

U.S. Students Rank Among World's Best and Worst Readers

BY DAVID J. HOFF
Washington

The United States scored in the middle on a new 32-nation study of educational achievement, experts say, because many of the best readers in the world live here—and many more of the worst.

"The best students in the U.S. do as well as anyone in the world," said Barry McGaw, the deputy director for education for the Organization for Economic Cooperation and Development, the Paris-based group that conducted the survey of 15-year-olds' achievement. "What drags the U.S. average down is that there are lots of kids in the country doing poorly."

The gap between America's best readers and its worst is wider than in any other country, according to results released last week from the OECD's Program for International Student Assessment, which assessed 15-year-olds' reading skills, mathematical abilities, and scientific knowledge. While that gap between high and low scorers is not as pronounced in math and science, it is still greater for the United States than for most of the nations in the study.

On the reading portion, for which the OECD collected the most in-depth results, 12 percent of U.S. 15-year-olds scored in the top 10 percent of the international sample. Only six countries had a higher proportion at that level.

But 18 percent of the U.S. test-takers scored at or below the lowest performance level in the exam—meaning they were unable to identify themes of reading assignments or locate basic information within a text. That percentage is the same as the international average, but more than twice as high as Finland's and Canada's—the countries that scored the best on the reading test.

The results demonstrate what reading experts say they already knew about U.S. students' reading abilities. Most students leave the primary grades as competent readers steeped in the basics, but many fail to refine and build on their skills as they move through middle and high school.

"The bottom line is that something has to be done in the middle school years, especially for kids who begin the cycle behind," said Judith L. Irvin, a professor of education at Florida State University in Tallahassee. "It's somewhat absurd to think that they have no instruction in reading beyond grade 3."

Middle of Pack

For the OECD assessment—known as PISA—the membership organization of industrialized governments tested a total of 265,000 students in 28 of the industrialized nations that are members of the compact, as well as Brazil, Latvia, Liechtenstein, and Russia. The tests included sections on literacy, mathematics, and science. Unlike other in-

ternational assessments, which focus on topics covered in classroom curricula, PISA examined students' ability to apply their knowledge in real-life situations.

The United States scored near the international average in all three subjects on the tests, which were administered last year. (See related chart.)

Finland scored the highest on the reading portion of the exam, with Canada and New Zealand also near the top and higher than the United States by statistically significant margins. The U.S. reading score was about the same as those of countries such as Belgium, Germany, and the Czech Republic, but statistically higher than those of Greece, Portugal, Luxembourg, Mexico, Russia, Latvia, and Brazil.

In mathematics and science, Japan and Korea ranked at the top, as those Asian nations often do on international assessments, while the United States scored in the middle, along with Ireland, Norway, and the Czech Republic.

The results were unveiled last week in separate reports published by the OECD and the U.S. Department of Education's National Center for Education Statistics.

"Unfortunately, we are average across the board compared to other industrialized nations," U.S. Secretary of Education Rod Paige said in a press release. "In the global economy, these countries are our competitors—average is not good enough for American kids."

Middle School Slump?

The PISA results are in line with the findings of previous international studies. The best schools in the United States are on a par with the highest-performing countries in the world, but the poor showing of a significant minority of American schools lowers the country's overall performance to the international mean.

Last spring, results from the Third International Mathematics and Science Study—Repeat revealed that achievement in wealthy suburban schools is comparable with that of leading nations, but that U.S. inner city schools rank with the lowest-scoring countries.

That same exam also showed that the math skills and science achievement of American 8th graders had declined significantly from the first administration of TIMSS, when a similar sample of students was tested as 4th graders. (See *Education Week*, Dec. 13, 2000.)

In the first version of TIMSS, given in 1995, the scores of U.S. 12th graders were among the lowest of the nations participating in the math and science exam.

With American 15-year-olds ranking near the international averages on PISA, one mathematician said the United States might be reversing the achievement slump from the 4th grade

Scoring Around the World

Reading Literacy

Finland	546
Canada	534
New Zealand	529
Australia	528
Ireland	527
S. Korea	525
United Kingdom	523
Japan	522
Sweden	518
Austria	507
Belgium	507
Iceland	507
Norway	505
France	505
United States	504
Denmark	497
Switzerland	494
Spain	493
Czech Republic	492
Italy	487
Germany	484
Liechtenstein*	483
Hungary	480
Poland	479
Greece	474
Portugal	470
Russia*	462
Latvia*	458
Luxembourg	441
Mexico	422
Brazil*	396
OECD average	500

Mathematics Literacy

Japan	557
S. Korea	547
New Zealand	537
Finland	536
Australia	533
Canada	533
Switzerland	529
United Kingdom	529
Belgium	520
France	517
Austria	515
Denmark	514
Iceland	514
Liechtenstein*	514
Sweden	510
Ireland	503
Norway	499
Czech Republic	498
United States	493
Germany	490
Hungary	488
Russia*	478
Spain	476
Poland	470
Latvia*	463
Italy	457
Portugal	454
Greece	447
Luxembourg	446
Mexico	387
Brazil*	334
OECD average	500

Science Literacy

S. Korea	552
Japan	550
Finland	538
United Kingdom	532
Canada	529
New Zealand	528
Australia	528
Austria	519
Ireland	513
Sweden	512
Czech Republic	511
France	500
Norway	500
United States	499
Hungary	496
Iceland	496
Belgium	496
Switzerland	496
Spain	491
Germany	487
Poland	483
Denmark	481
Italy	478
Liechtenstein*	476
Greece	461
Russia*	560
Latvia*	460
Portugal	459
Luxembourg	443
Mexico	422
Brazil*	375
OECD average	500

Country's average is significantly higher than the OECD average.

Country's average is not significantly different from the OECD average.

Country's average is significantly lower than the OECD average.

*Not a member of the OECD. The country's score is not factored into the OECD average.

"Knowledge and Skills for Life: First Results From PISA 2000" is available for \$15.20 from OECD, 2001 L St. N.W., Suite 650, Washington, DC 20036, (800) 456-6323. It can also be downloaded from the Web at www.sourceoecd.org. "Outcomes of Learning: Results From the 2000 Programs for International Student Assessment of 15-Year-Olds in Reading, Mathematics, and Science Literacy" is free from the U.S. Department of Education, ED Pubs, PO Box 1398, Jessup, MD 20794-1398, (877) 433-7827. It is also available at nces.ed.gov/surveys/pisa.

SOURCE: Organization for Economic Cooperation and Development

through the 12th grade that TIMSS documented.

"It's both important and good news that we're better than we had been in the other indicators," said Lynn A. Steen, a professor of mathematics at St. Olaf College in Northfield, Minn.

But a science education advocate called the results disappointing because the United States scored below other English-speaking countries—including Australia, Canada, the United Kingdom, and New Zealand—in both science and mathematics.

And the overall results also show that American schools are falling short of helping all students understand basic scientific principles, said Senta A. Raizen, the director of the Washington-based National Center for Improving Science Education.

"Regardless of how we compare to other countries," Ms. Raizen said, "this isn't very comforting, since our goal is to have a modicum of scientific literacy for everybody."

Map for Improvement

Similar to the showing in math and science, U.S. literacy scores drop against an international average as students get older. A 1991 study conducted by the same organization that sponsors

TIMSS found that American 9-year-olds scored near the top of the scale in literacy, but that 14-year-olds ranked in fifth place. (See *Education Week*, Sept. 30, 1992.)

Reading experts say that middle school teachers of all subjects need help understanding how to incorporate reading instruction into their daily lessons. Educators in the primary grades have done a good job preparing students with the basic skills of decoding and reading stories, they say, but teachers in later grades need to work with students on how to decipher the meaning of complex passages of nonfiction.

"It's not just the English teachers' problem; it's every teacher's problem," said Carol M. Santa, a founder of the Montana Academy, a private school for struggling adolescents, and a past president of the International Reading Association. "It's not just teaching the content. It's teaching kids how to read, study, and learn about the content."

"The emphasis needs to become how to read your social studies book, your science book, and other informational texts," said Ms. Irvin, the Florida State University professor. "When kids know how to read informational texts, they learn how to learn more."

Ms. Santa and Ms. Irvin agree that many middle and high school

teachers are not prepared to teach reading skills. Many of them are trained to teach about the content and assume that students have the skills they need to understand it by reading textbooks.

Teachers who learn how to address students' reading needs are most likely to see improvement in the students who tend to score the worst on reading tests, Ms. Santa said.

"It makes the most difference for kids who are struggling," she said.

That is where the United States should focus its energy if it wants to raise its standing on PISA and other international exams, Mr. McGaw, the OECD official, said at a press briefing on the study's results.

Countries that score the best on the new assessment have high percentages of high achievers, as the United States does, but their poorest performers don't fall as low as America's lowest scorers do, he said. In Finland, for example, 18 percent of test-takers scored at the top level, while only 7 percent fell into the lowest categories.

"What America has to do if it wants to raise its mean is to bring the tail up and to pay attention to the disadvantaged," Mr. McGaw said. "The message from other countries is that it can be done."

The PISA tests will be given again in 2003 and 2006.