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Public Education Policy And Progress



## **CHANCE FAVORS THE PREPARED MIND: Report Finds that Students in the Highest-Achieving States Score As Well As Counterparts in Most Foreign Countries in Math and Science, but Trail Highest-Achieving Foreign Countries**

A new report from the American Institutes for Research (AIR) finds that eighth graders in most states perform as well as or better than their counterparts in most foreign countries in math and science. The bad news is that eighth graders in the highest-achieving states (Massachusetts, Minnesota, and North Dakota, among others) fall significantly below those in the highest-achieving countries (including Singapore, Hong Kong, and Korea). The report, *Chance Favors the Prepared Mind: Mathematics and Science Indicators for Comparing States and Nations*, uses state eighth-grade data from the 2005 and 2007 National Assessment for Educational Progress (NAEP) to project a state's performance onto the scale of the Trends in International Mathematics and Science Study (TIMSS). By doing so, the performances of each of the fifty states and the District of Columbia can be compared to the forty-six countries that participate in the TIMSS.

“If you think of states and nations as in a race to prepare the future generation of workers, scholars, and citizens to be competent and competitive in a technologically complex world, then the states are in the middle of the pack,” said **Dr. Gary Phillips, a chief scientist at AIR and author of the report.**

According to the report, Singapore, Hong Kong, Korea, Chinese Taipei, and Japan generally outperform the United States in math and science. In addition, Massachusetts, the highest-scoring state in math, also falls behind these five Asian countries in math—although it outperforms the other forty-one countries included in the report. In science, North Dakota is the highest-ranking state, finishing ahead of Japan, but behind the four other Asian countries. The highest-performing countries and states in math and science are shown in the table below.

Country/State	Math Score	Country/State	Science Score
Singapore	73	Singapore	55
Hong Kong	66	Chinese Taipei	52
Korea	65	Korea	45
Chinese Taipei	61	Hong Kong	44
Japan	57	<b>North Dakota</b>	<b>43</b>
<b>Massachusetts</b>	<b>51</b>	Japan	42
<b>Minnesota</b>	<b>43</b>	<b>Montana</b>	<b>42</b>
<b>North Dakota</b>	<b>41</b>	Estonia, Massachusetts, New Hampshire, South Dakota, Vermont	<b>41</b>
<b>Vermont</b>	<b>41</b>		
<b>Kansas, New Jersey, Belgium</b>	<b>40</b>		

## ***Chance Favors the Prepared Mind***

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The report finds that the United States' average performance in math and science is generally comparable to other English-speaking nations and to European nations and significantly better than many African and Middle Eastern countries. However, several states (Mississippi, New Mexico, and Alabama, among others) and the District of Columbia have poor performance levels that fall closer to those of African and Middle Eastern countries.

"More than a century ago, Louis Pasteur revealed the secret to invention and innovation when he said 'chance favors the prepared mind,'" Phillips said. "The take away message from this report is that the United States is losing the race to prepare the minds of the future generation."

The complete report is available at <http://www.air.org/news/pr/8thGrader.aspx>.



### **U.S. READING RESULTS ON INTERNATIONAL COMPARISON THROWN OUT DUE TO PRINTING ERROR: Alliance President Calls for Retest**

On November 19, officials from the National Center for Educational Statistics announced that the United States' reading scores on the 2006 Programme for International Student Assessment (PISA) had been invalidated because of an error in the printing of the test. The other results from PISA, which tests fifteen-year-olds in fifty-seven countries in mathematics, science, and reading literacy, are still scheduled to be released by the Organisation for Economic Co-operation and Development (OECD) on December 4.

The error occurred because of a printing problem by RTI International, the firm with which the U.S. Department of Education contracted to administer the test. Originally, students who opened the test booklets were supposed to find a reading passage on the left page and a series of questions related to it on the right page. However, in printing the test booklets, RTI International noticed that the color from the cover of the test booklet bled through the first sheet. As a result, it decided to begin the test on the first right-hand page. Students opening the booklets were instructed to answer questions related to a story or passage on the "opposite page." Because of the new layout, those directions were incorrect.

**Mark S. Schneider, the commissioner of the National Center for Education Statistics**, which oversees U.S. participation in the exam, called the printing error a "major loss for the study" and an "embarrassment" to everyone involved.

Upon learning of the printing error, **Bob Wise, president of the Alliance for Excellent Education and former governor of West Virginia**, urged the U.S. Department of Education to readminister the test to U.S. students. Wise called the printing error "both understandable and distressing," but said that accurate reading results were "particularly critical" considering that Congress is considering changes to the No Child Left Behind Act.

"Since this international examination is administered only once every three years, new PISA data about how U.S. students are faring internationally in reading will not be available until 2010 at the earliest, unless a means is found to administer the most recent test again," he wrote in a letter

to **U.S. Secretary of Education Margaret Spellings** and **Grover J. Whitehurst, director of the Institute of Education Sciences (IES)**. “Having the most recent PISA reading performance data would permit policymakers and educators to evaluate efforts in the United States and in countries throughout the world much more thoroughly to determine what is, and is not, working to improve reading performance.”

Wise said that fewer than 6,000 U.S. students participated in the full PISA exam and added that RTI International should be willing to develop a new sample and to readminister the reading section of the test. “I urge you to explore every avenue to see whether this important international measurement of our middle and high school students’ reading performance can be accomplished,” he concluded.

In response, **Bruce Friedland, a spokesman for the IES**, said that his agency and the department would give “careful consideration” to the request, but that no decision had been made.

Governor Wise’s complete letter is available at  
[http://www.all4ed.org/files/PISALetter\\_DeptEd\\_112007.pdf](http://www.all4ed.org/files/PISALetter_DeptEd_112007.pdf).

### **Another Kind of Printing Error: Spanish Paper Leaks PISA Science Results; U.S. Students Place Twenty-First**

American fifteen-year-olds scored lower than the international average in science, according to the latest results on the Programme for International Student Assessment (PISA). The results, which were not scheduled to be released until December 4, were partially leaked by the Spanish paper *Magisterio* on November 28. Subsequently, the Organisation for Economic Co-operation and Development (OECD), decided to make the science results public but to stay on schedule for releasing the rest of the comprehensive report on December 4, at which time it will also release results in mathematics and in reading.

Commenting on the results, **OECD Secretary-General Angel Gurría** said that PISA is a valuable tool that governments can use when making policy decisions. “PISA is much more than just a ranking. It is about how well individual education systems are equipping their young people for the world of tomorrow. First and foremost, it tells countries where their strengths and weaknesses lie,” he said.

With a score of 563 in the science rankings, Finland ranks first overall, followed by Canada (534) and Japan (531). The United States is twenty-first among the thirty OECD member countries included in the assessment, with sixteen OECD countries significantly higher. The United States’ score (489) places it below the international average of 500 and in a group with the likes of Poland (498), France (495), and Spain (488); however, the United States’ score is significantly higher than those of five other OECD countries, including Italy (475), Turkey (424), and Mexico (410).

The complete chart is available at <http://www.oecd.org/dataoecd/42/8/39700724.pdf>.



### **HIGH SCHOOLS FOR EQUITY: Report Offers Lessons from High Schools that Successfully Graduate Low-Income Minority Students**

In America, only a few more than half of African American and Latino students graduate from high school on time. In addition, only 12–14 percent graduate having met the requirements to attend a state university, according to a new report by the School Redesign Network at Stanford University and Justice Matters. The report, *High Schools for Equity: Policy Supports for Student*

## ***High Schools for Equity***

(Continued from p. 3)

*Learning in Communities of Color*, examines five California schools that are achieving much greater success with low-income students of color and identifies several practices and policies that similar schools can use to improve both the day-to-day learning experiences and educational outcomes of their students.

“These schools break the conventional links between race, poverty, and academic failure,” said **Linda Darling-Hammond, a professor of education at Stanford University and co-executive director of the School Redesign Network**. “Not only do their students receive an academically rigorous curriculum that prepares them for college and careers, [but] they also experience learning opportunities that are culturally rich, socially and practically relevant, and responsive to their needs and interests.”

After examining data on more than three hundred sixty California high schools, the report’s authors chose to focus on five urban public high schools. They include Animo Inglewood Charter High School, Inglewood, CA; Leadership High School, San Francisco; June Jordan School for Equity, San Francisco; New Tech High School, Sacramento; and Stanley E. Foster Construction Tech Academy, San Diego. The schools, which are both district-run and charter-operated schools in California’s largest cities, have no selective admission requirements, serve primarily students of color and low-income students, graduate students at higher rates than the state average, and send more than 80 percent of their students to college, as shown in the table below.

**Characteristics of the schools featured in *High Schools for Equity***

	<b>Animo Inglewood</b>	<b>Construction Tech Academy</b>	<b>June Jordan School for Equity</b>	<b>Leadership High School</b>	<b>New Tech High School</b>
School Enrollment	518	430	371	320	355
Free and Reduced Lunch	74%	68%	48%	52%	62%
Students of Color	100%	81%	95%	96%	70%
African American Students	37%	17%	37%	18%	27%
Latino Students	63%	51%	32%	39%	26%
English Language Learners	7%	24%	13%	12%	25%
Graduates Going to College	94%	81%	95%	100%	100%
Graduates Going to Four-Year College	69%	36%	73%	68%	42%

The common elements that the report’s authors discovered in these schools include small, personalized learning environments, rigorous and relevant curricula that provide authentic learning and assessment opportunities, and extensive, regular occasions for teachers to collaborate and learn with one another.

Among the commonalities, the report calls personalization the “most striking” difference between these schools and traditional urban high schools, which often have enrollments in the thousands and allow for very few meaningful relationships between students and teachers.

Instead, the schools profiled all have much more manageably sized student bodies, in the three hundred to five hundred range. Additionally, teachers in these schools have an advisory group of fifteen to twenty-five students who meet with them several times a week. Typically, teachers stay with the same group of students for two to four years and also work with each student's family and with other teachers to ensure that the student receives the academic and personal supports that are needed for success.

In addition to more time for students and teachers to meet, the schools studied also provide a considerable amount of time for teachers to work together to design curriculum and instruction and learn from each other. Overall, the schools allocated seven to fifteen days to shared professional learning time, in addition to several hours during the week that teachers used to plan and problem solve around students and subject matter. This common planning time was augmented by mentoring and coaching systems for new and veteran teachers.

Sadly, far too many of California's students fail to enjoy the quality education that these schools provide. Large numbers of students of color attend schools with such poor learning conditions that the report describes them as "hostile and dehumanizing places that serve to track students into low-wage jobs and prison."

Because of these conditions, an increasing share of young African American and Latino men are populating the state's growing prison system, rather than its higher education system. According to the report, every African American male subtracted from a state university campus translates to fifty-seven who were added to state correctional facility. Among Latinos, three Latino males were added to the prison population for every one added to the four-year public university system. As a result, in 2006, California spent as much on corrections as on higher education.

"Low-income students and students of color in California are more likely than others to attend under-resourced schools that are racially and socioeconomically segregated, staffed with under-qualified teachers, unable to offer college preparatory courses or strong technological education programs, and where graduation is not the norm," said Darling-Hammond. "The work the schools in our study are doing is exceptional and occurs against the odds. Their successes can be replicated, but only if California implements substantive policy changes."

The report's authors list several policy changes that the state can make in order to replicate the successes of the schools in the report. First, they call for investments in teacher preparation and development that allow teachers to take on the kinds of pedagogical strategies and advisement responsibilities that are found in the profiled schools. They also recommend that California recruit and develop principals who can lead schools that are organized far differently from traditional schools and that the state support curriculum, assessment, and instruction that helps students develop twenty-first-century skills. The report also mentions the need for flexible funding streams that allow for investments in innovative approaches and financial support that makes college a reality for low-income and undocumented students.

The complete report is available at [http://www.srnleads.org/press/pdfs/hsfe\\_report.pdf](http://www.srnleads.org/press/pdfs/hsfe_report.pdf).

## ***The Turnaround Challenge: Report Says Worst-Performing Schools Provide the Best Opportunity to Dramatically Improve Student Achievement***

The worst 5 percent of the nation's schools represent the best opportunity to dramatically improve school achievement, according to a new report from the Mass Insight Education and Research Institute. *The Turnaround Challenge: Why America's best opportunity to dramatically improve student achievement lies in our worst-performing schools*, which was funded by the Bill & Melinda Gates Foundation, finds that 5,000 (5 percent) of America's public schools are on track to fall into the restructuring phase—the most extreme designation—under the No Child Left Behind Act (NCLB) by the 2009–2010 school year. These schools, the report says, represent a level of “persistent failure” that “commands swift, dramatic intervention.”

“Light-touch reforms simply have not worked for these chronic low performers,” said **William H. Guenther, president of Mass Insight Education and Research Institute**. “Yet another generation of students, over 2.5 million of them, is receiving a woefully inadequate education in these schools. If bold changes aren't called for at the lowest-performing schools, then where will we ever have the will to act?”

According to the report, interventions in failing, largely high-poverty schools (particularly high schools), have tended toward incremental-change strategies that have produced little result. However, it notes that some large urban districts (Chicago, Miami-Dade, New York City, and Philadelphia), have undertaken “promising turnaround strategies,” but are still in their early stages.

The report collects lessons from these cities and urges states, districts, and schools to use them in their efforts to turn around struggling schools. The key levers the report cites include creating zones with more flexible operating conditions (hiring, budgets, schedules, programs, etc.), assembling and training leadership teams with specific turnaround skills, investing in a new breed of lead turnaround partners that integrate the work of other providers around a coherent strategy, and conducting the work in clusters of schools for both effectiveness and scale.

The complete report is available at <http://www.massinsight.org/micontent/trnresources.aspx>.



## ***WHEN GIRLS DON'T GRADUATE, WE ALL FAIL: New Report Finds that Female Dropouts Face Greater Economic Challenges than Male Counterparts***

Although American girls are slightly less likely to drop out of high school than boys, they are likely to be more negatively impacted from an economic standpoint, according to a recent report from the National Women's Law Center (NWLC) titled *When Girls Don't Graduate, We All Fail: A Call to Improve High School Graduation Rates for Girls*. In fact, the report finds that female dropouts earn significantly lower wages than male dropouts, are at greater risk of unemployment, and are more likely to rely on public support programs.

“The high school dropout crisis has received significant recent attention but almost exclusively as a problem for boys. It is generally overlooked that girls are also failing to graduate at alarmingly high rates,” said **Marcia D. Greenberger, co-president of the National Women's Law Center**.

*When Girls Don't Graduate* declares that 520,000 of the 1.2 million dropouts who would have graduated with the Class of 2007 were female. Additionally, the report estimates that approximately one out of every four girls fails to graduate on time. Figures are even worse for students of color; the NWLC finds that 37 percent of Hispanic girls, 40 percent of African American girls, and 50 percent of Native American and Alaskan Native girls do not graduate on time. That compares to 48 percent for Hispanic boys, 54 percent for black boys, and 55 percent

for American Indian boys, according to *Education Week's* report *Diplomas Count*, which was also used by the NWLC.

The report focuses on both the financial and social consequences that female dropouts face. In terms of economics, *When Girls Don't Graduate* states that females who drop out are more likely to have problems finding employment. A 2006 study cited in the report found that while 77 percent of all male dropouts were employed, only 53 percent of female dropouts were. Furthermore, the NWLC report states, though women earn less money than men at all levels of education, the wage gap is especially wide between male and female dropouts. With an average wages of \$15,530 a year, women who drop out of high school earn \$9,100 less than their male counterparts—in other words, just 63 cents for every dollar a male dropout earns.

Research in the report hints at a possible correlation between mothers who have dropped out of high school and their children's—particularly their daughters'—educational attainment. "Although children are particularly at risk of dropping out themselves in families where one or both parents are high school dropouts, the educational level of mothers may make a greater difference," the report reads. "A recent study of female students found that while the daughters of men who graduate from high school are 15 percent less likely to drop out of school than daughters whose fathers dropped out, the daughters of women who graduate from high school are *one-third* less likely to drop out of school than daughters of women who dropped out."

The report goes on to detail the ways in which keeping girls in school "serves broad societal goals," such as enhancing tax revenues and then outlines factors that seem to correlate with a high risk of dropping out. Virtually all of the factors listed—except for pregnancy—are the same risk factors associated with boys.

"Far too many boys and girls will fail to make it to graduation day on time, if at all," said **Jocelyn Samuels, NWLC vice president for education and employment**. "This is more than a boys' problem—or a girls' problem. It is a societal problem. We owe it to all our students to address this serious issue promptly."

To combat the dropout crisis, NWLC recommends that more gender-based research be performed to identify factors that may affect male and female students differently and to determine which interventions are the most effective for specific groups. The report, which lists nine recommendations in all, also recommends that data collection on educational performance and graduation rates be improved, school accountability be increased, additional support be provided for pregnant and parenting students, and that girls' access to rigorous career and technical education be ensured.

The report is available at <http://www.nwlc.org/pdf/DropoutReport.pdf>.

***Straight A's: Public Education Policy and Progress*** is a biweekly newsletter that focuses on education news and events both in Washington, DC and around the country. The format makes information on federal education policy accessible to everyone from elected officials and policymakers to parents and community leaders. The Alliance for Excellent Education is a nonprofit organization working to make it possible for America's six million at-risk middle and high school students to achieve high standards and graduate prepared for college and success in life.



ALLIANCE FOR  
EXCELLENT EDUCATION

1201 Connecticut Ave., NW  
Suite 901  
Washington, DC 20036

Phone 202 828-0828  
Fax 202 828-0821  
Alliance@all4ed.org  
www.all4ed.org

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**Bob Wise**  
President

**Jason Amos**  
Editor

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