



## Delivering Meaningful 21<sup>st</sup> Century School Reform: Urgent Need for Action!

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## Introduction

Until recently, school reform has been a rallying cry for a plethora of political and educational leaders representing divergent views of how to improve American K-12 education but all unified in focus on a goal to keep America competitive in the 21<sup>st</sup> century global economy. But the rallying cry of late has sharply converged on new high stakes individual teacher evaluation plans, a central requirement for states to qualify for \$4.35 billion of Race to the Top, RTTT, grants. Few will argue that ineffective teachers should remain in the classroom or that teachers should not be individually evaluated in a meaningful way. Before RTTT, many states were already studying new ways to evaluate teacher effectiveness using both quantitative and qualitative measures. However, inserting the requirement in a federal grant process that then required state legislation as affirmation that states were committed to fulfilling the grant requirement represents a unilateral federal takeover of school reform. A federal grant process can be easily changed but states are left with legislation on the books dictating specific school reform action.

If the new federal focus on teacher evaluation was informed by sound educational research and statistics from school districts about teacher preparation and alignment of that preparation to their assigned classes, then such a high stakes action might be justified. However, no such evidence exists. In fact, just the opposite is the case.

The premise of this policy brief is that new teacher evaluation plans currently being rushed into testing and practice are neither supported by cognitive and educational research nor the reality of the teaching profession as it exists today. The problem of American public education remaining competitive in the 21<sup>st</sup> century global economy is a systemic one with roots planted over 100 years ago. The rush to single out teachers to take on sole financial accountability for student outcomes will result in a 'cure worse than the disease.' There is a better way to hold teachers individually accountable for student achievement.

## Race to the Top Funds

Area D of RTTT was named “Great Teachers and Leaders.” To be awarded a RTTT grant, states had to present evidence that school districts were not only measuring student growth but also incorporating that data into teacher evaluations for decisions on promotion, retention and tenure. Area D was worth 138 out of 500 points assigned to the grant score, the most of any area. With this one requirement, the federal government has decided how schools in every state should operate. States acquiesced without a fight as they desperately needed federal funding to keep their doors open, a politically expedient action that will have dire consequences down the road.

## How did we get here? Systemic Roots of Educational Crisis – Overview

To understand the present it is wise to look at the past and in terms of American public education, the past has informed the present in ways few people realize. As much as critics claim 21<sup>st</sup> century education is stuck in an agrarian past that dictated the school calendar and curriculum that is now horribly outdated, history does not support that view. In the 19<sup>th</sup> and early 20<sup>th</sup> centuries, formal schooling at the one-room schoolhouse was held in the months when work on the farm was primarily indoors – after the fall harvest and through the winter months to spring

planting. Students came to school when they could but there was not a September to June school calendar.

In terms of curriculum, the past also informs the present:

“Thomas Jefferson’s plan for the common school aimed to secure not only the peace and safety of the Republic but also the social fairness and the best leaders. He outlined a system of elementary schooling that required all children, rich and poor, to go to the same school so that they would get an equal chance regardless of who their parents happened to be.” (The Making of Americans: Democracy and our Schools by E.D. Hirsch, Jr., 2009, p. 5)

In the late 19<sup>th</sup> and early 20<sup>th</sup> centuries, a fierce debate ensued about the nature of the high school curriculum. Higher education leaders, led by Charles Eliot as President of Harvard (1869-1909), wrote a report that called for all students to have equal access to a rigorous standardized curriculum as a foundation for their future careers, a decision that would be of their choosing. Support would be provided to students who needed help with the rigorous curriculum.

A counter report was produced by Massachusetts educators advocating instead for a differentiated curriculum because of the belief that immigrant and minority students would not be able to succeed within a rigorous curriculum. The differentiated curriculum camp won the debate and set American public education on a path for the next 100 years.

The strife today over teacher accountability and America’s ability to remain competitive in the global economy is an unintended consequence of the differentiated curriculum. Over the years at many public high schools, subject matter was watered down with concomitant lower expectations for large populations of students, perpetuating the myth that certain students simply could not learn. A high school diploma no longer represented a standard level of achievement.

Along with the widespread adoption of a differentiated curriculum at secondary schools, institutions of higher education that were charged with training teachers merely reflected societal norms as large numbers of teachers were no longer required to teach difficult subjects, such as advanced mathematics, physics and the classics, to all students. Another unintended consequence of the less rigorous differentiated curriculum then was a less rigorous curriculum at college and university schools of education or remedial classes to get the student up to college performance levels. Until just recently, the widely held view was that students who could not succeed in some subject matter majors and attain a high-end career could always become a teacher. Respect for the teaching profession plummeted.

Typical of a policy pendulum, a new philosophy of American public education has been evolving that returns to the philosophy of our forefathers that all students should have equal access to high quality teachers and a rigorous curriculum. Schools of education at colleges and universities are responding with vigor developing new requirements for education degrees to include not only expertise in subject matter but also demonstration of excellence in pedagogical practice.

## **Fundamental Flaws in current Teacher Evaluation Plans**

There are three fundamental flaws in the current administration’s mandate on teacher evaluation plans: 1) Educational research has shown that when teachers collaborate, student

achievement increases. As the system now privileges individual teacher achievement, incentives for collaboration will disappear and student achievement will decline, 2) Statistical complexity of crafting reliable and valid quantitative scores to evaluate teacher effectiveness abound. Dr. Daniel Willingham, cognitive scientist at the University of Virginia, masterfully articulates this problem ([www.danielwillingham.com/videos](http://www.danielwillingham.com/videos) - Merit Pay, Teacher Pay, & Value-Added Measure), and 3) The reality of the teaching profession today is the widespread problem of teachers being forced to teach “out-of-field” in that they are assigned classes to teach for which they have no background or expertise. It is fundamentally unfair to evaluate teachers performing in “out-of-field” assignments. While teachers’ unions might be a first thought to assign blame for this problem, it is one issue for which unions are not the root cause and thus, an opportunity for potential political compromise. Dr. Richard M. Ingersoll of the University of Pennsylvania has thoroughly researched this issue and that of teacher retention. (Ingersoll & Merrill, *Seven Trends: The Transformation of the Teaching Force*, May, 2012).

Since the late 1980s, the number of beginning teachers who leave within 5 years has been steadily increasing. Forty to fifty percent of teachers leave within five years of beginning their profession. And in 2008, 13.1 percent of teachers left after the first year – a 34 percent increase from 1998. “It is the low status of teaching, exemplified by a lack of respect for the complexity and importance of the job, that has resulted in what the data tells us; that teaching is plagued by problems of recruitment and retention and that out-of-field teaching is not simply an emergency condition but a common practice in the majority of secondary schools in this country.” (Ingersoll, *The Problem of Out-of-Field Teaching*, Phi Delta Kappan, June 1998, p. 776.)

In 2003, Dr. Ingersoll published a state-by-state breakdown of out-of-field teaching defined as the percentage of public grades 7-12 classes in four key academic areas (Math, Science, English and Social Studies) taught by teachers without a major or minor in the field. In Florida, the percentage increased from 21.45 percent in 1993-1994 to 28.42 percent in 1999-2000. While Florida has made great strides in improving NAEP scores, out-of-field teaching is still being reported at high levels in some counties. For example, in Duval County for the 2010-2011 year, five high schools reported out-of-field percentages more than 20 percent (20.5 percent to 27 percent.) Inner city poor schools such as in Chicago have some of the highest rates of out-of-field teaching at times exceeding 40% averaged across curriculum fields, but in some fields it is much higher with public school instruction in the Physical Sciences exceeding 82%! This means that less than 18% of the teachers teaching in the Physical Sciences have degrees or certifications to teach in that curriculum field. How can we even begin to properly manage and evaluate teacher’s productivity and impact when so many are not even teaching in the fields they were educated to perform in? Are History teachers prepared to teach Calculus or vice-versa?

The problem of out-of-field teaching needs to be thoroughly understood – and significantly reduced so that it is just a stop-gap in an emergency situation every now and then - before rushing to adopt complex teacher evaluation plans linking teacher pay to student performance. Without an informed debate, the likely result will be a decline in student achievement, further erosion of teacher morale with an increase in the number of teachers leaving the profession.

## Where do we go from here?

We know how students learn. We know the qualities of master teachers. We know too many students are dropping out of high school. We know too many teachers are leaving the profession in the first five years of their careers. We know parents are critically important to their child's

education. And we know technology has yet to be leveraged to finally realize a return on the enormous investment in successive waves of computers and computer networks that have been made at every school in the country. Milbrey McLaughlin and Joan Talbert, two educational researchers at Stanford University, have collaborated on a body of research on “teacher learning communities” and “local learning systems” as the foundation to successful schools and ultimately, the larger community. First and foremost, their research challenges the entrenched culture of schools. Instead of teachers being held individually accountable for students operating in isolation from their classroom, all teachers at a school should be held accountable for all students, a concept of shared accountability. For example, if a student is struggling to read, the science teacher takes some responsibility to support that remedial need. In consultation with other teachers, a learning plan is developed for these individual needs. To be most effective, these teachers meet, both offline and online, to analyze data on student achievement and formulate a data driven plan of action to modify instruction in order to improve learning outcomes based on the individual student, the definition of an advanced teacher learning community. Teachers are held individually accountable for their contribution, or lack thereof, to the culture of shared accountability based on their individual performance through peer evaluation. Leveraging technology to nurture the development of “local learning systems” will produce the desired return on investment in technology and most important, the only way to achieve the goal of maintaining and solidifying American competitiveness in the global economy. A K-12 e-learning platform, informed by this research and successfully pilot tested last year, is currently being completed that will facilitate meaningful online collaboration among large numbers of teachers to both improve domain expertise and pedagogical practice that allows for an interface between teachers and student where parents have direct access to monitor learning.

The result: Ineffective teachers are weeded out; beginning teachers are given the support they need to succeed and remain in the profession; parents are invited to support teachers within their own learning community; school, district and government administrators share knowledge to formulate sound educational policy as proactive and not reactionary actions, and most important, students stay in school and succeed. It is imperative that in the early days of the Romney administration, quick guidance is issued to mollify the potentially negative consequences of the financially driven rush to enact legislation on teacher evaluation plans before states have had the opportunity to fully implement and test optimal quantitative and qualitative metrics through the installation of the proposed local learning system. We must not implement change for changes sake that will actually lead to lower student outcomes and fewer properly prepared teachers as the pendulum swings back in the opposite direction of its current trajectory, because neither direction (exemplified by “No Child Left Behind” and “Race To The Top”) has tackled the fundamental shifts in technological application, population demographics or functional teaching methodologies or evaluations. We must move in a different direction, not right or left but ahead toward results that make sense for all stakeholders involved in education. The problems are significant but they can be solved.

### **Solutions:**

1. Education must be managed more like a for-profit business where teachers are seen as a valuable production asset and allocated to meet deliverables based on their expertise to drive overall student outcomes through a team driven methodology that is focused on the individual student for maximum individual outcome potentials where those students who

are have greater abilities can continue to forge ahead and are not held down by the learning level of the group, but those students who require extra help can get it in a positive format. The team is student centric and made up of all the individual teachers, the parents and the students themselves.

2. “Out-of-Field” instruction must be kept to a minimum. Great math teachers should be teaching math and not biology, history teachers should not be teaching physical education and so on and so on. A large amount of capital has been invested in attaining individual teacher expertise and it should be utilized to its greatest potential. This is analogous to Lean Manufacturing where the most work is accomplished where it provides value, based on the utilization of the best tool for the job, exactly when it is needed.
3. Technology is a great learning tool but can only be implemented in a classroom environment where the student has respect for the teacher’s expertise. Through the use of blended instruction (a combination of classroom lecture & application connected to the latest online technologies and information) the teacher can facilitate learning even above their level of curricular knowledge while they are actually increasing their level of subject matter expertise. Prior research has shown that simple computer based training (CBT) programs that do not have teacher input have less than a 10% student knowledge retention & application rate and that classroom instruction alone has less than a 50% knowledge retention & application rate, but the combination of CBT and Classroom can have an over 80% knowledge retention & application rate.(Teagle Foundation Research)
4. Quantitative and qualitative measurements of teacher effectiveness must be accomplished in an overall school based 360 feedback system where the parent and the student have a stake in the student’s outcomes and their level of input and actions are part of the overall score. Team based teaching and measurement drives teacher’s actions and input levels to each student and allows for peer to peer review as teachers gage the impact of the other teachers performance on each students outcomes where collaboration is open but peer evaluation is kept confidential.
5. Reward and retention are then based on actual fare result of effort rather than on random variables the teachers don’t often have control over such as parent involvement, student desire and most importantly the impact of other teachers input. It is hard to teach history or math to a student who can’t read or doesn’t speak English. This also allows the teacher to teach the curriculum and not just prepare kids for the test questions.
6. System design must be based on a singular portal with multiple interconnected software applications to allow all users and administrators access to information in a format that is as simple to operate as possible to keep time consumption to a minimum, especially for teachers who will have the greatest responsibility for information input and analysis.

## How do we accomplish this?

The pieces and parts are already being utilized in different areas all over the country. The process must be pulled together and implemented as quickly as possible in a few leading school

districts so that the process can be gauged and modified before it is implemented more broadly across the nation. The cost factors for this system are estimated to be equal to or less than the current allocations for the programs that are already running and we can use that momentum to turn this leviathan in a new direction that can actually have positive outcomes for all educational stakeholders, from the parents, students and teachers to the universities and finally the employers that depend on an educated citizenry.

Whether it be the current administration or a new Romney administration, the public is going to demand that we create a return on the investment for all of the capital that has been consumed and that which is slated to be expended and they want that ROI to be demonstrated in greater educational outcomes for each student or they will simply stop funding the current educational system and many members of the public have already reached that decision point. There is little doubt that whichever administration is in power come January, there will be pressure on local school districts and teachers unions through the implementation of a voucher system in which schools compete for available dollars and the mandated implementation of methodologies to hold teachers more accountable for student outcomes regardless of their level of control.

## Options

We can keep our heads in the sand or we can be proactive in the development and implementation to meet these changes head-on. The winds of change are coming and they can either sink us or we can ready the sails so that it can move us in the direction that provides the greatest opportunities for student achievement and teacher growth & job satisfaction/retention.