



# The MATHEMATICAL ASSOCIATION of AMERICA

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Letters to the Editor  
The Chronicle of Higher Education  
1255 23rd Street, N.W., Suite 700  
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To the Editors:

Your January 13<sup>th</sup> article, "Taking Anxiety Out of the Equation," states "Until recently, math anxiety has received little attention from mathematicians."

Teaching collegiate mathematics has been discussed for a very long time; the 27,000 member Mathematical Association of America (MAA) has been devoting conference sessions, workshops, books and articles to undergraduate mathematics teaching for almost a century. Mathematics was the first STEM discipline to undertake a nationwide effort to improve undergraduate education with Calculus Reform, starting in 1989. MAA programs continue to expand on these efforts. Each year, our 29 sections give teaching awards, and the MAA gives six national teaching awards. The MAA will award the first Selden Award for Research in Undergraduate Mathematics Education this summer.

Outstanding research in collegiate mathematics education is being done on the learning of elementary mathematics through advanced subjects. The American Mathematical Society, the Society for Industrial and Applied Mathematics, the American Statistical Association, and the American Mathematical Association of Two-Year Colleges have active Education Committees.

The article cites a student at U Michigan who intended to major in mathematics but did poorly in calculus, could not get help, dropped the course and switched majors. Anecdotal evidence is never convincing. This student took high school calculus, but did not take the Advanced Placement examination. How rigorous was the course and how serious were the student's interests?

The article states that most students take collegiate mathematics courses in large lecture halls where "they watch instructors solve equations on a blackboard." The data for this statement is not referenced. The mathematics community does not embrace large lecture sections. However, students in large sections meet in small recitation groups and instructors have office hours. Even in small classes and with dedicated teachers, students with "dropped stitches" are in trouble. There are math

tutorial labs, parallel texts to fill in the blanks, and other out of class assistance available. Students must bear some responsibility for doing homework, seeking help, and displaying persistence.

The second story is about a student at the U of Louisville whose introductory calculus course was taught by a professor of mechanical engineering and a professor of chemical engineering. Their professional interests are engineering, not mathematics. Teaching mathematics requires more than having had the course, a blackboard and chalk. Students deserve instructors whose discipline is mathematics teaching their mathematics courses.

Many new faculty are very interested in teaching, as seen in the large participation in section and national Project NExT. Many mathematics graduate programs offer Ph.D. candidates teaching experiences and expert mentoring.

Math anxiety is a real phenomenon that the mathematics community takes seriously. But, students like Rob Fiorillo should be advised not to take 16 credits, while participating in ROTC and varsity team sports as a freshman. And certainly no one should assume that any mathematics course is an easy "A."

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