

More Michigan students taking, passing advanced math

April 11 2019, by Kristen Parker



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Michigan high school students are going above and beyond the required math curriculum, likely an effect of the state's graduation requirements, finds new research from Michigan State University.

The Michigan Merit Curriculum, which went into effect with the class

of 2011 and requires students to take four years of math, at least up to algebra 2, also seems to be influencing more students to enroll in college.

"Our research indicates that the policy is working in terms of providing more opportunities to the most disadvantaged students," said Soobin Kim, author of the study and a researcher in the MSU College of Education. "It has been successful in equalizing access to algebra 2, which is a well-established predictor for postsecondary readiness."

The researchers, including MSU faculty members Barbara Schneider and Ken Frank, found students from low-income schools were particularly affected by the curriculum, completing on average a full semester more math.

Although 28 states now have similar requirements for math course-taking in [high school](#), the MSU researchers' work is among the first to explore whether the policies improve course-taking patterns and college enrollment outcomes.

Like other states that have passed similar policies, Michigan's set of course-taking expectations are intended to make learning opportunities more equitable and prepare [young people](#) for success in college and the workforce.

The study, published in *Educational Evaluation and Policy Analysis* in March, also found Michigan students are now more likely to enroll in four-year colleges.

And those effects were greatest for students who were already better prepared based on their eighth-grade test scores.

The researchers used transcripts from a representative sample of 129 Michigan high schools to analyze patterns of course-taking for more than

300,000 students over 10 years—allowing for comparison before and after the policy change. They also matched their data to [college](#) enrollment information for each [student](#) from the National Student Clearinghouse.

Among subject areas, the research team focused on math because students tend to follow a standard sequence of courses with less variation from school to school.

Previous research found the Michigan Merit Curriculum had little to no impact on students' ACT scores or graduation rates.

Both studies were conducted by the Michigan Consortium for Education Research, a research partnership between MSU, University of Michigan and the Michigan Department of Education, which has received \$6 million in grant funding from the U.S. Department of Education.

The massive dataset, created through the partnership, will continue to generate new insights.

Kim said more information is needed about how higher expectations lead to changes for students, and that requires looking in classrooms—at factors such as academic preparation prior to high [school](#), class size and characteristics of classmates and teachers.

"This is just the beginning," he said. "One [policy](#) will not change outcomes for all students in the same way. It takes time to explore each factor but it's our job to study them with diligence."

More information: Soobin Kim et al, The Impact of the Michigan Merit Curriculum on High School Math Course-Taking, *Educational Evaluation and Policy Analysis* (2019). [DOI: 10.3102/0162373719834067](#)

Provided by Michigan State University

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