

## **The Good High School Teacher**

*Prepared for the North Carolina New School Project*

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Thomas Friedman's provocative book, *The World is Flat*, speaks boldly to how cheap, ubiquitous telecommunications have transformed our conceptions of global economic competition, and now places new demands on America's public schools. In the "flat world" all high school graduates must learn much more than the 3Rs and be able to create, synthesize, and evaluate information from a wide variety of subjects and sources while understanding and respecting a wide variety of cultures. The exponential growth of knowledge in many fields — especially in science and mathematics — pose new challenges for 21<sup>st</sup> century worker.

However, most high of today's large, impersonal high schools, designed more than a half century ago for a different economy and a different world, are leaving far too many young people behind. No longer can high schools expect only a few students to engage in serious academic work; and deliver a "mile wide and an inch deep" curriculum where teaching is telling and learning is listening while the needs of growing numbers of diverse students are not met. Fifty percent of our nation's high school students, according to a 2003 opinion poll, found school dull and unchallenging.<sup>1</sup>

In North Carolina policy makers, practitioners, and the public must come to grips with a number of daunting facts and figures. Despite progress in the college-going rates and with higher Scholastic Aptitude Test scores, many of the state's high schools lose almost half of their ninth grade students before graduation. Last year barely 22 percent of the state's high schools met both the state's "exemplary growth" standard (of the "ABC" accountability program) and the Adequate Yearly Progress (AYP) standard of No Child Left Behind. And less than 20 percent of the state's minority students have taken even one Advancement Place (AP) exam, the current hallmark of a rigorous high school curriculum. Both the University of North Carolina 16-campus system and the state's community colleges must offer increasing numbers of remedial (meaning high school) courses to in-coming students.\* The picture is not pretty.

Political, business, and community leaders are taking action. The National Governors' Association has made strengthening high schools as their top education priority. NGA calls for the high school curriculum to be tougher but

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\* Nationwide more than 30 percent of high school students do not graduate and more than 25 percent of the high school graduates who enter four-year colleges fail to return for their sophomore year; in two-year institutions, the dropout rate is twice that high. Also, more than half of today's college students are placed in at least one remedial math or English class, learning skills they should have acquired in high school. And surveys of employers report that far too many new hires lack the basics in reading, writing and math.

also more pertinent to real world tasks students will face in the workplace. The Gates Foundation, the world's wealthiest philanthropy, has allocated nearly \$700 million to states, school districts, and non-profits to transform large, impersonal high schools into small, redesigned ones.

For many reformers high schools need to go small to get better. Recent studies have shown that students from small high schools are more likely to perform better on tests, fail fewer classes, and attend college more frequently than their counterparts in large ones. And, these findings tend to be more profound for poor students and those of color.<sup>2</sup> For the Gates Foundation reformers small high schools must be redesigned so that rigor, relevance, and relationships are the norm. *Rigor* means that *all* students are expected to master a challenging curriculum that readies them for college or work. *Relevance* means that all students are engaged in learning that clearly relate to their own lives and aspirations. *Relationships* mean that all students have a number of adults in their schools that know them and their families well. According to Tom Vander Ark, education director for the Gates Foundation, “Getting there will require changes in curriculum, instruction, and structure.”<sup>3</sup> Getting there will also require *good teachers*.

Research assembled over the last 15 years has convinced policy makers and business leaders of what parents have always known: teachers and how they teach make the *most important* difference in whether or not students will achieve. However policy makers have struggled over how to best solve our nation’s teacher supply and quality problems. And, when it comes to high schools – where the gravest teacher shortages exist – little serious action has been taken to identify good teachers, much less prepare and support them.<sup>†</sup>

North Carolina’s *New School Project* (NSP), supported by the Gates Foundation, is ready to take bold action – and recognizes that the first step is to engage policy makers, practitioners, and the public with images of the *good teacher*.<sup>‡</sup> The NSP has eloquently pointed to major differences in the attitudes and skills needed by teachers in traditional and redesigned high schools. For example, traditional high school teachers tend to deliver content to students, pace lessons in prescribed and lock-step ways, use standardized assessments solely to evaluate students, and have different learning expectations for different students. In redesigned high schools teachers need to do so much more. They must assist students in learning to synthesize, apply, and integrate content, give students different opportunities to learn in different ways and at different rates, use multiple assessments to help them improve their teaching. They also must

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<sup>†</sup> Perhaps, the only serious, sustained, and more systemic efforts to identify good high school teachers can be found in the standards and assessments of the National Board for Professional Teaching Standards. The National Board has created content and student-developmentally aged specific performance assessments. For high school teachers see the Adolescent and Young Adult (AYA) standards and assessments in math, science, social studies, etc.

give feedback to students, and have the same learning expectations for all students.

The NSP claims are well supported by evidence. A recent longitudinal study of 820 high schools found that those that gave teachers more time to learn from each other and were able to personalize teaching for smaller groups of the same students over time produced significantly higher achievement gains.<sup>4</sup> But small size is not enough. Teachers have to teach differently in order for the small school and more personalized learning opportunities to take hold. Another set of studies clearly has shown that students in “restructured schools” learn more only when teaching is focused on active learning in real-world contexts and where teachers know how to help students engage in higher-order thinking and more authentic tasks.<sup>5</sup> For example, students — in Eva Reeder’s 10<sup>th</sup> grade class near Seattle, Washington — learn geometry and civics by designing an architecturally sound building. Eva has the knowledge of content, teaching, students, and community in order to lead learning experiences where teams of students construct models, research scientific principles, and debate community land-use issues.<sup>6</sup> So how can we identify the good high school teacher so more of our students can have teachers like Eva; and how can teachers like Eva learn to work effectively in a redesigned, small high school?

By drawing on the 2005 report of the National Academy of Education (and other sources) the *good high school teacher*<sup>s</sup> can be more clearly defined. The NAE report in particular has synthesized a range of both large-scale quantitative and more in-depth case study research on how humans learn, the effects of teacher education, and the teaching practices that lead to student learning.<sup>7</sup> In defining the good teacher, the NAE report focused on three dimensions: (1) learners in their social context, (2) subject matter, and (3) teaching. Because of the need for teachers to be actively involved in the redesign of what is often an intractable, archaic, tradition-bound organization, I have added another dimension: (4) high school change (see attached).

*Knowledge of Learners in Social Context.* First of all, the good school teacher must understand how students learn, and in particular how adolescents view the world. They must know how their students think about school subjects as well as how they can best make progress in acquiring knowledge and skill. For students to grow academically as well as socially the good teachers must know them well and determine their readiness for the tasks at hand. Because of the growing percentage of second language and special needs learners in today’s schools (e.g., 60 percent of North Carolina’s teachers teach at least some second language learners), the good teacher must know a great deal about language and literacy. Good teachers, even those who teach in high schools, need to know a

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<sup>s</sup> Granted, good teachers help students learn. Because much of the today’s reform rhetoric focus on standardized achievement it is important to note that these tests *can help* in identifying good teachers. However, the current tests are not sufficient — because often only a few high school teachers can have standardized tests ascribed to their teaching, and because these tests can clearly only measure a small bit of what 21<sup>st</sup> century high school graduates need to know and do.

great deal about the building blocks of language (e.g., the structure of words and sentences) and the relationship between language and literacy. Because of the many diverse students in our nation schools, even high school math and science teachers need to have literacy skills that will enable them to teach a 10th grade Hispanic student, reading at the 8<sup>th</sup> grade level in Spanish, but only the 5<sup>rd</sup> grade level in English.

The good high school teacher knows how to work with students who have different dialects or customs that affect their learning. Without such knowledge a teacher will not know how to understand what motivates students, what they understand, or what will engage them. For the good teacher knowledge of community and culture is paramount — especially if parents are going to be reached and become integral to their child’s academic and social development. The good high school teacher knows how different communities create different cultures, and how the culture affects student learning. These skills are essential for the good high school teacher who is expected to serve a more substantive counseling and advisory role as part of small, school learning communities.

*Knowledge of Subject Matter.* A high school teacher must know their subject matter. This is a given. However, a good high school teacher must also know how to make that subject matter accessible to students. Because of the exploding knowledge base in different disciplinary fields (e.g., biology), the good high school teacher must know their subject matter deeply, not just a long, hodge-podge of facts associated with it. The good high school teacher must be able to identify the central concepts of their subject matter and organize their teaching around them. They also must know far beyond the confines of what one learns by earning a major in a typical liberal arts subject in anyone of America’s typical universities. The good high school teacher knows their subject major such that they also know how to select the kinds of text, resources, and learning opportunities appropriate for adolescent students.

Given current school reforms, the good teacher also must know a great deal about national and state student standards, and how to make sense of them for instruction in their local context,\*\* and what kinds of lessons and tasks will help their students pass muster on both standardized and more authentic student assessments. Because small redesigned high schools offer a more focused, integrated curriculum, the good teacher must be able to make the interdisciplinary connections, assemble the right materials, and guide their students in developing links among facts and ideas as well as problems and solutions. The good high school teacher is more of generalist than a specialist.

*Knowledge of Teaching.* It is one thing to know subject matter; it is another to teach it. For academics like Lee Shulman, one of our nation’s most

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\*\* All too often policy makers and reformers assume that if teachers earn a subject matter major a university they will be prepared for high school teaching, when in fact their liberal arts coursework may be out of alignment with the content of the K-12 curriculum.

respected education psychologists and President of the Carnegie Foundation for the Advancement of Teaching, these teaching skills are called *content-specific pedagogy*. For Shulman, content-specific pedagogy separates the expert scholars from the good teachers. Most any college graduate can speak of the horrors of sitting through obtuse, disconnected, uninspiring lectures from a Ph.D. who knew their subject matter “cold.”

However, good teachers must know how to make content accessible to students. The NAE report is clear: The good teacher must be able know how to solve the subject-specific problems they pose for their students, and anticipate common misunderstandings within a content area like science — e.g., the typical beliefs many students hold that the Earth's proximity to the sun is the reason for the seasons or that objects float in water because they are lighter than water.

The good teacher also must know how to use technology and other curricular resources to deepen students' understanding and inspire them to learn. The good high school science teacher must be able to detect students' misconceptions about gravity while the good social studies teacher must be able to detect misconceptions about free speech in a pluralist, democratic society. In addition, the good high school teacher must know enough about the subject matter they are teaching so students can begin to think and perform like a mathematician, author, scientist, or musician.

In addition, the good high school teacher needs to not only assess what students know, but also why. This means that they need to use both standardized achievement tests and other performance assessments to figure out what students know and understand. This is no easy task, and requires considerable training to do right.

Redesigned high schools call for teachers to assess students more authentically. They must design tasks and then grade students on how well they organize information, apply the right methodology, draw logical inferences, back up opinion with facts, and communicate effectively what they know both orally and in writing. This means more than assigning a letter grade or arbitrarily sorting student work into the simple and subjective categories of excellent, good, and poor. Good teachers also know how to use assessments to help students monitor their own learning and inform parents (and other family members) of their child's progress. The assessments that good teachers develop are accurately linked to national and state standards, and the grades applied to students are valid, fair, and consistent. They know and can explain the meaning — to students and parents alike — of a specific percentile score on a norm-referenced standardized test as well as what is a “4” (on a 5-point scale) on locally-developed performance assessment.

Finally, good high school teachers know the kinds of classroom management strategies that work for different adolescent students. They do so by going beyond the kind of command and control strategies sold by textbook

companies. They know how to resolve conflict between students as well as create a respectful classroom community that encourages positive behavior and developmentally appropriate learning activities that motivate and engage students.

*Knowledge of High School Change.* High schools, with their unique cultures, are well known for their resistance to change. As Michael Fullan has noted school change is non-linear, loaded with uncertainty, and sometimes perverse. This means that the good high school teacher must have an additional set of skills.

For example, high school teacher leaders themselves must be involved in creating and communicating the vision for redesign and then building commitment and organizing their colleagues to think and act differently. Good high school teachers know about different models of high school organization, and they understand the vagaries of change. They know how to tolerate the ambiguities and the inevitable “implementation dips.” As Fullan has noted, “understanding the vicissitudes of the change process is a key to working on large scale change.”

The good high school teacher knows how to work in teams in joint problem solving. When they move from having no collective planning time to 5 hours per week, they know how to use that time wisely. They know how to create and sustain professional learning communities. In her research Milbrey McLaughlin found that good teachers in professional learning communities knew how to (1) protect against the “flavor of the month” reforms and shifting priorities, (2) socialize new teachers to school norms of practice and professional expectations, and (3) create opportunities for social interaction and informal learning. They become stewards of reform themselves.

To change their teaching practices the good high school teacher needs to know how to effectively engage in *lesson study* and *peer review* — both of which have been an anathema to most high schools. In this sense they need to have the skills to assess their colleagues’ lessons and performances in ways that transform practice while overcoming resistance and defensiveness. Good high school teachers also must become instructional leaders in their own right. Given the complexity of today’s schools no one administrator can model all of the content-specific teaching skills that need to be assessed and shared. Beyond being good teachers they need to know how to mentor peers and help transform the relationships among the adults in the building. It is one thing to be expert in teaching physics or literacy to 9<sup>th</sup> graders, but it is another thing to be an expert in the change process. A teacher can be a phenomenon in the former, but a disaster in the latter.

America (and North Carolina) has many, many good high school teachers. However, we just do not have enough of them and we have not developed the kind of teacher recruitment, preparation, and professional development system

to ensure the every student has one. The first step is to identify what we mean by a good high school teacher. The next steps will require bold action. For starters universities will need to reconsider both its teacher education programs as well as how subject matter majors are offered to prospective teachers. State policy makers must stop allowing anyone with just a subject matter major to be a high school teacher. School districts must offer much more powerful professional development that can help current teachers get ready for the profound changes expected of them. Now is the time. The world is flat for students and teachers too,

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<sup>1</sup> Farkas, S. & Johnson, J. (1997). Getting by: What American teenagers really think about their schools. New York: Public Agenda. Available from [http://www.publicagenda.org/research/research\\_reports\\_details.cfm?list=52](http://www.publicagenda.org/research/research_reports_details.cfm?list=52) (accessed August 14, 2005).

<sup>2</sup> 6 Cotton, K. (2001). New small learning communities: Findings from recent literature. Portland, OR: Northwest Regional Educational Laboratory.

<sup>3</sup> Vander Ark, T. (2005). Achieving 'Success at Scale.' Education Week. 24 (41). June 22. pp. 46-47, 56

<sup>4</sup> Lee, V.E. & Smith, J.B. (1995). Effects of high school restructuring and size on gains in achievement and engagement for early secondary school students. Madison: Wisconsin Center for Education Research, University of Wisconsin.

<sup>5</sup> Newmann, F. M., Marks, H.M. & Gamoran, A. (1995). Authentic pedagogy and student performance. Paper presented at the meeting of the American Education Research Association, San Francisco. April; Lee, V.E., Smith, J.B., & Croninger, R.G. (1995). Another look at high school restructuring: More evidence that it improves student achievement and more insight into why. Issues in restructuring schools. Madison: Center on Organization and Restructuring of Schools, University of Wisconsin.

<sup>6</sup> George Lucas Educational Foundation (2005). Geometry in the Real World: Students as Architects. Available from <http://www.glef.org/php/people.php?id=C517711> (accessed August 14, 2005).

<sup>7</sup> The National Academy of Education (2005). A good teacher in every classroom: preparing the highly qualified teachers our children deserve. San Francisco: Author.