

Gates Foundation donates \$1B to prioritize math education

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In this Feb. 1, 2019 photo, Bill and Melinda Gates pose for a photo in Kirkland, Wash. The Bill & Melinda Gates Foundation announced Wednesday, Oct. 19, 2022 that it is making grants of more than a \$1 billion as part of a sweeping national plan to improve math education over the next four years to help students land well-paying jobs when they graduate, given research that shows the connection between strong math skills and career success. Credit: AP Photo/Elaine Thompson, file

The Bill & Melinda Gates Foundation announced Wednesday that it is making grants of more than a \$1 billion as part of a sweeping national plan to improve math education over the next four years. Its goal: to help students succeed in school and land well-paying jobs when they graduate, given research that shows the connection between strong math skills and career success.

The foundation, which has long drawn controversy over its education work, said that to put more money into math, it will cut grants to other subjects like reading, writing, and the arts.

The increased focus on math comes after the pandemic "wreaked havoc" on learning in secondary schools, and widened gaps based on race in student performance, with [math scores](#) among Black students falling more sharply than declines among white students, according to Bob Hughes, director of the Gates Foundation's elementary and education grant-making program.

The foundation made the switch because it sees better math instruction in earlier grades as a key to helping students succeed in school and beyond. Students who pass an introductory course on algebra by 9th grade are twice as likely to graduate from high school and go to college, Hughes said.

The problem, he said, is for many students, math is not presented as a crucial, captivating subject.

"Too many students don't have access to math instruction in classrooms where they receive critical resources to help them see the joy in learning math and believe that they can become math people as they grow older," he said.

The new plan is the second major shift in education funding Gates has

made in recent years.

After spending hundreds of millions of dollars to promote common-core standards, a set of national educational goals for students at each grade level, the foundation in 2018 backtracked. Acknowledging criticism that the approach didn't allow individual schools flexibility, Gates developed a new plan that created networks of schools facing similar challenges. Educators in each of those networks could test teaching and coursework innovations and make adaptations as they saw fit, rather than adhere to a set of nationwide standards.

In 2020, Gates held a more than \$10 million competition to identify new approaches to teaching algebra. Those grants, and discussions Gates staff held over the past two years with teachers, parents, school administrators, curriculum experts, and others, helped formulate the foundation's new approach.

Gates will provide grants to prepare teachers better for teaching math and to curriculum companies and nonprofits to develop higher-quality teaching materials. The foundation will also support research into math education and make grants to help high-school math courses prepare students for college and the workplace.

A big problem with math as it is taught today is that students learn in isolation and can feel crushed when they get the wrong answer to a problem, says Shalini Sharma, co-founder of Zearn, an educational nonprofit and Gates grantee who, with Hughes, spoke with reporters this week. Zearn uses computer-based lessons that incorporate a lot of visuals to keep students interested and provides feedback on progress to help teachers tailor lessons for individual students. A new approach in which students work in teams to solve problems, she said, can turn all students into "math kids."

"When all kids are 'math kids,' making mistakes will be OK," she said. "It won't be embarrassing. In fact, making mistakes will be considered normal and an essential part of math learning."

Gates has committed to the approach for the next decade but has only made final spending plans for the next four years, when it will plow \$1.1 billion into math. That's the same amount it spent on its entire elementary and secondary education program for the past four years, during which only 40% was devoted to improving math instruction.

Initially the foundation will direct grants to assist students in California, Florida, New York, and Texas. The states were picked, Hughes said, because Gates has experience working with school districts in those states and because of their large share of the nation's Black and Latino students.

As Gates "hunkers down" on math, it will end its support for language arts, such as reading and writing, Hughes said. The change in approach probably means the end of support, once current grants run their scheduled course, for many education nonprofits.

Gates Foundation officials are in touch with several foundations that might be willing to pick up some of the slack, Hughes said, citing ongoing discussions with the Charles and Lynn Schusterman Family Philanthropies.

In recent years, many larger U.S. foundations have funneled money to improve civics education, said Amber Northern, senior vice president for research at the Fordham Institute, a conservative education think tank, citing the Carnegie Corporation and Hewlett Foundation as prominent examples. But, she said, there are relatively few foundations that devote significant sums to improve [math education](#).

"Lots of foundations want to come together and leverage their impact by joining with other foundations," she said. "This is an awareness call for other foundations to come on board."

The Gates shift is not the first time American education experts have expressed a need to focus on math. In the late 1950s, after the launch of Sputnik, educators called for a new vigor in math instruction to keep up with the country's Soviet adversaries during the Cold War, said Natalie Wexler, author of "The Knowledge Gap: The Hidden Cause of America's Broken Education System—and How to Fix It."

While math is important, Wexler said, only a small percentage of students go on to use math in their daily lives. But every student is a member of society and needs other skills to become positive contributors to society. For a democracy to function, she said, people need basic literacy, the ability to read newspaper articles critically, and knowledge of how public policy is made.

Math instruction is important, she said, but "the knowledge that goes into understanding a newspaper and following current events is going to be much more crucial in enabling those students to carry out their responsibilities as citizens."

Hughes said other skills are important, but the foundation felt it could have the biggest impact focusing on math. If taught properly, he said, math courses can connect students to real-life problems in need of a solution and keep them engaged as students, and eventually citizens.

"When kids start to feel alienated in middle school, it's frequently the [math](#) course that drives them away," he said.

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