The Common Core State Standards (CCSS) initiative continues to move forward. As of October 2010, 37 states and territories made the CCSS the legal law of their land in terms of the mathematics and language arts curricula used in their public schools.

Over 170 organizations, education-related and corporations alike, have pledged their support to the initiative. Yet the evidence presented by its developers, the National Governors Association (NGA) and Council of Chief State School Officers (CCSSO), seems lacking compared to the independent reviews and the available research on the topic that suggest the CCSS and those who support them are misguided.

The standards have not been validated empirically and no metric has been set to monitor the intended and unintended consequences they will have on the education system and children (Mathis, 2010). Yet most of the nation’s governors, state education leaders, and many education organizations remain committed to the initiative.

Surely there must be more compelling and methodologically strong evidence available not yet shared with the general public or education researchers to support the standardization of one of the most intellectually diverse public education systems in the world.

Or, maybe there is not?

A Bankrupt Argument

As colleagues and I presented previously (Tienken & Canton, 2010; Tienken & Zhao, 2010), the major arguments made by proponents in favor of the CCSS collapse under a review of the empirical literature: (a) America's children are “lagging” behind international peers in terms of academic achievement, and (b) the economic vibrancy and future of the United States relies upon American students outranking their global peers on international tests of academic
achievement because of the mythical relationship between ranks on those tests and a country’s economic competitiveness.

The persuasive, and to this point, effective argument made by proponents combines the classic combination of fear and falsehoods. The Roman Poet Seneca wrote, “We are more often frightened than hurt, and we suffer more from imagination than reality” and in this case he was correct.

Unfortunately for proponents of this empirically vapid argument it is well established that a rank on an international test of academic skills and knowledge does not have the power to predict future economic competitiveness and is otherwise meaningless for a host of reasons (Baker, 2007; Bracey, 2009; Tienken, 2008).

However, fortunately for proponents it seems as if some policy makers, education leaders and those who prepare them, and the major education associations and organizations that penned their support for the CCSS did not read the evidence refuting the argument or they did not understand it. The contention that a test result can influence the future economic prowess of a country like the United States (U.S.) or any of the G20 nations represents an unbelievable suspension of logic and evidence.

The fact is China and its continued manipulation of its currency, the Yuan, and iron-fisted control of its labor pool, has a greater effect on our economic strength than if every American child scored at the top of every international test, the SAT, the ACT, the GRE, or the MAT.

According to Nobel Prize winning economist Paul Krugman, China’s undervaluation of its currency cost the U.S. almost 1 million jobs and over 200 billion dollars in lost economic growth and 1.5% of its gross domestic product last year (The Washington Times, 2010). Economic strength of the G20 countries relies more on policy, than education achievement. Tax, trade, health, labor, finance, monetary, housing, and natural resource policies, to name a few, drive our economy, not how students rank a few, drive our economy, not how students rank on the Trends in International Math and Science Study (TIMSS) or the Programme for International Student Assessment (PISA).

To believe otherwise is like believing in the tooth-fairy. The U.S. already has one of the highest percentages of people with high school diplomas and college degrees compared to any other country and we had the greatest number of 15 year-old students in the world score at the highest levels on the 2006 PISA science test (OECD, 2008; OECD, 2009; United Nations, 2010).

We produce more researchers and scientists and qualified engineers than our economy can employ, have even more in the pipeline, and we are one of the most economically competitive nations on the globe (Gereffi & Wadhwa, 2005; Lowell, et al., 2009; Council on Competitiveness, 2007; World Economic Forum, 2010).

19th Century Skills
The vendors of the CCSS claim that the standards address critical skills necessary to compete in the 21st century. If so, why do they repackage 19th century ideas and skills? We only need to look at the mid 1800’s and the Lancastrian Method used in London and some of America’s cities and the Quincy, Massachusetts schools to see how the idea of standardization will play out. It did not work then and it will not work now.

The language arts and mathematics curriculum sequences embedded in the standards are nothing more than rehashed versions of the recommendations from the
The United States Council on Competitiveness called for:

- (a) use creative leadership strategies;
- (b) collaborate and cooperate globally amongst themselves and with their customer bases;
- (c) differentiate their responses, products, and services to “build operating dexterity” (p. 51); and
- (d) be able to use complexity to a strategic advantage.

The vendors of the CCSS have a problem: They have no data that demonstrates the validity of the standards as a vehicle to build 21st century skills nor as a means to achieve the things the business leaders say will be needed to operate in a diverse global environment. The CCSS are stuck in a time warp. A curricular time machine, if you will, set to 1858.

**Evidence Please**

School administrators are encouraged to make decisions based on data. The word data appears 230 times in the No Child Left Behind Act (No Child Left Behind [NCLB PL 107-110], 2002). The websites of every state education agency include references to data-driven decision making.

Many school districts or schools have “data committees” that make school-wide decisions based on some type of data. Surely there must be quality data available publically to support the use of the CCSS to transform, standardize, centralize and essentially de-localize America’s public education system. The official website for the CCSS claims to provide such evidence. The site alleges that the standards are “evidence based” and lists two homegrown documents to “prove” it: *Myths vs Facts* (NGA, 2010) and the *Joint International Benchmarking Report* (NGA, 2008).

The *Myths* document presents claims that the standards have “made use of a large and growing body of knowledge” (p. 3). Knowledge derives in part from carefully controlled scientific experiments and observations so one would expect to find...
references to high quality empirical research to support the standards.

When I reviewed that “large and growing body of knowledge” offered by the NGA, I found that it was not large, and in fact built mostly on one report, *Benchmarking for Success*, created by the NGA and the CCSSO, the same groups that created these standards; Hardly independent research.

The *Benchmarking* report has over 135 end notes, some of which are repetitive references. Only four of the cited pieces of evidence could be considered empirical studies related directly to the topic of national standards and student achievement.

The remaining citations were newspaper stories, armchair magazine articles, op-ed pieces, book chapters, notes from telephone interviews, and several tangential studies.

Many of the citations were linked to a small group of standardization advocates and did not represent the larger body of empirical thought on the topic.

The *Joint International Benchmarking Report*, the primary source of evidence provided by the NGA and CCSSO, draws most of its conclusions from one report, *The Role of Cognitive Skills in Economic Development* (Hanushek & Woessmann, 2008). The use of that report is troubling because it has several fatal flaws in its logic and methodology.

**Questioning the Evidence**

*The Role of Cognitive Skills* report is the primary piece of evidence used by the National Governors Association and the Council of Chief State School Officers to support their claim that achievement on an international test causes future economic growth and that national standards will improve international test scores for U.S. students.

The report is methodologically and logically flawed on several levels. First, the basis of the argument supported in the *Role* report about a cause and effect relationship between standardized test results and national economic growth is derived from a different, yet unsophisticated economic argument that an individual’s grades in school and performance on standardized tests predict his or her economic growth later in life. That sounds logical at first, but the cause and effect slight-of-hand associated with that logic and the leap from individual effects to national effects of grades, test scores, and rankings are untenable.

Most economists understand that the variables that drive individual income growth cannot be applied to an entire national economy. They are two different units of analysis; two different scales if you will. It would be like claiming that because a certain teaching method was effective with one student in a very small school in Maryland that we should make national education policy for all students in all states based on the results of that one method, with one student, in one small school (See Baker, 2007 & 2010 for more complete economic examples.).

Connecting an individual’s education achievement on a standardized test to a nation’s economic future is not empirically or logically acceptable and using that mythical connection for large-scale policymaking is civicly reckless. When education leaders and those who prepare them parrot that argument they actually provide credence to that anti-intellectual myth. When school administrators implement programs and policies built on those faulty arguments, they commit education malpractice.
Size Matters

When trying to extricate the facts from fiction in terms of the relationship between education and economic strength at the global level, it is important to understand that not all economies are created equal (Baker, 2007, 2010; Rameriz, Luo, Schofer, & Meyer, 2006; Tienken, 2008).

It is not methodologically correct to include every country from the TIMSS or PISA testing samples into the same economic or education pool. The size of the economy matters. Correlations between test rankings on international tests and economic strength can be statistically significant and moderately strong when all the small or weak economies like Poland, Hungary and the Slovak Republic remain in the sample with the G20 countries. Whereas the relationship between international test ranks and economic strength can be non-existent or even negative when only the G14 or G20 economies, the strongest economies in the world, form the sample (Tienken, 2008).

The authors of The Role of Cognitive Skills (Hanushek & Woessmann, 2008) do not cluster the samples to compare “apples to apples,” and they simply place all the countries in the same analysis pot and act as if size does not matter. Of course there is a positive relationship between rankings on international tests and economic growth when one includes 18 countries with weak or collapsing economies but who have international test rankings above those of the U.S.

The inclusion of very small economies with very large ones is statistically deceptive and actually demonstrates that rankings do not predict economic success. To think that Poland, Slovakia, Bulgaria, or Hungary, all countries that outscored the U.S. in math on the 2006 PISA test, will ever eclipse the U.S. in economic prowess based on its education output on international tests defies reality.

Economic Realities

Nations with strong economies (e.g. the G20) demonstrate a weaker relationship between increases in education attainment (e.g., output on international tests, percentage of population with at least a BA degree) and economic growth.

Japan provides an example of this phenomenon. Japan’s stock market, the Nikkei 225 Average, closed at a high of 38,915 points on December 31, 1989 and on October 15, 2010 it closed at 9,500 points, approximately 75% lower, but Japan ranked in the Top 10 on international tests of mathematics since the 1980’s and has always ranked higher than the U.S. on such tests. Yet Japan’s stock market and its economy have been in shambles for almost two decades. They have national curriculum standards and testing, and have for over 30 years. Japanese students outrank students from most other nations on math and science tests.

In contrast, the Dow Jones Industrial Average broke 1,200 points for the first time, on April 26, 1983, the day A Nation At Risk (National Commission on Excellence in Education, 1983) was released. The Dow closed at 11,691 points on January 4, 2011, over a ten-fold increase. The U.S. consistently outranks Japan on the World Economic Forum’s Growth Competitiveness Index.

So I am still wondering, where is the connection? (See Tienken, 2010).

Maybe Japan’s Gross Domestic Product (GDP) benefitted from the high rankings on international tests more so than the U.S.? Since 1984 the GDP of Japan and the U.S. have grown at basically the same rates. The U.S. posted third-quarter GDP in 2010 that was approximately 3.74 times larger than in 1984 whereas Japan’s 2010 third-quarter GDP was
3.48 times larger than in 1984. Advantage U.S. regardless of what some call poor international test rankings. The U.S. had approximately two-times the number of 15 year-old students who scored at the top levels of the 2006 PISA science test compared to Japan. The U.S. accounted for 25% of the top scoring students in the world on that test even though the U.S. did not outrank Japan overall.

Economic Competitiveness

The education system needs the economy more than the economy needs the education system in the G20 nations. Competitive, nimble, and expanding labor markets in countries with strong economies drive the citizenry to seek higher levels of education. This was known over 50 years ago when Harbison and Myers (1956) noted, “Education is both the seed and flower of economic development.” (p.xi).

Somehow those who continue to proffer the mythical relationships between international test rankings and economics and sell the idea of centralized curricular and knowledge standardization have not yet discovered this. Neither have those who continue to believe the worn out ideas and slogans about international test ranks and nationalized curricula.

Nations functioning at high levels economic growth and education attainment require larger changes in the education levels of a majority of the citizenry to have a statistically significant influence on the economy (the ceiling effect). But they need strong economies to stimulate the population to continue their education. Rameriz, Luo, Schofer, & Meyer (2006) found that, “School achievement levels appear to have a greater influence on economic growth in countries with lower levels of enrollment” (p.14). Those are countries like Chad, Honduras, and Sudan.

The U.S. has ranked either first or second out of 139 nations on the World Economic Forum’s (2010) Global Competitiveness Index (GCI) eight out of the last 10 years and never ranked below sixth place during that period, regardless of results on international assessments and without adopting national curriculum standards.

No other country has ranked better consistently on the GCI. The U.S. workforce is one of the most productive in the world and best educated. Over 70% of recent high school graduates were enrolled in colleges and universities in 2009 (Bureau of Labor Statistics, 2010). Approximately 30% of U.S. adults between ages 25-34 years-old have at least a bachelor’s degree. Only six other industrialized nations have a higher percentage of their population holding at least a bachelor’s degree (OECD, 2009) but their economies pale in comparison to the U.S.

The U.S. leads the world in what are known as utility patents or patents for innovations. In 2009, the U.S. was granted 95,037 patents whereas Japan, the country with the next greatest number, was granted 38,006.

The countries of world combined were granted only 96,896 such patents (U.S. Patent and Trademark Office, 2010). The U.S is home to over 28% of the patents granted globally (resident patents); the largest percentage of any country. Japan is second with 20%. The U.S. is second behind Japan for the number of Trademarks, 1.7 million versus 1.4 million.(World Intellectual Property Organization, 2010).

The World Economic Forum (2010) stated that the U.S. has an outstanding university system. It is home to 11 out of the top 15 universities in the world; the United
Kingdom is next with three out of 15 (The Times Higher Education, 2010). It seems illogical that the country with the best university system in the world can have a failing PK-12 education system that needs to be placed under centralized curricular control.

The World Economic Forum attributed the fall of the U.S. from second place to sixth place on the 2010-2011 GCI in large part to increased weakness in auditing and financial reporting standards and a lack of corporate ethics. The overall trust in the U.S. market sophistication has dropped from ninth in the world to 31st place during the last two years due to the fact that the global economic meltdown was created by the U.S. financial markets and vended across the globe.

Conspicuously missing from the list of reasons for the U.S. drop in competitiveness was the quality of its education system because education does not drive the U.S. economy (World Economic Forum, 2010). Test rankings simply do not correlate to economic strength when one compares apples to apples. Baker (2010) found a -.48 correlation between a country’s rank on the First International Mathematics Study (FIMS) in 1964 and its Purchasing Power Parity Gross Domestic Product (PPP-GDP). Rameriz et al., (2006) found very weak positive relationships ranging from .048 to .142 and those positive relationships were mainly for small and weak economies – size still matters.

Tienken (2008) found no statistically significant relationships between the Top 22 performing economies in the world and their ranks on international tests of math and science going back to the FIMS. Salzmann and Lowell (2008) documented that 90% of the variance in test scores on the PISA is explained by factors within countries, not between countries. Why do we focus on a solution that at best will provide only up to a 10% improvement?

A Decision in Search of Data
Where is the evidence to support the rhetoric surrounding the CCSS? This is not data-driven decision making. This is a decision grasping for data.

The evidence offered by the NGA and CCSSO to make the case for a cause and effect relationship, or any significant relationship for that matter, between test result ranking, economics, and the need for national curriculum standards (and eventually national testing) amounts to nothing more than snake oil.

Yet this nation will base the future of its entire public education system, and its children, upon this lack of evidence. Many of America’s education associations already pledged support for the idea and have made the CCSS major parts of their national conferences and the programs they sell to schools.

This seems like the ultimate in anti-intellectual behavior coming from what claim to be intellectual organizations now acting like charlatans by vending products to their members based on an untested idea and parroting false claims of standards efficacy.

Where is the evidence that national curriculum standards will cause American students to score at the top of international tests or make them more competitive? Some point to the fact that many of the countries that outrank the U.S. have national, standardized curricula.

My reply is there are also nations like Canada, Australia, Germany, and Switzerland that have very strong economies, rank higher than the U.S. on international tests of
mathematics and science consistently, and do not have a mandated, standardized set of national curriculum standards.

McCluskey (2010) reported that for the 27 nations with complete data sets that outranked the U.S. on the 2006 PISA science test, 10 of those nations did not have national standards whereas 12 of the 28 nations that ranked lower than the U.S. had national standards. The same pattern of mixed results held true for the 2007 Grade 8 TIMSS mathematics results. Although the eight countries that outranked the U.S. on that test had national standards so did 33 of the 39 countries that ranked lower (McCluskey, 2010). The students from the majority of nations with national standards ranked lower than the U.S. students. The same pattern held true for the TIMSS science assessment. More countries with national standards underperformed the U.S. than did countries without national standards.

**Alternative Explanation**

Perhaps there is another explanation for scoring high on international tests other than standardized national curriculum standards.

I noticed that every industrialized country, 24/24, that outranked the U.S. on the 2006 PISA mathematics test of 15 year-olds has some form of universal healthcare system for at least mothers and children, whereas the U.S. and 40% of the countries that scored lower than U.S. students do not (World Health Organization, 2010).

Most of those countries that outscored the U.S. also have lower child mortality rates and most have longer overall life expectancies than the U.S. (CIA, 2010). Only Poland, Slovakia, and Hungary have shorter life expectancies and still outscore the U.S. on international tests. Many of the countries that outscore the U.S. also have comprehensive fair housing policies.

Housing policy has been shown to be a stronger intervention for increasing test scores than nationalizing curriculum (Schwartz, 2010).

Perhaps it’s not universal curriculum standards that make the difference. Maybe it’s a comprehensive social system that provides a quality social safety net for children and mothers that has the greatest influence on ultimate education outcomes.

The data point in that direction. Although this would not qualify as empirical argument, it does highlight some interesting relationships and also is just as strong as the evidence offered to support the standards, maybe stronger.

**Centralized Curriculum Planning**

The U.S. has a population of over 300 million and is more ethnically, religiously, and racially diverse than many of the smaller nations that outrank it on international tests. The U.S. has the third largest population in the world behind China and India and it has the largest population of any country that participated in the TIMSS and PISA testing. Japan ranks 10th in population and the other countries that have larger populations than Japan did not participate in the TIMSS/PISA or are not in the G20 set of nations.

Size matters because size brings complexity. Finland, the country that usually ranks in the top five on international tests has 5.5 million people. In the U.S. we call that Wisconsin.

In fact, the top six scoring nations on the PISA 2006 math test have a combined population of only 240 million people.
Singapore, another country commonly cited as one the U.S. should emulate in terms of mathematics and science curriculum and testing has only 4.8 million people, a little more than half that of New Jersey.

To think that every student in this country should be made to learn the same thing is illogical—it lacks face validity. The U.S. is just too large and too diverse to engage in such folly. We should have learned from the Soviet Union that central planning does not work in the long-run. The diversity of the U.S. is one of its greatest strength. The U.S. economy is able to adapt to change because of the skill diversity of the work force.

The intellectual, creative, and cultural diversity of the U.S. workforce allows it to be nimble and adapt quickly to changes in the marketplace.

China, another behemoth of centralization, is trying desperately to crawl out from under the rock of standardization in terms of curriculum and testing (Zhao, 2009) and the effects of those practices on its workforce. Chinese officials recognize the negative impacts a standardized education system has had on intellectual creativity. Less than 10% of Chinese workers are able to function in multinational corporations (Zhao, 2009).

I do not know of many Chinese winners of Nobel Prizes in the sciences or in other the intellectual fields. China does not hold many scientific patents and the patents they do hold are of dubious quality (Cyranoski, 2010).

The same holds true for Singapore. Authorities there have tried several times to move the system away from standardization toward creativity. Standardization and testing are so entrenched in Singapore that every attempt to diversify the system has failed, leaving Singapore a country that has high test scores but no creativity. The problem is so widespread that Singapore must import creative talent from other countries (Tan, 2010).

**Oversimplification**

It is terribly naïve to think that all children should be made to master the same set of academic skills and knowledge and that it would actually benefit them or a country in the long run to do so.

It is an Orwellian policy position that lacks a basic understanding of diversity and developmental psychology. It is a position that eschews science and at its core, believes it is appropriate to force children to fit the system instead of the system adjusting to the needs of the child.

It is fundamentally un-child centered and it is an overly simplistic proposal for such a complex nation. Standardization is a Pollyanna approach to policy-making.

One cannot separate curriculum from culture, emotions, personal backgrounds, life experiences, prior knowledge, home environment or stages of cognitive and social development.

Cognitive Development Theory (Piaget, 1963; 1967; Vygotsky, 1978), Ecological Systems Theory (Bronfenbrenner and Evans, 2000), and Socio-cultural Theory (Vygotsky, 1986), or Maslow’s Hierarchy of Needs (1954) among others, suggests that we cannot pretend curriculum operates in a vacuum apart from other factors.

Standardization assumes that children are not active constructors of meaning that bring prior knowledge and experience to the learning situation. It assumes that all students start at the same academic place with the same advantages and set of skills and that they will finish with the same results. Those assumptions
seem more like a fairy tale than evidence-based decision making.

**Curriculum Research**

So what does the research suggest in terms of centralized curriculum planning? Wang, Haertel, and Walberg (1993) found that curriculum has the greatest influence on student achievement when it is a proximal variable in the education process. They found that the closer to the student that the curriculum is designed, deliberated, and created, the greater influence it has on learning.

This means curriculum should be largely a local endeavor. When curriculum is treated as a distal variable, something that occurs distant from the student, handed down from on-high, as is the case with the CCSS, it has a much weaker influence.

National policy mandates have the weakest influence of all on student learning, because like the CCSS, they are distal to the actual learning process (Wang, Haertel, and Walberg 1993).

Recently, Tramaglini (2010) found similar results in a study of the 120 New Jersey high schools that serve the state’s poorest communities. Tramaglini found that the more proximal the curriculum development process, the better the students performed on the state’s high school exit exam. Reed (2010) reported that universal curriculum standards do not close the achievement gap, the achievement gap is not a product of an “expectations gap” (p. 38) via differing standards for different types of students, and that local school contexts explain more of the achievement gap than universal standards.

Alexander’s (2002) study of course taking pattern before and after the introduction of New York’s regent standards revealed that local contexts such as school size and demographics accounted for most of the disparity in course taking, and universal curriculum requirements did little to overcome that after their initial implementation. Local context, involvement and input matters greatly.

There are also seminal works from education’s history that point to importance of curriculum as a proximal variable. Of course we have the mountains of curricular knowledge created by Francis Parker, John Dewey, Horace Mann, Ralph Tyler, Boyd Bode, the Harap Committee, and Hilda Taba to name just a few.

But we have large studies from others as well. The landmark Eight-Year Study demonstrated that curriculum can be an entirely locally developed project and still produce better results than traditional curricular programs (Aikin, 1942).

In fact, the experiment demonstrated that the less standardized, more diverse, locally developed and designed the programs (based on demonstrated research and theories of learning), the better the students did in college academically, socially, and civically compared their traditionally prepared peers.

Results from several well-known earlier studies demonstrated that there is not “one best curriculum path” for students in high school and standardized curricula sequences are not necessary to achieve superior results in elementary and high schools (Collings & Kilpatrick, 1929; Jersild, Thorndike, & Goldman, 1941; Thorndike, 1924; Wrightstone, Rechetnick, McCall, & Loftus, 1939; Wrightstone, 1936).

**The Road to Nowhere**

We have been down the road of standardized curriculum and that road is a dead end in terms of ensuring that more children learn more. The results from the “college prep for all” initiatives in Chicago beginning in 1997, New York State
in 2001, Texas in 2003, and mandated use of universal state standards via the No Child Left Behind Act of 2002 have done little to close the achievement gap, or the social/economic gaps that exist in this country (Allensworth, Takako, Montgomery, & Lee, 2009). The growth of blacks and Hispanic subgroups on the NAEP slowed after NCLB was enacted compared to the same time period before the law. One mandated universal curricular program for all children just does not make conceptual sense, is intuitively contradictory, and has no empirical backing.

Equality of curriculum standards is inherently inequitable. Mandating that everyone follow the same set of standards and perform at the same level of achievement guarantees that everyone will not get what they need and that certain groups of students, those that do not fit into the new system, will lose out.

They will be labeled “not proficient” or “in need” of something, when perhaps they just need more choices, more pathways, and more diversity of curricula within the system.

We should be increasing curricular diversity, not seeking to constrict it. We should be trying to help students explore and enrich their intellectual and social growth, not constrain them or funnel them into a small set of subjects.

A comprehensive curriculum is supposed to fulfill a unifying and specializing function. The Common Core State Standards does neither.

It creates a standardizing apparatus. We should respect differences among children, not try to extinguish them. There is a lot more going on here on the societal level than meets the eye. It’s more complex than the creators and vendors of the standards either understand or wish to present.

**Think It Over**

There is no reliable, independently validated empirical support for the CCSS initiative and yet many policy-makers and educators support it.

It is an attractive idea to support because it limits the intricacies of the real issues and makes it easy to lay the blame at the foot of a system (public education) that reacts to society, not drives it.

The CCSS initiative compartmentalizes complexity and compartmentalizing messy issues allows people to be intellectually lazy. Developing coherent education and social policy is more difficult.

The vendors of the CCSS present the standardization of America’s children as a neat and clean solution, easily manageable and easy to discuss.

Unfortunately the real world is not so organized and it is much more cognitively complicated. Believing that we can eliminate the complexity of educating all students by putting forth superficial ideas like one-size fits-all standards is like believing rankings on international tests really mean something. (Is your tooth under the pillow?)

It seems anti-intellectual, and based on the lack of evidence, unethical to support such a massive social experiment, using participants who have no choice but to go along.

The evidence suggests that there is not a crisis in education; there is a crisis in education leadership at all levels. Those who perpetuate bad ideas based on flawed data are practicing poor leadership. If some school leaders and
their organizations do not want to stand up for children then they should stand down and let those who are willing assume the leadership reins.

School leaders do not have to conduct the research on these topics but at least they should read it and dig below the surface to understand it.

Children have a right to a quality education. School leaders, those who prepare them, and the people who lead our professional organizations have a duty to help provide the quality. If some education leaders choose to drink the snake oil then they should expect to get sick. If some help sell it, they should resign.

Children do not have a seat at the policy-making table. Policy is thrust upon them, not created with them. They are helpless to defend themselves against poor decision making.

They do not have a voice. They have only the voices of the adults who are supposed to know better. I welcome your rebuttals but please remember: Leave the opinions and ideology behind and bring the evidence.

Author’s Note

Portions of this commentary were adapted from Tienken 2010 & 2011 listed in the references.
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Perceptions of the Role of the School Principal in Teacher Professional Growth

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Abstract

The purpose of this study was to investigate teacher and principal perceptions of the role of the principal in fostering teachers’ professional growth. A Likert-type questionnaire was used to explore the ways 476 teachers and 135 principals see themselves as being supported in their professional growth. New and veteran teachers and principals differ in their perceptions of what support they deem important to teacher professional growth. Teachers indicate that having a mentor is the most supportive factor in their growth. Principals tend to agree that listening to teacher concerns is the most supportive factor in fostering teacher professional growth.

Keywords

teacher professional growth; principal-teacher perceptions; teacher development
Every year, nine in ten of the nation’s three million teachers participate in professional development designed to improve their content knowledge, transform their teaching, and help them respond to students’ needs (Johnston & Louveouzo, 2009).

The value of teacher professional growth, the important role of principals in fostering that growth, and the techniques that are most often used by principals to assist in teacher growth and development have been examined by a number of education scholars in the past (Berube, 2004; Cochran-Smith & Lytle, 1999; Darling-Hammond, 2000, 2005; Drago-Severson, 2007; Dufour, 1995; Glickman, 2002). Most of these studies focus on new and beginning teachers.

What is not clear from the literature is how principals and teachers perceive the behaviors exhibited by principals in promoting the professional growth of teachers.

In this study the researchers examine how principals promote the professional growth of teachers from the perspectives of principals and teachers themselves by describing principals’ and teachers’ views on several aspects of principal behaviors.

Currently, there is a national focus on teacher quality. We assert that a contributing factor to teacher effectiveness is how the principal fosters teacher professional growth.

An integral component of sustained school improvement has been the willingness and ability of principals to assume the role as staff developers. To do this, principals must have clear and open communication with teachers and create opportunities to build relationships (Halfacre & Halfacre, 2006; Youngs & King, 2002). These principal behaviors increase principal-teacher trust, a necessary ingredient in helping teachers reach their professional goals (Gimbel, 2003).

Principal leadership which supports adult development makes schools better places for teaching and learning. Several studies suggest that principals realize that most teachers expand their teaching range only with carefully designed support and assistance (Berube, 2004; Blase & Blase, 1998; Gimbel, 2003; Halfacre & Halfacre, 2006; Sergiovanni, 1992; Zimmerman, 2006).

Findings from these studies point to the principal sharing decision making with teachers and involving them in planning professional development to meet their goals. Teachers tend to demonstrate high self-efficacy when communication with the principal is regular, open and honest (Gimbel, 2003).

Formal and informal opportunities that principals provide for teacher collaboration yield vast positive results for teacher growth. In schools where teachers frequently talk to each other the most about practice and where principals stayed in touch with the community, students had noticeably higher academic achievement (Blase & Blase, 1998; Cochran-Smith & Lytle, 1999; Drago-Severson, 2007; Leanna, 2002; Wenglinsky, 2000).

Results from these studies point to feedback from principals that was particularly helpful for teachers in implementing new ideas, using greater variety in teaching, responding to student diversity, preparing and planning more carefully, taking more risks, achieving better instructional focus, and using professional discretion to make changes.
Findings from studies of narrative feedback written by principals to teachers in their annual evaluations suggest that simply providing general feedback to teachers by the principal did not “promote and support” professional learning.

Rather, more structured and focused performance rubrics, used by the principal, helped provide quality constructive feedback to teachers and had a significant impact on their professional growth. Teachers could use principal feedback to promote self-inquiry (Feeney, 2007; Frase & Streshly, 1994).

Existing literature on teacher growth and leadership suggests that effective principals develop strong relationships with their teaching staffs through both formal and informal evaluations, coupled with ongoing positive dialogue between principals and teachers (Cochran-Smith & Lytle, 1999; Danielson, 2002; Glickman, 2002; Kaplan, 2001; Pancake & Mollier, 2007; Zimmerman, 2006).

In sum, by sharing the decision making, principals can engender positive interpersonal relationships with their teaching staffs. Building on these relationships, principals can find time for teachers to collaborate and offer timely, appropriate feedback on evaluation. In so doing, they promote the growth of their teachers.

**Methodology**

**Design**

For this descriptive-exploratory study of principal and teacher perspectives, an original questionnaire was used. A list of 20 final questions was developed and critiqued by university colleagues with expertise in questionnaire design. The creation of the final questionnaire emanated from data compiled from a 2-question, field-test questionnaire pilot-tested with a sample of graduate students enrolled in summer graduate courses in education. The 2 questions were:

1. What kind of tangible supports does your principal offer to make you feel you are growing professionally? List 10 behaviors, structures or policies of the principal.

2. What are the barriers to your principal not being able to support your professional growth? List 10 structures, behaviors, or policies which impede your principal from supporting you professionally.

**Method**

Following editing, revision, and IRB approval, the final 20-question questionnaire was sent electronically by using Zoomerang, which guarantees anonymity (Table 2). Teachers are not necessarily rating their own principals. Data were treated and analyzed through the use of SPSS.

**Results/Discussion**

**Demographic data**

Respondents included 478 teachers and 135 principals. Elementary principals responded more than those from other grade levels while the greatest number of teacher respondents came from the high school level (Table 1). Principal respondents were predominantly white females who worked at the high school level for 2-5 years. Teacher participants were predominantly female, white and were likely to work for 2-5 years at the K-5 grade level. In each question, “n” will vary as not all of the 135 principals and 478 teachers responded to each question.

The free/reduced lunch demographic data show that 41.7% of principal respondents came from schools with 5-19% free/reduced lunch while 40.3% came from the least
affluent schools with fewer than 20% of students eligible for free/reduced lunch. Teacher respondents came from schools with 21.5% free and reduced lunch in the 5-19% category and 17.3% in the free/reduced lunch category of 20% or more.

Table 1

Demographic Data

<table>
<thead>
<tr>
<th>Grade Level</th>
<th>Principals n=134</th>
<th>Teachers n= 476</th>
</tr>
</thead>
<tbody>
<tr>
<td>K-5</td>
<td>39.6%</td>
<td>28.5%</td>
</tr>
<tr>
<td>6-8</td>
<td>16.4%</td>
<td>22.7%</td>
</tr>
<tr>
<td>9-12</td>
<td>20.8%</td>
<td>30.8%</td>
</tr>
<tr>
<td>Other</td>
<td>23.0%</td>
<td>17.0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Length of Employment</th>
<th>Principals n=134</th>
<th>Teachers n=475</th>
</tr>
</thead>
<tbody>
<tr>
<td>First year</td>
<td>14.9%</td>
<td>7.8%</td>
</tr>
<tr>
<td>2-5 years</td>
<td>38.1%</td>
<td>29.7%</td>
</tr>
<tr>
<td>6-10 years</td>
<td>20.9%</td>
<td>25.4%</td>
</tr>
<tr>
<td>11-20 years</td>
<td>14.9%</td>
<td>23.3%</td>
</tr>
<tr>
<td>21 or more years</td>
<td>11.2%</td>
<td>13.1%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Principals n=134</th>
<th>Teachers n=474</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>96.0%</td>
<td>94.0%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>0.0%</td>
<td>1.2%</td>
</tr>
<tr>
<td>Black</td>
<td>1.5%</td>
<td>0.6%</td>
</tr>
<tr>
<td>Other</td>
<td>2.3%</td>
<td>3.8%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Percentage Free/Reduced Lunch</th>
<th>Principals n=134</th>
<th>Teachers n=474</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-19%</td>
<td>41.7%</td>
<td>21.5%</td>
</tr>
<tr>
<td>20% or greater</td>
<td>40.3%</td>
<td>17.3%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gender</th>
<th>Principals n=134</th>
<th>Teachers n=473</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>41.0%</td>
<td>18.7%</td>
</tr>
<tr>
<td>Female</td>
<td>59.0%</td>
<td>79.6%</td>
</tr>
</tbody>
</table>

Note: Other = K-12, 5-8, K-8, 7-12 grade levels; number of students eligible for free and reduced lunch in schools
Table 2 results from SPSS show a rank order comparison of behaviors principals and teachers agree most support the professional growth of teachers. The top 5 ranked by principals are not the same as the top 5 ranked by teachers.

Table 2 shows the percentage of principals and teachers responding to each of the 15 non-demographic questions on the questionnaire. A striking finding from this table is the difference in perception of what teachers, as opposed to principals, indicated as the most important action by the principal that impacts their professional growth. The first ranking supportive action indicated by teachers is ranked eleventh by principals: “I offer a mentor to new teachers.”

Further dissonance in perceptions is shown in Table 2. Principals ranked time devoted to listening to teacher concerns as the first supportive behavior for promoting teacher professional growth while teachers ranked the time principals spend listening to them as fourth. Perceptions that teachers have of principals visibly supporting their growth is ranked second by teachers whereas principals rank that action as eighth. The encouragement of teacher collaboration is ranked third by teachers and seventh by principals. Principal visibility is ranked fourth by teachers and third by principals.

A comparison of questions 14 and 15 revealed that twice as many principals (100%) as teachers (45%) responded that they seek teacher input into the decision process. Our questionnaire responses showed that 94% (Table 2) of principals indicated that they seek teacher input before making a decision and only 45% of teachers reported this is so.

Moreover, 100% of the principal respondents indicated they spent time listening to teachers as an action which influenced teacher professional growth while 78% of teachers perceived that action as influential to their professional growth.

Ninety seven percent of principals responded that they conducted classroom observations and the same percentage of principal respondents indicated that they offer constructive feedback on instructional practices. Sixty eight percent of teachers reported that their principals conduct observations and evaluations. How can principals report that they support teacher professional growth if only 68% (Table 2) of teachers reported that they felt supported by observation and evaluation and only 56% reported that they felt supported in their professional growth by constructive feedback about their teaching from their principals?

Table 2 shows that about half as many teacher respondents (46%) as principal respondents (95%) reported that the time principals spent speaking informally with them about instructional practice was important to their professional growth. Sixty six percent of teachers indicated that principals acknowledge and recognize their professional growth and 91% of responding principals reported that they do acknowledge such growth.
Table 2

*Rank Order Comparison of Behaviors Principals and Teachers Agree Most Support the Professional Growth of Teachers*

<table>
<thead>
<tr>
<th>Principal Questionnaire Item</th>
<th>Principals</th>
<th>Teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td>I spend time listening to the concerns of my teachers.</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Rank Order</td>
<td>Overall Response</td>
<td>Rank Order</td>
</tr>
<tr>
<td>100%</td>
<td>78%</td>
<td></td>
</tr>
<tr>
<td>(135/135)</td>
<td>(368/469)</td>
<td></td>
</tr>
<tr>
<td>I promote a school climate of open and honest communication among teachers and administrators.</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Rank Order</td>
<td>Overall Response</td>
<td>Rank Order</td>
</tr>
<tr>
<td>99%</td>
<td>62%</td>
<td></td>
</tr>
<tr>
<td>(134/135)</td>
<td>(292/475)</td>
<td></td>
</tr>
<tr>
<td>I am a visible presence to students and teachers.</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Rank Order</td>
<td>Overall Response</td>
<td>Rank Order</td>
</tr>
<tr>
<td>98%</td>
<td>78%</td>
<td></td>
</tr>
<tr>
<td>(130/132)</td>
<td>(368/474)</td>
<td></td>
</tr>
<tr>
<td>I feel comfortable speaking informally with teachers in my school.</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Rank Order</td>
<td>Overall Response</td>
<td>Rank Order</td>
</tr>
<tr>
<td>98%</td>
<td>76%</td>
<td></td>
</tr>
<tr>
<td>(131/134)</td>
<td>(363/478)</td>
<td></td>
</tr>
<tr>
<td>I personally conduct classroom observations and evaluations of teachers.</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Rank Order</td>
<td>Overall Response</td>
<td>Rank Order</td>
</tr>
<tr>
<td>97%</td>
<td>68%</td>
<td></td>
</tr>
<tr>
<td>(129/133)</td>
<td>(319/473)</td>
<td></td>
</tr>
<tr>
<td>I offer constructive feedback on instructional practice.</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>Rank Order</td>
<td>Overall Response</td>
<td>Rank Order</td>
</tr>
<tr>
<td>97%</td>
<td>56%</td>
<td></td>
</tr>
<tr>
<td>(126/130)</td>
<td>(260/471)</td>
<td></td>
</tr>
<tr>
<td>I encourage teachers to collaborate.</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Rank Order</td>
<td>Overall Response</td>
<td>Rank Order</td>
</tr>
<tr>
<td>97%</td>
<td>82%</td>
<td></td>
</tr>
<tr>
<td>(127/132)</td>
<td>(391/479)</td>
<td></td>
</tr>
<tr>
<td>I support the professional growth of my teachers.</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>Rank Order</td>
<td>Overall Response</td>
<td>Rank Order</td>
</tr>
<tr>
<td>96%</td>
<td>82%</td>
<td></td>
</tr>
<tr>
<td>(129/134)</td>
<td>(392/479)</td>
<td></td>
</tr>
<tr>
<td>I spend time speaking informally with teachers regarding instructional practice.</td>
<td>9</td>
<td>12</td>
</tr>
<tr>
<td>Rank Order</td>
<td>Overall Response</td>
<td>Rank Order</td>
</tr>
<tr>
<td>95%</td>
<td>46%</td>
<td></td>
</tr>
<tr>
<td>(127/134)</td>
<td>(218/474)</td>
<td></td>
</tr>
<tr>
<td>I often ask teachers for input before making decisions.</td>
<td>10</td>
<td>13</td>
</tr>
<tr>
<td>Rank Order</td>
<td>Overall Response</td>
<td>Rank Order</td>
</tr>
<tr>
<td>94%</td>
<td>45%</td>
<td></td>
</tr>
<tr>
<td>(126/134)</td>
<td>(214/473)</td>
<td></td>
</tr>
<tr>
<td>Item</td>
<td>Frequency</td>
<td>Percentage</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>-----------</td>
<td>------------</td>
</tr>
<tr>
<td>I offer a mentor to new teachers.</td>
<td>11</td>
<td>93%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(123/133)</td>
</tr>
<tr>
<td>I show recognition and acknowledgement of teachers’ professional growth.</td>
<td>12</td>
<td>91%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(122/135)</td>
</tr>
<tr>
<td>I offer an adequate amount of time for teachers to collaborate.</td>
<td>13</td>
<td>69%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(92/134)</td>
</tr>
<tr>
<td>I procure funds for tuition reimbursement for teachers.</td>
<td>14</td>
<td>62%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(82/135)</td>
</tr>
<tr>
<td>I have adequate monies to provide professional development for teachers.</td>
<td>15</td>
<td>39%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(53/135)</td>
</tr>
</tbody>
</table>

A cross-tab analysis (see Table 3) of length of employment and the question about the principal offering feedback on instructional practice revealed a striking finding. Over 60% of teachers reported that they received feedback on their practice from the principal in their first year of teaching while after 21 years of tenure, 42.9% of teachers said they received such feedback.
Table 3

Question 5: cross tab analysis by length of employment and “I offer constructive feedback on instructional practice.”

<table>
<thead>
<tr>
<th>Length of employment</th>
<th>Principals n=135</th>
<th>Teachers n=478</th>
</tr>
</thead>
<tbody>
<tr>
<td>First year</td>
<td>95.0% (19/20)</td>
<td>60.4% (22/37)</td>
</tr>
<tr>
<td>2-5 years</td>
<td>100% (49/49)</td>
<td>48.2% (67/139)</td>
</tr>
<tr>
<td>6-10 years</td>
<td>96.3% (26/27)</td>
<td>39.7% (48/121)</td>
</tr>
<tr>
<td>11-20 years</td>
<td>95.0% (19/20)</td>
<td>46.3% (51/110)</td>
</tr>
<tr>
<td>21+ years</td>
<td>92.3% (12/13)</td>
<td>42.9% (27/63)</td>
</tr>
</tbody>
</table>

A cross-tab analysis of length of employment with the question on recognition and acknowledgement of teachers’ professional growth (Table 4) shows that 78.3% of first-year teachers reported that principals supported them in this manner and only 59.6% of teachers with more than 21 years experience indicated such recognition by principals.
Table 4

Question 13: cross-tab analysis by length of employment and “I show recognition and acknowledgement of teachers’ professional growth”

<table>
<thead>
<tr>
<th>Length of employment</th>
<th>Principals n=135</th>
<th>Teachers n=478</th>
</tr>
</thead>
<tbody>
<tr>
<td>First year</td>
<td>100% (20/20)</td>
<td>78.3% (29/37)</td>
</tr>
<tr>
<td>2-5 years</td>
<td>90.1% (46/51)</td>
<td>72.4% (102/141)</td>
</tr>
<tr>
<td>6-10 years</td>
<td>85.8% (24/28)</td>
<td>59.8% (73/122)</td>
</tr>
<tr>
<td>11-20 years</td>
<td>85.0% (17/20)</td>
<td>62.5% (70/112)</td>
</tr>
<tr>
<td>21+ years</td>
<td>93.3% (14/15)</td>
<td>59.6% (37/62)</td>
</tr>
</tbody>
</table>

Implications

The purpose for this study was to examine how principals and teachers perceived the role of the principal in facilitating the professional growth of their teachers as determined by self-reported responses of a sample of Massachusetts teachers and principals. The response rate was 8.6% and, as such, this is an exploratory study.

In order to see how similar the 8.6% was to the original sample, we reviewed the composition of the original principal/administrator sample and saw that the respondent sample paralleled the composition of that sample. For the teacher sample, we had difficulty obtaining email addresses, and therefore, used a purposive sample which reflected the same composition as the principal/administrator sample.

Respondents for both teacher and principal questionnaires reflect similar demographics to the original Massachusetts sample population.

One finding from this exploratory study suggests that the longer teachers are employed, the less the principal seems to recognize their professional growth. If such is the case, this could be demoralizing to veteran teachers, especially those who retool to update their pedagogical and technological skills. The same could apply with regard to principal-teacher communication.
Our data seems to suggest that the longer a teacher’s tenure, the less communication there is between principal and teacher. This may be a factor in veteran teachers feeling isolated, especially when new teachers arrive at their schools. Further study, with a larger sample and higher response rate may corroborate these preliminary data.

According to our results, teacher respondents do not perceive that principals acknowledged their professional growth, but principal respondents do.

This dissonance in the data may contribute to some teachers feeling unappreciated by their school principals and not being held in esteem for their professionalism. Zimmerman (2006) found that high levels of communication between administration and staff correlated positively with high teacher self-efficacy.

Our literature review demonstrates that strong principal-teacher relationships through both formal and informal evaluations, coupled with ongoing positive dialogue between principals and teachers, are integral to teacher professional growth (Cochran-Smith & Lytle, 1999; Danielson, 2002; Glickman, 2002; Kaplan, 2001; Pancake & Mollier, 2007; Zimmerman, 2006).

Another finding from this exploratory study is the difference in principal and teacher perceptions on the value of having a mentor. For principal respondents, offering a mentor to promote teacher growth does not seem as important as it does to teacher respondents. The first-ranking supportive action indicated by these teacher respondents is ranked eleventh by these principal respondents: “I offer a mentor to new teachers.”

Teachers want to feel that their input is valuable in school governance. If they are left out, they feel disenfranchised. Data suggest that principal participants think they seek teacher input before making a decision, but teacher participants do not agree with this perception. Studies conducted by Blase and Blase (1998), Gimbel (2003), and Zimmerman (2006) indicated that teacher input into decision making is important for building principal-teacher trust.

These same authors propose that an open and honest climate is conducive for teacher growth, yet data suggest that such a climate is valued among our principal sample but less so by our teacher sample. Youngs and King (2002), Gimbel (2003), and Zimmerman (2006) suggested that to enhance teacher growth, principals should solicit input from their teachers when making decisions and should maintain open communication with all teachers, new and veteran, to engage them in conversations about instructional practice. In this way, teachers feel validated and respected for their professionalism.

Recommendations
The value of teacher professional growth, the important role of principals in fostering that growth, and the techniques that are most often used by principals to assist in teacher growth and development have been examined by a number of education scholars in the past (Berube, 2004; Cochran-Smith & Lytle, 1999; Darling-Hammond, 2000, 2005; Drago-Severson, 2007; Dufour, 1995; Glickman, 2002).

Three recommendations flow from this exploratory study. First, principals should observe and offer effective, timely feedback to teachers on instructional practice.
Second, the principal’s role in providing a mentor, especially to new and beginning teachers is important. Teacher data from this exploratory study suggest the importance of a mentor in teacher development.

Principals should look for effective teachers to serve as mentors and provide training for them to serve as role models for their peers. The quality of the teacher mentor, the mentor-protégé relationship, and how the mentor is trained all contribute to the professional growth of the teacher.

Principals need to pay heed to veteran teachers and be sure they are acknowledged for their experience. Additionally, principals need to provide appropriate professional-development opportunities for veteran teachers to grow and contribute to their schools.

Finally, the low response rate may mean that principals and teachers in Massachusetts may be too busy, too disinterested, too distracted, or do not have computer access to participate in an electronic questionnaire. This is disappointing in that the findings may inform practice. Perhaps providing a free course for principals and teachers at our university would increase the sample size. Additionally, the questionnaire could be mailed in a self-addressed, stamped envelope with a follow-up postcard reminder.

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