

United States vs. the World in Education: Where Are We and What Does That Mean?

Many of us who care about education in America are alarmed. As countless newspaper articles from New York to Honolulu have divulged the comparative statistics every couple of years since the mid-1990s, showing the United States slipping further below not just G-8 partners like Germany, the United Kingdom, Japan, and Canada but also much smaller countries we have helped to build and protect, like South Korea, a lot of us, including some high-profile citizens, have progressed past the stage of denial, landed squarely on anger, and have started hollering for change.

In January of 2006, for example, television correspondent John Stossel titled a “20/20” education expose “Stupid in America,” and described how Belgian high school students had “cleaned the American kids’ clocks” in an ABC-sponsored international academic test: “We didn’t pick smart kids to test in Europe and dumb kids in the United States. The American students attend an above-average school in New Jersey, and New Jersey’s kids have test scores that are above average for America.” Denied access to filming in classrooms by all the states he approached, Stossel finally got permission from Woodrow Wilson High School in Washington, DC to give “20/20” cameras to a few students selected by the school, and what the student camera operators captured wasn’t pretty.

Bill and Melinda Gates, through their well-funded and generous foundation, are advocating strenuously for a whole new approach to high-school education in this country. Noting that 40% of low-income 12th graders in our public high schools are reading below basic levels, and citing a total high-school graduation rate of only 70% in 2001, (down a notch to 69.7% in 2004), the Gates Foundation is investing in organizations that are working to overhaul the system by creating one new productive school after another – schools that are focused often on engaging students in specialized ways and getting them interested in education again.

Even Margaret Spellings, U.S. Secretary of Education, can’t spin the international figures into gold. Though she repeatedly intones, “The rest of the world is catching up with

us,” in an April, 2006 “Ask the White House” online interactive forum, Secretary Spellings admitted that, “Data on international assessments show us that American K-12 students are behind those in many other developed countries. On the most recent Program for International Student Assessment (PISA), American 15-year-olds ranked 24th out of 29 developed nations in mathematics literacy and problem solving. Only 7% of America’s 4th and 8th graders were ‘advanced’ on the 2003 Trends in International Math and Science Study (TIMSS), while 38% of Singaporean 4th graders and 44% of Singaporean 8th graders reached this level.”

International education rankings are available from a number of sources, but PISA and TIMMS, the two assessments mentioned by Secretary Spellings, are among the best known. PISA, a triennial world-wide test of 15-year-old schoolchildren’s scholastic performance, is coordinated by the Organization for Economic Co-operation and Development (OECD). The TIMMS assessment, along with PIRLS, which tracks progress in international reading literacy, is administered by the International Association for the Evaluation of Educational Achievement, known as IEA.

So what do the data show? OECD’s 9-page, 2005 Education at a Glance Briefing Note for the United States, which distills the findings of its 436-page English-language edition of the most current PISA data, ranks the U.S. in 21st place, tied with Poland, Hungary, and Spain, in mathematics. In problem-solving, we tied for 23rd with Spain, Portugal, and Italy. However, along with South Korea, we were one of only two countries where a statistically-significant improvement in mathematics performance was achieved by our 8th graders over an 8-year period. The current TIMMS study, from 2003, measured the mathematics and science achievement of children at the 4th and 8th grade levels in 50 countries. Overall, the Asian countries outperformed the other participants. Singapore was at the top, followed closely by Chinese Taipei (formerly Taiwan), Hong Kong, and South Korea.

Alan Wagner, Professor and Chair of the Department of Educational Administration and Policy Studies at the University at Albany, worked at the OECD in Paris for fifteen years, until 2001, and he was there during the early years when PISA was being developed. He acknowledges that the IEA, with its TIMMS assessment, is trying to do something similar to PISA, which is to take stock of how well students are doing at different stages in the education process as a

basis for analytical work, but that both get used as international benchmarks and those comparisons get a lot of attention. But PISA's strategy of discovering what they call "indicators" for 15-year-olds sets it apart. Why 15-year-olds? "That's the last age at which most of the education systems in the developing countries had roughly common expectations for all their young people," Wagner reveals. "After that point, which is upper secondary level in some countries, students would spin off into vocational pursuits, as opposed to academic ones."

If we know, then, that our 15-year-olds (students customarily in late 8th through early 10th grades here) are ranked near the bottom on the worldwide assessments, and we are anxious because so many concerned people say that less effective schooling awaits them in American high schools, what direction should we follow? Do we ignore the international assessments and continue on our present course, trusting in the federal No Child Left Behind program's standards and testing to raise student achievement levels in the long run, or should we look carefully at the international testing results and see what we can learn from high-performing education systems in other countries so we can begin to re-structure our own system? Why are students in other cultures interested in learning when so many of our students seem bored? What motivates them? And here's the toughest question: if we are seemingly unable, as a nation of parents and educators, to stoke the innate human curiosity for learning into a fire for knowledge and skills in the majority of our students, are these international assessments the pragmatic indication that America has lost its drive?

Alan Wagner has a Zen-like response to the international testing, at least: "It seems to me that a meaningful way to think about this is that the assessments measure what they measure, and they're probably reasonable measures of what they measure, but they don't measure everything." What Wagner may be suggesting here, apart from the challenges inherent in deciding what the data doesn't measure, is not only how difficult it is to interpret the actual findings, for any number of reasons, but also how easy it is to use the data to promote whatever particular agenda an individual or organization may have.

The OECD Briefing Note for the United States, for example, trumpets the strength of the U.S. in the knowledge economy. (The development of modern knowledge economies

reflects the move from economies based on land, labor, and capital to economies where the main component of production is information and knowledge.) OECD's report explains that for the European Union, which includes more high-performing, industrialized, G-8 economies than anywhere else in the world, the U.S. is its main competition and is clearly in first place, as far as knowledge economies go. We also lead the G-8 in per capita wealth, and accounted for 42% of all research and development expenditure in the OECD area, far ahead of the EU and Japan. Moreover, in the filing of 2001 patents, which are one important measure of innovative and inventive performance, the U.S. had the highest share, about 34%.

Are the international assessments accurate? Are they testing only the best and brightest students from Singapore or Finland or other high-performing countries? Though it's not easy to ascertain exact testing demographics, at least it's clear that in OECD, the participating countries have worked for years in concert to establish the testing criteria. Furthermore, it's equally hard to dispute the scrupulous research and data-collection methods of the IEA and the OECD: PISA's 322-page Technical Report (2000) lays out in great detail the collaborative nature of that particular assessment, explaining all the ways that experts from OECD-participating countries ensure that the PISA testing instruments and methods are internationally valid.

But as Alan Wagner points out, "We can easily get lost in technical data, and you can also argue that the assessments measure what the designers intended them to assess. But if you start at the point of, 'We're not doing well, or we're doing well,' then the next step would be to say, 'How should we be comparing one population to another?'" Because the assessment statistics can generate more questions than answers, at the very least, a more productive means of comparison may involve supplementing those statistics by temporarily abandoning the abstract for the concrete and by focusing on the people who have the responsibility of training the students taking these assessments: What if we briefly examine the observations and conclusions of two new teachers from very different countries?

A Culture of Discipline **(Why this heading here?)**

In 2000, U.S. citizen Lorna Middlebrough left her banking job and traveled with her husband to China. For three years, they lived in a “small” rural town of 100,000 people, and taught English as a Foreign Language to Master’s and Ph.D. students at the North West Sci-Tech Agricultural and Forestry Institute. When they moved back home in 2003, Lorna entered an M.A. in Teaching program at Johns Hopkins University, where she was placed in the same student cohort as Tian hui Xue. Tian hui was born in China in 1966, finished her undergraduate studies in Beijing, and worked as an editor there until 1995, when she moved to America. Both earned their Master’s Degrees in 2005 and are now teaching English for Speakers of Other Languages (ESOL) in elementary schools in Silver Spring, Maryland.

“China is still the most populous nation in the world, 1.3 billion, and the focus there has been on developing economic growth and continuing to keep the economy booming, and part of the way to do that is to control the number of births,” Lorna explains. In China, which has had a one-child per family birth policy since the 1970s, there is no retirement system, and it has become very important for all those only children to get the best education possible. Where the economic value of learning is so obvious, it transforms quickly into enlightened self-interest, and families exert continuous pressure on their children. “It’s to your advantage, long-term, for your son or daughter to get a good education and get a good job, because in your old age, they will financially support you.”

That pressure begins when children are two years old. Their parents make them memorize T’ang Dynasty poems as a way to teach the four tones in Chinese speech. “When I compare my Chinese students with my American students,” Lorna says, “my Chinese students could memorize an incredible amount of information, because that was what they had been practicing since they were small children. And the Chinese system rewards that. Everything is based on rote memorization, including assessments. In a multiple choice test, you can establish what people know, but you can’t begin to understand what they really think, or how they would problem solve. And when I would ask my Chinese students to write their actual opinion on something in a journal, they would look at me like I had three heads.”

On the other hand, Tian hui readily admits she likes regimentation, and thinks memorization is effective. She would start early in elementary school, before dawn, reading

and memorizing on her own in nationally-standardized textbooks from 6:00 until 8:00 am, before she walked back home for breakfast. Instruction began at 9:00, and continued through the day until it was dark.

In 1986, China passed a Compulsory Education Law that established national requirements and guaranteed school-age children the right to receive at least nine years of free elementary and secondary education, and 95% of its primary-age schoolchildren were enrolled in more than 800,000 schools. Even now, 90% of the curriculum is controlled by the Central Government.

Again, Tian hui prefers that system: “In China, it’s a national, standardized curriculum. Here, the curriculum is done at the district level, not even at the state level, and it keeps changing all the time, too. You can see all kinds of grammatical mistakes in my ESOL curriculum. And when they give examples, too, they just aren’t right. How can I use it in my teaching? We have neglected the basic things here. We are trying to pursue critical thinking and all these high-level skills, but without the basics and the foundation laid firmly.”

Tian hui likes order. She doesn’t like the way American students wander around during class, using the bathroom or sharpening pencils. They’re too hard to control. “There is a lot of chaos,” she observes. “When it is instruction time, you are supposed to focus on what the teacher is teaching and follow instructions. Students behave better in China. There are not many distractions. They’re much quieter in China. Here, we encourage students to ask questions in class, but in China they don’t do that.” Tian hui also admits she isn’t very objective. “I think the American system is not the best. We should be more open to learn from other countries. In China, they think, *We need to become knowledgeable. We want to become very useful people in the future.* Chinese students are always taught to think about what they can do for their family, and what they can do for their country, and what they can do for humankind. They are always encouraged to think big and to be ambitious. In class here, my students always ask me, ‘Can we play a game? Will there be a prize? Can we have an ice cream party?’ The teacher’s job is to teach and to help you gain knowledge and to guide you, not to buy you presents. The students here seem more entertainment-oriented than knowledge-oriented.”

Lorna believes the underlying philosophies of the Chinese and American educational systems make them vastly different, and suspects that part of the reason, as one would expect,

is how our disparate societies teach our children to participate in them. “The Chinese system produces people who are hard-working, very serious, and extremely conscientious. They want to succeed and be very successful, but often they are only comfortable with a structured approach to things. To a great extent, that’s what their society rewards. “Whereas, in American culture,” Lorna continues, “when our students step out into the world and start to participate in the workforce or in our political system, we reward people who are innovative thinkers, who are creative problem solvers, who step outside the box – who turn the box upside down and inside out sometimes. We are looking for people to think very independently and to speak with confidence and with credibility about their ideas or to raise questions.”

Questions in China, as Tian hui mentioned, aren’t encouraged, whether in school or in the larger society. Corruption is rampant and ubiquitous, according to Lorna, and if you have a problem, “It’s difficult to find someone to complain to who is not part of whatever is going on. As far as how the international testing assessors are working in China, Lorna concludes, “ I suspect that it would be hard for them to get to some of the poorer areas. From a sampling perspective, it would be easier to work in economically-developed cities with good roads on the east coast, because certainly there are places in China where you have to walk for two days and then ride a donkey for a day to get there.”

In one sense, much of what Lorna and Tian hui express about the educational biases in China and America is what we might expect to hear, based on what have been two diametrically-opposed political systems for much of the last fifty years. On the surface, rote memorization, a national curriculum, and oppressive pressure to conform seem like mainstays of a more totalitarian system that we would adamantly oppose in our system. And yet the enforced standardization of No Child Left Behind has proven to be a double-edged sword, bringing not only the benefits of a reform movement that has forced public schools to examine how they are doing business and to improve, but also establishing a punitive environment that has narrowed the curriculum, promoted lockstep teaching and learning, and promoted a culture of fear in many places. That seems to characterize a system that is pragmatically better suited to China than to America.

Moreover, according to Bonnie Terry, who traveled to China in 2000 as a member of a reading Education Delegation, “The Chinese are in the process of changing their teaching practices from that of rote learning to that of teaching thinking skills. They were very

interested in learning new techniques.” And Tian hui contends that the study of English is part of the curriculum for every student in China, starting in Grade One.

So the problems of comparison are clearly not black and white, and we are inundated with assessment data and anecdotal information from an overwhelming variety of sources. Jim Baldwin, District Superintendent of Questar III BOCES and one of the people responsible for launching the new Tech Valley High School, believes that we ignore international comparisons at our own risk. “The kids that we’re educating today are going to compete with people throughout the world for jobs. When we compare the number of students who are earning bachelor’s degrees and then earning advanced degrees in the United States compared to other countries, particularly China and India, we’re seeing just some shocking numbers, because they have so many more people. They appear to be making great progress in terms of the development of what we call the creative class – those are the people who generate ideas, who generate new products, and who generate the next wave of technology.”

“I think that people are curious about these things,” Alan Wagner agrees, but he also wonders if people are asking, “Can we really be compared? Aren’t we so different that comparisons don’t really make sense? Does that account for the difference in our performance? Do they seem to be addressing in their systems exactly the kinds of things that we’re seeing as a challenge in terms of improving educational performance?’ Those are useful questions to ask, I think, and it’s useful to look across international borders -- as useful as looking across state borders.”

As Lorna Middlebrough concludes, “We should be looking for best practices all over the world, but that’s just not what people in my school are thinking about. There’s not a lot of energy at this stage to look at other countries and other models and then come back and say, ‘Here are some things that we think are worth exploring.’ They’re very America-focused. As somebody new to teaching in this country, I can see that there are a lot of things wrong with the system, but there are also a lot of great people teaching. So if you have a lot of great people teaching who really care about kids and who know their stuff and work so hard, why aren’t we being more successful? I don’t know. If this were an easy problem, we would have figured it out by now.”

