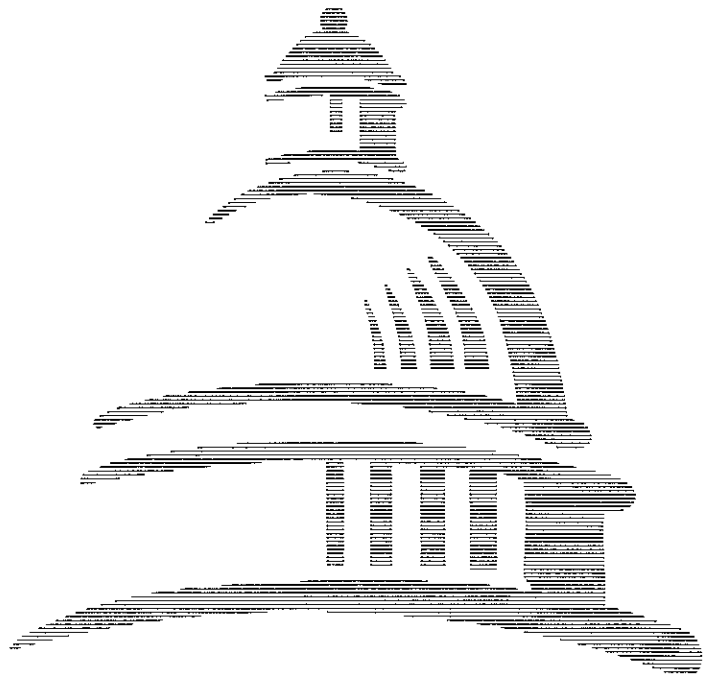


March 1, 2017

Overview of Remedial Education at the State's Public Higher Education Segments

LEGISLATIVE ANALYST'S OFFICE

Presented to:
Senate Education Committee
Hon. Benjamin Allen, Chair





What Is Remedial Education?

Segments Assess Readiness for College-Level Coursework

- Colleges historically have required certain incoming students to take placement exams to determine if they are ready for college-level coursework.
- The three public higher education segments historically have used different placement exams.
- Remedial education is intended to help students who are assessed as “unprepared” to succeed in college-level work.

Assessments Focus on Reading, Writing, and Math Skills

- California Community Colleges (CCC) and California State University (CSU) assess students in English and math.
- University of California (UC) assesses students only in English.

Remedial Education Is Known by Various Other Names

- Typically used interchangeably with terms such as developmental education and foundational skills. Known in the community colleges as “basic skills.”



How Many Students Are Assessed as Unprepared?



Rates of Unpreparedness Vary by Segment

- Three-quarters of first-time CCC students (more than 150,000 incoming degree, certificate, or transfer-seeking students identified each fall term as unprepared).
- More than 40 percent of first-time CSU students (about 25,000 students identified each fall term as unprepared).
- 23 percent of first-time UC students (about 8,000 students identified each fall term as unprepared).



Unprepared Students Are Less Likely to Graduate

- At CCC, 30 percentage point difference in graduation rates between incoming students assessed as college-ready versus not college-ready.
- 20 percentage point difference in graduation rates at CSU.
- Comparable UC outcome data not available.



What Is the Traditional Approach to Remedial Education?



Traditional Approach Involves Sequences of Term-Length Courses

- **Testing and Placement.** Based on a placement test score, colleges place students into a sequence of precollegiate-level courses they must complete prior to enrolling in college-level English or math courses.
- **Example of Remedial Course Sequence.** Arithmetic, Elementary Algebra, Intermediate Algebra.
- **Teaching Method.** Often involves lecture-based format and abstract and repetitive practice exercises.



Shortcomings of Traditional Approach

- **Placement Tests Often Misplace Students.** Data from national research and the CCC system suggest that about 30 percent of community college students placed into remedial coursework could have succeeded if directly placed into college-level coursework.
- **Sequences Extend Time in School.** Students beginning three levels below college-level courses must complete three terms of remediation before attempting college-level English or math courses.
- **Teaching Method Criticized as Ineffective.** Does not necessarily promote conceptual understanding or provide relevant context to help students connect what they are learning to their broader educational or professional goals.



What Are New Approaches to Remedial Education?



Innovations in Remedial Education

- ***Establishing Strong Partnerships With High Schools.*** CSU's Early Assessment Program, for example, provides feedback to high school students on the extent to which their English and math skills align with college expectations. The program includes a professional development component aimed at helping high school teachers improve their instructional practices.
- ***Using Multiple Indicators to Assess and Place Students.*** Common indicators include students' high school courses, grades, and test results.
- ***Accelerating Progress Toward College-Level Courses.*** Includes compressing sequences, pairing college-level courses with extra supports, and creating alternative remedial pathways for students not pursuing careers with heavy math or science focus (for example, allowing a statistics course to satisfy the math college-readiness requirement).
- ***Other Notable Innovations.*** These include incorporating remedial skills within academic or career technical education programs and embedding student services into remedial courses.



How Is Remedial Education Funded at CCC?

- Remediation at CCC Funded by Proposition 98 and Student Fees**

- CCC Receives Funding Through Apportionments and Several Categorical Programs**
 - **Apportionments.** In 2015-16, CCC received more than \$400 million in apportionment funding (general-purpose monies) for precollegiate-level English and math courses.
 - **Basic Skills Initiative.** Since 2007-08, the state has provided at least \$20 million annually for this initiative. Base funding level scheduled to increase to \$50 million in 2017-18.
 - **Basic Skills and Student Outcomes Transformation Program.** 2015-16 budget provided \$60 million (one time) in incentive grants for college to adopt and implement evidence-based practices over a multiyear period. 2016-17 budget included \$30 million (one time) for additional incentive grants.
 - **Basic Skills Partnership Pilot Program.** 2015-16 budget provided \$10 million (one time) in incentive grants for community colleges to provide remedial instruction to CSU students and for CCC, CSU, and local high schools to better align English and math curricula. Grants run over a two-year period (2016-17 and 2017-18).
 - **Components of Other Categorical Programs.** Including Student Success and Support Program, Student Equity Program, Extended Opportunity Programs and Services, Institutional Effectiveness Partnership Initiative, and Awards for Innovation.



How Is Remedial Education Funded at CSU and UC?



Remediation at CSU Funded by State and Student Fees

- **Early Start Program.** CSU's summer remedial program received \$13.2 million in 2015-16, about half coming from student fees and half from state lottery funds.
- **Other Remedial Courses.** For remedial courses during the regular academic year, the state provides the same amount of funding to CSU as it does for college-level courses. In 2015-16, total funding for these remedial courses (state General Fund and student tuition revenue) was \$48 million.



Remediation at UC Also Funded by State and Student Tuition

- UC was not able to identify how much funding it uses for remedial education, but we estimate it likely spends in the low millions of dollars annually.



Issues for Legislative Consideration



Challenges in Coordinating Multiple CCC Initiatives

- Are CCC's many categorical programs working in concert to help campuses meet their student improvement goals?
- What could the Legislature do to promote better coordination and outcomes?
- What is the best balance of central versus local control? To what extent should the Legislature require campuses to use identified best practices? To what extent should the CCC Chancellor's Office intervene if a campus is not meeting its student improvement goals?



Funding Remedial Education

- Should UC and CSU rely more heavily on CCC and high school faculty to teach their remedial courses?
- Should the state fund all remedial courses across the three public systems at a uniform rate?
- Should the state financially reward colleges that improve their student outcomes? Should this results-oriented funding supplement or replace current student-support categorical funding?



Promoting Large-Scale Success

- Virtually every campus can point to an effective remedial practice or program. Often, however, these programs are pilots or small in scale and have not been implemented campus-wide. How can the Legislature ensure that existing and future spending on remediation improves practices on a larger scale, whether for an academic department, college, or statewide?

Acceleration Strategies that Produce Powerful Results



A Planning Resource for Community Colleges

Under California's AB770 and the Basic Skills Outcomes Transformation Program, \$60 million of new state funds have been allocated to increase completion among students designated underprepared for college. The funds support colleges to implement evidence-based practices that substantially increase student completion of transfer-level courses in English and math or an industry-recognized certificate or degree. This brief is intended to help colleges build their plans.

While basic skills sequences were developed to help students be successful, they are having the unintended consequence of weeding many out of college. The more remedial courses students are required to take, the lower their completion of transferable English and math. Statewide, just 7% of students placed three or more levels below college math go on to complete a transferable course within three years. Students of color are disproportionately impacted because they are more likely to be placed into lower levels of remediation. Our traditional approach is clearly not serving its intended purpose.

The California Acceleration Project is working with 61 colleges to implement three high leverage strategies that accelerate students' progress, substantially increase student completion of transferable, college-level English and math courses, and narrow equity gaps. The evidence from California and other states makes clear that students are not nearly as "unprepared" as we have believed. By changing our approach to placement and remediation, community colleges can help many more students to complete math and English requirements and build momentum toward their longer-term goals.

High Leverage-Strategies for Increasing Student Completion of Transferable, College-Level English and Math Courses

- 1. Changing Placement Policies:** Colleges broaden access to transfer-level courses, and make access more equitable, by adjusting cut scores, using robust multiple measures, and requiring algebra-based testing and remediation only for access to courses that require substantial algebra.
- 2. Implementing Co-Requisite Models:** Students classified as "below transfer level" are allowed to enroll in a transfer-level course with extra concurrent support, saving them at least a semester of stand-alone remediation and reducing their chances of dropping out (e.g., "1A-plus" models: students co-enroll in English 1A and 2 additional units with the same instructor).
- 3. Redesigning Remedial Courses:** Multi-level sequences in English and math are replaced with accelerated courses that are well-aligned with the transfer-level requirements in students' chosen pathway.

THE IMPACT: RESEARCH HIGHLIGHTS

Strategy #1: Changing Placement Policies

Colleges broaden access to transfer-level courses, and make access more equitable, by adjusting cut scores, using robust multiple measures, and requiring algebra-based testing and remediation only for access to courses that require substantial algebra.

The Community College Research Center has found that a large number of students placed into remediation could have been successful if allowed to enroll directly in college-level courses. Studying a large, urban community college system, CCRC researchers estimated that:

- 61% of entering students could succeed in college English if allowed to enroll directly (19% were eligible under existing policies)
- 50% of entering students could succeed in college math if allowed to enroll directly (25% were eligible under existing policies)

The CA Multiple Measures Assessment Project found that 72% of community college students could be placed into college English with an average grade of C+ using these multiple measures: 1) overall high school GPA 2.7 or higher, OR 2) C in AP English, OR 3) GPA 2.3 or higher and 12th grade English course B- or higher.

At California community colleges that doubled and quadrupled student access to college English (Butte, Long Beach):

- Success rates in college English courses remained steady
- Completion of college English was 1.6 to 3 times higher for all students
- Students of color saw the greatest gains and equity gaps narrowed substantially

Assessment validation studies had failed to detect the large number of students inappropriately placed into remediation at these colleges.

In the Virginia Community College system, completion of college-level math tripled after implementation of a pathways approach to placement, with different competencies required for students pursuing different majors (e.g., liberal arts vs. STEM).

Investigating Local Placement Policies



What % of incoming students qualify for direct access to transfer-level English and math? How does this vary by race/ethnicity? Is your college in compliance with state guidelines on disproportionate impact? (Access for students of color should be no lower than 80% of white students' access.)



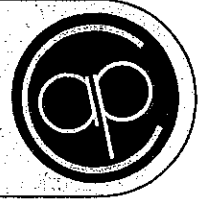
To what extent are multiple measures used in placement, especially overall high school GPA? Do multiple measures apply to only a narrow band of students near the cut score, or do they provide an alternative way to access transfer-level courses (e.g. students qualify by test scores OR overall high school GPA of 2.7 or higher)?



Is a student's educational goal part of math placement? Are algebra tests blocking access to courses that require little to no algebra? (e.g, College Statistics)

Placing Students Too Low: A Blind Spot of Current Practice

"When a student is placed into a college-level course and fails there...the fact that there has been a placement mistake is painfully obvious to all." But "when a student does well in a remedial course, it is unlikely to be perceived as a problem."
 - Judith Scott-Clayton, CCRC



Strategy #2: Implementing Co-Requisite Models

Students classified as "below transfer level" are allowed to enroll in a transfer-level course with extra concurrent support, saving them at least a semester of stand-alone remediation and reducing their chances of dropping out (e.g., "1A-plus" models: students co-enroll in English 1A and 2 additional units with the same instructor).

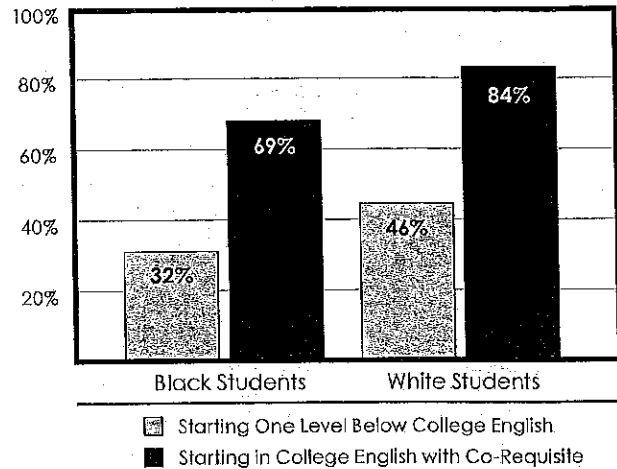
Co-requisite models are producing such dramatic gains in completion of college-level courses that several states are implementing them system-wide (Tennessee, Colorado, Indiana, Virginia).

At four colleges offering co-requisite models, completion of college English was 1.6 to 2.3 times higher than in traditional remediation, increasing from 38-50% to 62-78%. Equity gaps for Black and Hispanic students narrowed or disappeared completely.

CUNY's large randomized controlled experiment allowed students placed into elementary algebra to bypass remediation and enroll directly in college Statistics with supplemental instruction. The majority of students passed, and pass rates were nearly 20 percentage points higher than the control group enrolled in elementary algebra.

Completion of College English

Community College of Baltimore County



Descriptive data from the Community College of Baltimore County from CCRC study of 572 students in co-requisite model between F-'07 and F-'11. Students followed for at least one year after enrollment.

Strategy #3: Redesigning Remedial Courses

Multi-level remedial sequences in English and math are replaced with accelerated courses that are well aligned with the transfer-level requirements of students' chosen pathway.

At the first 16 colleges offering redesigned remediation with CAP, the RP Group found that students' odds of completing transferable courses were:

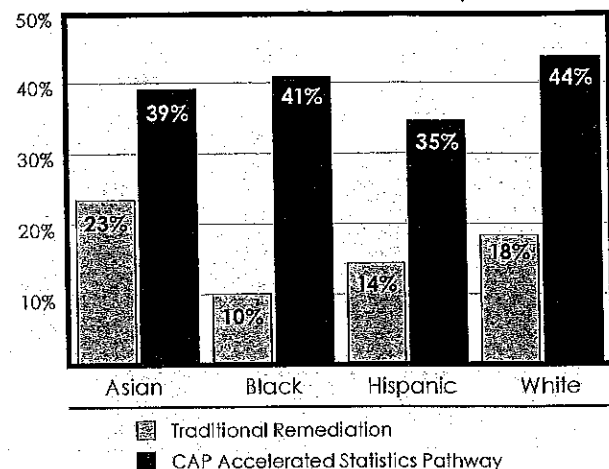
- 2.3 times higher in effective accelerated English pathways
- 4.5 times higher in accelerated statistics pathways

Further, all students benefitted from accelerated remediation, including all ethnic groups and placement levels, ESL students, students with low GPAs, and students with disabilities.

At 26 colleges in the Carnegie Foundation's national Statway program, completion of transfer-level math more than tripled in half the time (49% in one year vs. 15% in two years).

Completion of Transfer-Level Math

The California Acceleration Project



Descriptive data on CAP statistics pathways from RP Group researchers Hayward and Willett. N = 653 accelerated students followed for 1.5-2 years.

WHY ACCELERATION?

One Student's Story

City College of San Francisco student Lulu Matute was born in Chicago to Honduran immigrant parents. Though she had passed all her high school math requirements, she took a year off after graduating and her math skills got rusty. She didn't realize the high stakes of the placement test, didn't prepare for it, and was assigned to the lowest remedial level. When she met with a counselor to create an education plan, Lulu saw that this placement meant she'd have to be at CCSF for three to three and a half years. Enrolling in the first course left her further demoralized.

"A lot of the problems were very grade school," she recalls. "I remember my professor told us it was OK if we needed to draw dots to help us count. In high school, I had taken trigonometry, I had taken algebra and geometry, but here I was in college counting dots."

Lulu was thrilled to discover the accelerated statistics pathway that CCSF had launched the year before. It was a perfect fit for her major, political science, and it not only reduced her time in remediation, it enabled her to finish her transfer requirements in two and a half years. She graduated CCSF with a GPA of 3.9.

Lulu was accepted into UC Santa Cruz, UC Santa Barbara, UCLA, and UC Berkeley. She plans to enroll at UC Berkeley in fall 2015, then go on to law school or graduate work in public policy. Ultimately, she sees herself running for public office.

Reflecting on her experience, Lulu remembers sitting in that lowest-level math class and looking around the room. "All the students in the class were students of color, students that looked like me." She said that they sometimes talked among themselves, wondering if there was something wrong with them. But taking the accelerated pathway and working with other student advocates, Lulu started to understand the problem differently. "It's not that we're not able to learn, not that we're not smart enough. The problem is the path."



The California Acceleration Project was founded in 2010 by two community college faculty members who wanted to do something about the number of students dropping out of remedial English and math sequences. Since 2011, CAP has worked in partnership with the 3CSN professional development network, with funding from the state Chancellor's Office. Additional private support has been provided by the California Education Policy Fund, the Walter S. Johnson Foundation, LearningWorks, and the Community College Research Center.

Senate Education Committee
Status on Remedial Education in California: Barriers and Best Practices
California Department of Education (CDE) Fact Sheet

CDE Programs

Adult Education

<http://www.cde.ca.gov/sp/ae/>

Adult education provides educational opportunities and services to equip adults with the knowledge and skills necessary to participate effectively as citizens, workers, parents, and family and community members.

California Career Pathways Trust (CCPT)

<http://www.cde.ca.gov/ci/ct/pt/>

The CCPT, administered by the CDE, builds connections between businesses, schools, and community colleges to better prepare students to meet the needs of employers.

California Mathematics Readiness Challenge (CMRC) Initiative

<http://www.cde.ca.gov/pd/ps/itqsahe.asp>

The purpose of the CMRC Initiative is to provide in-depth professional learning opportunities for collaborative teams of secondary educators, their school-site administrator, and faculty from their partner institution(s) of higher education to support the implementation and evaluation of grade 12 experiences that are designed to prepare pupils for placement into college-level courses in mathematics.

California Partnership Academies (CPA)

<http://www.cde.ca.gov/ci/gc/hs/cpagen.asp>

The CPAs, administered by the CDE, are themed academies offered to high school students in grade 10–12 that are at risk of graduating. CPAs are small learning communities within larger high schools. Each year, students take classes together, including core academic subjects and at least one career technical education course.

College and Career Indicator (CCI)

<http://www.cde.ca.gov/ta/ac/cm/documents/dashboardguidespring17.pdf>

The CCI, approved by the State Board of Education, will provide data on the percent of students who are prepared for postsecondary education and careers.

College Readiness Block Grant (CRBG)

<http://www.cde.ca.gov/ci/gc/ps/collegereadiness.asp>

The CRBG, administered by the California Department of Education (CDE), provides California's high school pupils additional supports to increase the number of students that enroll at institutions of higher education and complete an undergraduate degree within four years.

UC Curriculum Integration Institutes (UCCI)

<http://ucci.ucop.edu/>

The UCCI is a partnership between the CDE and the UC. The UCCI are professional development workshops for teachers that bring in both academic subject content teachers (Language Arts, Mathematics, etc.) and career technical education teachers (welding, graphics, etc.) to create a-g approved CTE courses.

Postsecondary and Other Programs

Advancement Via Individual Determination (AVID)

<http://www.avid.org/>

AVID is an in-school curriculum that teaches academic skills and behaviors, tutorials, and social skills to many low-income and first-generation students by creating a college-going culture.

Associate Degree for Transfer (ADT) Program

<http://www.sb1440.org/>

This new law requires community colleges to grant an associate degree for transfer to a student once a student has met specified general education and major requirements for the degree. Upon completion of the associate degree, the student is eligible for transfer with junior standing into the California State University (CSU) system.

California Community College (CCC) Student Success Scorecard

<http://scorecard.cccco.edu/scorecard.aspx>

CCC's performance measurement system that tracks student success at all 113 community colleges.

California State University's Early Assessment Program (EAP)

<http://www.calstate.edu/eap/about.shtml>

The EAP is a testing option taken by high school juniors as an addition to the California Assessment of Student Progress and Performance to measure their readiness in English and mathematics for college-level studies.

College and Career Access Pathways (CCAP)

<http://californiacommunitycolleges.cccco.edu/Portals/0/DocDownloads/PressReleases/OCT2015/PR-AB288-final.pdf>

Allows formal partnerships between high schools and community colleges to allow more students to take college-level courses at their high schools or on college campuses.