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# Surprise – High School Reform Is Working

High school reform has now been on the national agenda long enough that we can begin reaching conclusions about the effectiveness of various approaches to it. The authors report on the strategies and their results thus far, finding that progress is indeed possible.

BY THOMAS TOCH, CRAIG D. JERALD, AND ERIN DILLON

**T**HOSE who would reform America's education system have focused tremendous energy on improving the nation's high schools in the last half-decade. And the high schools have proved less impervious to change than many believed they would be.

Spurred by sobering reports of ill-prepared students and a billion dollars in funding from the Bill & Melinda Gates Foundation, policy makers nationwide have embraced the issue. Political, business, and education leaders convened at a National Education Summit on High Schools in Washing-

ton, D.C., in 2005. Later that year, the National Governors Association (NGA) awarded the first of nearly \$24 million in grants to more than two dozen states to develop comprehensive high school improvement plans, and every governor has signed an unprecedented NGA pact to measure high school graduation rates more accurately.

Commission reports, conferences, and research briefs

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have made a compelling case for reform. Only 68% of the nation's high school freshmen — and only about half of African American and Hispanic students — graduate on time.<sup>1</sup> Just 57% of high school graduates take the core academic courses proposed by a national commission two decades ago.<sup>2</sup> As a result, only one-third of high school freshmen graduate on time with the academic preparation necessary to succeed in college.<sup>3</sup>

The Gates Foundation put high school reform on the national agenda when in 2000 it launched a five-year high school initiative. The Gates initiative focused on addressing the anonymity and resulting apathy and alienation that earlier reform proponents — among them TheodoreSizer in *Horace's Compromise*, his influential 1984 study of public high schools; Ernest Boyer in his 1983 report *High School*; and John Goodlad in his 1984 book *A Place Called School* — had identified as so detrimental to the productivity of public high schools. The Gates Foundation has captured the major underlying principles of today's high school reform movement — and the movement's ambitiousness — with a new version of the Three R's: rigor, relevance, and relationships. Reforms, Gates and others have argued, need to focus on raising academic standards, connecting students' studies to their lives outside of school, and addressing the anonymity of the nation's many large, comprehensive high schools.

The high school reform movement resembles a sprawling 19th-century Russian novel, with dozens of actors and innumerable initiatives. But reformers are focusing primarily on five strategies — improving school climate, strengthening curriculum and instruction, raising graduation requirements, helping freshmen get up to speed academically, and preventing students from dropping out.

At the same time, these reform efforts have been accompanied by an equally ambitious effort to gauge the effectiveness of the reforms. Researchers have conducted a range of studies on the high school reforms of the last half-decade. The results are just now starting to emerge, and they are more promising than many would expect.

## PERSONAL, CHALLENGING, ENGAGING

Over the past seven years, the Gates Foundation alone has invested more than \$1 billion to create more than 1,500 “small learning communities” of, optimally, fewer than 400 students each. Some were built from scratch while others were created by “redesigning” ex-

isting high schools and breaking them up into smaller, semi-autonomous units. The new (from-scratch) schools are replications of promising “model schools” that the foundation had identified throughout the country, such as High Tech High in San Diego.

The foundation also invested \$5 million in a major, multi-year evaluation of the initiative, conducted by two independent research organizations, the American Institutes for Research (AIR) and SRI International. Evaluators judged how well the schools were doing in the following areas: personally tailored learning, relationships based on mutual respect and responsibility, high expectations, a shared focus, and teacher collaboration.<sup>4</sup> In a report of the results, released by the foundation in November 2005, evaluators found that the new schools resembled the models on which they were based and that “most have the ‘relationships’ piece of the foundation's vision firmly in place.”<sup>5</sup> While the redesigned schools made less progress toward that vision than the new ones, evaluators still found marked improvements in school culture, especially in creating a more personalized, caring climate.

A similar study, released in mid-2006, was conducted by Policy Studies Associates to evaluate the New Century High Schools initiative, which has created 75 small high schools in New York City through a funding partnership that includes the Gates Foundation, the Carnegie Corporation of New York, and the Open Society Institute. Researchers found that the majority of schools succeeded in establishing a safe, academically focused, and socially supportive environment. They also concluded that “NCHS schools contributed importantly to the educational achievement of enrolled students.”<sup>6</sup>

Though early results are generally positive, other recent research on efforts to create “schools-within-schools” has sounded a note of caution: significant differences in personalization and academic expectations among small learning communities could lead to students sorting themselves, in effect re-creating the school-initiated system of “tracking” students of different backgrounds into different academic programs, a vestige of a practice that the Gates reforms were intended to eliminate.<sup>7</sup>

## STRENGTHENING CURRICULUM AND INSTRUCTION

Gates conducted a second study to determine whether a more supportive learning climate translates into stronger curriculum and instruction in the classroom.

During 2002-03 and 2003-04, evaluators asked experienced teachers to assess the intellectual rigor of classroom assignments and student work from 12 new high schools and 12 traditional, comprehensive high schools that had yet to be redesigned.

The findings were mixed. On the positive side, English teachers in the new high schools gave assignments that were much more demanding and relevant. But

demics rather than personal relevance.

As counterintuitive as it may be, low-achieving students do not appear to suffer from taking tough, college-prep courses. The evidence indicates that a combination of rigor, relevance, and good instruction can lead to higher student achievement. Researchers at Johns Hopkins University recently found that enrollment in career and technical education is positively associated with

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math teachers in new schools were no more likely than those in conventional schools to assign intellectually demanding class work.<sup>8</sup> Thus it is not surprising that test results in the Gates-funded schools generally have been no better than in traditional schools, except for a slightly more positive trend in reading scores.<sup>9</sup>

The Gates Foundation began modifying its high school reform strategy as the results of the AIR/SRI evaluation emerged. While not abandoning the belief that high schools can change largely on their own, the foundation has now embraced a “tighter” approach, designed to ensure that the schools it supports have rigorous standards and challenging classroom instruction. Says Tom Vander Ark, former executive director of the foundation’s education initiatives: “With many of our early grants, I encouraged people to fix the architecture. Several years later, many of those same folks are stuck in architectural arguments and never got to the heart of the issue — teaching and learning.”<sup>10</sup>

Reform, it is increasingly clear, depends on improving both school climate and the quality and rigor of classroom instruction.

## RAISING ACADEMIC GRADUATION REQUIREMENTS

Since 2001, 11 states and Los Angeles, the second-largest school district in the nation, have decided to begin requiring students to complete a full college-prep course sequence. Twenty-two states currently require graduation exams.

Many educators are concerned that raising graduation standards will increase dropout rates because low-performing students might be “pushed out” in order to pump up schoolwide passing rates or might become disengaged from a curriculum that is focused on aca-

higher graduation rates, but *only* when the tech courses are taken along with more challenging academic courses. The ideal ratio appears to be roughly one career or technical course to every two academic courses.<sup>11</sup>

Perhaps the most compelling evidence on the question of graduation requirements and graduation rates comes from Chicago. In 1997, Chicago raised its graduation standards to well above Illinois’ statewide standards. Beginning with entering freshmen in 1997-98, students were required to complete the courses necessary for entry to competitive state universities.<sup>12</sup> Over the next few years, graduation rates *improved*.

An analysis by the Consortium on Chicago School Research found that most of the improvement was attributable to higher levels of preparation among entering ninth-graders — the result of K-8 reforms. But a small part was driven by the new graduation requirements themselves. The graduation requirements encouraged freshmen and sophomores to take and complete more courses, and students who accumulated more credits early in high school were more likely to earn on-time diplomas.<sup>13</sup>

Chicago’s experience also adds an important caveat to the wholesale embrace of higher graduation requirements. Despite the city’s 1997 decree that students must take high-level courses to graduate from high school, in 2005 the *Chicago Tribune* published a devastating article on the dismal preparation of the city’s public school students who were entering area colleges. The paper found that more than 60% of freshmen failed the placement test in English and had to take a remedial course in the subject. About 70% failed the writing test, and more than 90% failed the math test.<sup>14</sup> In other words, “college-prep” courses prepare students for college only when the courses are taught by capable

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teachers who provide a challenging curriculum and motivate students to master the material.

### GETTING STUDENTS READY FOR RIGOR

The push for rigorous classroom curricula and tougher graduation requirements has generated increasing concern about the poor academic preparation of many entering ninth-graders. Students who enter ninth grade poorly prepared are more likely to fail ninth grade, and students who fail ninth grade are more likely to drop out. In a study of nonselective neighborhood high schools in Philadelphia, researchers Ruth Curran Neild and Robert Balfanz found that only one in four freshmen had reading skills appropriate for his or her age; roughly half read at the sixth-grade level or below.<sup>15</sup> In response to students' poor preparation, foundations, the federal government, and many organizations have invested in "accelerated" instruction that quickly catches students up and helps them handle challenging college-prep coursework.

So far, the only large-scale evaluation of accelerated "catch-up" courses in both reading and math appears to be one conducted by Johns Hopkins University researchers affiliated with the university's Talent Development high school model. Ninth-graders in Talent Development high schools spend double the amount of time in math and English courses for the entire year — 90 minutes in each. During the first semester, they take classes designed to give them the academic and study skills necessary to handle college-prep courses later on; during the second semester, teachers follow the district's regular curricula for English and algebra, supplemented with special materials developed by Johns Hopkins University.

Researchers found that students taking the Talent Development catch-up courses significantly outperformed their peers in comparison schools, taking into consideration the students' previous achievement levels and their attendance over the course of the school year. Interestingly, students who started out with higher-than-average achievement seemed to benefit from the courses, too, which led the researchers to conclude that high-poverty urban high schools should consider making such courses standard for all entering freshmen.<sup>16</sup>

### PREVENTING STUDENTS FROM DROPPING OUT

Research on the dropout problem clearly suggests that graduation rates should improve if reformers are

successful in implementing several of the strategies discussed above. But most researchers contend that only intensive, pervasive *institutional* reforms can significantly improve graduation rates in the nation's most troubled high schools.

It is important to note that the dropout problem is very unevenly distributed across the nation's high schools. Robert Balfanz and Nettie Legters, researchers at Johns Hopkins University, report that 2,000 high schools — about 15% of the nation's total — produce half of the nation's dropouts.<sup>17</sup>

Results from a rigorous evaluation of the Talent Development model, released in 2005 by MDRC, a non-profit social policy research organization based in New York City, suggest that even such severely challenged high-poverty schools can improve ninth-grade promotion and on-time graduation rates if they "layer on" overlapping reform strategies. Evaluators noted that Talent Development's strong positive impacts seem to come from implementing prescriptive strategies for upgrading curricula and improving teaching at the same time that high schools are broken into smaller, more personal learning communities.<sup>18</sup>

In 2006 MDRC released a review of three comprehensive high school reform initiatives: the Talent Development model; Career Academies, a school-within-a-school model that emphasizes a career-oriented curriculum; and First Things First, a small-learning-communities model that was initially, and very successfully, implemented in Kansas City, Kansas. After assessing the successes and failures of each model, the researchers concluded that "structural changes to improve personalization and instructional improvement are the twin pillars of high school reform."<sup>19</sup>

### VALUABLE COMBINATIONS

The current research on high school reform suggests two very powerful conclusions. First, the American high school is not as impervious to change as many thought it to be. Both real change and real progress are possible, slow and difficult though they may be. Second, the most significant improvements in high schools come from *combining* strategies and solutions long thought to be ideologically disparate or even mutually exclusive. Though limited, the research cited here suggests that more rigorous curricula and tougher graduation standards might *not* hurt graduation rates and might even help improve them. Rigor and relevance are not engaged in a zero-sum tradeoff, but can actu-

ally work best in combination. Helping educators become more supportive of students is critical, but doing so produces more significant improvements in student learning when combined with high expectations and rigorous instruction.

The challenge now becomes how to create the conditions that allow such solutions to flourish together and how to get them into the communities and high schools that need them the most. High school reform is achievable. But if reformers are to be successful, they must leave very little to chance.

1. Jay P. Greene and Marcus A. Winters, *Public High School Graduation and College Readiness Rates: 1991-2002* (New York: Manhattan Institute for Policy Research, Education Working Paper No. 8, February 2005). The rate does not include students who graduate later than expected or who earn a nonstandard diploma, such as the GED (General Education Development) diploma.

2. National Center for Education Statistics, *Digest of Education Statistics 2004*, available at <http://nces.ed.gov/programs/digest/d04>. Data are from Table 137.

3. Greene and Winters, *op. cit.*

4. Brand-new schools based on specific designs were compared both with their original "model schools" and with traditional, comprehensive high schools. High schools that had been "redesigned" into clusters of small learning communities were compared with a sample of schools that had been surveyed prior to being redesigned.

5. Linda Shear et al., *Creating Cultures for Learning: Supportive Relationships in New and Redesigned High Schools* (Washington, D.C.: American Institutes for Research and SRI International, April 2005), p. 42.

6. *Evaluation of the New Century High Schools Initiative, Report on the Third Year* (Washington, D.C.: Policy Studies Associates, June 2006), p. v.

7. See, for example, Douglas D. Ready, Valerie E. Lee, and Kevin G. Welner, "Educational Equity and School Structure: School Size, Overcrowding, and Schools-Within-Schools," *Teachers College Record*, October 2004, p. 10. The authors found that "to varying degrees subunit choice permitted students to sort themselves based on their race, social class, academic backgrounds, and aspirations. Parallels to the stratification common to tracked high school curricula were striking. Academically motivated students tended to select subunits with reputations for academic rigor, while struggling students often chose subunits they thought had low academic and behavioral expectations. Moreover, some subunits were designed to attract certain types of students, including those with math or science themes and those with traditional vocational themes" (p. 27).

8. Karen Mitchell et al., *Rigor, Relevance, and Results: The Quality of Teacher Assignments and Student Work in New and Conventional High Schools* (Washington, D.C.: American Institutes for Research and SRI International, 2005), p. 43.

9. American Institutes for Research and SRI International, *Executive Summary: Evaluation of the Bill & Melinda Gates Foundation's High School Grants, 2001-2004* (Washington, D.C., April 2005), p. 8.

10. Quote is from Vander Ark's foreword to Tony Wagner et al., *Change Leadership: A Practical Guide to Transforming Our Schools* (San Francisco: Jossey-Bass, 2006), p. xiii.

11. Stephen Plank, Stefanie DeLuca, and Angela Estacion, *Dropping Out of High School and the Place of Career and Technical Education: A Survival Analysis of Surviving High School* (Minneapolis: National Research

Center for Career and Technical Education, University of Minnesota, 2005).

12. That course sequence is a somewhat stricter version of the one recommended in *A Nation at Risk*, minus the half-credit in computer science.

13. Melissa Roderick, Elaine Allensworth, and Jenny Nagaoka, "How Do We Get Large Urban High Schools to Care About Dropout Rates and Will No Child Left Behind Help or Hurt?," paper prepared for the Developmental, Economic, and Policy Perspectives on the Federal No Child Left Behind Act Conference, Center for Human Potential and Public Policy, Harris School of Public Policy, University of Chicago, 6 May 2004, pp. 37-38.

14. Jodi S. Cohen, "Colleges Find Many Lacking: Students Fall Short in Math, English and Put in Remedial Courses," *Chicago Tribune*, 20 November 2005.

15. Ruth Curran Neild and Robert Balfanz, "An Extreme Degree of Difficulty: The Demographics of the Ninth Grade in Non-Selective High Schools in Philadelphia," paper presented at the annual meeting of the American Sociological Association, Anaheim, Calif., 2001.

16. Robert Balfanz, Nettie Legters, and Will Jordan, "Catching Up: Impact of the Talent Development Ninth Grade Instructional Interventions in Reading and Mathematics in High-Poverty High Schools," Johns Hopkins University, April 2004, ERIC ED 484524.

17. Robert Balfanz and Nettie Legters, "Locating the Dropout Crisis: Which High Schools Produce the Nation's Dropouts?," in Gary Orfield, ed., *Dropouts in America: Confronting the Graduation Rate Crisis* (Cambridge, Mass.: Harvard Education Press, 2004), p. 72.

18. James J. Kemple, Corinne M. Herlihy, and Thomas J. Smith, *Making Progress Toward Graduation: Evidence from the Talent Development High School Model* (New York: MDRC, May 2005), p. ES-8.

19. Janet Quint, *Meeting Five Critical Challenges of High School Reform: Lessons from Research on Three Reform Models* (New York: MDRC, May 2006), p. ES-10. **K**

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