ALLIANCE FOR EXCELLENT EDUCATION

FactSheet

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

Over the past thirty years, the modern workplace has radically changed, and the demands on those making the transition from the classroom to the workforce continue to rise. Students from Birmingham 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' 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.

The United States has substantial inequities in achievement across the country, and international surveys show that the performance gap between the most- and least-proficient students in the United States is among the highest of all OECD countries (Kirsch et al. 2007). Despite the myth that other countries achieve only because they have small, homogenous student populations, data shows that many countries' schools successfully assimilate immigrant or high-poverty populations that are proportionately larger than those in the United States. American schools, on the other hand, do little to mitigate the barriers that these groups face (OECD 2007b). Moreover, the rapidly growing minority populations that represent a disproportionate share of America's lowest-achieving students are projected to make up more than half of the U.S. population by 2050 (United States Census Bureau 2004). Unless the United States begins to prepare *all* students for college and the modern workplace, America's disturbing downward trend will only get worse.

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 Achievement (PISA) measures of academic proficiency.*

Reading Literacy

- In 2003, the United States ranked 15th of 29 OECD countries in reading literacy, and with a score of 495, came in near the OECD average of 500 (U.S. Department of Education. National Center for Education Statistics 2004). However, a printing error invalidated the U.S. reading section of the 2006 PISA assessment, so the current U.S. standing is unknown.

Scientific Literacy

- The United States ranks 21st of 30 OECD countries in scientific literacy, and the U.S. score of 489 fell below the OECD average of 500 (OECD 2007b).
- One quarter (24.4 percent) of U.S. fifteen-year-olds do not reach the baseline level of science achievement. This is the level at which students begin to demonstrate the science competencies that will enable them to use science and technology in life situations (OECD 2007b).

* 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 (OECD 2007b). Results presented in this fact sheet are, unless otherwise noted, from the most recent PISA, administered to students in 2006.

1201 Connecticut Avenue, NW · Suite 901· Washington, DC 20036
Phone 202 828-0828 · Fax 202 828-0821 · www.all4ed.org

Mathematics Literacy

- The United States ranks 25th of 30 OECD countries in mathematics literacy, and the average score of 474 fell well below the OECD average of 498. Scores have not measurably changed since 2003, when the United States ranked 24th of 29 countries (OECD 2007b).
- Over one quarter (28.1 percent) of American fifteen-year-olds performed below the baseline level of mathematics proficiency at which students begin to demonstrate the kind of skills that enable them to use mathematics actively in daily life (OECD 2007b).

Problem Solving

- In 2003, the U.S. ranked 24th of 29 OECD countries in problem solving, and the average score of 477 fell well below the OECD average of 500 (OECD 2004).
- Half of American students fell below the threshold of problem-solving skills considered necessary to meet emerging workforce demands (OECD 2004). National surveys corroborate this finding; for example, 46 percent of American manufacturers say that their employees have inadequate problem-solving skills (NAM 2005).

Equity in Achievement

- The United States has an average number of students who perform at the highest proficiency levels, but a much larger proportion who perform at the lowest levels. The United States is the only member country to have relatively high proportions of both top and bottom performers (OECD 2007b).
- Although American white students' average science score of 523 ranked above the OECD average, Hispanic American (439), American Indian and Native Alaskan (436), and African American (409) students all fell far below (U.S. Department of Education. National Center for Education Statistics 2007). These groups scored similarly to the national averages of Turkey and Mexico, the two lowest-performing OECD member countries.
- The difference between the science scores of two students of different socioeconomic backgrounds is higher in the United States than in almost any other country (OECD 2007b).
- First-generation immigrant students in the United States lag an average of 57 points behind their native counterparts, which is the equivalent of nearly two years of schooling. Second-generation U.S. immigrants perform no better than first-generation immigrant students (OECD 2007b).
- Four of the five member countries that have higher proportions of immigrants than the United States also have higher national scores than the United States (OECD 2007b).

References

Kirsch, I., H. Braun, K. Yamamoto, and A. Sum. 2007. *America's perfect storm: Three forces changing our nation's future*. Princeton, NJ: Educational Testing Service.

National Association of Manufacturers [NAM], The Manufacturing Institute, and Deloitte Consulting LLC. 2005. *2005 skills gap report: A survey of the American manufacturing workforce.* Washington, DC: Author.

Organisation for Economic Co-operation and Development [OECD]. 2007. *PISA 2006: Science competencies for tomorrow's world*. Paris: Author.

———. 2004. *Problem solving for tomorrow's world: First measures of cross-curricular competencies from PISA 2003.* Paris: Author.

United States Census Bureau. 2004. *U.S. interim projections by age, sex, race, and Hispanic origin*.

U.S. Department of Education. National Center for Education Statistics. 2007. *Highlights from PISA 2006: Performance of U.S. 15-year-old students in science and mathematics literacy in an international context* (NCES 2008–016). Washington, DC: Author.

U.S. Department of Education. National Center for Education Statistics. 2004. *International outcomes of learning in mathematics literacy and problem solving: PISA 2003 results from the U.S. perspective*. (NCES 2005–003). Washington, DC: Author.