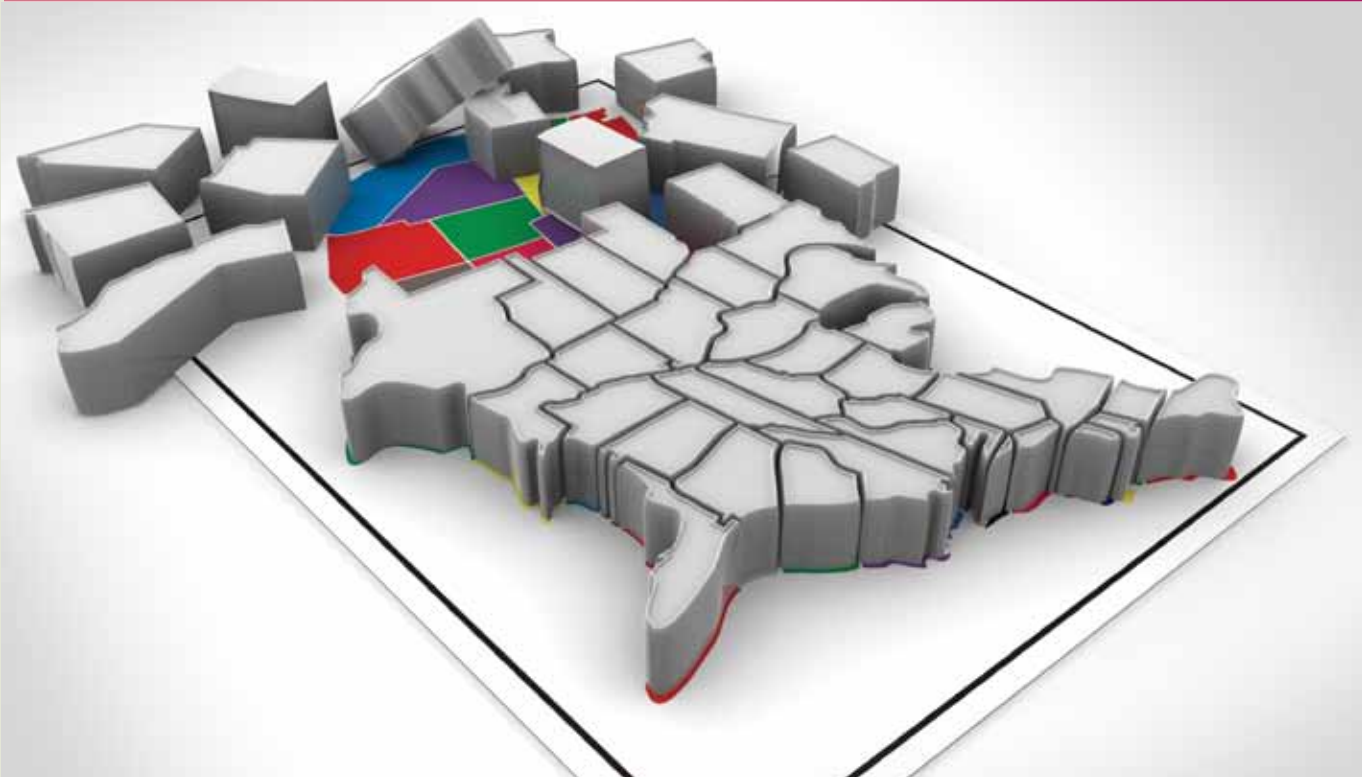


Common Core State Standards: I Wonder?

by Christopher H. Tienken
Academic Editor



On June 1, 2009, the National Governors Association Center for Best Practices (NGA Center) and the Council of Chief State School Officers (CCSSO) issued a press release stating that 49 states and territories had joined the Common Core State Standards Initiative (CCSS). That initiative proposed that all states voluntarily adopt the same set of curriculum standards and, eventually, submit to a national test, or at least a state test, aligned directly to those standards. Within months, many organizations, including

the 16 education associations that make up the Learning First Alliance, pledged support for the yet untested initiative. Seemingly, state education bureaucrats and many professional education associations jumped directly to *How will we implement these standards?* rather than first asking *Why should we implement them?* Certainly education professionals responsible for promoting the social, emotional, and academic growth of children should, at the very least, ask *why* as part of the vetting process for any initiative aimed at children.

To ask *why* means that we, as education professionals, must look at the underlying assumptions of the initiative. The NGA and CCSSO made several sweeping statements to support the need for nationalizing curriculum standards and testing. For example, the NGA and CCSSO (2009) asserted that America's children are still behind their peers in other countries "in terms of academic achievement and preparedness to succeed." The NGA and CCSSO expressly affirmed that the economic future

of the United States hinges on adopting the proposed standards. These claims notwithstanding, neither the professional associations nor the leaders of state education agencies who were early supporters of the initiative challenged any of these statements. They went directly to *how*, without asking *why*.

Because curriculum and assessment are two of my research interests and I have investigated the relationship between international assessment rankings and economic achievement (see Tienken 2008), the NGA and CCSSO statements made me wonder: Does the premise for this initiative—the need for national curriculum standards and testing—actually hold up under review, even a superficial review? I personally need to ask the *why* questions before I choose to support this initiative.

I Wonder

First, I wonder about the claim that America's children are lagging behind their international peers. Understanding international test results is not as cut-and-dried as the NGA and CCSSO would have us believe. Many issues affect test scores at the international level: opportunity to learn the material on the test, selective sampling by countries, poverty levels of the students in the samples, negotiations of actual test questions by the countries involved, culture, and other factors out of the control of schools. I will provide an overview of a few of these factors.

Opportunity to Learn (OTL) refers to the degree to which a country's curriculum includes or closely matches the tested topics. For example, Bracey (2000) reported that 23 percent of the questions on the Third International Mathematics and Science Study (TIMSS) 1999 mathematics test, taken by U.S. 12th-grade students, presumed that the

test-takers had already completed some type of calculus course. However, most U.S. students do not take calculus—in part because of federal education policies enacted following Sputnik that reduced the mathematics requirements. Even though these policies are antiquated, they continue to drive mathematics curricula programming (Bracey 2002; Tanner and Tanner 2007)—a continuing issue that CCSS won't fix. In 1999, most U.S. students who took the TIMSS were under-prepared for about one-quarter of the questions on that test. The degree of curricular alignment and OTL also correspond to the relationship between grade level and student age. For example, ages of students tested in their "final of year school" ranged from 17-years-old in the United States to 21-year-old college seniors in other countries (Bracey 2002). Even when comparing only the high school students, U.S. students in their "final year of school" tend to be younger than—and one school year behind—their international counterparts.

Sample student populations of other nations generally do not compare "apples to apples" with the student population of the United States. The students tested in many countries represent selective, more homogeneous populations "whereas the U.S. students represent an actual sampling of the total student population and age grouping" (Tanner and Tanner 2007, 357). For example, during their final year of school, Russia administered the TIMSS test only to native speakers, no second language learners allowed; likewise, Israel tested only students in Hebrew-speaking schools, giving their testing sample a much more homogeneous quality; Switzerland included only students in 15 of 26 cantons, representing their highest performing regions; and Spain

restricted the sample population to Spanish-speaking schools, but also omitted students in Catalunya, which is a semi-autonomous region and has more variation in student population (Lapointe, Askew, and Mead 1992). Italy excluded entire provinces, such as Sicily, because those regions have some of the highest percentages of children living in poverty, along with the highest levels of unemployment (Bracey 2002). In contrast, the United States included in the TIMSS sample students from 98 percent of the available population. Among those tested were special education students, English language learners, and children from poverty—a much more diverse population.

Like it or not, in the United States, the variable with the strongest correlation to student performance and achievement on standardized tests is poverty level. For instance, in no state in the United States does the subgroup of students identified as "economically disadvantaged" achieve a higher mean scale score than other students on any state standardized tests, at any grade level (Tienken 2010). At the time of the TIMSS, the United States ranked 2nd highest behind Russia in the percentage of students under the age of 18 living in poverty in industrial nations (Bradbury and Jäntti 1999). U.S. poverty rates correlate closely with race and student achievement on standardized tests, more so than in other industrialized nations (Organization for Economic Co-operation and Development [OECD] 2009). Consider, for example, the results from another international test—the 2000 Programme for International Student Assessment (PISA). Disaggregating by race, white U.S. students ranked 2nd out of 29 countries on the 2000 PISA reading tests, 7th out of 30 in mathematics, and 4th out of 30 in science (OECD 2000). Conversely, black and

Hispanic students ranked 26th among 30 countries on the reading test and 27th among 30 countries on the mathematics and science tests (OECD 2000). The poverty rates for black and Hispanic students are three times higher than for white students in the United States (U.S. Census Bureau 2009).

Another factor that impacts international assessment scores is that participating countries negotiate the test items that will be included. Representatives from more than 60 countries negotiated the development, wording, skills, and context of the items in the PISA 2003 assessment. The United States does not do well in these negotiations, as reflected by the fact that there are typically more test items covered by Asian curricula than by typical U.S. curricula. The Asian countries have reputations for scoring high on international tests, and there is intense national pressure to maintain that reputation. Their negotiating teams do their best to ensure that trend continues. Also, their countries produce test preparation materials based on skills they know will be included. For example, PISA and TIMSS test preparation materials are readily available in stores in Taiwan and Singapore (Sjøberg 2007). Thankfully, I have not yet seen any prep materials for these meaningless tests on the store shelves in the United States.

The ‘So What?’ Connection
Second, I wonder whether it matters that other countries outscore U.S. students. So what? Clearly, the validity of the results is questionable given all the other factors that impact them. More importantly, even though international achievement tests have been given since 1964,

the predictive validity of these tests has yet to be determined. In terms of test scores, predictive validity relates to how one test score predicts performance on some other meaningful measure. The NGA and CCSSO make the double-barreled claim that (a) national standards will lead to higher international test scores for U.S. students; and (b) performance on international tests (aka competition with international peers) is a predictor of future economic superiority. Therefore, the results from international tests should predict economic strength. Like the first claim, this one does not hold up even to superficial review.

There is no strong, or even mild, correlation—and certainly not a cause-and-effect relationship—between national standards and national performance on international tests. Using basic probability skills, one can determine that the majority of countries in the world have national standards, and thus the probability is high that many countries with national standards will score well. Examining the actual test results, however, reveals the weak relationship. Some countries that rank higher on international tests have national standards and some do not. For example, Canada does not use common national standards, but scored well on the 2006 Progress in International Reading Literacy Study (PIRLS) of reading achievement (Mullis et al. 2006). Canadian students also scored well on the PISA 2003 and 2007 tests. Both Canada and Australia, another country that did not have national curriculum standards, scored above average on the 2006 Science PISA and ranked 2nd and 4th among the participating countries that are members of the OECD (PISA 2003; 2007). Countries

that perennially outscore the United States, such as Singapore and Japan, are now trying to undo the damage done after nationalizing their education systems around one set of standards (Zhao 2009; Tan 2010).

Interestingly, despite not having internationally benchmarked national standards, America had the largest number of students who scored at the top levels in science on the latest PISA for 15-year-olds (OECD 2009). The United States accounted for 25 percent of the world’s top science achievers—nearly double the next closest competitor, Japan, with only 13 percent; and triple Germany and the United Kingdom, with only 8 percent. Korea had only 5 percent of the world’s top achievers in science, and Hong Kong-China had only 1 percent. Never heard of this achievement? The data is readily available online (OECD 2009), but apparently the NGA and CCSSO have not read it.

Voodoo Economics

I need to be clear about this next point: There is no methodologically sound empirical evidence that supports a cause-and-effect or even a strong relationship between any of the G8, G14, or G20 countries’ rankings on international tests of academic skills and those countries’ economic vitality and competitiveness. There is, however, empirical evidence to challenge that claim. Multiple studies conducted during the past 12 years reveal that the relationships between rankings on international tests and the economic vitality of the top 17 economies in the world are either so weak that they are meaningless or they are statistically insignificant; these studies certainly do not demonstrate a cause-and-effect relationship (Bils and Klenow 1998;

Krueger 1999; Bracey 2002, 2005; Psacharopoulos and Patrinos 2002; Ramirez et al. 2006; Baker 2007). In fact, among these strongest 17 economies in the world, the relationship between their rankings on international tests and their economic strength, as measured by the Growth Competitiveness Index compiled by the World Economic Forum, is actually negative (Krueger and Lindahl 2001; Tienken 2008). This means that the stronger the economy, the lower the rank on international tests.

According to the World Economic Forum (Schwab 2009), the United States has ranked either 1st or 2nd consistently in economic competitiveness since 1998. The only year the United States fell out of the top two spots was in 2006, following Hurricane Katrina. The United States was ranked 2nd during 2009–2010, even after the recent economic meltdown. Keep in mind that that U.S. students never scored in the top two spots on any international test during this same period or any prior time. In fact, if economic competitiveness were linked to international test scores, the United States likely would rank near the bottom because that is exactly where U.S. students scored on the First International Mathematics Study in 1964 and the First International Science Study in 1970. Ironically, the students who scored so poorly on those early international tests, and all international tests since then, are the same people who have kept our economy the most competitive in the world for all these years. I also found it interesting that the current workforce, the most productive workforce in the world according to the Council on Competitiveness, the World Economic Forum, and

the International Institute for Management Development—to name a few—was educated without statewide standards, let alone national standards and testing.

Despite more than 50 years of political noise regarding America's imminent demise at the hands of education systems like the Soviet Union, Japan, South Korea, and Singapore, the U.S. economy has remained the strongest and most nimble in the world. What is this infatuation on the part of some education leaders, professional associations, and policy makers with asking *how* before they ask *why*? The facts just do not support the rhetoric in the case of Common Core State Standards and should prompt all of us to ask *why*. ■

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Christopher H. Tienken is an Assistant Professor at Seton Hall University in the College of Education and Human Services, Department of Education Leadership, Management, and Policy. He is a former public school teacher and administrator. You can contact him at christopher.tienken@shu.edu.

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