

US students lag peers in East Asia in math, science

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American students have strides to make when it comes to math and science, where they lag behind a solid block of East Asian countries, according to results released Tuesday from an international exam.

Eighth graders in the United States improved their scores in math over the last four years, up nine points. Scores for science, however, were flat. In fourth grade, scores were unchanged in the math and science tests.

"The results do suggest a leveling out in the most recent cycle," said Ina Mullis, an executive director of the TIMSS & PIRLS International Study Center at Boston College, where researchers helped coordinate staff to administer the assessments. "One always prefers to see improvement, but holding one's own is preferable to declining."

Singapore topped the rankings, taking first place in both grades for math and science on the tests, known as the Trends in International Mathematics and Science Study, or TIMSS. The tests are administered every four years to a random sampling of students in dozens of countries.

Hong Kong, South Korea, Taiwan and Japan also dominated the lists for each grade in both subjects.

The United States placed 10th in fourth-grade science as well as in eighth-grade math. In eighth-grade science, the U.S. tied with Ireland in

10th place. It ranked 14th for fourth-grade math, just behind Portugal and Kazakhstan.

While the short-term trend for American students overall wasn't glowing, scores over the last 20 years have improved considerably. Math and science scores for eighth graders had sharp gains, as did scores for fourth-grade math. Science scores for fourth graders showed no statistical change over the last two decades.

Matt Larson, president of the National Council of Teachers of Mathematics, said the results show there's work to be done, but that he's encouraged overall by the growth since the mid-90's.

"This may reflect an increased focus on mathematics in the early grades and could be a longer-term effect of standards reform and the implementation of research-informed instructional practices in more schools."

Randi Weingarten, president of the American Federation of Teachers, said the steady progress by U.S. students "affirms that when there is an alignment between teachers and students, instruction and standards, and resources—giving teachers the flexibility to teach what students need to know and do—we see success."

Globally, results from the 2015 exams showed achievement trends were up—with more countries registering increases than decreases in math and science for both grades. Gender gaps were another highlight. They have narrowed over the last 20 years, especially in science at the eighth-grade level.

"A lot of countries have been working hard to close that achievement gap, and have promoted girls' interest and participation in science," said Michael Martin, who runs the TIMSS & PIRLS International Study

Center with Mullis.

About 600,000 students around the world took part in the 2015 exams. The tests are sponsored by the International Association for the Evaluation of Educational Achievement in Amsterdam.

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