**Why We Must Raise the Bar for Admission to an Education School**

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**Paper given at the Pope Center for Higher Education Policy**

**January 15, 2013**

Most observers agree that the American system of public education is mediocre. For example, only 25% of all ACT-tested high school graduates passed all four of ACT's college-readiness benchmarks in 2012.[1] Our students' deficiencies show up much earlier. According to the 2011 Trends in Mathematics and Science Survey (TIMSS) scores, only 7% of our grade 8 students reach the Advanced level in mathematics, suggesting why little advanced coursework in mathematics and science can be taught in our high schools. In contrast, from 27 to 49% of grade 8 students in the five highest-achieving countries (all in East Asia) reach the Advanced level.

Yet, our mediocre system of public education is not cheap. Even though educators are asking for increased appropriations to implement the changes in K-12 mandated by adoption of the Common Core standards, we are already among the world's spending leaders in per pupil costs in K-12.[2] Despite all the money the federal government, state governments, and philanthropists (think Walter Annenberg) have showered on K-12 in the past 45 years, in addition to local tax money, we have poor to mediocre results to show for it. It is time to consider whether policy makers have been trying to climb up the wrong reform tree to get to higher levels of student achievement in K-12.

In my talk today, I shall propose that the current administration, like previous ones, began its reform efforts in the wrong place. My main purpose, though, is to suggest that much can be done even at this late date to improve the outcomes of K-12. We need to begin by addressing the major sources of the mediocrity of our public school system—academically under-qualified teachers, administrators, and education researchers, as well as ill-informed if not willfully ignorant policy makers who bring limited understanding of the evidence from high quality education research as well as little if any successful experience to the task of strengthening the school curriculum and increasing all students' academic performance.

**Why Standards for Students Are the Wrong Place to Begin Reform**

For several decades, the federal government and most states have thought they could best address increasingly inadequate and uneven levels of student achievement by means of objectives or

goals for each grade level in K-12 called standards, whose implementation would be enforced by state or federal assessments based on those standards. For reasons that still make little sense, they thought that student achievement should be tackled first in their attempt to "fix" our schools, and that they could do so directly. This is as true of education policy makers in the Clinton and Bush administrations as in the Obama administration. It is also true of earlier policy makers such as Lamar Alexander, Albert Shanker, Diane Ravitch, and Chester Finn, all of whom saw national standards as the first step in reforming a poorly performing system of public education.[3]

Today's education policy makers have simply continued down the same wrong yellow-brick road that earlier ones trod; they have added "school choice" to the menu of what they want from the Wizard but have a very limited understanding of what choice could include. Their major assumption seems to have been that most teachers don't expect enough of all their students and that most students would respond with greater effort if teachers held higher (and similar) expectations across states. After all, what does a presumably higher standard mean? And who, in their policies, has been held "accountable" for low student achievement?

However, if they had examined public education in just a few other countries, they would have realized that the first pot holes to fill in here were (1) the low if non-existent requirements for admission to our education schools and (2) a K-12 curriculum shaped almost entirely by the academically under-qualified teachers and administrators who had come from our education schools, assisted by education faculty, not academic experts.[4] If they had done some analytical research, they might have realized that the content-light, pedagogically oriented, and poorly written standards most states were coming up with in the 1990s were more mischievous than useless in the hands of academically under-qualified educators. And that a continuation of the same kind of standards at a national level would lead to an even more mischievous curriculum.

Education policy makers also could have pondered what was done beginning a century ago to ensure that all doctors had had first-class medical training no matter what medical schools they had graduated from. In a few decades after the Flexner report appeared in 1910, each state had not only revamped its medical training programs but also established academic requirements for admission to them (something that had rarely existed before) and created meaningful licensure tests for those who had graduated from them (something that had not existed before).[5] These reforms were carried out state by state, and by 1935 more than half of the medical training programs that existed in 1900 no longer existed.

Quality controls in the form of an admission test to and a licensure test after medical school helped to ensure that changes in program content would make a positive difference to the quality and prestige of the medical profession. Those who could pass these tests would be able to diagnose, understand, and treat medical problems better than those who couldn't pass what were basically tests of academic knowledge. Good bedside manners, as desirable as they are, were not the target of these tests. Yes, a medical education became expensive, health care became more expensive, and there were fewer doctors in rural areas. But the average doctor was much more competent, sound medical research flourished, and the average life span of our citizens increased dramatically over the next 100 years—a tribute to an improved public health system as well as to improvements in medical training.

Yet, the need for changes in requirements for admission to the programs offered in our education schools (as well as the kind of changes needed in program content and in licensure tests) has received even less national and state attention than the content of the curriculum parents want in our public schools. The U.S.D.E. and a narrow circle of advisers have spent their initial energies on getting states to adopt the kind of standards they think low-achieving students can meet to be declared "college-ready" (i.e., generic, content-light skills in the English language arts) and then on getting states to argue with teacher unions about what percentage of students' test scores their academically under-qualified teachers and administrators should be held accountable for. The U.S.D.E. has seemingly sacrificed all of our students on the altar of a single and limited source of educational accountability—student assessment.[6]

**Other Sources of Accountability**

I speak to you as someone who sees student achievement more as a function of the many state policies that affect teacher and administrator recruitment, training, licensure, and re-licensure, than of K-12 standards and student assessments, to identify only causal factors that are school-related. I am known as the person who developed some of the best state standards in the country. But I consider my revision of the almost incomprehensible tangle of regulations and tests governing licensure of teachers, education specialists, and administrators in the state my most important achievement at the Massachusetts Department of Education. The clear, content-rich, and pedagogically sound standards we developed in the English language arts, science, mathematics, history, geography, economics, and civics would have amounted to little more than black and white noise without an academically stronger corps of teachers to teach to them (and administrators to ensure they were being taught to).

My revision of the state's licensing regulations, re-licensing regulations, and tests was based on the hypothesis that a corps of academically stronger educators would lead to higher levels of student achievement. That hypothesis has been borne out by the state's first-place or tied-for-first-place NAEP scores at grades 4 and 8 in reading and math since 2005, by its first-place or close-to-first-place TIMSS scores in science and mathematics in 2007 and 2011 (the state participated as an independent country), by rising Advanced Placement course enrollment and test scores in the state, and by rising pass rates on the state's own annual assessments for students in both comprehensive and career/technical high schools, and for all categories of students. The level of achievement signified by these test scores could not have been reached without teachers who could and did teach to first-class state standards, and administrators who understood them.

Did the policies I put into place lead to a stronger corps of teachers and administrators? I offer as one small piece of suggestive evidence the fact that the test of foundational reading knowledge I helped to develop in 2002—a licensure test required of all prospective early childhood, elementary, and special education teachers—has been adopted by Connecticut (2008), Wisconsin (2012), and North Carolina (2012), to be followed soon by New Hampshire. North Carolina is one of the few states that have realized that this one stand-alone licensure test plays a crucial role in expanding the scientific knowledge base of those teaching beginning reading. It helps to ensure that reading methods coursework in their education schools will address the content of this test in some way.

Even more could have been done in Massachusetts in 2000. But there were limits to what I could do in an agency that was authorized to spell out only the outline of the content of training programs for education personnel, their licensure requirements and tests, and their professional development. I could not alter admissions requirements for undergraduate, masters,' or doctoral programs in education; in most states, such requirements for public colleges and universities are governed by a board of higher education, while those in private colleges and universities are usually governed independently by their boards of trustees. My recommendations, as well as my remarks, therefore, are for North Carolina legislators and members of the state's boards of higher and K-12 education because they need to work together to make the kind of changes in the requirements for admission to undergraduate, masters' and doctoral education programs that will result in academically stronger teachers, administrators, specialists, and education researchers and policy makers—and, ultimately, higher student achievement in North Carolina.

**What We Know about the Effectiveness of our Education Schools**

I am not the first to say that all education school programs need to be restructured and revamped. Arthur Levine, former president of Teachers College, Columbia University, sought to spark national discussion on ways to reform a dysfunctional institution with a series of reports in the mid-2000s: a 2005 report on preparing school leaders, a 2006 report on preparing teachers, and a 2007 report on preparing education researchers. In a comment to the Board of Trustees of Indiana University in August 2012, he pleaded: "Don't stop at teaching [for education reform]. Programs to produce principals and superintendents are worse."

Let me point out briefly what we know about the relationship between student achievement and various components of teacher education to support my claim that more demanding admission requirements to our education school programs should be the first focus of reform. I draw chiefly on the review by the National Mathematics Advisory Panel (the Panel), of which I was a member. Its final report and task group reports were issued in March 2008 and still warrant close attention. Based on evidence from the high quality research it reviewed (and readers should know that the Panel was sharply criticized by mathematics educators for reviewing only high quality research), the Panel found that teachers who completed a traditional teacher preparation program have no higher student performance on average than other teachers. Student achievement is not related to whether prospective teachers graduate from a traditional teacher education program or what would be considered an alternative program. Nor could the Panel find a body of evidence to support the efficacy of professional development in raising student achievement, whether or not it had increased teachers' knowledge of their subject.

The Panel did find a body of credible research on one very important matter—the characteristic of an effective teacher. It found teachers' knowledge of the subject they teach significantly related to student achievement. In other words, the more academically competent the teacher is, the more students learn. There may well be other characteristics of an effective teacher (common sense suggests others), but no credible body of education research has told us what they are.

Part of the problem here lies with education research itself. Over 16,000 potentially relevant studies were located by Abt Associates for the Panel's consideration. But Abt judged only a tiny number worthy of review. The Panel would have had far more to say to address its charge, which

was how we should prepare all students for success in algebra I based on the best available research, if more education research had been of high quality.

**What Can North Carolina Do?**

Given that a teacher's academic competence matters for student achievement, that research cannot point to consistently to any other quality that matters, and that professional development as it is implemented doesn't increase student achievement, how can North Carolina make use of these findings?

**1. The state can raise the bar for admission into a teacher preparation program**. In such high-achieving countries as Singapore, South Korea, and Finland, admission to a teacher training program is highly competitive. Only students in the top 10-20% of their high school or college cohort are admitted to an elementary or secondary training program. In contrast, most elementary teachers in the U.S. come from the bottom third of their college cohort, as noted in a 2007 McKinsey report. It is therefore not surprising that over 75% of test-takers taking a new 40-item elementary mathematics test for licensure in Massachusetts in 2009 failed (they did not get at least 60% of the items right). Since then, the number of those passing this test to become licensed elementary or special education teachers has ranged from about 40% to 55% of the whole group per test administration. Keep in mind we're not talking about a test in astrophysics, nor are we talking about semi-educated people; those who take this test are completing or have already completed college and presumably took at least algebra I, geometry, and algebra II in high school.

To its credit, North Carolina's Board of Education just adopted this licensure test in December 2012. A 40-item practice test for this test is available on the Massachusetts Department of Elementary and Secondary Education's website.[7] So is a 40-page guide to the mathematics coursework that should have been taken by test-takers in their teacher preparation programs.[8] A high number of North Carolina college students in teacher preparation programs may not pass this test, but the problem is not the test. The problem is admitting academically weak students to an elementary teacher preparation program.

Illinois is trying to use a newly designed admissions test to ensure greater academic competence in those admitted to a preparation program. In 2010, its Board of Education strengthened its test of basic academic skills, used for admission to an undergraduate teacher preparation program, and set a high bar for passing. In one year, the number passing this basic skills test drastically decreased, affecting enrollment in many programs. Nevertheless, in June 2012, the Illinois State

Board of Education re-affirmed the high cut score, a vote urged by the state commissioner of education, his staff, and a petition signed by district superintendents. While a high percentage of minority test-takers failed this test, no one argued that minority children would benefit from being taught by academically under-qualified minority teachers. The low pass rate for minority candidates for licensure is probably the most difficult issue to address for supporters of a high bar on a teacher skills test. But the consequences of a double standard are clear to some commentators.[9]

Other states could require a test similar to Illinois's and to its high cut score, regardless of other tests they have taken for admission to the university. They can also shrink programs with large numbers that show little relationship to employment possibilities in their public schools. Illinois could further justify its high cut score because enrollment in K-12 is declining in the state and its teacher preparation programs have produced a large oversupply of elementary teachers. A report on student teaching by the National Council on Teacher Quality strongly recommends a sharp decrease in the number of prospective elementary teachers this country prepares, not only because supply far outweighs demand but also because it found that resources for an adequate practicum aren't there for huge numbers.

States like North Caroline can use other measures besides a specific test of academic skills for ensuring a higher level of academic competence in prospective teachers: e.g., a certain SAT or ACT score (although if SAT and ACT tests are aligned with Common Core's "college readiness" standards, their scores won't indicate superior academic performance in high school); standing in the top decile of a high school graduating class; winner in a competition for academic, artistic, or musical achievement (e.g., participation in a Math Olympiad, science fair, or statewide youth orchestra); and publishing in a journal with high academic standards (e.g., *The Concord Review*).

A good part of this problem could be solved by eliminating undergraduate teacher preparation programs altogether, a policy recommended in 1986 by the Holmes Group, a group of reform-minded education school deans. This can be done easily by enacting a state policy decreeing that *undergraduate education courses* not count toward an undergraduate or graduate degree for anyone, including prospective teachers. If undergraduate teacher preparation programs are eliminated, a high cut score on an admission test for a post-baccalaureate teacher preparation program is easily justified; test-takers have, after all, completed an undergraduate program.

Other research would support such action. Many studies have found no relationship between student achievement and master's degree programs in education, most of which are for those already holding a teaching license from an undergraduate program. Their value is only for a salary increase. These particular master's degree programs should be abandoned, leaving in place only those that are teacher preparation programs, such as the Master of Arts in Teaching (M.A.T.) program in which at least half of the graduate coursework is in the discipline the aspiring teacher intends to teach—at least in the original model of this degree program.

**2. The state can require a Master of Arts or Science degree in a subject taught in K-12 before admission to any program for school administrators.** Unfortunately, few teachers today (before or after beginning a teaching career) earn a MA or MS degree in their subject area (a degree that tends to guarantee demanding subject-specific coursework), creating a new problem for our schools that few people are aware of. Few K-12 curriculum directors or associate superintendents in charge of the curriculum are apt to have more than a major in the discipline they supervise, or in more than one of them (or any of them) if they supervise many subjects, leaving them unable to offer expert advice on secondary textbooks, course sequences, and course content in the subject(s) they supervise. This requirement would upgrade the caliber of many school administrators in one stroke and would have positive consequences for development or revision of the school curriculum.

**3. The state can require a Master of Arts or Science degree in a subject taught in K-12 before admission to a doctoral program in curriculum and instruction**. This requirement would also upgrade the caliber of doctoral students in one stroke. It is mind-boggling to think that over 15,000 of the 16,000 studies located for possible review by the National Mathematics Advisory Panel had to be discarded because they failed to meet minimum scientific standards in their design and claims. It is not just research in mathematics education that is weak in design or execution. The bulk of education research in other areas (e.g., written composition) also cannot be used to tease out "best practices." To find out more about the quality of their own doctoral programs in education and on the quality of the dissertations and research completed by those affiliated with their public universities, state boards of higher education should commission an independent report on their strengths and weaknesses.

**4. The state can require applicants to doctoral programs in educational leadership or public policy to demonstrate their ability to locate and analyze a body of research evidence**

**supporting a current major policy.** They need to show they are able to distinguish between well-designed studies that permit generalization and poorly-designed research or anecdotes.

**5**. **The state can train prospective secondary teachers under the aegis of the academic discipline they major in**, with pedagogical faculty (who may be similarly-trained secondary teachers of the subject) attached to the discipline, **not** an education school. This is a common European model. Since college-level arts and sciences departments in this country deal with the results of high school training, they alone can make valid connections between the high school curriculum for their discipline and what they expect in their own coursework. At present, the sequences and content of subjects taught in the K-12 curriculum are designed chiefly by graduates of education school programs from a narrow pedagogical perspective, not by discipline-based experts. Links between liberal arts departments at our colleges and the high school teaching force once existed, but were severed over 80 years ago at the time education schools developed.

At the very least, all teachers of mathematics and science, regardless of grade level, should be prepared in programs attached to college-level mathematics and science departments. Discipline-specific pedagogical faculty would be under the aegis of the academic discipline. In this way, those responsible for the content of the discipline and those responsible for pedagogy together help prospective teachers of that subject work out content-relevant ways to address whatever problems in curriculum and instruction they encounter in student teaching. And because middle schools often begin with grade 5, it would also be desirable to have full-time mathematics and science teachers in grades 5 and 6 (i.e., departmentalized instruction), instead of self-contained elementary classrooms with generalist teachers in those grades.

**6. The state can train prospective pre-school, kindergarten, and primary grade teachers in two- or three-year pedagogical institutes, as do many European countries**. Prospective pre-school and kindergarten teachers should not be required to complete a liberal arts major in a four-year college.

The Finnish model, about which we have heard a great deal in recent years, dates from about 1970 and has several distinctive features. All prospective teachers in Finland can be trained at only eight universities in the country and must have graduated from an academic high school. Prospective elementary teachers are admitted to a five-year program in Educational Science

consisting of a three-year B.A. degree program followed by a two-year master's program in education. Prospective subject teachers usually complete a three-year B.A. degree program and two-year master's program in their subject in the arts and sciences, followed by a two-year master's program in education. The 1970 reforms upgraded the master's program in education for both types of teachers, focusing them on rigorous educational research. Unlike prospective elementary teachers, subject teachers are supervised by faculty with joint appointments in the arts and sciences and pedagogy. In both models subject teachers are expected to have a deep understanding of their subject before they begin their teaching career, and in their pedagogical training they are not separated from discipline-based faculty.

**7. The state can require discipline-based faculty as well as pedagogical faculty to supervise student teachers.** In order to implement needed changes in K-12, this is perhaps the most important area to address. The length of student teaching time is something that would be negotiated with the re-accrediting body for education schools. But the availability of discipline-based faculty (and the time they spend) is probably a responsibility of a Board of Higher Education, a Board of Trustees, the arts and sciences dean, and the education school dean**.**

Student teachers should be also placed in classrooms that discipline-based faculty have visited and approve of. Again, time for visiting the schools needs to be arranged for by Trustees and the deans of the arts and sciences and the school of education.

**Concluding Remarks**

The purpose of my talk today is to suggest how North Carolina could increase the academic competence of the graduates of its education schools and turn around a mediocre public school system. These suggestions are based on a credible body of research evidence showing a relationship between academically stronger teachers and higher student achievement. An academically stronger corps of educators is more likely to establish and teach an academically stronger curriculum, do better designed research, and make more soundly-based educational policy. Yet, our educational leadership is in a state of denial.

I had hope when I read about the release of a report on educator preparation and entry into the profession in December 2012 by the organization that oversaw the development of the Common Core standards (Council of Chief State School Officers), anticipating that it would recommend the adoption in this country of a major feature of the educational systems in high-achieving

countries, as well as cite the important research finding on the characteristic of effective teachers in the National Mathematics Advisory Panel's final report. I also had high hopes for what would be in a draft of the U.S. Department of Education's proposed regulations for education schools in the name of accountability, to be released in 2013. And in a draft of the standards proposed by the Council for the Accreditation of Educator Preparation (CAEP), also to be released in 2013.

Stunningly, CCSSO's report never mentioned the NMAP or its major finding on the characteristic of effective teachers. It did note that Finland, although not one of the highest-scoring countries on the 2011 TIMSS, uses a highly competitive process to select prospective teachers. It did praise Singapore's teacher training programs, although it failed to mention that Singapore, too, selects only the top 10-20% of its high school graduates as prospective teachers. So far, none of the three documents that will guide reform of teacher preparation shows evidence of learning from the failure of the standards-for-students-first approach.

In fact, the first CCSSO recommendation indirectly suggests what obstacles we face in this country in trying to strengthen our corps of educators: "States will revise and enforce their licensure standards for teachers and principals to support the teaching of more demanding content aligned to college- and career readiness and critical thinking skills to a diverse range of students."

This recommendation, once you parse it, clearly fails to ask for higher admission standards. It does want more demanding content taught, but it also wants this content to reflect Common Core's flawed standards in English language arts and mathematics. What the right hand giveth, the left hand taketh away. Our educational leadership seems incapable of taking the obvious step that other countries have taken as a matter of common sense—restricting admission to a teacher preparation program to the top 10-15% of the cohort graduating from a regular high school (for admission to an undergraduate program) or to the top 10-15% of those graduating from college (for admission to a post-baccalaureate program) .

Until North Carolina's regulations and tests governing the preparation, licensure, and re-licensure privilege teachers with demonstrated academic achievement of their own, North Carolina will not have teachers who can work around Common Core's weaknesses and increase achievement in all student categories. It has made an excellent beginning by adopting the Massachusetts licensure tests for prospective elementary teachers—in both reading fundamentals and in mathematics knowledge. It can extend this excellent beginning by abandoning all the other PRAXIS tests it

now uses for licensing teachers and adopt all of the other licensure tests Massachusetts created or revised during my tenure in its Department of Education. Their contents can be aligned with any set of state standards North Carolina has, and I offer my consulting services pro bono for the purpose of strengthening the state's teacher licensure tests.

**References**


National Mathematics Advisory Panel. (2008). *Foundations for success: Final report of the National Mathematics Advisory Panel.* Washington, D.C.: U.S. Department of Education. http://www2.ed.gov/about/bdscomm/list/mathpanel/report/final-report.pdf

Council of Chief School State Officers. (2012). Our responsibility, our promise: Transforming Educator Preparation and Entry into the Education Profession. Author.

Sandra Stotsky. (2012). Essay review of *Finnish Lessons: What Can the World Learn from Educational Change in Finland* by Pasi Sahlberg. *Journal of School Choice: Research, Theory, and Reform*, Volume 6, Issue 2, 295-300. http://dx.doi.org/10.1080/15582159.2012.673944.

Sandra Stotsky. (September 2009). New guidelines for teacher training: A needed attempt to reform the accreditation of teacher education schools lacks substance. *Clarion Call.* Raleigh, NC: John Pope Center. http://www.popecenter.org/commentaries/article.html?id=2225

Sandra Stotsky. (2008). How to strengthen K-12 mathematics education in Massachusetts: Implications of the National Mathematics Advisory Panel report. Policy Brief. Boston: Pioneer Institute.

Sandra Stotsky. (2006). Why American students do not learn to read very well: The unintended consequences of Title II and teacher testing. Nonpartisan Education Review, 2 (1). http://nonpartisaneducation.org/Review/Articles/v2n1.pdf

Sandra Stotsky. (2006). Who should be accountable for what beginning teachers need to know? *Journal of Teacher Education*, 57 (3): 256-258. http://www2.ed.gov/admins/tchrqual/learn/nclbsummit/stotsky/stotsky2.pdf


[1] http://www.act.org/research/policymakers/cccr12/readiness1.html

[2] http://articles.businessinsider.com/2012-01-07/politics/30587761_1_oecd-countries-high-school-graduation-rate-spending

[3] In order to make teaching a more respected profession, Albert Shanker did want prospective teachers to demonstrate a high level of academic competence. In a 1986 article in *The American Educator*, Shanker proposed a three-part examination: first, a strong test of subject matter knowledge,; second, a test of pedagogy. Then, for those who passed both, a "supervised internship program of from one to three years in which teachers would actually be evaluated on the basis of how well they worked with students and with their colleagues."

[4] One of the few educators who got it right was E.D. Hirsch. The philosophy behind his Core Knowledge Foundation suggests that part of the remedy for a steadily deteriorating public school system is a strong and specific academic curriculum (as designated in the Core Knowledge Curriculum Sequence) and teachers who can teach that curriculum because they have taken the relevant academic coursework for what they teach.

[5] https://ualearn.blackboard.com/bbcswebdav/pid-303852-dt-content-rid-690898_1/courses/49626.201240/readings/Ludmerer-Flexner-AcadMed.pdf

[6] Tom Haladyna, (2011). Using student achievement tests to evaluate teachers—A very bad idea. Nonpartisan Education Review/Essays,7(2). http://nonpartisaneducation.org/Review/Essays/v7n2.pdf

[7] http://www.mtel.nesinc.com/PDFs/MA_FLD003_SubtestII_PRACTICE_TEST.pdf

[8] http://www.doemass.org/mtel/mathguidance.pdf

[9] See Walter Williams' comments in http://jewishworldreview.com/cols/williamns010913.php3