RESEARCH

U.S. School Performance, Through a Glass Darkly (Again)

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suppose we must expect gloomy predictions about schools from those who have vested interests in depicting them as ruinous, but we shouldn’t expect to see such from a place like the American Institutes for Research (AIR). But that’s what we get from AIR’s Gary Phillips and John Dossey of Illinois State University, authors of Counting on the Future: International Benchmarks for American School Districts (www.air.org).

The report, like so many similar reports, begins with false premises and closes with an illogical conclusion. The premises are these:

Large corporations locate their business in U.S. cities; foreign students attend U.S. schools; and U.S. businesses export goods and services to foreign nations. Large urban cities need to know how their students stack up against peers in the nations with which the U.S. does business. This is especially important for students in the fields of science, technology, engineering, and mathematics. The students in these fields will allow our future generation [sic] to remain technologically innovative and economically competitive. (p. 4)

It’s hard to imagine a shorter paragraph containing more misinformation. Did BMW build a plant in South Carolina, Mercedes a plant in Alabama, and did Nissan move its U.S. headquarters to Tennessee because of these states’ high math scores? Hardly. They built and moved because they got enormous tax breaks, no unions, and cheaper labor.

Second, this report compares average scores in the U.S. and selected U.S. cities with average scores in other nations. Such comparisons tell us nothing. Reports such as AIR’s concentrate on the supply side of skills and ignore the demand side. Does the market demand more scientists and engineers? Hardly. The U.S. has three new native-born or permanent-resident scientists and engineers for every new scientific and engineering position being created. What the market wants is cheap scientists and engineers, which is no doubt why 65% of new graduates leave science and engineering within two years (Lowell and Saltzman 2006).

Third, the recent Global Competitiveness Report 2008-2009 from the World Economic Forum (WEF) ranks the U.S. #1 — again. Japan’s kids were acing tests when A Nation at Risk was published 25 years ago and they continued to ace tests even as that nation sank into 15 years of economic recession and stagnation. The link between test scores and a nation’s economic health simply isn’t there. Does anyone — anyone! — think low test scores created the current crisis? If so, it would have to be the low scores of business school graduates on ethics tests.

Phillips and Dossey use a linking technique that permits one to estimate how students from other nations would perform if they sat for our NAEP tests. The report first summarizes the U.S. generally against other nations participating in the math segment of TIMSS. Among the 25 nations participating at 4th grade, the U.S. is sixth with an estimated 37% of its students proficient or better on the 2007 NAEP. At 8th grade, the U.S. is 10th of 44 countries with 31% proficient. These rankings are the seeds of crisis?

Interestingly, only four nations have a majority of students proficient at the 4th-grade level, only five manage it at 8th grade. Singapore is tops in both grades with 66% proficient at 4th grade, 73% proficient at 8th grade. At 8th grade, 14 nations have 5% or fewer proficient. Norway has 9%, Italy 18%, Sweden 21%, Scotand and New Zealand 22%. These countries are generally considered “competitor nations.” For four nations, including Saudi Arabia, the percent proficient rounds down to zero.

The report then considers results from the TIMSS nations held up against “large urban cities” that had participated in the 2007 NAEP. Some cities that are often cited as horrible examples take their lumps here. Chicago has only 16% proficient at 4th grade, 13% proficient at 8th grade — but that’s better than Norway’s 9%. Yet the WEF ranks Norway higher than high-scoring Taiwan (16th vs. 17th) and almost as high as Japan (9th), Korea (13th), and Hong Kong (11th). Only Singapore at 5th puts what looks like real daylight between itself and Norway. But it ranks behind Sweden in the WEF report, though 73% of its 8th graders are proficient compared to Sweden’s 21%. The link between test scores and economies is simply not there.

For Los Angeles, the figures are 19% and 14% and for Atlanta, 20% and 11%. Cleveland and the District...
of Columbia make double digits only at 4th grade.

But Houston is almost at the median at 4th grade (28%) and above the median at 8th grade (21%). And New York City is at the median in 4th grade (34%) and above it at 8th grade (22%). And Boston scores 27% proficient at both grades. San Diego gets 35% of its 4th graders to the proficient level but falls to 24% at 8th grade.

Does anyone — anyone! — think low test scores created the current economic crisis?

Two cities that are often perceived as university towns, Austin and Charlotte, do even better. Charlotte finishes higher than the U.S. average with 44% proficient at 4th grade and 34% at 8th grade. This figure ranks it sixth among 25 nations at 4th grade and 10th among 44 at 8th grade. Austin has the same rankings, having 40% of 4th graders proficient and 34% of 8th graders. This means that at 4th grade, Austin and Charlotte are just behind Singapore, Hong Kong, Taiwan, Japan, and Flemish Belgium.

The report examines how the cities stack up against the average of the nations. At 4th grade, Austin, Charlotte, San Diego, and the U.S. as a whole do significantly better than the TIMSS average. Houston and Boston do about the same, while Atlanta, Chicago, Cleveland, Los Angeles, and the District of Columbia do significantly worse.

At 8th grade, Austin, Boston, Charlotte, and the U.S. as a whole do significantly better than the international average. Houston, San Diego, and New York City do about the same. Atlanta, Chicago, Cleveland, Los Angeles, and the District of Columbia do significantly worse.

Keep in mind that these “significant” differences are purely statistical. We have no idea about any practical significance.

Well, you say, when we compare American cities against individual countries or the TIMSS average, we’re including some nations whose percent proficient rounds to zero. Thus the report goes on to compare the percent proficient in the cities and the average for the industrialized nations of the Organisation for Economic Co-operation and Development (OECD).

At 4th grade, Charlotte, Austin, San Diego, and the U.S. as a whole score significantly better than the average OECD nation. Boston, Houston, and New York City score about the same, while the other five cities — Atlanta, Boston, Chicago, Cleveland, and the District of Columbia — scored lower. At 8th grade, no city outperforms the OECD average. Charlotte, Austin, and the U.S. as a whole perform as well, but the other cities are all below the OECD average.

The report closes with the usual illogical conclusion that because our kids don’t match Singapore’s in math, “we are already at a competitive disadvantage.” I don’t think so. I’ve reported on how employers are emphasizing soft skills and college admissions officers put more weight on extracurricular activities than on SAT scores. Equally important, just as these “dark side” reports never consider the demand for skills, they never take into account cultural variables. Most people who do the dirty work in Singapore actually live in Malaysia. Many long-term “guest workers” in Singapore come from the Philippines and can’t bring their families with them. Singapore is thus spared the efforts required to educate an economically diverse population.

In a recent article (www.boston.com/bostonglobe/ideas/articles/2008/10/26/grade_change), Jay Mathews wrote, “the impression that our schools are losing out to the rest of the world, that we are not producing enough scientists and engineers, is a misunderstanding fueled by misleading statistics.” True enough. AIR’s statistics are in places misleading, but their worst flaw is that the authors misinterpret them.

REFERENCE
