

Want better math teachers? Train them better, says MSU scholar

June 9 2011



The United States needs better-trained math teachers if the nation is going to compete globally, Michigan State University education expert Bill Schmidt argues in the research journal *Science*. Credit: Michigan State University

It's time for the United States to consider establishing higher standards for math teachers if the nation is going to break its "vicious cycle" of mediocrity, a Michigan State University education scholar argues in *Science* magazine.

As American students continue to be outpaced in mathematics by pupils in countries such as Russia and Taiwan, William Schmidt recommends adopting more rigorous, demanding and internationally benchmarked teacher-preparation standards for [math](#) teachers.

"Our research shows that current teacher-preparation programs for

middle-school math instructors in the United States do not produce teachers with an internationally competitive level of mathematics knowledge," said Schmidt, a University Distinguished Professor and co-director of MSU's Education Policy Center.

Schmidt makes his argument in an "education forum" paper in the June 10 edition of *Science*, one of the world's preeminent science research journals. MSU researchers Richard Houang and Leland Cogan co-authored the paper.

Current standards for [math teachers](#) are established on a state-by-state level. Schmidt suggests the states could come together to establish more rigorous and uniform standards, similar to the Common Core State Standards Initiative for K-12 students.

That initiative, which establishes more rigorous math and English-Language Arts standards for students, is led by the National Governors Association and the Council of Chief State School Officers. Thus far, 42 states have adopted the common [standards](#).

But students can't get better at math if their instructors aren't fully prepared to teach them, Schmidt noted.

"Weak K-12 math curricula taught by teachers with an inadequate mathematics background produce high school graduates who are similarly weak," Schmidt said. "A long-term and better solution is to break the vicious cycle of mediocrity in which we find ourselves."

Schmidt led the U.S. portion of the Teacher Education Study in Mathematics, or TEDS-M, by far the largest study of its kind, surveying more than 3,300 future teachers in the [United States](#) and 23,244 future teachers across 16 countries.

Provided by Michigan State University

Citation: Want better math teachers? Train them better, says MSU scholar (2011, June 9)
retrieved 21 September 2024 from

<https://phys.org/news/2011-06-math-teachers-msu-scholar.html>

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