

Guys, this a two-part document. Yes. You must digest both parts. 😊

*The Atlantic*

## How Do American Students Compare to Their International Peers?

The most recent math results from an international survey place the United States near the bottom.

SOURCE: <https://www.theatlantic.com/education/archive/2016/12/how-do-american-students-compare-to-their-international-peers/509834/>

By [Emily Richmond](#) Dec 7, 2016 [Education](#)

U.S. students are stagnating in reading and science proficiency while their math performance declined slightly, based on new results from [an international assessment](#), cueing the usual spate of alarmed headlines, as well as no shortage of opportunities to misapply the data.

On the Program for International School Assessment (PISA), U.S. scores in reading and science were about the same as three years ago, leaving Americans near the middle of the pack. Results were lower in math in 2015 compared with 2012, placing the U.S. near the bottom of 35 industrialized nations. Singapore was the top performer in all three subject areas.

Fifteen-year-old students in more than 70 countries and education systems were tested on their critical-thinking skills and problem-solving capabilities as well as their proficiency in core subjects. While PISA has its limitations ([and critics](#)), it's one of the few means of comparing U.S. student achievement [to their global peers](#).

It's not clear precisely why U.S. students are struggling to make gains on PISA. There's plenty of speculation: school funding, inadequate teacher training, and inequitable educational opportunities are frequent targets. It's also tempting to turn to other countries for inspiration ([Estonia, anyone?](#)), despite their vastly different social structures, student demographics, and methodologies for teacher training, standards, and instruction. As the Harvard math education professor Jon Star [told](#) *Education Week's* Sarah Sparks:

"Certain countries do well or less well in a certain year, and everyone just rushes to that country to figure out what's going on there. A few years ago it was Finland, and before that it was Japan. It's tempting to want to say the implementation of some country's [math curriculum] would work, but it just plays out so differently in each state and locality."

There's plenty of solid reporting on the full PISA results. But here are three areas that particularly caught my attention.

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For older U.S. students, math is not adding up.

Another international test recently published its latest results: the Trends in International Mathematics and Science Study (TIMSS). Unlike on PISA, U.S. students have made [slow but steady progress](#) for decades. However, as Joy Resmovits [points out](#) in *The Los Angeles Times*, that's a different type of test, and it's given to younger students (fourth- and eighth-graders, vs. 15-year-olds).

Andreas Schleicher, the Organization for Economic Cooperation and Development's (OECD) director of education and skills, said during [a webinar](#) on Monday, that U.S. students' levels of proficiency appear to decline as kids advance to higher grades, contrary to the trend in many higher-performing countries.

He also highlighted another troubling issue suggested by the PISA results. "Students are often good at answering the first layer of a problem in the United States. But as soon as students have to go deeper and answer the more complex part of a problem, they have difficulties," Schleicher said.

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The achievement gap among rich and poor students in the U.S. is narrowing.

This is actually an area where the U.S. deserves significant credit, says the OECD's Schleicher. While there's still significant ground to cover, no country is making greater progress on closing its equity gap than the United States, he said during the webinar.

As Amanda Ripley, a journalist who authored *The Smartest Kids in the World*, [wrote](#) for *The New York Times*, "In 2006, socioeconomic status had explained 17 percent of the variance in Americans' science scores; in 2015, it explained only

11 percent, which is slightly better than average for the developed world. No other country showed as much progress on this metric.”

This could be part of the legacy of the federal No Child Left Behind Act, which required states and districts to pay closer attention to achievement by historically underserved student populations, Schleicher says. (It’s too soon to know the impact of NCLB’s recent replacement, the Every Student Succeeds Act.) Schleicher says there’s also great promise in the [Common Core State Standards](#), adopted by over 40 states, and which President-elect Donald Trump has [called](#) “a total disaster.”

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Attendance matters.

On average, 37 percent of U.S. test-takers on PISA said they had skipped at least one day of school in the two weeks prior to the exam. That’s nearly double the OECD average of 20 percent. On the science assessment, for example, U.S. students who reported skipping scored 29 points lower than their non-absent peers. The OECD average score drop was even more dramatic: a 33-point decline after adjusting for student and school socioeconomic factors—the equivalent of almost an entire year’s worth of classroom learning.

“In middle and high school, especially in subject areas like math and science, the work is highly scaffolded—if you miss even one day you can fall behind very quickly, and the more rigorous the curriculum, [the greater those consequences](#) can be,” says Hedy Chang of Attendance Works, a national organization focused on [addressing student absenteeism](#).

Educators need to identify the underlying reasons why kids skip school, Chang says. But chronic absenteeism (defined as missing at least 10 percent of school days in an academic year) is four times greater among kids struggling with poverty, Chang says. “The achievement gap is tied to socioeconomics.”

More from the Education Writers Association



- [Colleges Face a New Reality, as The Number of High School Graduates Will Decline](#)
- [New York City Council Takes on School Segregation](#)
- [More Low-Income Hispanic Kids Are Getting Early Start to Education](#)

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## NPR

### [Education](#)

# [2013] PISA Test Results for U.S. Students Are 'Sobering'

December 3, 2013 4:00 AM ET

SOURCE: <http://www.npr.org/2013/12/03/248320179/pisa-tests-results-in-u-s-are-sobering>

[Claudio Sanchez](#)

International standardized test scores have been released. The test is given to students around the world every three years. It measures their knowledge of reading, mathematics and science literacy. U.S. students usually turn in mediocre performances, and this year's scores were no different.

RENEE MONTAGNE, HOST:

Ever since the Year 2000, 15-year-olds from around the world have taken a test every three years to gauge their reading, math and science skills. It’s called PISA, short for Program for International Student Assessment.

And as NPR's Claudio Sanchez reports, the results of the U.S. are being described as sobering.

CLAUDIO SANCHEZ, BYLINE: Remember the movie "Groundhog Day," where the main character wakes up every morning and realizes nothing has changed? He's re-living the same day over and over again. Well, that pretty much sums up the latest PISA results for 15-year-olds in the U.S. Their scores in reading, math and science have not changed since 2003.

JACK BUCKLEY: Yes, unfortunately that's true. So across the three major subjects, essentially the U.S. 15-year-old average scores have remained flat over the entire history of PISA.

SANCHEZ: And that's not good news, says Jack Buckley, commissioner of the National Center for Education Statistics. It oversaw the testing of 5,000 students in the U.S. last year.

BUCKLEY: PISA is like a thermometer. It tells us where we stand. It tells us whether we're improving or not. And that's really what it's for.

SANCHEZ: Well, if that's all it is - a thermometer - the U.S. appears to be bedridden with a fever while other countries are getting healthier and stronger. In math, U.S. 15-year-olds look pretty weak, they ranked 36th among 64 nations, somewhere between Lithuania and the Slovak Republic. In science, the U.S. ranked 28th between Denmark and Spain. And in reading, the U.S. ranked 24th.

But here's the most troubling finding, says Harvard Professor Jan Rivkin.

JAN RIVKIN: While our scores in reading are the same as 2009, scores from Belgium, Estonia, Germany, Ireland, Poland and others countries improved and now surpass ours. Other countries that were behind us, like Italy and Portugal, are now catching up. You know, we are in a race in the global economy. The problem is not that we're slowing down. The problem is that the other runners are getting faster.

SANCHEZ: Rivkin, who co-chairs a project on U.S. competitiveness at Harvard, says even Vietnam - a poor developing country - now has higher average scores than the U.S. in math and science. And that, experts say, points to something more ominous.

MARC TUCKER: The current education reform agenda in the United States has not worked.

SANCHEZ: That's Marc Tucker. He heads the Center for Education and the Economy which for 25 years has been studying the world's best performing education systems, like the Chinese province of Shanghai and countries like Japan and the Republic of Korea.

TUCKER: These countries have been making big changes in their education system. They have not been tradition-bound. They have asked themselves what's working for us and what's not working for us, and they have been willing to change. Number two, what you will find among top performers is that they have been working hard to provide more resources for kids who are harder to educate, than kids who are easier to educate. In some of those countries, like Singapore, it means not just more teachers but better teachers.

SANCHEZ: Still, there is a bright side for the U.S. in all this, says Harvard Professor Jan Rivkin. If you break down U.S. scores by state, Massachusetts is right up there with some of this year's top performing countries. So if Massachusetts was a country, it would rank 6th in reading above Finland - a country that many in the U.S. consider a model. In science, Massachusetts would rank 9th; and in math, 17th.

RIVKIN: The success in Massachusetts, I think shows the power of finding a coherent strategy. Here, we've raised standards, we've provided greater support, we've invested deeply in the quality of teaching. And we in Massachusetts have stuck to that for decades, and that shows up in the results over time

SANCHEZ: Massachusetts, says Rivkin, is a good example of what works when school reformers stay the course.

Claudio Sanchez, NPR News. MONTAGNE: This is NPR News.

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