

## Results of Maryland’s System-level Developmental Mathematics Pathway Initiative

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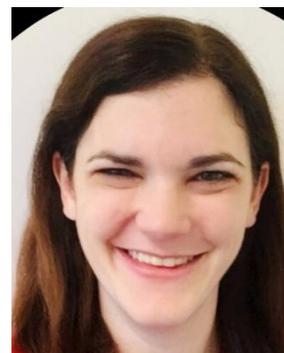
In this quasiexperimental study, we compared the effects of new developmental statistics-based courses to traditional algebra-based developmental courses. We used extant data from eight institutions and a matched sample of 2,041 students (Treatment,  $N = 748$ ; Comparison,  $N = 1,293$ ). All students enrolled in a treatment or comparison course in the 2017–18 school year and did not intend to declare a STEM major. After adjusting for covariates, we found evidence that treatment courses positively influenced whether students passed developmental mathematics ( $\beta = .089, p < .001$ ). Seventy-seven percent of treatment students passed developmental mathematics compared to 69% of comparison students who passed. Treatment students were also more likely to enroll in a subsequent credit-bearing mathematics course than comparison students ( $\beta = .139, p < .001$ ). Forty-nine percent of treatment students enrolled in the credit-bearing course compared to 34% of comparison students who did. Once enrolled in a credit-bearing course, treatment students successfully passed at a similar rate as comparison students ( $p = .601$ ). Taking the treatment or comparison course did not significantly predict whether students remained continuously enrolled and/or graduated during the study ( $p = .711$ ). We concluded that the treatment courses facilitated students’ ability to pass developmental mathematics and enroll in credit-bearing mathematics.

Keywords: developmental mathematics, developmental statistics, mathematics pathway, student success, mathematics reform, quasiexperimental analysis



**Jill Feldman** is a Senior Study Director at Westat, a social science research firm. She holds a PhD in educational psychology and has over 20 years of professional experience conducting evaluations of local, state, and federal educational programs and policies. Jill’s research interests focus on systems change; fidelity measurement; and diversity, equity, and inclusion in education, especially in STEM disciplines.

**Jennifer Flynn** worked as a Senior Study Director at Westat when this study was conducted. She holds a PhD in social psychology with a minor in quantitative methods. Her research interests center on identifying best practices to promote student achievement, particularly among students from underserved communities.





**Tara Dunderdale** has worked in education and policy with a focus on equity and inclusivity. She holds an EdD in education policy and administration and her experience spans multiple areas of education including K–12 instruction, advocacy and policy development, public policy research, and program evaluation.

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