

The Latest on Developmental Education Research

What States and Colleges Need to Know

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MDRC is dedicated to learning what works to improve the well-being of people in poverty. During these challenging times, our “Ideas and Evidence 2021” briefs provide policymakers with fact-based research and analysis to help them address critical issues in social policy and education.

Every year, millions of college students are referred to developmental courses (also called remedial courses). Then what? Success rates in these courses are low: Fewer than half of developmental students pass the course sequences to which they were referred. Being referred to developmental education is also highly correlated with dropping out of college. Colleges, researchers, and advocates across the nation have therefore identified developmental education as a place that innovation and change are needed.

Research shows that **many students referred to developmental education are underplaced**. That is, they would have been successful if they had gone directly into college-level courses instead. States and colleges looking to improve student outcomes should start by figuring out which students do not need developmental courses at all. From there, states and colleges can look at other interventions to help students who do need additional support.

YOU SHOULD KNOW: Developmental education affects different students differently. Policymakers must consider the equity implications of developmental education and of reforms. Review your state’s data to see whether you have achievement gaps by race, by sex, by age, by geography, or by part-time/full-time status. Often, students of color, first-generation students, older students, and rural students are disproportionately referred to developmental education, and interventions should make sure to help these students. Continue to review those same data to ensure that your policy changes are not reinforcing inequities.

MDRC is one of many research organizations evaluating innovations in developmental education. For more than a decade, MDRC and the Community Col-

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lege Research Center at Columbia University have together led national research centers on developmental education. This brief presents the latest research on developmental education and provides high-level summaries of findings and implications for practice for states and colleges interested in making a change.

REFORM TYPE 1: Boosting Skills Before Students Enter College

THE INTERVENTION: Many colleges have created summer boot camps or summer bridge programs for developmental education students. The goal of these interventions is to help students who are nearly ready for college build their skills during the summer before their first fall semester, so that they can enroll in college-level courses instead. [Evaluations](#) of these programs have shown that they help students pass their first college-level courses, though there do not appear to be effects on long-term persistence or graduation. Recently, [MDRC evaluated CUNY Start](#), a program for students at the City University of New York (CUNY) assessed as having significant remedial needs. CUNY Start students delay matriculation (enrollment in a degree program) for one semester and receive time-intensive instruction in math, reading, and writing with a prescribed curriculum and teaching method delivered by trained teachers. The program aims to help students complete remediation and prepare for college-level courses.

THE FINDINGS: Over three years — a span that includes both the one-semester program and the two and a half years following the program — CUNY Start substantially increased college readiness, slightly increased credit accumulation, and modestly increased graduation rates by increasing the percentage of students participating in CUNY’s [highly effective Accelerated Study in Associate Programs \(ASAP\)](#).

IMPLICATIONS FOR PRACTICE: Summer boot camps and summer bridge programs have positive effects on students and can often be offered inexpensively. These programs may fit the needs of students who have been away from formal education for some time and need a refresher. More comprehensive skill-building programs such as CUNY Start have much larger effects on college readiness. For both types of interventions, however, the early effects on college readiness do not translate directly, on their own, into effects on retention and graduation. To improve students’ likelihood of graduating after they become college-ready, CUNY Start directs students into a comprehensive support program, CUNY ASAP.

REFORM TYPE 2: Changing Assessment Practices Using Multiple Measures

THE INTERVENTION: Historically, colleges have used a single, high-stakes placement test to determine whether students are college-ready. [Recent studies have](#) questioned the accuracy of these tests and have instead identified other data, most often high school grade point averages (GPAs), as more predictive of students’ readiness for college-level courses. Colleges that use multiple measures for placement aim to do a better job of identifying students who are college-ready and who can bypass developmental courses entirely. Students who can succeed in college-level courses get into those courses more quickly, not spending time in developmental courses they do not need and that extend their time to graduation. Colleges might combine new measures into their existing placement tests, replace their tests with other criteria, bump students just below a test score cutoff up to college-level courses because of other pieces of data, or simply let students choose to go into college-level courses directly following a conversation with an adviser or faculty member, regardless of their test scores or GPAs.

THE FINDINGS: MDRC and the Community College Research Center have [conducted two](#) randomized controlled trials of multiple measures systems. In both studies, students who were placed into college-level courses because of multiple measures, or “bumped up,” were more likely to enroll in and complete the courses to which they were referred. Overall, these students completed their first college-level courses at higher rates than control group students placed into developmental courses. In one of the studies, a subset of students was referred back to developmental education because of multiple measures, or “bumped down.” These students would otherwise have

been referred directly to college-level courses, and they had worse course pass rates and retention rates than students placed based on test scores alone.

IMPLICATIONS FOR PRACTICE: While it is too soon to know whether multiple measures interventions have long-term effects on graduation rates, it is clear that they help underplaced students reach college-level courses faster, and pass those courses, too. Often, colleges are already collecting data like high school GPAs and last math courses completed as part of the application process, so including these data in placement decisions can be a low-cost, high-impact policy change. During the COVID-19 pandemic, multiple measures have been used to replace testing for colleges unable to offer in-person placement testing. Colleges should, however, review the implications of the multiple measures policies they select to ensure that the systems are not simply replicating inequities from the K-12 system, especially for students of color or adults who have been out of high school for many years. It is worth noting that the studies indicate that multiple measures should only be used to “bump up” students into college-level courses; students who have satisfactory test scores but low high school GPAs should not be “bumped down” into developmental courses.

REFORM TYPE 3: Building Skills and Aligning Content with Programs of Study

THE INTERVENTION: Many colleges and states have chosen to reorganize developmental math to offer multiple major- or career-relevant pathways for students to complete their math requirements, instead of a single, algebra-focused pathway. The idea is that students get a more relevant math experience, with a curriculum aligned with their educational or career goals. MDRC and the Community College Research Center evaluated one of these models, [the Dana Center Mathematics Pathways \(DCMP\)](#). In DCMP, there are three math pathways: statistics for students in the social sciences; quantitative reasoning for students in the humanities; and algebra for students in science, technology, engineering, and mathematics majors.

THE FINDINGS: DCMP increased the percentages of students completing developmental math and both taking and passing college-level math. DCMP also increased the total number of math credits students earned. The effects appear to be greater for part-time students and for students who scored lower in math on the placement test. It is too soon to know how DCMP affects students’ graduation rates. After four semesters, there was a small but statistically significant effect on the percentage of students who earned certificates, but no discernable effect on a combined measure of all credential completion plus transfer to four-year schools.

IMPLICATIONS FOR PRACTICE: While it is not yet clear whether DCMP will have an effect on graduation rates, it is helping students succeed in college math. Students react positively to having math courses better tailored to their major or career choices, and DCMP students report a better understanding of how math applies to everyday life. Differentiating math pathways can easily complement other student success reforms that states and colleges may be undertaking. Notably, DCMP has been demonstrated to work for students of all races, and appears to have a larger effect for part-time students — often a tricky population to assist.

REFORM TYPE 4: Merging Developmental and College-Level Courses

THE INTERVENTION: Often called corequisite remediation, this course change directs developmental students to enroll simultaneously in college-level courses and developmental courses that provide concurrent support. The idea is to provide students with the extra support they might need from the developmental curriculum without delaying their entry into college-credit-bearing courses.

THE FINDINGS: A [large study of English corequisite remediation](#) in five Texas community colleges found large effects on students’ likelihood of passing college-level English, including consistently positive effects for students of all races. [Another study](#) at CUNY assessed mathematics corequisite remediation within differentiated math pathways

(like the DCMP study discussed earlier). This study found large, positive effects on students' likelihood of completing their full math sequence, and even found positive effects on persistence and graduation rates.

IMPLICATIONS FOR PRACTICE: Corequisite remediation can be challenging to implement, and across the country, there are many variations on the approach. Initial rigorous studies of two approaches have shown that they can be effective for helping students complete math sequences, stay in college, and even graduate. Other variations have not yet been rigorously evaluated.

CONCLUSION

Developmental education is not working for many students. Colleges and states have a variety of evidence-backed reform options to try based on their local needs. There is still a lot to learn, though, and more research is being conducted into students' longer-term outcomes.

Across all these reforms, what are the most important lessons?

- **Many students traditionally referred to developmental courses would be successful going directly to college-level courses.** Identifying these students and moving them directly into credit-bearing, college-level courses can help them shorten the time it takes to earn degrees. It is also a relatively inexpensive reform to implement.
- **Any reform a college or state undertakes should be evaluated internally to ensure it is not exacerbating academic achievement gaps.** Local data review can help improve reforms and ensure no students are excluded. Data review is not a one-time thing: Colleges and states should review their outcomes data continually to identify achievement gaps that must be addressed.
- **The strategies presented in this paper are not mutually exclusive.** Many colleges choose to undertake multiple strategies to address different students' needs. For example, colleges might change how students enter developmental education, placing more students directly into college-level courses, and at the same time implement differentiated math pathways so that students who remain in developmental courses receive a more career-relevant math curriculum. Other forms of support can help developmental students, too; notably, across the research literature, the programs with the largest effects on developmental students in rigorous evaluations are comprehensive, multifaceted ones. Implementing changes to developmental education in conjunction with other forms of support for these students, such as targeted advising and tutoring, can lead to an even larger impact.
- **Courses' transferability to four-year colleges is vital for student success.** When two-year colleges make changes to their courses, but four-year colleges do not accept the new courses as prerequisites or credit-bearing courses, transfer students are left to repeat courses they have already taken. Articulation and alignment should be a priority for state agencies.

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