Further, more than half did so their first semester at community college.

That said, roughly 10% to 12% of students at each level of the writing and mathematics sequences, respectively, deferred their first remedial course in the sequence until their second regular academic year (fall 2003 or spring 2004). In addition, between 9% and 16% of students at each level of the respective writing and mathematics sequences deferred their first remedial course until after their second regular academic year (beyond spring 2004).

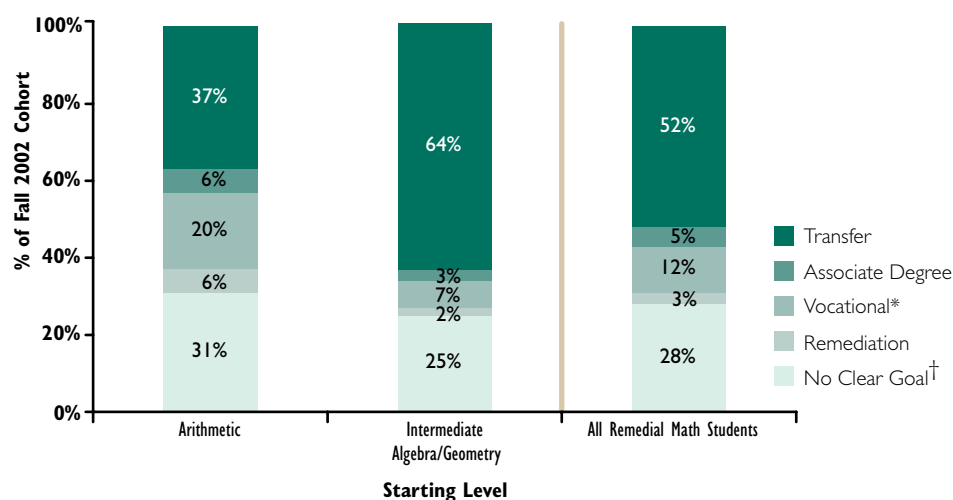
### *All else equal, students' ultimate success in community college rests on their ability to complete college-level work*

Given the many variations in course sequences, students' starting points, and their progress through the system, the EdSource study used a statistical analysis

**figure 6a** Students' stated academic goals in 2002 compared with their starting levels in the remedial writing sequence



**figure 6b** Students' stated academic goals in 2002 compared with their starting levels in the remedial mathematics sequence



Note: Percentages do not always sum to 100 due to rounding.

\* Vocational includes students interested in pursuing a vocational associate degree, a certificate, or other job-related goal.

† This means that students did not report a goal, that they were undecided, or that they had an abstract goal.

DATA: STUDENT COURSE ENROLLMENT RECORDS PROVIDED BY CCC CHANCELLOR'S OFFICE MANAGEMENT INFORMATION SYSTEM (COMIS) MATCHED WITH COURSE LISTINGS, DESCRIPTIONS, AND PREREQUISITES FROM THE 2002-03 THROUGH 2008-09 COURSE CATALOGS OF THE COLLEGES.

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to look for correlations between students' characteristics, course-taking patterns, and academic outcomes. (See the box on page 12 for more about this portion of the analysis.)

This series of analyses indicates that, in large part, community college students' completion of a credential and/or transfer

to a four-year institution depends on their success in completing college-level courses in mathematics and writing. Further, when all else is equal, students are more likely to attain those key thresholds of mathematics and writing competency if they:

- Enroll full time (take more than 12 units per semester) during their first year;

## The analysis of the correlations between course-taking patterns and academic outcomes

Dr. Peter Riley Bahr of the School of Education at the University of Michigan used logistic regression as the primary analytical tool for stepping through a series of questions about students' course-taking behaviors, as follows:

- Who tends to delay the first remedial course?
- Who tends to achieve a passing grade on first attempt in the first remedial course?
- After the first remedial course, who tends to attempt a second, more advanced course?
- Among students who attempt a second (more advanced) course, who tends to delay this second course?
- Who tends to complete successfully a remedial math course that is no more than one level below College Algebra, or a remedial writing course that is no more than one level below College Composition?
- Who tends to complete successfully a college-level course in math or writing?
- Does variation in remedial course-taking patterns have any bearing on students' long-term outcomes?

Controlling for other variables, this analysis found that certain aspects of remedial course-taking behavior among first-time students who entered the community colleges in fall 2002 appear to have systematic relationships with these students' progress and ultimate achievement. It is important to note, however, that this does not mean that a particular behavior causes success or failure.

**A full discussion of this analysis and its results—and the complete study—is available at [www.edsource.org/iss\\_research\\_communitycollege.html](http://www.edsource.org/iss_research_communitycollege.html).**

*Among those who did attempt a more advanced course, students who delayed their first remedial writing course for a year were less likely to ever complete a college-level course.*

- Begin the needed remedial sequence during their first year of attendance;
- Pass their initial remedial course on their first attempt;
- Enroll in a remedial sequence continuously after they start; and
- Have fewer course levels to get through between their starting point and the college level.

By definition, all of the students included in these analyses enrolled in the identified remedial courses and attended community college for more than one semester. (It is only possible to measure delay when students show up in the remedial sequence sometime after the first semester.) Similarly, the

students who were identified as attempting and/or successfully completing a more advanced course were limited to those who attended for four or more semesters.

### Students who delay their first remedial course for too long are less likely to succeed

The first condition for success in getting to college-level coursework—enrolling full time during the first year—may seem somewhat obvious. Students who take more classes are more likely to succeed. In particular, however, this study shows that students who initially enrolled part time were more likely to delay their first remedial course in either writing or mathematics. Further, the

fewer units they took, the more likely they were to delay.

The analysis also shows that delaying the first remedial course is associated with some negative outcomes for students. For example, other things being equal, students who delayed their first remedial mathematics course were less likely to pass that first course.<sup>2</sup> In both mathematics and writing, students who delayed their first course a full year—until the fall of 2003 or later—were less likely to even attempt a more advanced course. And among those who did attempt a more advanced course, students who delayed their *first* remedial writing course for a year were less likely to ever complete a college-level course. In mathematics, that long-term consequence was only associated with delays beyond the second year.

### Passing the first course and persistence are both important

In both writing and math, successfully passing the first remedial course is tremendously important in determining whether a student attempts a second, more advanced course. It is also notable that although students' starting levels were not associated with the likelihood of passing, the *number of units* a student took during the first year was correlated. In writing, for example, the fewer units a student took, the lower the likelihood of passing the first remedial course.

Students' backgrounds also related to their success in their first course. All else equal, female students were more likely to pass their first remedial course in both mathematics and writing.

### Continuity in course-taking matters for completing more advanced courses

The analysis narrowed in on the subset of students who began their coursework two or more levels below college level to see whether those with delays between their first and second course were as likely to complete the final course in the remedial sequence. For math students that course is Intermediate Algebra/Geometry and for writing it is the course one level below College Composition. For both subjects, all else equal, students who delayed their second, more

advanced course by more than one semester were less likely to successfully complete the final course in the remedial sequence than students who did not delay.

A separate analysis looked at similar delays among students, regardless of their starting levels, to see if delaying a second course was related to completion of a *college-level course* in mathematics or writing. The findings were the same. All else equal, students who delayed a second, more advanced course by more than a semester were less likely to complete a college-level course.

#### Starting level is a major predictor of students' success in college-level math and writing courses

One of the strongest findings from the statistical analyses was related to the course level at which students started. Those who began below Intermediate Algebra/Geometry were much less likely to complete a college-level math course, even if they enrolled for many semesters. The same was true for writing students who began more than one level below College Composition. And this was true despite the fact that these students who began at lower levels were generally more likely to attempt a second, more advanced course in the sequence and less likely to delay that second course when they did so.

Further, the analysis did *not* indicate that starting levels were related to students' likelihood of delaying a first remedial course, *nor* did it show that students who started at lower levels were less likely to pass their first course. In other words, *despite other behaviors that are predictive of success for the group as a whole and all else equal*, students who started at the lower levels were less likely to successfully complete college-level courses in math and writing even when they stayed in the system for many years.

Less clear is the extent to which these students' lack of completion represented an unsuccessful experience for them. Their differences from remedial students more generally indicate that a substantial portion of these students did not fit the mold of recent high school graduates aspiring to transfer.

For example, a substantial number of students who began taking remedial courses at

### The lack of progress among African American students in the 2002 cohort is of particular note

After controlling for such variables as starting level, delays, and socioeconomic status, African American students when compared with white students in this study's regression analyses were:

- more likely to delay their first remedial writing course;
- less likely to pass their first remedial math course; and
- less likely to complete a college-level course in either subject.

This raises important questions about students' readiness when they leave high school. And it raises questions about whether existing developmental approaches address incoming differences among student groups, what might be done differently, and where. For example, two-thirds of all African American community college students in California attend in just five counties: Alameda, Los Angeles, Riverside, Sacramento, and San Diego.

the lowest levels started with somewhat less ambitious goals than transfer to a four-year university. Roughly one in five students who entered the mathematics sequence at the Arithmetic level declared an intent to pursue either a vocational associate degree (3%), a certificate (3%), or "other job-related" goal (14%). And 15% of students who entered the writing sequence four or more levels below College Composition stated remediation as their purpose for enrolling.

In addition, many students who began at these lowest levels were older when they entered community college. Nearly two in five students who began in Arithmetic—or began four or more levels below College Composition—were older than traditional college age when they first enrolled in a community college. About one in five was older than 25 years of age.

Finally, many students who began at these lowest levels took a low-unit first course. Altogether, 24% of students who began in Arithmetic and 25% of students who began four or more levels below College Composition took a course that provided fewer than three units. Such low-unit courses were uncommon at higher levels of both sequences.

It seems likely that, for some students who entered the remedial mathematics and writing sequences at these lowest levels, not

completing the last course in the sequence or the first college-level course beyond it did not constitute a "failure." The 14% of Arithmetic-starters who declared an "other job-related" goal, for example, may have achieved their goals *without* completing a college mathematics course or earning a credential or transfer. Their achievements are not documented in the outcomes as analyzed, nor are they included in larger discussions of what constitutes college success or completion.

That said, the analysis underscores the difficulty students have getting through multiple levels of remedial courses. The more levels, the less likely they will reach college-level work or completion. The findings also provide additional indications about what makes students most vulnerable to failure.

Many other researchers have found similar results through case studies and secondary analyses of local and state data. This study is notable for the size of its state-wide data set, the fact that it was student-level data, and the analytical methods used. Its findings are consistent with most other studies, and thus should contribute to the growing momentum to improve developmental education and the general direction of current recommendations concerning practice and policy.



## The goal of improving students' success and completion makes the status quo unacceptable

The data reported above reflect the experiences of a group of students who entered the community college system in California in 2002, several years before the creation of the Basic Skills Initiative. In the years since, the discussion and research generated through the BSI have produced much-needed dialogue about the importance of improving student outcomes in developmental education.

The initiative has pushed colleges to address the fact that substantial proportions of their students need developmental education and to direct resources toward professional development for faculty. As noted above, K–12 education reforms have also been put in place that may have improved the readiness of students who enter the community colleges.

That said, this study documents the magnitude of the challenges California faces in its efforts to increase the success of developmental students, and it provides a benchmark against which that can be measured. What remains unclear is how to achieve that success.

Recognition of the need for more effective practices in developmental education is at the heart of the BSI work now being done, but it is also a topic of discussion nationally. This is a period of intense scrutiny regarding the practice of developmental education by researchers, policymakers, philanthropic organizations, and other national stakeholders. This scrutiny is raising far-reaching questions about how developmental education might best meet diverse student needs.

### *National experts agree that developmental education should change*

For the most part, the national conversation does not question whether changes in developmental education are needed. Instead, it focuses on how to support institutional innovation and improve student outcomes, particularly the outcomes of students who start three or more levels below the college level.

In the context of Obama's goals related to college completion, the National Center for Higher Education Management Systems

(NCHEMS) published recommendations regarding potential policy changes in California, a project funded by the Hewlett Foundation. The authors criticize the approach to developmental education undertaken at most colleges, which they say consists of a remedial course sequence staffed with untrained adjunct faculty and to which the campus sometimes adds additional student support services.

Calling this approach both ineffective and expensive, the NCHEMS authors call for "a completely reformed base model, not an ineffective base model with compensatory add-ons." Such a model, they argue, would:

- Be based on fine-grained assessments of students' developmental needs;
- Consist of modularized instructional units;
- Be designed for statewide application;
- Be contextualized for students as far as possible;
- Use technology to a greater degree than is currently typical; and
- Have a "high touch" component in the form of coaches and mentors.

They also point to exemplars, such as California's Career Advancement Academies, the Integrated Basic Education and Skills Training (I-BEST) Program in the state of Washington, and the JFF Breaking Through project. Their recommendations echo the work of other national organizations and experts as well.

California's community colleges are making efforts in many of these areas and with some notable successes. However, much remains to be learned—both at the campus and system levels—about which

reforms in developmental education will lead to greater success and increased completion rates, for which students, and under what circumstances.

### *Faculty inquiry and development play a fundamental role in local innovation*

Faculty familiarity with a rich menu of research-based options for effective practice in developmental education is a first step on the road to improving student outcomes on a campus. This local expertise was far from common in California at the time the BSI began, however. A 2008 survey by the Chancellor's Office found that many local campuses did not have faculty that were "hired with or later received specific training in developmental education." The problem was most striking in mathematics. Half of the 64 campuses that responded to the survey reported that no more than 25% of their basic skills faculty in math had such training. For writing, 39% of campuses reported the same. For reading and English as a Second Language (ESL), on the other hand, faculty training was much more common.

Faculty development is complicated by the fact that so many remedial courses are taught by part-time faculty. Many colleges reported that fewer than half of their credit basic skills sections in writing, reading, and/or mathematics were taught by full-time faculty. The inclusion of part-time faculty in professional development has been one concern for BSI leaders. For example, the initiative's Summer Teaching Institute in 2008 funded the attendance of campus teams comprised mostly of part-time faculty.

A growing number of initiatives around the state also propose that making effective developmental education practices central to the work of individual colleges requires a culture of evidence-based inquiry. Faculty and administrators need to know more about current programs. What is working? What is not? Based on what evidence? What alternatives might be undertaken?

The institutional research function within the California Community Colleges provides some capacity for this work. However, institutional researchers to date have focused primarily on accountability reporting and strategic planning, rather than improvement of student learning through faculty inquiry and experimentation, according to the Research and Planning (RP) Group. Its 2009 survey of colleges found that, in general, college administrators view research and data as being more widely integrated into the work of their colleges than do faculty. According to the authors of the study, these findings suggest that the role of institutional researchers in enabling faculty to use data to inform their practice in concrete ways remains to be fully developed on most campuses.

Consistent with the goals of the BSI, recent efforts are providing community college faculty with frameworks through which to conduct inquiry and reflect on their practice. (See the box for examples.)

More generally, current thinking about how to improve results for developmental students includes the improvement of support systems for students, capitalizing on students' interests, and restructuring the remedial sequence.

### *Support for student success needs to be explicit and pervasive*

Research has consistently drawn attention to the importance of better integrating developmental instruction with a suite of support services that ensure students stay engaged, receive assistance, and maintain a sense of forward progress toward their goals. The importance of support is underscored by this study's finding that students who did not pass a remedial math or writing course on their first attempt were less likely

## Projects targeted at strengthening faculty inquiry related to developmental education

- A three-year project by The Carnegie Foundation for the Advancement of Teaching and The William and Flora Hewlett Foundation—**Strengthening Pre-collegiate Education in Community Colleges (SPECC)**—provided grants to 11 community colleges in California to support faculty inquiry groups. These groups developed and evaluated new approaches to teaching and learning in basic skills courses using evidence and data. One outcome of SPECC was online case studies through which faculty documented their research questions, approaches to developmental teaching and learning, and what they learned. Some practices at the core of SPECC, including online documentation of faculty inquiry, continue in projects such as the **Faculty Inquiry Network (FIN)**.
- The **University of Southern California Center for Urban Education (CUE)** works with California community colleges through its Equity Model to facilitate faculty inquiry toward more equitable college access and success. Campus inquiry teams disaggregate student data by race and ethnicity, develop benchmarks for improvement, and identify potential leverage points for improving student outcomes. The model supported an effort by **Evergreen Valley College**, for example, whose findings resulted in new goals for enrolling students in the courses into which they had placed and further inquiry into the role of matriculation.
- A new RP Group-led effort—**Bridging Research, Information & Culture (BRIC)**—will assist 15 colleges in strengthening their capacity for evidence-based inquiry projects during 2010–11. The project also intends to make institutional research more efficient in order to free up time to support campus inquiry.
- The newest phase of the **Basic Skills Initiative**, now led by faculty from the Los Angeles Community College District, is working to establish a sustainable and permanent statewide professional development network called the California Community Colleges' Success Network (3CSN). Their effort currently includes eight regional networks.

*Research has consistently drawn attention to the importance of better integrating developmental instruction with a suite of support services that ensure students stay engaged, receive assistance, and maintain a sense of forward progress toward their goals.*

to take a second, more advanced course in those subjects, holding constant other variables.

The recent work of the Student Support Partnership Integrating Resources and Education (SSPIRE) initiative provides one window into both new and longstanding efforts to integrate support services with developmental instruction. Nine colleges received grants during three years to implement new approaches through a partnership between The James Irvine Foundation and MDRC. The colleges used four distinct approaches:

- *Learning communities* that linked multiple courses and revised them to include counseling and support staff in various ways.
- *Case management* that ensured students received such services as financial aid support, academic advising, and career counseling.
- *Study centers* that provided students a place on campus to get academic assistance and to which students were actively recruited.
- *Summer bridge programs* through which students reviewed math concepts and skills and received counseling support.

*Contextualized teaching and learning is based on the idea that students should encounter foundational skills within a context that is meaningful on its own terms. This provides students with a clearer view of why these skills are important and who they might become by using them.*

These grant-funded efforts in California provide models that other colleges might consider. But they often also raise questions about how, with limited budgets, colleges can prioritize and sustain programs on behalf of more students. Chaffey College's Student Success Centers provide an example of academic support services at scale. The centers were a result of the college's Basic Skills Transformation Project, which responded to declining basic skills outcomes in the late 1990s. Undertaken with Partnership for Excellence funds formerly provided by the state, the project adopted new assessments, revised courses, integrated the college's former basic skills department into the disciplines, and replaced its former basic skills lab with the Student Success Centers.

Institutional research conducted by the college has found that students who use the centers are "more likely to successfully complete a course than students who were enrolled in the same section and did not access a success center," and that utilization of the centers has the "largest impact on the success rates of first-time college students."

### *Contextualization capitalizes on student interest and identity*

Contextualized teaching and learning is based on the idea that students should encounter foundational skills within a context that is meaningful on its own terms. This provides students with a clearer view of why these skills are important and who they might become by using them. To this end, as described by the Center for Student Success, instructors model "the skills necessary to complete a task [and also help] students articulate the thinking that accompanies the completion of the task."

This contextualized approach contains an implicit critique of how writing, reading, and mathematics are frequently taught within remedial sequences. In 1999, University of California–Berkeley professor Norton Grubb

was more explicit in his criticism of traditional remedial sequences and instruction. He argued that they frequently break student literacy and numeracy into small, discrete skills to be remediated separately and *prior to* learning the content or practice of a field. Thus, a writing sequence may start at the lowest level with sentences, followed by paragraphs, then short essays, then eventually longer essays. Grubb calls this "skills and drills" or "part-to-whole" instruction. From a curricular perspective, he and others also say this style of organization recreates a K–12 experience that students presumably have missed or failed to understand previously.

The I-BEST Program, a statewide program undertaken by the **Washington State Board for Community and Technical Colleges (SBCTC)**, is perhaps the most widely cited program nationally that integrates developmental instruction with career-technical learning. Its focus is on students, including ESL students, more than 25 years old.

A recent literature review of contextualized approaches by the Center for Student Success documents a small number of California programs with an occupational focus. One of these—a noncredit program focused on providing students with pathways into the utilities and construction trades—is part of a wider network of state-supported Career Advancement Academies, assisted by the CareerLadders Project. These academies are commonly organized around learning communities that position basic skills instruction within a career-technical pathway of regional importance. Career Advancement Academy programs currently operate in the East Bay, Central Valley, and Los Angeles. Each involves partnerships between one or more community college districts, multiple colleges, adult schools, and other local agencies (e.g., chambers of commerce and workforce investment boards). (For more information, see the Career Ladders Project,

[www.careerladdersproject.org/projects/career.php](http://www.careerladdersproject.org/projects/career.php).)

Course offerings that explicitly integrate *for-credit* basic skills instruction into an occupational context appear to be relatively uncommon in the California Community Colleges. In his dissertation, Walter Charles Wiseley surveyed chief instructional officers, administrators of occupational education programs, and directors of federally funded Perkins career-technical projects about any such credit courses offered in 2006–07. Among 35 colleges that responded, "only 11 courses of sufficient length and content" could be verified. These included 10 integrated or "hybrid" mathematics courses and one linked writing course.

Contextualized basic skills instruction need not have a specifically occupational focus, however. Again, the Center for Student Success provides some examples, such as the Academy for College Excellence (ACE, formerly the Digital Bridge Academy) at Cabrillo College. The program is intended to enable at-risk students to succeed in college-level studies. Student cohorts enroll full time in learning communities, beginning with a two-week Foundation Course. As part of their academic coursework, teams of students conduct primary research projects as they might do in college-level courses, such as projects on social justice topics of interest to them. That, in turn, provides context for literacy and mathematics learning through such activities as analyzing data.

### *Different approaches to the remedial sequence offer promise*

As the EdSource analysis and other research have shown, students' chances of completing and exiting a developmental sequence decrease as their "starting level" in a remedial sequence moves lower. This has prompted some educators to think differently about the structure and goals of their remedial sequences, and some experimentation is showing promise.

### *Acceleration can take different forms*

Acceleration is one approach to thinking differently about remedial sequencing. The approach can take a number of different forms.

The English sequence at **Chabot College** in Hayward is one California example. Developed more than a decade ago, the sequence resulted from a reorganization of English instruction at the college, including the integration of writing and reading. In its current form, students who assess as not ready for English 1A (called Critical Thinking and Composition) may choose from two paths, both of which integrate writing and reading:

- A two-semester “Reading, Reasoning and Writing” sequence (English 101A and 101B), with each course offering three hours of lecture and two hours of individualized instruction.
- A one-semester, accelerated version of “Reading, Reasoning and Writing” (English 102).

Both paths are shorter than many English sequences encountered by community college students in California, but the English 102 path potentially enables students to enter English 1A as early as their second term. Both paths also share the common premise that students should practice, with support, the literacy tasks expected in transfer-level courses (an assumption shared by the Cabrillo College ACE program). Students read book-length works that serve as spurs to discussion and writing, for example.

Another approach to acceleration is to allow students who assess just below the college level to enroll directly in college-level courses with additional instructional support. For example, Thomas Bailey of the Community College Research Center argues that “the distinction between developmental and nondevelopmental students is arbitrary.” Although some students clearly enter community college unprepared to succeed in college-level work, the fact that a student scores slightly above or slightly below the college-level cut score on an assessment need not justify an entirely different entry point into the curriculum, especially if a different entry point makes attrition more likely.

#### Modularization breaks semester-long courses into smaller segments

Modularization is a different approach to the remedial sequence that challenges

the assumption that full, semester-length courses should be the default unit of remediation. According to this school of thought, students do not necessarily arrive at community college with skill needs that fit neatly into predefined “levels.” A student may need additional preparation with respect to some skills and concepts but not others.

Modularization means breaking courses or entire sequences into “modules” that students pursue at their own pace. This focuses their time on skills and concepts for which they need more preparation and potentially allows them to exit the remedial sequence more quickly.

For example, **Jackson State Community College (JSCC)** in Tennessee has reorganized its formerly three-level mathematics sequence—Basic Math, Elementary Algebra, and Intermediate Algebra—into a single suite of nine modules. Which modules JSCC students must master depends both on their preparation and the program of study they intend to pursue. Students fulfill an “individualized learning contract” by mastering “only the concept deficiencies determined by a pre-test and those that are relevant to their career goals.”

#### Changes to sequence structure raise policy considerations

The examples above clearly show that traditional remedial sequences are not the only way to structure developmental education. But changes to these structures, or in how students access them, can sometimes be complicated by existing policies.

For example, educators must consider the transfer role of the community colleges when evaluating the structure of remedial sequences. Intermediate Algebra is the final step in the remedial mathematics sequence, in part because subsequent transfer-level math courses must have “an explicit Intermediate Algebra prerequisite” to meet CSU’s course requirement related to quantitative reasoning.

Some in the state, including the ACE program and The Carnegie Foundation for the Advancement of Teaching, are considering approaches to developmental mathematics that place stronger focus on statistical

reasoning, however. The underlying question is whether taking Intermediate Algebra best serves the academic goals of all students. Similar questions have engendered vigorous debate in the K–12 community about whether the “a–g” course requirements for four-year public university eligibility (which include Algebra II) should be required for all students.

*Some in the state, including the ACE program and The Carnegie Foundation for the Advancement of Teaching, are considering approaches to developmental mathematics that place stronger focus on statistical reasoning. The underlying question is whether taking Intermediate Algebra best serves the academic goals of all students.*



## State policies can support or hamper campuses' ability to implement innovations and evaluate them

The push to innovate in the area of developmental education is often framed in the context of two overarching goals.

Those goals are the following:

- Improving students' rates of successful course completion, and
- Compressing the amount of time required for developmental students to become college-ready.

Both of these goals would not only benefit students, but could also reduce state expenditures on developmental education in the long run. State policies can make a difference in the ability of campus officials and faculty to implement innovations and can affect their capacity to evaluate the results of those innovations. California's scorecard in this regard is mixed.

On the positive side of the ledger, California's decentralized governance system provides a level of local flexibility that can encourage and support experimentation. But for local educators to learn from these efforts and from one another—and for the system to move forward deliberately—common frameworks for measuring and evaluating outcomes are also essential. Other barriers for would-be innovators are the low priority often placed on developmental education by actors within the system and the absence of incentives to change those priorities. As pressure to improve student completion rates has increased, however, community college stakeholders and state policymakers in California have begun to respond.

### *Creating goals for developmental education and measuring improvement appropriately depend on having good data*

Among the most basic measures of community college student and institutional performance are those required by the federal government and included in the Integrated Postsecondary Education System (IPEDS), such as attainment of associate degrees

within three years of enrollment. But these basic measures do not provide the kind of actionable insights into student outcomes in developmental education that are currently being discussed nationally and in California.

"The first step toward improving performance outcomes in developmental education is to get a firm handle on current student and institutional performance," argues Michael Collins, program director of Jobs for the Future. (See the box on page 3 for more about these initiatives.) He adds that the states involved in the Achieving the Dream initiative have focused on some key steps involved in doing so. One is to gather data that clarify the need for developmental education and illuminate how this need varies among different groups of students depending on their age, ethnicity, and full-time and part-time status. This is particularly important given the diverse student bodies that community colleges serve.

The Achieving the Dream initiative has undertaken efforts to also identify and test measures of students' progress through community college. These resonate with many of the variables used in the remedial course-taking analysis conducted for the EdSource study. They include:

- Pass rates for developmental courses;
- Completion of a remedial course sequence;
- Enrollment in/completion of first college-level math and English courses; and
- Continuous enrollment in the community college system (not just at one campus).

In addition, a new national initiative, the Voluntary Framework of Accountability, is developing some measures that campuses could adopt. Headed by the American

Association of Community Colleges (AACC), the initiative's goal is to create a set of measures that can be used by all community colleges and are easy for the public to understand. Other measures being considered include measures of college readiness and milestones such as completing 15 or 30 units of college-level instruction.

In 2010, researchers at the Institute for Higher Education Leadership & Policy (IHELP) at California State University Sacramento also proposed potential "milestone" measures and "on-track indicators" that community college leaders could use to identify particular barriers to student success in their institutions. These measures could provide early warning signs that students were falling off-track.

### *Funding policies can remove barriers and support new models*

Among participants in the Complete College America discussion, the state policy focus was largely on ways to leverage state funding systems to support innovations in developmental education and remove policies and regulations that penalize innovation or stand in its way. And in a 2009 report published by Jobs for the Future, Collins highlights policies in some Achieving the Dream states that actively support innovation. For example, he says states can support innovation in part by providing flexibility on funding and financial aid policies that traditionally use semester-based enrollment reporting.

*As pressure to improve student completion rates has increased, community college stakeholders and state policymakers in California have begun to respond.*

California already allows districts to claim funding for a variety of course configurations, including open entry/exit courses, distance learning, and independent study, according to regulations and guidelines published by the CCCCCO in 2006. Regulatory changes in 2005–06 also specified that “supplemental learning assistance” would be funded whether it was in the form of a lab required of all students in a class or was targeted to just a subset of students in a course. Tutoring, under specified conditions, is also eligible for funding. The extent to which community college districts avail themselves of these options is less clear.

*IHELP researchers criticize traditional “performance funding” models as failing to recognize that “improving performance is an ongoing and costly undertaking and should be institutionalized into the basic funding formula so as to provide a stable and significant funding source.”*

A major catalyst for innovation can also be the availability of additional resources for pilot programs. This kind of funding is important because of the effort that experimentation requires and because some models that provide extra supports for students are more expensive to operate on a per-unit basis. It is particularly important that the latter types of programs are well evaluated before they are taken to scale.

Substantial financial support for innovation in California is not likely to come from the state in the near future. This constraint increases the leverage of private foundations and contributes to their ability to shape innovations based on their interests and beliefs. Colleges wanting to experiment with new approaches will likely look to the Gates Foundation’s \$110 million investment as a potential source of innovation funds, for example.

Often, consistent state data and benchmarks are integral to evaluating the success of innovative programs. They are also a key component of many foundation grants. California’s challenges in this area mean that the scale-up potential of any new

program concept could be compromised. This could make the state’s innovators less likely to get private support for their efforts.

#### *Can funding policies be used more proactively?*

The national conversation on community college student success adds one further reform to the mix: providing incentives for results. Although the arguments for such incentives can be compelling, limited evidence of their effectiveness and concerns about their implementation highlight the challenges of moving from concept to reality.

The NCHEMS analysis points to two types of incentives that states have used. One provides extra funds to institutions that achieve a particular degree-production goal, such as 50% of students getting a degree. The other provides a fixed amount per degree produced. They add that there is little evidence that pay-for-performance approaches have lived up to their perceived promise, however. This may be directly related, according to some analyses, to the low levels of funding included in such incentives, which typically affect 1% to 2% of allocations.

One ongoing model of incentive funding is Washington State’s Student Achievement Initiative, which provides extra funding to community colleges that improve their performance on specific student success measures. Started in 2008, the program has been partially funded by the Gates Foundation, with awards added to colleges’ base budgets going forward. Campuses receive points for improvements among students in four benchmark areas:

- Progression toward college-level skills, including students’ gains in basic skills

and passing precollegiate courses in writing and mathematics;

- First-year retention;
- Completion of college-level mathematics courses that are required for a technical or academic degree;
- Completions, including degrees, certificates, and apprenticeships. (See Washington SBCTC, [www.sbctc.ctc.edu/college/e\\_studentachievement.aspx](http://www.sbctc.ctc.edu/college/e_studentachievement.aspx).)

In a 2007 critique of California’s community college funding system, researchers from IHELP urged state leaders to consider new funding ideas being explored nationally. They note, “In many cases these new directions recognize the power of financial incentives to change behaviors and [involve] the targeted use of funds to encourage the desired outcomes.” But the authors also criticize traditional “performance funding” models as failing to recognize that “improving performance is an ongoing and costly undertaking and should be institutionalized into the basic funding formula so as to provide a stable and significant funding source.”

They propose various approaches to a new funding model, all of which begin with redefining the *workload* upon which FTES funding is based. “Workload is currently defined as 3rd week enrollment and colleges are funded to serve it. Alternatively, workload could be defined as teaching students for a full term, serving financially disadvantaged students, guiding students through basic skills, or producing certificates and degrees.”

Such an approach, they contend, would be more consistent with state goals insofar as policymakers intend to *educate* students rather than merely enroll them.

This approach is influencing debates about community college policy in California. Senate Bill 1143 (Liu), which was signed by the governor on Sept. 28, 2010, calls on the Board of Governors to adopt a plan for promoting and improving student success, including “alternative funding options instituted in other states for improving student success and completion.” (See the box on page 20 for a full description of the goals of Senate Bill 1143.)

## Community college bill requires a plan for student success and completion

First introduced as an incentive funding proposal, Senate Bill (SB) 1143 (Liu) in its final form calls for the Board of Governors (BOG) of the California Community Colleges to adopt a comprehensive plan for promoting and improving student success. The first step in that work will be the creation of a task force that includes “a broad representation of stakeholders, including but not limited to faculty.” The task force is charged with providing recommendations related to student success and completion, including at least the following:

- Multiple measures and effective programs for assessing student success and completion.
- Statutory and regulatory barriers.
- Best practices for promoting success and completion, including but not limited to the acquisition of basic skills.
- Alternative funding options for providing necessary services to students and promoting best practices.
- Alternative funding options instituted in other states.
- The effective use of technology.

The BOG is required to report the recommendations of the task force and the contents of its adopted plan to the appropriate legislative committees by March 1, 2012.

(For the full language of SB 1143, go to [www.leginfo.ca.gov](http://www.leginfo.ca.gov).)

system cut course sections by 9%, but only cut basic skills sections by 6.6%. The CCCCCO report also underscored, however, the extent to which the system was giving preference to continuing and returning students, versus first-time students and “special admits” who are typically high school students who take classes at the community colleges. In all, there were 133,383 fewer individuals in the latter two categories in 2009–10 than in the previous year, representing most of the 140,045 reduction in student count.

The state’s 2010–11 budget had not been adopted as this report was going to press. All projections, however, were for more cuts to community college funding this year.

*Although basic skills categorical funds remained “protected” from other uses in the final version of the 2009–10 state budget, these funds were reduced from the previous \$33.1 million to slightly more than \$20 million.*

## Budget realities shape the immediate future in California

State policy has reinforced the importance of developmental education as a central component of the mission of the California Community Colleges, but current financial pressures are still having an effect.

For example, categorical funds for matriculation have been cut substantially and granted flexibility for other uses. And although basic skills categorical funds remained “protected” from other uses in the final version of the 2009–10 state budget, these funds were reduced from the previous \$33.1 million to slightly more than \$20 million.

Experiences in 2009–10 tested the extent to which colleges can and will place priority on improving basic skills education. Along with budget cuts to the system of about 8%, California lawmakers included in the 2009–10 Budget Act a provision that lowered by 3.34% the number of students the community colleges were required to educate.

This “workload reduction” was intended to enable the colleges to limit enrollments and reduce their course offerings, commensurate with cuts to their revenues. The act also expressed “legislative intent that any necessary reductions in course sections, to the greatest extent possible, be achieved in areas other than basic skills, workforce training, and transfer.”

However, the campuses faced pressure from many different directions as they decided how to manage their course offerings. Some of that pressure reflected decisions by the University of California and California State University systems to cut their own enrollments. That created an increased demand for transfer courses at the community colleges.

At the September 2010 meeting of the Board of Governors, the CCCCCO presented enrollment totals for 2009–10. The report showed that developmental or basic skills programs had been affected, but less so than some other program areas. All told, the



## Improving developmental education is a prerequisite for increasing college completions

The EdSource study supports the national consensus that the current system of developmental education is not producing the results it should for the investment being made by the state, by local campuses, and by students themselves. It also makes clear that the larger national objective of increasing college completions cannot be attained unless more community college students successfully reach the point where they can do college-level work.

Multiple research studies, including this one, indicate that improvements in at least three areas could produce substantial leverage toward that goal:

- Reduce the need for developmental education.
- Create conditions that will help students be more successful in the courses they attempt.
- Compress the time it takes for students to get through developmental education.

Making these changes could not only save the state money in the long run, but also improve the effectiveness of its investment and help ensure that the hard work of faculty and students is not wasted effort. This study suggests some steps that need to be taken in California to achieve those goals. It also makes clear that state policymakers, community college system leaders, and local campus leaders and faculty each have a part to play. Further, some of the actions toward these objectives also involve the state's other public education segments, particularly K–12 education.

### *Nothing is “typical” among California’s developmental programs*

Any effort to improve developmental education in California as a whole must start by acknowledging the variability within the current system. In this state’s 112 open-access institutions, there are two aspects of this variability—the students and the campuses.

The student diversity is a product of the community college mission as an open-access institution. Students who take developmental courses at the community colleges

are of all ages. They enter with many different academic needs and with many different goals. As long as the system retains its open-door policies, expectations for developmental education have to be tempered by the reality that not all students aspire to college-level work and that among those who do, the effort it will take to get there varies dramatically.

*Many see the Common Core adoption as a crucial first step in increasing the percentage of high school graduates qualified to enter college without remediation....*

The diversity among campuses in how they configure their developmental programs is to a large degree a product of local decision making. In some places, it reflects a thoughtful institutional focus on student needs and the best way to help students succeed. At other campuses, it may reflect a lack of attention to developmental sequences in favor of other priorities, an accumulation of decisions over many years with little or no re-examination, or a lack of knowledge regarding how to improve.

### *Common expectations for and measures of college readiness could benefit students*

Accepting that the exception is the rule among the state’s many community colleges, there are nevertheless places where greater consistency could make things better for students. Consistency regarding what students can expect when they enroll in a community college is a prime example. Creating that

consistency is first and foremost the work of state policymakers—particularly insofar as it involves not just the community college system, but also K–12 schools and the public university systems.

The recent adoption of the Common Core State Standards by the California State Board of Education—and the work to implement these standards in the next few

years—could provide a critical opportunity. In taking this action, California joined more than 30 other states in adopting a common core of K–12 standards in English and mathematics. Many see the Common Core adoption as a crucial first step in increasing the percentage of high school graduates qualified to enter college without remediation because it could result in a closer alignment between high school graduation requirements and the readiness expectations of community colleges. Thus, the adoption also creates a need for renewed discussions about learning expectations among the state’s K–12 and higher education communities.

The goals of the Common Core are consistent with the efforts by the CCCCO to increase the standardization of the system’s placement tests, now being explored through the CCCAssess project. That standardization is another linchpin in the effort to reduce the need for remedial

*State policymakers can and should continue to support the work being done by the CCCCCO and other state leadership to standardize the data used to measure student progress and completion. The institutional researchers at campuses throughout the state can help inform and implement shared metrics.*

education in part because of its power to signal clear expectations to students and faculty. It could also facilitate state policymakers' ability, working with system leaders, to create common metrics for measuring student readiness, a first critical step toward also improving the state's measures of student progress and completion rates. These types of data standardization should improve the state's understanding of the current performance of the system. They could also enhance local faculties' ability to evaluate their efforts to reform developmental education programs and adjust their strategies.

For the same reason, the state also needs to continue to pursue its goal of developing a comprehensive data system that can follow students from K–12 education through postsecondary education and into the workforce. It should also encourage—and support with additional resources or policy changes where necessary—the kind of system-level cooperation that led to the development of the CB-21 coding rubrics and clarified the definitions of college-level work across the system.

### *California policy leaders should support local efforts to rethink developmental education and evaluate innovations*

California's community college students can benefit from the work being done, both here and nationally, to rethink how developmental education is delivered. Everyone from local campus faculty to state policymakers has a role to play in the research, innovation, and evaluation now under way. In the current financial climate, more funding to support pilot projects or increase student support services is probably too much to ask of state leaders, but they can still support these efforts.

On the one hand, despite the pressure to increase completion rates, state policymakers

should resist the temptation to act hastily and enact new regulations that codify rigid developmental sequences or approaches. The emerging research makes it clear that there is much to learn on this score and that the most effective programs to date are those that respond to local circumstances and faculty capacity.

On the other hand, state policymakers can and should continue to support the work being done by the CCCCCO and other state leadership to standardize the data used to measure student progress and completion. The institutional researchers at campuses throughout the state can help inform and implement shared metrics. They can also help the faculty on their campuses develop the capacity to better use such measures for faculty inquiry related to local developmental programs, the students they serve, and the areas where innovation is most needed.

This work of innovation and evaluation has already begun. Rather than resulting in a “solution” to the challenges of developmental education, the work should more properly result in a stronger spirit of inquiry among all community college stakeholders regarding how to continuously improve the effectiveness of their developmental programs for students.

### *Developmental students need better course-taking guidance and stronger support systems to help them reach their goals*

Most students in the 2002 cohort EdSource studied who enrolled in a remedial sequence began doing so during their first year. And overall, students who failed or withdrew from their first math or writing course were less likely to attempt a second, more advanced course in those subjects. Supporting students' success during their first year, then, is an important lever for keeping students on a path to completing remedial sequences. Such support could involve more effective matriculation services on

campuses, backed by appropriate state policies that encourage and enhance those local efforts.

This and other studies identify aspects of student course-taking that, if improved, could help students be more successful and ultimately have a better chance of college completion. In particular, those findings can be summed up by the following:

- Students should not delay starting, or stop midway through, remedial courses.
- Students should attend full time or as close to full time as possible.
- When students are struggling academically, they need additional support so that they can pass remedial classes on the first attempt.

Actors throughout the system should look for appropriate policy levers and changes in local practice that can encourage and support these goals. But such policies should stop short of mandates that assume all students enroll with the same objectives or are best served by the same educational offerings.

For example, in California, where community colleges have a high degree of local autonomy, some have urged that the state needs to set a uniform policy that immediate remediation (when needed) be mandatory across the system. The quantitative findings from this study are neither strong enough nor clear enough to support such a policy. Combined with the qualitative research, the findings do illuminate some reasons students delay remedial courses and indicate that those delays take their toll. This issue should be one focus of the task force called for in Senate Bill (SB) 1143 to explore ways to improve student success and completion.

Faculty and support staff at local campuses could take some steps now to make student progress a priority. For example, they could examine their course schedules to determine ways they could encourage students to enroll in a given remedial sequence continuously, without interruption. Are there simple changes that could promote the start of remedial coursework in the fall? Or what programs or policies could provide better bridges from one academic year to the next during the summer months?


### *Evaluating the efficacy of the state's investment in developmental education can deliver financial and strategic advantages*

Finding resources to finance the development of innovative new models is currently a huge challenge in California. Perhaps more importantly, it is unclear that the colleges have sufficient resources or motivation to bring successful innovations to scale and fully integrate them into existing curricula and services, particularly when doing so challenges a powerful status quo and will not clearly be accompanied by increased state support. The irony, of course, is that moving students more rapidly through remedial course work could ultimately save the state money by increasing the “productivity” of its educational investment and reducing the amount spent on programs that do not lead to student success.

When students attend college but never leave the developmental sequence, it is costly both for them and for the state. Helping students get through developmental sequences in less time would help address this issue. Developing stronger alternative pathways—and making sure students are aware of those options—would also be a good investment for the state and for those students who are currently at the greatest risk of leaving community college empty-handed. The state might be well served, for example, if more developmental students were encouraged to participate in high quality career-technical programs rather than the emphasis being placed so heavily on transfer courses. For guidance in doing this more effectively, California might look to other states where the community college systems have long put more emphasis on workforce development.

Growing concerns about student success rates in community colleges have prompted calls for better measures of student progress and for holding colleges more accountable for that progress. In 2010 in California, that momentum crystallized into several legislative proposals to change state policy related to such issues as transfer requirements and state funding formulas. That work has been assigned to the Board of Governors and its

SB 1143 task force. While that group's work moves forward, the pressure on the community colleges and the state will also be increasing.

Delivering developmental education more effectively—and in a way that results in better student outcomes—could be the most significant and immediately positive strategy for getting more students to complete some form of college credential without compromising the system's long-standing open-access mission. That holds promise for individual campuses and for the system as a whole. But more broadly, it can position California as the key contributor to the nation's aspirations to graduate more Americans with the skills that businesses and the economy will need to compete in the 21st century. 

#### To Learn More

This report draws from EdSource's research study, which was released to the public in October 2010. For a free download of the study, go to [www.edsource.org/iss\\_research\\_communitycollege.html](http://www.edsource.org/iss_research_communitycollege.html).

For more information on community college issues, go to EdSource's community college page, which gives background information, data, and links to EdSource publications on community colleges and to other resources. [www.edsource.org/iss\\_secondary\\_cc.html](http://www.edsource.org/iss_secondary_cc.html)

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## Endnotes

<sup>1</sup>"First-time students" excludes students who were previously enrolled in higher education, were concurrently enrolled in high school, did not report a valid Social Security number, or did not enroll in any coursework.

<sup>2</sup>However, this was not the case for the very small group of students who took their first math course during the summer of 2003. These students were generally as likely to pass their first remedial math course as those who started immediately.

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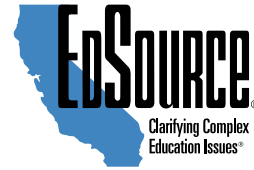
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