

## How Does the United States Stack Up? International Comparisons of Academic Achievement

Over the past thirty years, the modern workplace has changed radically, and the demands on those making the transition from the classroom to the workforce continue to rise. Students from Baltimore and Boston no longer compete against each other for jobs; instead, their rivals are well-educated students from Sydney and Singapore. But as globalization has progressed, American educational progress has stagnated. Today, the United States's high school graduation rate ranks near the bottom among developed nations belonging to the Organisation for Economic Co-operation and Development (OECD). And on virtually every international assessment of academic proficiency, American secondary school students' performance varies from mediocre to poor. Given that human capital is a prerequisite for success in the global economy, U.S. economic competitiveness is unsustainable with poorly prepared students feeding into the workforce.

While the overall level of U.S. performance lags behind that of other industrialized countries, it also has substantial inequities in achievement across the country. The United States has a higher percentage of students who perform at lower levels of proficiency than other industrialized nations, and a lower proportion of students who reach the highest levels of proficiency. These achievement gaps have significant effects on the nation: A study by the OECD finds that, if the United States brought all students up to a minimum level of proficiency, the country would add as much as \$72 trillion to its gross domestic product over the lifetime of a child born in 2010.<sup>1</sup>

The following details how fifteen-year-old students from the United States compare with fifteen-year-olds in other OECD member countries in the Programme for International Student Assessment (PISA) measures of academic proficiency.\*

### Reading Literacy

- In 2012, the United States ranked seventeenth out of thirty-four OECD countries in reading literacy, scoring near the OECD average.
- Seventeen percent of U.S. fifteen-year-olds do not reach the PISA baseline of reading proficiency, which is a level that has remained virtually unchanged since 2000. This is close to the OECD average; however, the top five performing countries have 10 percent or fewer of their students below the baseline.

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\* PISA is a triennial assessment that the OECD administers to students in its member and partner countries. It is the world's most comprehensive and rigorous comparison of international student achievement; participating countries make up nearly 90 percent of the world's economy. Unless otherwise noted, results presented in this fact sheet are from the most recent PISA, which was administered to students in 2012.

- Eight percent of U.S. fifteen-year-olds performed at the top levels of proficiency in 2012, down from 12 percent in 2000 and far below the proportion of students who reached top levels in Japan, Korea, and Canada.

### **Scientific Literacy**

- The United States ranked twenty-first out of thirty-four OECD countries in scientific literacy, and the U.S. score of 497 was not statistically different than the OECD average.
- Eighteen percent of U.S. students scored below the baseline level of science proficiency; in 2006, 24 percent of students failed to reach the baseline. In Poland, Canada, and Singapore, fewer than 10 percent of students failed to reach the baseline level of proficiency in science literacy.
- Only 7.5 percent of U.S. students performed at the top levels in science proficiency in 2012, slightly below the proportion who reached that level in 2006. In Australia, Japan, and Estonia, more than 13 percent of students reached those levels.

### **Mathematics Literacy**

- The United States's average performance in mathematics was below the OECD average and was virtually unchanged since 2003. U.S. students ranked twenty-sixth out of thirty-four OECD countries.
- Since 2003, more than one-quarter of U.S. students do not reach the PISA mathematics baseline Level 2 proficiency. This figure is above the average for OECD countries and far more than in countries like Finland, Japan, and Korea.
- Nine percent of U.S. students reached the top levels of performance in mathematics, less than the OECD average and slightly less than the proportion reaching those levels in 2003. In Canada, Germany, and Poland, more than twice the U.S.'s proportion of fifteen-year-olds reached top levels of performance in mathematics.

### **Equity in Achievement**

- Fifteen percent of the variation in student performance in the United States is explained by students' socioeconomic background. Disadvantaged students are generally less engaged, less motivated, less driven, and less confident in their abilities than their more advantaged peers.
- In the United States, 5 percent of students can be considered resilient, meaning that they come from the 25 percent of the most socioeconomically disadvantaged students, but they perform much better than would be predicted based on their socioeconomic background. This is below the OECD average of 7 percent and only one-third the proportion of resilient students found in Hong Kong, Macao-China, Shanghai-China, and Vietnam.

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<sup>1</sup> E. Hanushek and L. Woessmann, *The High Cost of Low Economic Performance* (Paris: OECD, 2010).

