

Anticipation Guide: Myths and Realities about International Comparisons

Indicate whether you agree or disagree with each of the statements below. Next, read and work with a partner to see how accurate your knowledge of ‘international testing’ was.

Before Reading			After Reading	
Agree	Disagree		Agree	Disagree
_____	_____	1. <i>Other countries test a more select, elite group of students.</i>	_____	_____
_____	_____	2. <i>The U.S. performs poorly because of poverty and other family factors.</i>	_____	_____
_____	_____	3. <i>Cultural factors prevent U.S. students from performing as well as those in other nations, particularly Asian countries.</i>	_____	_____
_____	_____	4. <i>Other countries are less diverse than the US.</i>	_____	_____
_____	_____	5. <i>Wealthier countries spend more than the U.S. on education.</i>	_____	_____
_____	_____	6. <i>U.S. attainment rates cannot be compared with other countries’ because the U.S. tries to educate many more students.</i>	_____	_____
_____	_____	7. <i>Education does not really affect the economy anyway. A Nation at Risk warned that America’s economy would suffer, but that never happened.</i>	_____	_____

Benchmarking for Success: Ensuring U.S. Students Receive a World-Class Education

A report by the National Governors Association, the Council of Chief State School Officers, and Achieve, Inc. 2008 (www.nga.org)

Myths and Realities about International Comparisons

Myth: *Other countries test a more select, elite group of students.*

Reality: That might have been true for early international assessments, but it is no longer true today. According to Jim Hull, who examined international assessments for the National School Boards Association, *“Since the 1990s, due to better sampling techniques and a move by more countries to universal education, the results represent the performance of the whole student population, including students who attend public, private, and vocational schools, students with*

special needs, and students who are not native speakers of their nation’s language.”

While the U.S. still sets a relatively high age for compulsory education among OECD nations, that does not automatically translate into higher rates of school enrollment. U.S. enrollment rates in primary and secondary education are the same as or below those in other industrialized nations. For example, among OECD member nations, the U.S. ranks only 22nd in school enrollment of 5- to 14-year-olds and 23rd in enrollment of 15- to 19-year-olds.

Moreover, on the most recent PISA assessment, OECD member nations on average tested a *higher* proportion of 15-year-olds than did the U.S. (97 percent versus 96 percent of those enrolled in

schools, and 89 percent versus 86 percent of the entire 15-year-old population), which refutes the idea that the U.S. was disadvantaged by testing a broader population. While no assessment is perfect, PISA, TIMSS, and PIRLS all have tight quality-control mechanisms, including very strict and transparent guidelines for sampling students and administering assessments. All exclusions must be thoroughly documented and justified, and total exclusions must fall below established thresholds.

Myth: The U.S. performs poorly because of poverty and other family factors.

Reality: According to the U.S. Department of Education, the U.S. looks about average compared with other wealthy nations on most measures of family background.⁶⁶ Among the OECD's 30 member nations, U.S. 15-year-olds are slightly above the international average on a composite index of economic, social, and cultural status (ESCS); only 11 percent of U.S. students fall within the lowest 15 percent of the ESCS internationally. Moreover, America's most affluent 15-year-olds ranked only 23rd in math and 17th in science on the 2006 PISA assessment when compared with affluent students in other industrialized nations. In fact, when the OECD uses statistical methods to estimate how PISA scores would look if the ESCS index were equalized across all countries—a leveling of the playing field—U.S. performance actually looks *worse* rather than better.

This is not to say that demographics are unimportant in American schools: The U.S. ranks high in the impact that family background has on student achievement (fourth out of 30 countries), in part because its education system does a particularly poor job supporting students and equalizing learning opportunities. For example, a 2006 study published in the *European Journal of Political Economy* found that out of 18 developed nations, the U.S. is the only country where weaker students are more likely to be enrolled in larger classes.⁷¹ Another study found that the U.S. has one of the largest gaps in access to qualified teachers between students of high and low socioeconomic status.

Myth: Cultural factors prevent U.S. students from performing as well as those in other nations, particularly Asian countries.

Reality: U.S. 15-year-olds reported spending *more* time on self study or homework in science, math,

and reading than did students on average across the 30 OECD nations taking the 2006 PISA assessment, including those in Japan and, except for math, in Korea. Moreover, high-performing nations and states can be found all over the world, not just in Asia. For example, the five top-scoring nations in the 2006 PISA science assessment were located on four different continents, reflecting a range of cultures: Europe (Finland), North America (Canada), Asia (Japan), and Oceania (New Zealand and Australia).

Singapore is often singled out for its top performance on the TIMSS math assessment, which some say must be due to an unusually strong work ethic. But that belief was challenged in a 2005 study by the American Institutes for Research (AIR): "*Singaporean students are hardworking, but if Singapore's success is attributable only to work ethic, how can we account for the fact that its high achievement is a comparatively recent development? On the Second International Science Study in the mid-1980s, Singaporean fourth graders scored only 13th out of 15 participating nations, and Singaporean eighth graders did no better than their U.S. counterparts In response to these poor scores, Singapore's Ministry of Education re-engineered and strengthened the education system, reforming both the science and mathematics curriculum.*"

Countries such as Finland, Korea, and Hong Kong have achieved major improvements in learning outcomes over time without changing their national cultures. In fact, as recently as the mid-1980s Finnish students performed only about average among OECD nations on tests used at the time. Hong Kong instituted numerous reading reforms that boosted its fourth-graders' performance from significantly below the U.S. in 2001 to significantly above it in 2006.

Of course, cultural attitudes can play a role in achievement. Studies conducted in the 1980s found that mothers and students in some Asian countries were likely to attribute success in math more to effort than to innate ability, while the reverse was true for Americans. But experimental studies have shown that students' beliefs can be changed in ways that positively impact learning; the National Mathematics Panel recommended that such strategies be used more widely in American classrooms.

Myth: Other countries are less diverse.

Reality: The U.S. is a diverse nation, but that diversity should not prevent states from improving student achievement. Among the 11 other OECD countries that like the U.S. had more than 10 percent immigrant students, all of them performed higher in math and nine performed higher in science. And Singapore, which scored at the top of the most recent TIMSS math assessment, is not as homogeneous as many assume.

According to the 2005 AIR report, “*Arguments about Singapore’s homogeneity are not persuasive. ... Singapore has three major ethnic groups. About three-fourths of Singapore’s population is Chinese, but almost a quarter is Malay or Indian. Like the United States, Singapore experienced serious ethnic strife in the 1960s.*” Cultural homogeneity has been cited as a factor in Finland’s high achievement in that it lends itself to a great deal of agreement about education and education reform. But Finland’s success also is attributable to very different educational policies and practices in areas like teacher recruitment and student support.

Myth: Wealthier countries spend more than the U.S. on education.

Reality: The U.S. is wealthier and spends more on education than most other countries. Among the OECD’s 30 member nations, the U.S. ranks highest in GDP per capita and second highest in educational expenditures. A report on the U.S. economy published by OECD last year observed, “*On average, and relative to other OECD countries, U.S. students come from well-educated, wealthy families and ... go to schools that are unusually well-financed. Given any of these factors, U.S. students might be expected to be among the world leaders.*” However, while the U.S. ranks high in education spending, it ranks only near the middle of OECD nations in its “effort” to fund education when expenditures are compared with wealth (gross national product).

Myth: U.S. attainment rates cannot be compared with other countries’ because the U.S. tries to educate many more students.”

Reality: The U.S. does rank higher than average on access to higher education, but that does not

explain its very low college-completion rates. While America’s entry rate for four-year and advanced postsecondary programs exceeds the OECD average by 10 percentage points (64 percent to 54 percent), its college “survival rate” trails the OECD average by 17 points (54 percent to 71 percent). According to OECD, “*Comparatively high drop out rates in the United States are [negatively] contributing to the United States’ relative standing against other countries*” in educational attainment.

Myth: Education does not really affect the economy anyway. A Nation at Risk warned that America’s economy would suffer, but that never happened.

Reality: While *A Nation at Risk* erred in linking the recession of the early 1980s to educational stagnation (other factors such as the business cycle are more important over the short term), the report was correct that improving education is critical to America’s economic competitiveness. New research based on extensive data from many countries over several decades confirms that cognitive skills as measured by international tests strongly influence long-term economic growth.

Other factors matter too, of course. In fact, America’s historic advantages in other areas have made up for its students’ mediocre skills and allowed the U.S. to grow its economy without significantly improving its schools. First, the sheer size of the U.S. and its much earlier investment in mass secondary and postsecondary education gave it a significant numerical advantage in human capital. Second, its open and agile economy, flexible labor markets, and intellectual property protections enabled industry to make better use of the human capital available.

But those historic advantages are eroding as other countries imitate the U.S. example. America already has lost its lead in educational attainment, and many countries are instituting economic reforms. “*Eventually, our competitors will narrow our economic lead as they learn how to create their own versions of agility and scale,*” says economist Anthony Carnevale. “*At that point, the competition will really come down to who has the best human capital.*”