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Developmental Education

AN INTRODUCTION
FOR POLICYMAKERS

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EDUCATION COMMISSION
OF THE STATES

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CENTER FOR THE ANALYSIS OF
POSTSECONDARY READINESS

Developmental, or remedial, education courses are designed to develop the reading, writing or math skills of students who are deemed — usually through standardized tests — underprepared for college-level courses. Offering these noncredit courses allows community colleges and less selective four-year colleges to open their doors to students who might otherwise be shut out of higher education. Millions of students — disproportionately students of color, adults, first-generation students and those from low-income backgrounds — enroll in developmental education at two- and four-year colleges. They include students who did not receive an adequate academic foundation in high school and those who have been out of school for years and need a math or English refresher. Although colleges have offered developmental education programs for decades, state policymakers have begun to pay more attention to the growing data that show the weaknesses of developmental education and its impact on college completion, workforce development and equity goals.

The goal of developmental education is to improve students' skills to increase their chances of success in a credit-bearing, college-level program. However, barriers on campus and in federal, state and institutional policies can slow students' progress toward a degree, which has long-term implications for students and states.

Why Is Developmental Education Important?

Large numbers of students at both two- and four-year institutions take developmental courses. Community colleges educate nearly 40 percent of undergraduates, and more than two-thirds of these students take at least one developmental course. Additionally, 4 in 10 students at four-year colleges take at least one developmental course.¹

Students in developmental education, particularly at four-year colleges, are less likely to complete a program and earn a degree or credential. When students do not complete a credential, investments in their education by state and federal governments (and by students themselves) show little return. Students who do not complete a degree often work in lower-paying occupations and are left in debt.² The higher dropout rate also makes it harder for states to meet their goals for a better educated workforce. In community colleges, the majority of students are assigned to developmental math, so — to the extent that remediation is not effective or, even worse, acts as a barrier to access to college-level courses — it can hamper efforts to bolster

More than two-thirds of community college students and 40 percent of four-year college students take at least one developmental course.

Remediation as traditionally taught has had, at best, modest effects on improving outcomes for students who enter college with weak academic skills.

Colleges across the country are implementing reforms to better help students' progress through developmental education.

the workforce in science, technology, engineering and mathematics (STEM).³

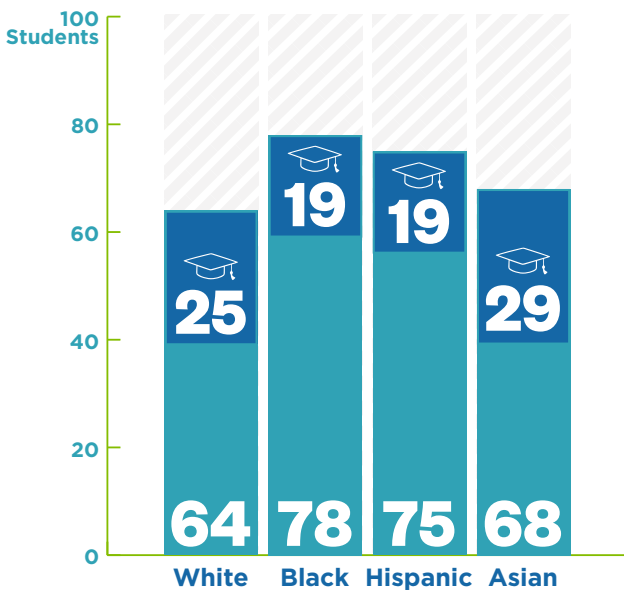
Degree or Certificate Completion Within Six Years of College Entry		
Starting institution	Students who took no remedial courses	Students who took one or more remedial courses
Community college	40%	34%
Public, four-year college	71%	55%
Private, nonprofit four-year college	77%	55%

Source: BPS:2009 via NCES QuickStats.

Developmental education is a major investment. The collective cost to students and their families has been estimated at \$1.3 billion per year, and the total cost at all colleges has been estimated at \$7 billion.⁴ Though developmental programs can look like a tempting target for budget cuts, reforms that aim to make underprepared students more successful also require substantial resources to provide the additional supports they need. The experience of states that have implemented successful reforms indicates that the need for resources shifts rather than declines.

Developmental education reform plays a key role in efforts to close racial/ethnic gaps in graduation rates. Black and Hispanic students are disproportionately assigned to developmental education, and black and Hispanic students who take developmental courses graduate at lower rates than white and Asian students who take developmental courses — compounding attainment gaps.⁵

First-Time Students in Dev Ed Who Earn a Credential in Six Years



Of **100 white students** who enroll in community college, **64** take developmental courses; **25** of the dev ed students graduate.

Of **100 black students** who enroll in community college, **78** take developmental courses; **19** of the dev ed students graduate.

Of **100 Hispanic students** who enroll in community college, **75** take developmental courses; **19** of the dev ed students graduate.

Of **100 Asian students** who enroll in community college, **68** take developmental courses; **29** of the dev ed students graduate.

Source: U.S. Department of Education, *Remedial Coursetaking at U.S. Public 2- and 4-Year Institutions: Scope, Experience, and Outcomes*, 2016; BPS 2009 via QuickStats.

What Are the Challenges Surrounding Developmental Education?

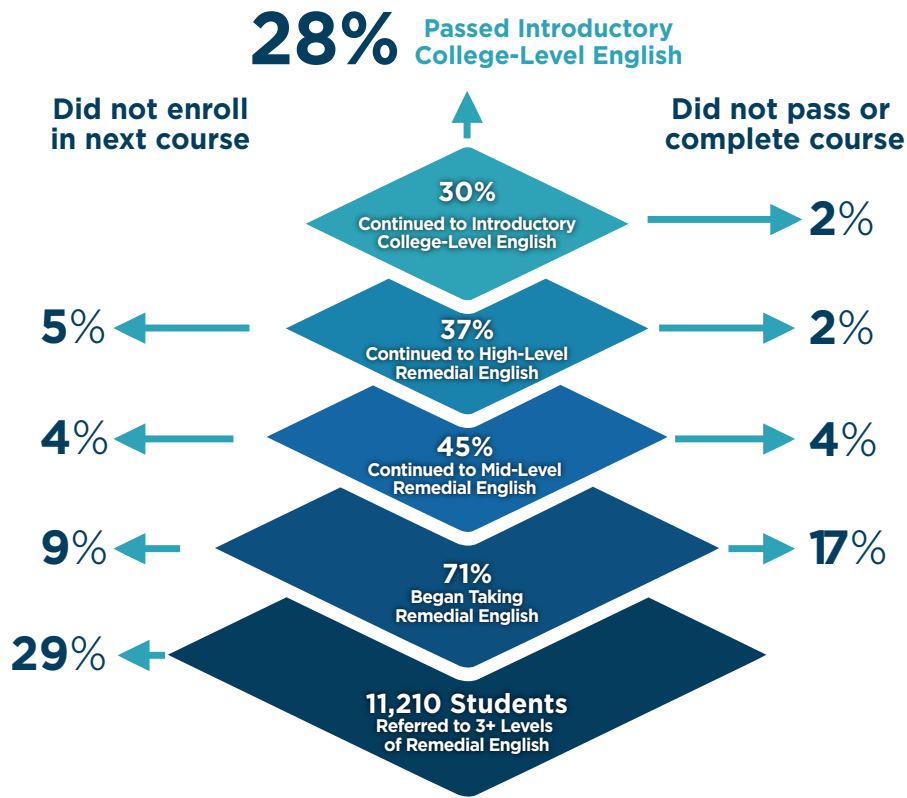
Students assigned to developmental courses are deemed academically weaker or less prepared than students assigned to college-level courses, and they graduate at lower rates than do students deemed college-ready.⁶ But a lack of skill or preparation is not the only reason developmental students do not fare as well in college.⁷ Research has found that traditional developmental education can hinder students in a variety of ways that could be improved through better policy and practice. For example:

Placement tests are inaccurate, putting too many students in developmental courses. One study found that more than one-third of students placed into developmental English and almost one-quarter of students placed into developmental math had the potential to earn a B or higher in college-level courses.⁸ Another study found students who disregarded a developmental placement and enrolled in college-level courses were much more likely to pass the college course than were students who started in the developmental course.⁹

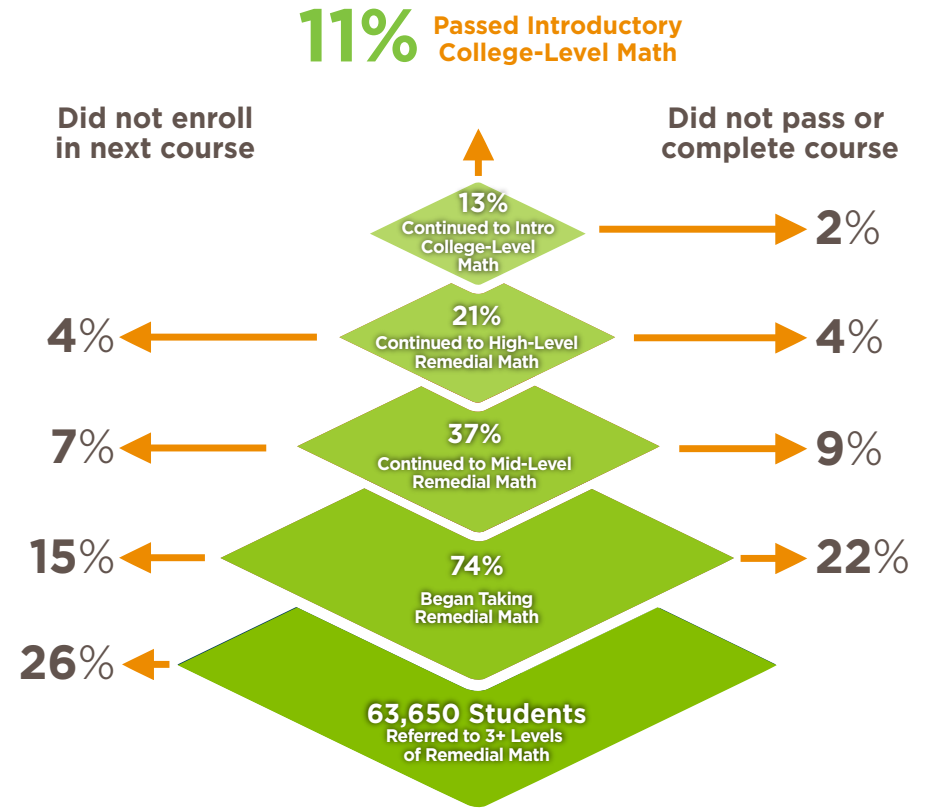
Many students do not make it through developmental course sequences. Students who score at the low end on placement tests often are assigned to two or three semesters of developmental coursework before they are eligible to take college-level courses. One study of more than 250,000 students found that 33 percent of those referred to developmental math and 46 percent of those referred to developmental reading finished all their developmental courses. Fewer still went on to pass the introductory, college-level course.¹⁰

Additionally, students assigned to several semesters of developmental education are less likely to enroll in a college-level course in the subject than students assigned to fewer developmental courses. While some students fail or withdraw from developmental courses, many drop out even though they are making progress. The more breaks between courses, the more likely students are to drop out.¹¹

Student Progression Through the Developmental Reading Sequence



Student Progression Through the Developmental Math Sequence



Source: Community College Research Center's *What We Know About Developmental Education Outcomes*.

How Can Policymakers Tackle These Challenges?

1. Improve the accuracy of assessment and placement. More students would likely do well in credit-bearing, college-level courses than previously thought.¹² Rather than using standardized placement tests, colleges can achieve greater placement accuracy by using a combination of indicators to determine students' readiness for college-level courses. These indicators include high school GPA, level of high school math completed, SAT or ACT scores and non-cognitive assessments.¹³ A study currently underway by the Center for the Analysis of Postsecondary Readiness (CAPR) is evaluating the use of multiple measures for placement.

State/system examples



The **California** State University system dropped placement exams and instituted a multiple measures placement system using grades, ACT and SAT scores and other measures.¹⁴ (The university system also eliminated standalone developmental courses. The new placement system determines what extra supports students need in credit-bearing coursework.¹⁵)

The **California** legislature also passed legislation that requires community colleges to incorporate high school grades and other measures into placement decisions for developmental courses or English-as-a-second-language courses.¹⁶



North Carolina community colleges developed placement exams customized to new developmental curricula, in addition to instituting a multiple measures placement system.¹⁷ Students are exempted from the placement exam and allowed to enroll in college-level courses if they have an unweighted GPA of 2.6 or a minimum score on the SAT or ACT.¹⁸


2. Consider strategies to minimize attrition and accelerate students' progress into college-level courses, such as compressing developmental education sequences or placing more students into credit-bearing courses with supports. Colleges shortened developmental education in various ways, including by combining developmental reading and writing courses, compressing multiple semesters into one and breaking courses into compressed mini-semesters — though research is still needed on the effectiveness of these approaches. Some also streamlined course content and removed material deemed unnecessary for success in subsequent courses. Studies also show corequisite remediation to be promising for many students.¹⁹ Under this model, students enroll in a college-level math or English course with a parallel support course, extra tutoring or other supports.


State/system examples




Virginia's community college system integrated its reading and writing developmental courses into one course and changed the course structure to reduce the time needed to complete developmental English.²⁰ The system introduced an eight-credit, one-semester course for the lowest-placing students and a four-credit course for middle-range developmental students. Higher-scoring developmental students were placed in a two-credit course taught as a corequisite with introductory college English, increasing the proportion of students eligible for college-

level English from 53 percent to 81 percent.²¹ Prior to the redesign, students who placed into the lowest levels of developmental English and reading were required to complete two writing courses and two reading courses.

 The **Tennessee** Board of Regents implemented corequisite remediation in math, reading and writing in its 13 community colleges. Developmental students take college-level courses along with a learning support class. In the first year of full implementation, 52 percent of students passed college-level math in one semester, compared with 12 percent who passed college-level math within a year under the prerequisite model.²² In English, 59 percent passed college-level writing in a semester under the corequisite model, compared with 31 percent who passed college-level writing within a year under the prerequisite model.


 In **Texas**, H.B. 2223 mandates that institutions of higher education develop corequisite remediation models that pair developmental education courses with freshman-level courses.²³


 In **Florida**, S.B. 1720 makes placement testing and enrolling in developmental courses optional for community college students, and allows students to choose the type of developmental support they want to use.²⁴ Though pass rates in introductory college-level courses declined after this reform was introduced, the proportion of entering students who passed the courses increased because more students were taking the courses.²⁵


3. Provide more structured, coherent paths through developmental requirements, and make them relevant to programs of study.

Some colleges redesigned developmental math to tailor courses for students who intend to enter STEM fields or non-STEM fields. For example, math pathways models (designed by the Charles A. Dana Center at the University of Texas at Austin and the Carnegie Foundation for the Advancement of Teaching) replace algebra with statistics and quantitative reasoning courses (at both the developmental and college levels) for non-STEM students.

State/system examples


 A Math Pathways Task Force created by the **Missouri** Department of Higher Education recommended creating alternatives to college algebra aligned to programs of study.²⁶ The math pathways now include statistics and mathematical reasoning, in addition to algebra.

 The City University of **New York** (CUNY) is transitioning to a system that will provide alternatives to remedial algebra, such as quantitative reasoning or statistics.²⁷ The courses will be taught as corequisites with college-level courses.

 Colleges across **Texas** are moving to scale the Dana Center Mathematics Pathways Model, which offers accelerated non-algebraic math pathways and an accelerated STEM pathway.²⁸ CAPR is studying the impacts of this model at four community colleges in the state.


4. For students with significant needs, consider a sustained and intensive approach with wraparound supports. Research is still limited on the effects of developmental education on low-placing students and the best approaches to support them. But intensive developmental programs aim to address the range of problems that may cause students to drop out by supporting their academic, financial and personal needs and providing information on navigating college. These approaches sometimes begin before a student enrolls in college.


State/system examples

 CUNY Start provides intensive remedial instruction and college advising before students matriculate.²⁹ The full-time program is 25 hours per week for students who need reading, writing and math remediation; and the part-time program (for reading and writing or math) is 12 hours per week. The cost to students is \$75.

5. Pair developmental education reforms with comprehensive institutional reforms. Research shows that reforms that alter developmental education but leave the rest of the college untouched often have little impact on graduation rates.³⁰ Full-scale institutional reforms address other barriers to student success — including inadequate advising, financial challenges and inefficient transfer — and can have a substantial impact when delivered in a comprehensive way.

State/system examples

 CUNY's Accelerated Study in Associate Programs (not strictly a developmental program) is available for students who agree to attend a CUNY college full-time and continuously enroll in remedial courses until they pass, with the goal of graduating within three years.³¹ It provides intensive advising, career counseling, transfer assistance, block scheduling, tutoring, tuition and fee waivers, and assistance with transportation and textbook costs. An evaluation of the program found that it nearly doubled graduation rates.³²

 Colleges participating in the American Association of Community Colleges' Pathways Project are working to integrate developmental education reform into institutional reform by mapping explicit connections between developmental prerequisites and college programs, helping students enter college-level courses and programs more quickly, providing supports to help them stay in their programs and broadening academic supports beyond math and English.³³ Clearly mapped programs and intensive advising help students long after they leave developmental education.³⁴

The Balance Between Uniform Policy and Innovation

Creating state-level higher education policies is a balancing act between delineating clear goals and expectations and allowing room for colleges to adapt policies to local contexts and innovate local solutions. Legislation may be most effective when it sets a meaningful policy for addressing a challenge but leaves the specifics of implementation to education experts in the higher education system and at local colleges. Overly prescriptive legislation or policies run the risk of stifling innovations already underway, creating one-size-fits-all solutions that may not work for every student or rushing changes for which faculty are not trained or supported.

Additional Resources

- [Developmental Education Challenges and Strategies for Reform](#), U.S. Department of Education
- [Getting Developmental Education Up to Speed: A Look at MDRC's Research](#), MDRC
- [Designing Meaningful Developmental Reform](#), Community College Research Center
- [Is Corequisite Remediation Cost-Effective? Early Findings From Tennessee](#), Community College Research Center
- [California Acceleration Project](#)
- [Dana Center Mathematics Pathways](#)
- [Carnegie Math Pathways](#)
- [Core Principles for Transforming Remediation within a Comprehensive Student Success Strategy](#)

ENDNOTES

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