

When Talking Education

Five fundamental lessons to inform conversations

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Lesson #1: Americans think the nation's public schools are troubled, just not the public schools their kids attend.

Lesson #2: The U.S. has never led the world on international exams.

Lesson #3: We are not a country of internationally average students.

Lesson #4: Teachers are the most important school-related factor, though out-of-school factors matter more.

Lesson #5: Nothing in education is simple.

*“What the best and wisest parent wants for his own child,
that must the community want for all of its children.
Any other ideal for our schools is narrow and unlovely;
acted upon, it destroys our democracy.”*

- John Dewey, 1899¹

*“So what is the lesson to be learned?
If a country seeks better education performance,
it is incumbent on the political and social leaders
to persuade the citizens of that country to make the choices needed to show
that it values education more than other areas of national interest. “*

- OECD Report, 2011²

The day I officially changed my college track from dentistry to education, I ventured into Barnes and Noble and perused the shelves devoted to my new major. I switched to education for the opportunity to positively impact the lives of young people, though I admit a small part of me wanted to play a role in “saving education” as well. I stared at the rows of books realizing I had little idea what needed to be saved let alone how to save it.

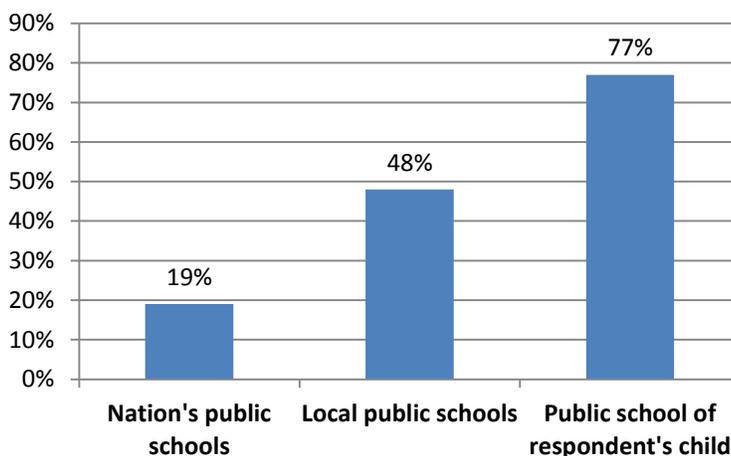
For the next decade and then some I focused squarely on improving my classroom. Like so many teachers, I cared about the world of education swirling around me but the demands of the classroom occupied my time. Consequently, even after a decade in the teaching profession I still found myself inadequately prepared to intelligently talk about the state of education with similarly uninformed family and friends. After one of those uncomfortable talks I began a personal quest to decode the confusion of public education for myself. It has been a revealing three-year effort keeping up with blogs, deconstructing documentaries, highlighting books, examining reports, and bouncing ideas off colleagues. I have found public education more complicated than I had expected; certainly more nuanced than what is presented in most magazine articles and TV specials. What follows are five lessons I think I know now and think you should know before engaging in your next conversation on American education.

Lesson #1: Americans think the nation’s public schools are troubled, just not the public schools their kids attend.

Gallup regularly conducts a poll asking Americans to grade public schools three ways. First, respondents grade the entire U.S. public school system. Second, respondents grade only their local public schools. Third, respondents with children in public schools grade only the public school of the respondent’s child. Year after year, the results indicate we are a confused nation.

Consider the 2012 results of the survey. When addressing the first question, a mere 19% of respondents gave an A or B grade to U.S. public schools as a whole. Certainly this is not good, though the data parallels the conventional wisdom that U.S. public schools are in peril. The responses are more encouraging when addressing the second question, as 48% of respondents gave an A or B grade to their local public schools. This suggests that although the public schools are understood to be bad, many people in the U.S. feel their local public schools are not the problem. This trend continues through the third question. For respondents with children in public schools, 77% gave an A or B grade to their child’s public school. 77%!³

Percentage of respondents who gave an A or B grade (2012)



(Source: Author, based on 2012 PDK/Gallup Poll)⁵

Gallup has been asking this same series of questions for years and has consistently demonstrated a perception gap.⁴ What this perception gap represents is anyone’s guess. Perhaps people are biased in favor of their local schools. Perhaps parents simply have low expectations. Perhaps parents value other aspects of their local school over standardized test scores and similar data often reported. Perhaps parents see low standardized test scores as more reflective of the child than the school. Perhaps while Americans have seen the test scores and understand problems exist, three out of four parents are pleased, even impressed with the experience provided by their public schools. Most likely the data reflects a mixture of these options plus more.

We know that the perception of the nation’s public schools as a whole undoubtedly involves information gathered from outside sources: news reports, documentaries, political discourse, etc. The parental perception of local schools, on the other hand, relies heavily on personal experience. ***This data therefore delivers an encouraging correlation: The stronger one’s relationship with the public school, the more favorable one’s opinion.*** This data challenges the current national message portraying the education cup as not just half-full but practically empty. When it comes to their local schools, most Americans simply aren’t buying the message. They apparently experience something considerably more positive, though their optimistic perspective remains largely absent from the national dialogue. Our conversations need more depth.

The perception gap underscores a national lack of understanding concerning the complexities of public education. We know from what we are told that our nation’s schools are bad, but our experience with our own schools often tells us otherwise. We need more information. Let’s dig a little deeper as we investigate international exam data in lesson #2.

Lesson #2: The U.S. has never led the world on international exams.

In 2012 Exxon Mobil supported their National Math and Science Initiative through an advertisement centered on the U.S. being ranked a below average 25th in the world on international math exams. The inspiring ad urges the nation to raise academic standards and “get back to the head of the class.”⁶ But the U.S. has never been “head of the class” on international math exams. In fact, when looking back to the First International Math Study (FIMS) in 1964, the U.S. ranked 11th out of the 12 participating countries.⁷ By January 1992, the U.S. had taken part in three international math surveys and three international science assessments and, in a summary from The National Center for Education Statistics, “fared quite poorly” on each assessment with “scores lagging behind those of students from other developed countries.”⁸ Today, the popular dialogue suggests the U.S. is fading on international exams while historical analysis suggests the nation is actually *improving* on these exams.⁹ Of course, improvement means we typically finish about average among developed countries (more on that later).

The wrinkle in all this is that the U.S. has managed to secure its international role as an economic, political, and innovation leader without leading on international exams. Nearly 50 years have passed since our mediocre showing on the FIMS exam; during that time we have continued to produce test scores trailing other nations, all along warning that these test scores pose a threat to our national future. Yet 50 years of American prosperity have failed to support such a correlation.

Dr. Yong Zhao thinks 50 years of data is enough to consider revising our reaction to international exams. The University of Washington professor brings a unique perspective to the conversation. Born and educated in China, he is a respected scholar on both Chinese and American education. He views the past 50 years of American prosperity as evidence that the U.S. education system has strengths the international test scores fail to recognize. In his words:

“To meet the challenges of the new era, American education needs to be more American, instead of more like education in other countries. The traditional strengths of American education - respect for individual talents and differences, a broad curriculum oriented to educating the whole child, and a decentralized system that embraces diversity - should be further expanded, not abandoned.”¹⁰

To Americans who consistently hear of the bad news in education, it may seem inconceivable that what we need is to be more American. But Zhao indicates other countries, including Asian countries, are embarking on reform paths to do just that. Consider Singapore as an example, a nation consistently scoring among the top in the world on international math exams. Singapore’s math reputation is so legendary, the country’s math teaching philosophies and methods have been packaged as a curriculum marketed towards U.S. schools. Yet even Singapore found something missing from their high test scores, as Tharman Shanmugaratnam, Singapore’s former Education Minister explained in a 2006 Newsweek interview:

“‘We both have meritocracies,’ Shanmugaratnam said. ‘Yours is a talent meritocracy, ours is an exam meritocracy. There are some parts of the intellect that we are not able to test well - like creativity, curiosity, a sense of adventure, ambition. Most of all, America has a culture of learning that challenges conventional wisdom, even if it means challenging authority. These are the areas where Singapore must learn from America.’”¹¹

So most American parents think highly of their own schools, the U.S. prospered the last half century despite never dominating the international exams, and countries outperforming us on international exams see valuable

qualities in our students that are missing in their own. If this all sounds too good to be true, it is because conventional wisdom insists that U.S. education is in decline since some Golden Age in the past. In *Schools Cannot Do it Alone*, Jamie Vollmer contends this line of thinking suffers from “nostesia,” the combination of nostalgia for the past and amnesia for what the past was actually like.¹² Today, 90% of the nation’s adults between the ages of 25 and 29 have attained at least a high school education. This record high for the U.S. compares to 57% of the same population in 1971. That same age group also set a record for attainment of bachelor degrees; 33% in 2012 compared to 12% in 1971.¹³ The National Assessment of Educational Progress (NAEP) results, considered the nation’s report card, have shown a significant increase in performance for nine and thirteen year-olds in both math and reading since the assessment began in 1971.¹⁴ Unfortunately, these more positive messages on education are rarely articulated.

The U.S. may not boast perfect public schools, but we apparently have strengths generally ignored in the national dialogue. Zhao insists an increasing concentration on standardized testing will erode those strengths. From his vantage point, the U.S. is “becoming obsessed with test scores in a limited number of subjects, which in essence is the adoption of a single criterion for judging the success of students, teachers, and schools.” Zhao warns: “Once we adopt this single criterion, we will kill the most important and sought-after commodity in the 21st century — creativity.”¹⁵

Zhao’s message should give Americans reason to pause. So should recent research on the ACT and SAT, the ubiquitous standardized tests taken by high school juniors and seniors, who include the test results in college applications. In *Crossing the Finish Line*, William G. Bowen, Matthew M. Chingos, and Michael S. McPherson report on their study of college completion that included roughly 200,000 college students attending over 60 universities. The prominent researchers (Bowen a former president of Princeton University; McPherson a former president of Macalester College) included in the study an investigation of the reliability of ACT and SAT scores at predicting college completion. Keep in mind the ACT and SAT are designed to provide colleges a standardized alternative to considerably un-standardized high school grades. In doing so, the ACT and SAT offer a level playing field for selecting students for college admission. Regardless, Bowen, Chingos, and McPherson found high school grades surprisingly - and convincingly - superior to both tests at predicting college completion. Their explanation: Not only do high school grades indicate some level of content mastery, high school grades also reveal the presence of other important and lasting qualities necessary for success.¹⁶ The moral of this research reinforces the theme from the international test data, as we appear to repeatedly overrate the perceived messages from standardized tests while simultaneously underestimate valuable qualities the tests fail to measure.

This is not to say that standardized test data is meaningless, but a reminder that such data certainly does not mean everything. Safe to say we could approach standardized test data with greater perspective and respond to it with greater poise. The same can be said of our education system altogether. As we implement reforms, it seems sensible to recognize and build on our strengths while specifically addressing the challenges we face. And we do have challenges. In all my research, nothing struck me like the challenge I encountered in Lesson #3.

Lesson #3: We are not a country of internationally average students.

I previously referenced Exxon Mobil's advertisement referring to our low international math ranking. That ranking stems from the 2009 PISA exam, an international exam taken by 15 year-old students that attempts to assess a student's ability to apply their knowledge to new situations.¹⁷ The exam is the work of the Organisation for Economic Co-operation and Development (OECD), an effort of 34 nations to "promote policies that will improve the economic and social well-being of people around the world."¹⁸ Among the OECD nations, the U.S. ranked about average in science and reading literacy and just below average in mathematics.¹⁹

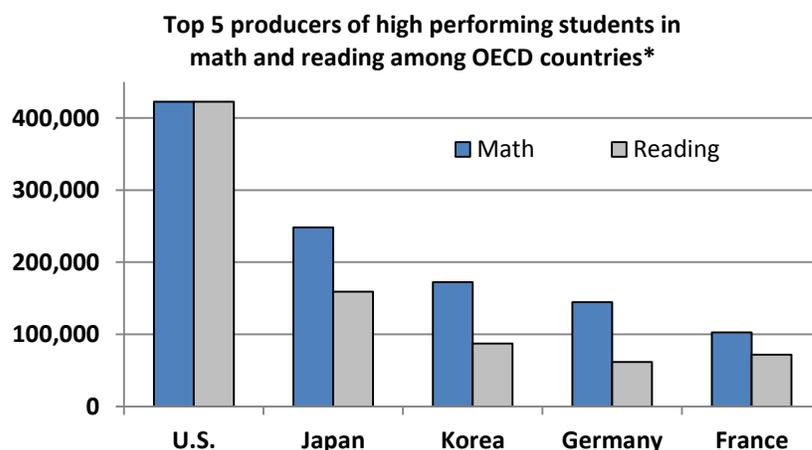
Upon hearing that our students tested about average on the 2009 PISA exam, one could easily assume that we are a nation of internationally average students and that we just do not produce enough high performing students to compete with the top performers worldwide. This is simply not the case. According to a revealing study from Michael Petrilli and Janie Scull of the Thomas Fordham Institute, when the PISA data is extrapolated over entire populations, the U.S. actually produces more high achievers than any other OECD country in math and reading. The numbers aren't even close. In math, the U.S. produces nearly as many high achievers as the next two countries combined (Japan and South Korea). In reading, the U.S. produces more high achievers than the next three countries combined (Japan, South Korea, and France).²⁰

These great numbers of high-performing students arguably stand among the best prepared students in the world, especially when assuming these high-performers also maintain the non-tested strengths (creativity, curiosity, willingness to challenge conventional wisdom, etc.) Singapore noticed in American students. For all of these high performers, it seems inaccurate to label the U.S. education system as failing, broken, or obsolete.

Unfortunately, Petrilli and Scull determined the U.S. produces more low achieving students than any other OECD country as well.²³ Some may attempt to shrug off this negative data by contending that the U.S. educates (and tests) all of its students while other countries only educate (and test) the elites. Among OECD countries, this is simply a misconception.²⁴

In the big picture, we are a big nation (with over 316 million citizens, the U.S. is the OECD's most populous country - roughly 2.5 times greater than second place Japan)²⁵ with a globally substantial number of high achievers and a regrettable number of low achievers. Of course, there are plenty of students in between as well but it is from the extremes that we derive our achievement gap; a gap decidedly correlated to socio-economic status.²⁶ This socio-economic impact is not unique to urban or rural schools but is true throughout the country. Anywhere that there is a child with a lower socio-economic status, that child has a high chance of being a low-achiever.²⁷

This kind of revealing information demonstrates the type of valuable lessons available in international exam data. Despite the hype, the problem with U.S. education is not necessarily that we rank roughly average internationally on exams like PISA. The U.S. is simply not a nation of average students. We are a nation, though,



*High performing considered a level 5 or 6 on 2009 PISA exam. Quantities extrapolated over entire 15 year-old enrollments.

(Source: Author, based on OECD data)^{21, 22}

where academic achievement, at least as reported from international test data, is vastly unequal. Every American should understand this.

Why are poorer students overwhelmingly less educated? I have come to accept that everything in education is complicated, but this is *really* complicated. Researchers in 1995 estimated that children from underprivileged families hear about 30 million fewer words by the age of 3 than children from privileged families. This word gap leads to substantially different vocabulary development that puts children from underprivileged families at a disadvantage even before formal schooling begins.²⁸ Poverty also adds more stress on children, and stress has a negative effect on working memory and consequently hinders concentrated learning.²⁹ Understanding this, it would seem obvious that these students would require more resources to bring them on par with their more privileged peers. Yet, when these students finally enter school, they often receive fewer resources than their richer peers. According to the OECD publication *Strong Performers and Successful Reformers in Education: Lessons from PISA for the United States*, the U.S. is one of only a handful of OECD nations that spends more educational dollars on its privileged population than on its underprivileged population. Furthermore, the report indicates that underprivileged students in the U.S. are also less likely to have access to better-qualified full-time teachers.³⁰ The year after year accumulation of environmental stresses and the persistence of fewer resources, both at home and at school, consistently stacks the deck against our poorer students.

It gets worse. *Lessons from PISA for the United States* suggests that our attitudes also play a role, contending that Americans often subscribe to the notion that talent is generally the result of inheritance as opposed to an outcome of hard work. The result of this notion is a reduction in expectations of students from lower-socioeconomic backgrounds. From the report:

“...it is unlikely that the United States will achieve performance parity with the best-performing countries until it, too, believes, or behaves as if it believes, that, with enough effort and support, all children can achieve at very high levels.”³¹

Of course, the two-paragraph explanation above only begins to depict the tangle of interwoven threads between socioeconomic status and education. Still, with our low-socioeconomic students, we evidently have plenty of places to improve. What we cannot do is lose sight of their under-education by misrepresenting the story - a story that Singapore’s Tharman Shanmugaratnam bluntly summarized in his 2006 interview with *Newsweek*: “Unless you are comfortably middle class or richer,” he explained, “you get an education that is truly second-rate by any standards.”³²

Leave it to a distant observer to succinctly articulate our ills. May we not lose focus as we search for solutions. This brings us to lesson #4.

Lesson #4: Teachers are the most important school-related factor, though out-of-school factors matter more.

Let's get this straight - the consensus from research indicates that out-of-school factors play a far greater role in student achievement than do school-related factors, with teacher quality recognized as easily the most significant of the less-impactful school-related factors.³³

Herein resides a number of lessons. First, we should be willing to admit what should already be obvious - learning does not merely take place in the vacuum of classrooms but rather accumulates through the continuous interactions of daily life. The classroom may be a concentrated effort towards educating, but a life's education continues beyond the classroom walls so much so that the out-of-school environment proves most responsible for achievement in-school. Unfortunately, some of the current reform dialogue ignores out-of-school factors or even labels such factors as mere excuses. Research, on the other hand, seems to support acknowledging

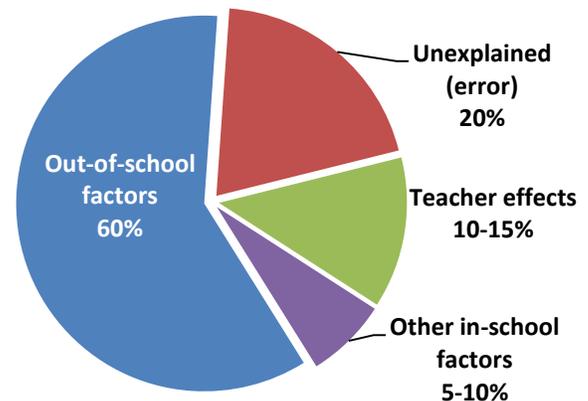
out-of-school factors and working on out-of-school strategies that could lead to more in-school success.

At the same time, we should respect the critical school-related role of our teachers and work towards strengthening the profession. This is an area that has become a top priority. Our main strategy these days involves increasing the intensity of teacher evaluations in an effort to assign classifications of quality to our teachers so that we can weed out the bad ones. While no one would argue in favor of keeping a truly poor teacher in the classroom, consider the analysis from *Lessons from Pisa for the United States*:

“As PISA shows, in most OECD countries, once teachers are hired, it is very hard to remove them from professional service, irrespective of the quality of their work. The high quality of teachers in those [high performing] countries appears to be a function of the policies that determine the pool from which teachers are initially drawn, their compensation, the status of teachers, the high standards of entering university-level teacher-preparation programmes, the quality of their initial preparation, and the attention given to the quality of their preparation following their initial induction.”³⁵

In other words, we may find the current strategy of teacher sorting to be, at best, painfully inefficient and, possibly, ineffective altogether. Instead, or at least concurrently, the U.S. could focus on raising the quality of teachers entering the profession in the first place. Jim Collins, the best-selling business author, addresses this strategy in *Good to Great and the Social Sectors*. In the monograph (carrying the insightful subtitle, “Why business thinking is not the answer”), Collins explains that selectivity is critical in environments like public education.³⁶ The challenge for the U.S. is creating an environment where the entire system can be appropriately selective. Many of today's educational reforms argue in favor of competition - competition between schools for students and competition between teachers for higher ratings. Unfortunately, these competitions can be counterproductive. We don't really want winner and loser schools when every child deserves a great school. We don't really want teachers competing at the expense of collaboration and collective improvement. The more appropriate place for competition likely resides in the job market, before new talent ever enters the classroom.

Approximate influence on student achievement



(Source: Author, based on Di Carlo, 2010)³⁴

The U.S. could make the “race to the top” happen between teaching candidates, hire the best of them, and then give them the professional range to flourish. This is the lesson from countries like Finland, where only 10 – 15% of college graduates are accepted into teacher preparation programs.^{37, 38}

We know teachers are the most important school-related factor in a student’s success. That is clear. Less clear is why our school-related reforms are not focused squarely on attracting the highest quality teacher candidates.

Lesson #5: Nothing in education is simple.

If there is one simple lesson to be had it is this: nothing in education is simple. In my research I found time and again conventional wisdom turned on its head.

Is our school calendar, with summers off, a result of our agrarian past? Doubtful, as it was typically the big city districts that first organized into common schools. There, students were given summers off partly because it was believed students needed a break, partly because the summers were hot and the schools had no air conditioning, and partly because many of the eastern elite whose students populated the schools retreated to summer homes. Logically the idea makes little sense anyway, as farmers certainly would have preferred spring and fall intermissions to coincide with the heavy work of spring planting and fall harvesting. Historically, common calendars established slowly and unevenly across the country, beginning with a wide variety of calendars and pitifully irregular attendance.^{39, 40} (The agrarian calendar myth is often coincided by the idea that students experience “summer learning loss” during summer vacation. Research suggests this is typically only the case for poorer students - yet another factor in the achievement gap.⁴¹) School calendars still vary across the U.S. today, though not widely, and on average American schools require instructional time on par or exceeding other OECD nations (there is a misconception that we don’t).^{42, 43} Furthermore, compared to their international peers, U.S. teachers spend considerably more time instructing, a relationship revealing a lack of emphasis on teacher planning and collaboration time. As a result, U.S. teachers spend hundreds of hours per year outside of the school day working on education-related endeavors.^{44, 45} On an international scale, U.S. teachers appear to be anything but slackers.

Do teachers’ unions need dismantling? Unlikely, as states in the U.S. with the strongest collective bargaining agreements also produce the highest scores on the country’s NAEP exam.⁴⁶ Internationally, the OECD report *Lessons from PISA for the United States* notes that many of the highest performing countries on the PISA exam possess strong unions, including Finland and Japan. The report concludes that while there may be no relationship internationally between the presence of unions and student performance, “the higher a country is on the world’s education league tables, the more likely that country is working constructively with its unions and treating its teachers as trusted professional partners.”⁴⁷ So we have national and international evidence demonstrating at the very least zero negative correlation between teachers unions and educational performance. It seems unsupported to suggest we would be better off without them.

I could go on and on. Interested in rating teachers using value-added data? Keep in mind that value-added results can be highly variable from year to year and are “widely considered unreliable in differentiating the good from the mediocre (or the mediocre from the terrible).”^{48, 49} Think teacher compensation needs to be merit-based? Read Daniel Pink’s *Drive* (or view his TED talk), where he explains how pay-for-performance schemes applied to anything other than routine tasks “usually don’t work and often do harm.”^{50, 51} Or check out Linda Darling-Hammond’s *The Flat World and Education*, where she discusses such performance-pay plans failing at

various times in our educational past and how such plans can undermine collaboration and actually de-motivate. She suggests a career ladder model that offers pathways to “recognize skill and accomplishment, enable professionals to take on roles that allow them to share their knowledge, and promote increased skill development and expertise across the profession.”⁵²

Such finer details highlight the need for nuance in our education discourse. We can acknowledge challenges without declaring the entire system broken. We can celebrate strengths knowing there is much to improve. I began my teaching career looking to help “save education.” I now cringe at the superficial and misleading phrase.

For schools, improving educational outcomes - especially regarding educational equality - will likely require the inspired support of an informed public. This is no small task considering the misconceptions which abound among educators and policy makers as well.

Conclusion

Today I feel more competent discussing the state of American education, though part of this competency includes accepting that every time I learn something new, a door opens revealing an unexpected roomful of data and arguments to humbly study. I am encouraged that parents generally approve of the service provided by public schools, that other countries see qualities in our students they would like to foster in their own, and that many of our students possess these qualities while also producing high scores on international exams. While accepting these positive messages, I recognize the tremendous challenge in meeting the needs of our struggling students, especially those with lower socio-economic backgrounds. I realize this is a complicated matter involving in-school and out-of-school factors, and without a single solution. Alas, nothing in education is simple. The five lessons presented in this paper offer a foundation for shifting the national narrative on education towards one of perspective and poise. The education of our children warrants as much.

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