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Alternatives to Algebra Help More Students Pass College Math

Study of Dana Center Model Builds Evidence for Statistics, Quantitative Reasoning Pathways

New York, July 17, 2018 — A promising math reform is helping more Texas community college students complete their remedial and college-level math requirements more quickly while learning math that will be useful throughout their lives and careers, according to [interim results from a study](#) by the [Center for the Analysis of Postsecondary Readiness](#) (CAPR). The students in the study are participating in mathematics pathways courses developed by the [Charles A. Dana Center](#) at the University of Texas at Austin.

The study found that students in mathematics pathways courses at four community colleges in Texas are passing developmental math at higher rates, allowing more of them to enroll in and pass college-level math. Math is often a major obstacle for students seeking a degree—particularly for the 60 percent of community college students and nearly third of students at public four-year colleges who have to take remedial math. Few of these students make it to or through college-level math, which is a major milestone to completing degree programs.

The research brief, [Making It Through: Interim Findings on Developmental Students' Progress to College Math with the Dana Center Mathematics Pathways](#), was written by Elizabeth Zachry Rutschow, a senior associate with [MDRC](#). CAPR is led by MDRC and the [Community College Research Center](#) (CCRC) at Teachers College, Columbia University, and funded by the Institute of Education Sciences at the U.S. Department of Education.

The study is being conducted at Brookhaven College and Eastfield College, both part of the Dallas County Community College District; El Paso Community College; and Trinity Valley Community College in East Texas.

In the CAPR study of the [Dana Center Mathematics Pathways](#) (DCMP) model, students were randomly assigned to math pathways or traditional algebra-focused remediation to isolate the effects of the courses. After following the students for three semesters, the study found:

- 56 percent of math pathways students passed developmental math, compared with 48 percent of students in traditional courses.
- 36 percent of math pathways students enrolled in college-level math, compared with 21 percent in traditional courses.
- 25 percent of math pathways students passed college-level math, compared with 17 percent in traditional courses.

[Colleges around the country](#) are adopting math pathways models as one of many reforms to remedial math. The math pathways model calls for students to take math that aligns with their major—humanities students might take quantitative reasoning, and social science students might take statistics, while STEM students continue to take algebra in preparation for higher level math courses. Remedial courses in the model are condensed, so students are more likely to finish them and move on to college-level math.

[Early findings](#) from the study were released in spring 2017. A final report will be released in 2019.

The Center for the Analysis of Postsecondary Readiness (CAPR) is a partnership of research scholars led by the Community College Research Center (CCRC) at Teachers College, Columbia University, and MDRC that researches innovative practices in developmental education across the United States. It is funded by the Institute of Education Sciences, U.S. Department of Education, through Grant R305C140007 to Teachers College, Columbia University.

The Charles A. Dana Center at The University of Texas at Austin works with our nation's education systems to ensure that every student leaves school prepared for success in postsecondary education and the contemporary workplace. Our work, based on research and two decades of experience, focuses on K–16 mathematics and science education with an emphasis on strategies for improving student engagement, motivation, persistence, and achievement. We develop innovative curricula, tools, protocols, and instructional supports and deliver powerful instructional and leadership development.