# Can the American High School Become an Avenue of Advancement for All? 

Robert Balfanz

## Summary

As the twenty-first century opens, says Robert Balfanz, the United States is developing a deep social consensus that American high schools should ensure that all adolescents graduate from high school prepared for postsecondary schooling and training. Balfanz asks how well high schools are succeeding in this mission and whether they can ultimately fulfill it.

Balfanz first surveys the structure and demographics of today's high schools. Forty percent of white students attend high schools that are 90 percent or more white, while roughly one-third of Latino and African American students attend high schools that are 90 percent or more minority. Minority students are also much more likely than white students to attend high schools that confront the challenges of concentrated poverty. In predominantly white, affluent suburban school districts, nearly every student arrives ready for high school work and then graduates. In all-minority inner city schools in high-poverty neighborhoods, most entering students lack a good middle school education and only half to two-thirds graduate.

With only a third to a half of high school graduates today prepared to succeed in college, how likely is it that American high schools will succeed in their mission of preparing all students for additional schooling or training? Balfanz argues that reforms over the past twenty-five years offer some hope. The standards and accountability movement has made the American high school a more focused and academic place. College preparatory course-taking has increased substantially, as has standardized testing. Mandatory exit exams have been imposed. And during the past decade, in particular, reformers have made a concerted effort to improve the lowperforming high schools that serve low-income and minority students. Investments by the federal government and by foundations have led to the development of several types of reforms that have been proven effective, thus raising hopes that the nation's lowest-performing high schools can better serve their students. Still, the American high school has a considerable way to go to be able to prepare all students for further schooling or training. To advance all its students, it must find a way to bring to scale the methods and mechanisms, conditions, and knowhow that have enabled a few low-performing high schools to achieve this transformation.
www.futureofchildren.org

Robert Balfanz is a research scientist at the Center for Social Organization of Schools, Johns Hopkins University.

Amuch maligned but durable institution, the American high school has played a key role in shaping the nation since its inception in the mid-nineteenth century. It has provided a means of upward mobility, served as an engine of economic growth, and played a vital role as a communitybuilding and socializing institution. At the same time, it has perpetuated inequalities and often fallen short of its ideals. ${ }^{1}$ At the dawn of the twenty-first century, the American high school is once again being called on to help promote the nation's success-this time, by ensuring that all adolescents graduate from high school prepared for postsecondary schooling and training. This new challenge is in many ways the end point of a 150 -year evolution.

Begun as a college-preparatory institution for a small fraction of society in the nineteenth century, the American high school added a workforce-preparation mission in the early twentieth century. ${ }^{2}$ As it became a mass institution through mid-century, it took on a socialization role, as a way station where adolescents moved from childhood to adulthood. The curriculum was modified, and a general course of study filled with lifeadjustment courses joined the academic and vocational components. ${ }^{3}$ Through the 1960s and 1970s, extensions to compulsory schooling laws and changes in the labor market helped make attending high school the norm for all adolescents. To retain students' interest and participation, the American high school tried to offer something for everyone to the point that it came to be described, aptly, as a shopping mall. ${ }^{4}$ Beginning in the 1980s and accelerating to the present day, the mission shifted once again. In response to the nation's transition from an industrial to an information economy, academic preparation
once again became a priority. No longer an end point in the public education system, the American high school is now being asked to prepare all its students for the postsecondary schooling and training required for full economic and social participation in U.S. society. In short, it is being challenged to make good on its potential and become an avenue of advancement for all.

In this article I examine the state of the American high school at the start of the twenty-first century and ask how well it is succeeding in this new role and what its prospects are for ultimately fulfilling this mission. I first examine the structure and demographics of the American high school, then look in more depth at its current goals and outcomes. Next I explore the prospects that the American high school will be able to reformulate itself and successfully prepare all students for additional schooling or training. I evaluate its ability to change by looking in depth at its evolution over the past twenty-five years and considering the forces that might both advance and constrain its success.

## The American High School Today

Understanding where the American high school is headed requires taking a close look at what it is today. In this section I examine how it is organized, where it is located, and who attends it.

## A Common Structure

Across the nation the great majority of high school students share a common experience. They attend a public, regular high school that begins in the ninth grade and concludes in the twelfth grade. In 2006, 90 percent of high school students attended a public school. Less than 3 percent attended an alternative school, and less than 2 percent a vocational high school. Only a small fraction of high
school students attended a charter school (3 percent) or a magnet school ( 8 percent). Today close to eight out of ten students go to a high school that begins in the ninth grade. Twelve percent go to combined middle and high schools that begin in the sixth, seventh, or eighth grade and conclude in the twelfth grade, and fewer than 4 percent attend senior highs that begin in the tenth grade. ${ }^{5}$

## Distinct Environments

Variations in school location and size begin to differentiate students' high school experiences. Roughly 30 percent of public high
school students attend schools in large or mid-size central cities. An almost equal share attends schools in rural areas or small towns. The remaining 40 percent of students attend suburban high schools. About 15 percent of public high school students attend small schools with 500 or fewer students. A greater share ( 25 percent) attends very large high schools with 2,000 or more students. ${ }^{6}$

Various school locations and sizes combine to produce a number of distinct high school environments. About 35 percent of rural students attend small schools with 500 or

Table 1. Percentage of All Students and Students of Various Race and Ethnicity Attending High Schools with Selected Characteristics, 2005-06

| Percent |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| School characteristic | All students | American Indian/ Alaskan Native students | Asian/Pacific Islander students | Hispanic students | Black students | White students |
| Minority concentration |  |  |  |  |  |  |
| 0-25\% minority | 44.8 | 26.5 | 20.6 | 9.9 | 9.8 | 66.4 |
| 26-50\% minority | 21.3 | 25.8 | 25.3 | 17.4 | 20.2 | 22.1 |
| 51-75\% minority | 14.1 | 16.6 | 22.6 | 22.3 | 22.8 | 8.7 |
| 76-100\% minority | 19.8 | 31.1 | 31.5 | 50.4 | 47.2 | 2.7 |
| 0-10\% minority | 25.1 | 8.5 | 6.1 | 2.6 | 2.4 | 39.6 |
| 90-100\% minority | 12.6 | 23.2 | 14.2 | 32.8 | 34.3 | 0.7 |
| Percentage of students eligible for free or reduced-price lunch |  |  |  |  |  |  |
| 0-10\% | 16.7 | 7.5 | 24.8 | 8.3 | 6.2 | 21.4 |
| 10-39\% | 46.4 | 35.5 | 43.1 | 29.2 | 30.5 | 56.1 |
| 40\% or more | 36.8 | 57.0 | 32.1 | 62.5 | 63.2 | 22.5 |
| School size |  |  |  |  |  |  |
| 50 to 200 students | 3.8 | 15.6 | 1.4 | 3.7 | 3.5 | 3.8 |
| 201 to 500 students | 11.7 | 23.3 | 4.7 | 8.3 | 10.8 | 13.1 |
| 501 to 1,000 students | 20.8 | 24.6 | 10.5 | 12.1 | 19.5 | 24.3 |
| 1,001 to 1,999 students | 37.6 | 24.8 | 36.7 | 30.2 | 41.9 | 38.9 |
| 2,000 or more students | 26.1 | 11.7 | 46.7 | 45.7 | 24.3 | 19.8 |
| Number of students per teacher |  |  |  |  |  |  |
| 15 or fewer | 32.6 | 41.8 | 21.5 | 25.2 | 34.7 | 34.8 |
| 16 to 20 | 43.8 | 39.1 | 36.9 | 35.1 | 47.5 | 45.9 |
| 21 or more | 23.6 | 19.1 | 41.6 | 39.7 | 17.9 | 19.4 |

Source: Common Core of Data, "Public Elementary/Secondary School Universe Survey, 2005-06," v.1a, (Washington: The National Center for Education Statistics, 2006).
fewer students, but an equal share attends larger schools with 1,000 or more students. Only about a tenth of central-city students attend small schools, with nearly four times that share attending very large schools with 2,000 or more students. In suburban areas three out of four students attend schools with 1,000 or more students. Schools with between 500 and 1,000 students-a size that research suggests effectively balances the need for personalization and the need for the learning opportunities that lead to the greatest achievement gains-are most commonly located in suburban or rural areas. ${ }^{7}$

## Still Separate and Unequal?

Where high schools differ most is in the composition of their student bodies and the resources available to organize and provide instruction and activities. As seen in table 1, more than fifty years after Brown v. Board of Education only about a fifth of high school students across all racial and ethnic groups attend a high school whose student composition (26-50 percent minority) reflects the national distribution of majority and minority groups enrolled in public high schools. Students more commonly attend high schools that are nearly all white or all minority. Forty percent of white students attend high schools that are 90 percent or more white, and close to 30 percent of African American and Latino students attend high schools that are 90 percent or more minority. Nearly threequarters of Latino and African American students attend high schools where most students are minority.

Minority concentration and poverty are also tightly linked in the nation's high schools. Free and reduced-price lunch data are notoriously inaccurate at the high school level. Students are reluctant to turn in the necessary forms, and schools put forth varied
efforts to collect them. With the appropriate cautions, however, the data can indicate lower bounds. With those caveats in mind the available data point to significant differences in the extent to which majority and minority students attend high schools with many low-income students. At a minimum, six out of ten Latino and African American high school students attend schools where at least 40 percent of the student population is eligible for free or reduced-price lunch. As seen in table 1, Latino and African American students appear to be three times more likely than white students and two times more likely than Asian American students to attend high schools that must confront the challenges of concentrated poverty.

One reason for the intersection of poverty and racial segregation in the nation's high schools is the abandonment of the public school system, particularly at the secondary level, by middle- and upper-income families in some central cities and Southern counties. In these locales private high schools are disproportionately white, and public high schools are disproportionately African American and Latino. For example, in both Chicago and Atlanta 50 percent or more of white students attend private high schools. ${ }^{8}$ The rejection of public high schools by middle- and upper-income families amplifies the effect of residential segregation in creating separate and unequal schools because even in locales where affluent, middle-class, and low-income families share the same school district, some of the more affluent and middle-class families are opting out of the public secondary schools.

An in-depth analysis of how resources vary from one high school to another is beyond the scope of this article-and data on the resources available to individual schools are
not detailed enough for such an analysis in any case. But existing data show that high schools differ substantially in the resources at their disposal.

The most basic resource, the ratio of students to teachers, influences not only class size, but also the personnel available for contact with students, homework support, after-school activities, and the basic ratio of adults in the school to students in need. Across all high schools in the United States wide disparities exist in student-teacher ratios. Only about half of the nation's high schools have fifteen or fewer students per teacher, the ratio some research has suggested is necessary to support state-of-the-art high school reforms. ${ }^{9}$ At the other end of the spectrum about 5 percent of high schools have twenty-six or more students per teacher. Thus some high schools have twice as many teachers as others for the same number of students. Considerable differences exist even within and across high-poverty school districts. Some highpoverty high schools in New Jersey-because of rulings by the state supreme court in the Abbott $v$. Burke school funding case since the 1980s-have student-teacher ratios of eleven to one. But some high-poverty schools in Los Angeles-because of voters' approval in 1973 of Proposition 13, a ballot initiative capping property tax rates-have student-teacher ratios of thirty or more to one. ${ }^{10}$ Crossreferences of student-teacher ratios, poverty levels, and minority concentrations demonstrate that Latino students in particular attend high-poverty high schools with student-teacher ratios considerably higher than those experienced by either African American students in high-poverty schools or white students in affluent high schools. ${ }^{11}$

High school districts also differ dramatically in how much they invest in their students.

At the extreme, it is possible, particularly in northern cities and their surrounding suburbs, to find two high schools within ten miles of each other with one spending $\$ 15,000$ per pupil and the other $\$ 5,000 .{ }^{12}$ Lawsuits that have been filed in a number of states clearly document the adverse impact of such inequities on the quality of the school facilities, the availability of instructional supplies, and the during-school and after-school learning opportunities provided to high school students in the lower-funded schools. ${ }^{13}$

A look at the community resources available in the school districts serving the fifty wealthiest and fifty poorest urban and suburban communities highlights the extremes. In the districts that serve the wealthiest communities, located exclusively in the suburbs, the median income is $\$ 120,000$, and 16 percent of the students are minority. By contrast, in the fifty poorest communities, located in either mid-size central cities or their urban fringe, the median income is $\$ 19,000$, and 90 percent of the students are minority. As seen in table 2, the students in the wealthiest communities attend smaller high schools with a lower student-teacher ratio. The students in the poorest communities, on average, attend larger schools with a far greater number of needy students and with fewer adults to provide support. It is perhaps not surprising, then, how different student outcomes are in each. Nearly all the students in the wealthiest communities are promoted in a timely fashion and graduate, compared with less than two-thirds of the students in the poorest communities.

In sum, the high school experiences of many U.S. students continue to be separate and unequal. Most Latino and African American students attend high schools with disproportionately high concentrations of low-income

Table 2. Selected Characteristics of High Schools in the Fifty Wealthiest and Poorest Urban and Suburban School Districts, 2005-06

Percent

| School characteristic | Fifty wealthiest districts | Fifty poorest districts |
| :--- | :--- | :--- |
| Share of minority students | 16.1 | 89.8 |
| Share of schools with a student-teacher ratio of 16 or more | 33.4 | 49.6 |
| Share of schools with 1,500 or more students | 36.4 | 58.6 |
| Graduation rate | 96.0 | 64.0 |

Source: Same as table 1.
and minority students. Four out of ten white students attend high schools with few minority students. Only in some low-wealth rural districts primarily in the South do white students attend high schools with large numbers of low-income students.

## Gaps in Entering Students' Achievement Levels

A final characteristic that differentiates high schools is the achievement levels of their incoming freshmen. The academic skills and outlooks that students bring to a high school shape both the nature and the outcomes of the school. U.S. high schools educate students with vastly different levels of preparation. In some of the affluent communities in the list of the fifty wealthiest, 95 percent or more of students enter high school having scored proficient on their state's eighth-grade examinations used for federal accountability under the 2001 No Child Left Behind (NCLB) Act. In high-poverty, non-selective inner city high schools, fewer than one in five students enters high school having reached proficiency levels in eighth grade. In fact, most incoming ninth graders in these schools have fifth- or sixth-grade mathematics and reading skills, resulting in part from a twotiered system of high schools in some large central cities. ${ }^{14}$ Students with grade-level skills (or better) gain admission to selective
high schools or selective programs within high schools. A recent flyer from one such school district could not have been plainer. It stated that only students with high test scores, good grades, good attendance, and good behavior in the middle grades would be admitted to the selective high schools and programs. By definition, the neighborhood, or non-selective, high schools are left to educate only students with low test scores, low grades, poor attendance, or poor behavior. Thus, in large urban systems some high schools are educating only students with high needs. More than 80 percent of their ninth graders repeat the grade or are over-age, or are in special education, or have below-seventh-grade math and reading skills. Selective high schools or programs have only a small fraction of students with these characteristics. ${ }^{15}$

National Assessment of Educational Progress (NAEP) scores indicate that high-poverty eighth graders have skill profiles closer to the average fourth grader than the average eighth grader. ${ }^{16}$ Moreover, low-scoring eighth graders are not equally distributed across the nation, but are concentrated among minority populations in the central cities of the Northeast and Midwest and throughout the Southeast and Southwest. ${ }^{17}$

Thus, within a common structure, high school students in the United States experience vastly different learning environments. The high schools that students attend range from predominantly white, large suburban schools in affluent communities, where nearly every student arrives ready for high school work and graduates, to all-minority inner city schools that serve high-poverty neighborhoods, where most students enter high school lacking a good middle grades education and only one-half to two-thirds of the students ultimately graduate. The spectrum also includes selective city schools that serve predominately minority students and send large numbers to college, as well as nearly all-white small rural schools in low-wealth counties where most students enter high school with inadequate skills and few attend college. In between are all manner of variations in school size, student composition, and entering skill levels.

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## Purpose and Outcomes of Today's High Schools

Given a common structure, but distinct environments and a still separate and unequal experience for many students, what is the purpose of high school in the twenty-first century? The weight of evidence suggests a growing consensus among both the students
who attend the schools and the school districts and states that organize them that regardless of the characteristics of a school or its students, the primary purpose of high school today is to prepare students for college. The secondary functions of workforce preparation, socialization, and communitybuilding remain, but ask a student, parent, school district administrator, or state school official the purpose of high school, and by far the most common response is that the mission of high school is to prepare students for postsecondary schooling.

The High School Survey of Student Engagement reports that in 2004, when 90,000 students nationwide (though with a bias toward the Midwest) were asked why they go to school, 73 percent responded, "I want to get a degree and go to college." This response outpaced "because of my peers/friends" (68 percent), "because I want to acquire skills for the workplace" ( 47 percent), and "because of what I learn in classes" (39 percent). Moreover, 82 percent of respondents said they plan to enroll in some form of postsecondary schooling after high school, and 10 percent were uncertain. ${ }^{18}$ Likewise, a nationally representative study sponsored by the U.S. Department of Education found that only 5 percent of the nation's high school seniors in 2004 reported that they expected to end their formal education with a high school diploma. Fully 87 percent reported that they expected to attend college, with more than one-third anticipating graduate or professional school. ${ }^{19}$ In the main, students act on these intentions, with three-fourths of high school graduates enrolling in college within two years.

Perhaps nothing better signifies the growing ascendance of college preparation as the core mission of high schools than the widespread availability in high schools of college-level
coursework. Roughly seven out of ten high schools offer dual-credit courses with local colleges or Advanced Placement courses, or both. Opportunities for such courses, however, differ sharply by school size. About half of small, primarily rural high schools offer students the opportunity to take college-level courses, compared with nearly all larger, primarily suburban and city high schools. ${ }^{20}$

But is the American high school successfully preparing its students to succeed in postsecondary schooling or career training? The question, though simple, defies a straightforward answer.

## Graduation Rates and Measured Achievement

The most fundamental high school outcome is graduation. Because each state measures its graduation rate in a manner of its own choosing, however, it is not possible to directly compare official graduation rates across states or between school districts or to calculate a national graduation rate. As John Tyler and Magnus Lofstrom point out in their article in this volume, multiple graduation rate estimates are available, each with its own strengths and weaknesses. ${ }^{21}$ Citing the recent analysis of James Heckman, Tyler and Lofstrom conclude that the national graduation rate is around 77 percent. Overall, then, for close to a quarter of their students, U.S. high schools are not achieving the most basic outcome. This national average, moreover, conceals great variations. In a third or more of U.S. high schools nearly everyone graduates; in 15 percent of schools graduation is not the norm, and graduation rates can be 50 percent or lower. Latino and African American students are three to four times more likely than white students to attend schools with a low graduation rate, and their graduation rates lag behind those of white students
by 15 to 30 points depending on the estimate and the state. ${ }^{22}$

It is also difficult to get a clear picture of the achievement levels of high school students in the United States. National Assessment of Educational Progress (NAEP) results for seventeen-year-olds provide some evidence, though questions about student effort and motivation challenge the validity of the results. On the one hand, NAEP results are based on a sample of all seventeen-year-olds, not just those who are college bound. On the other hand, the test is of no consequence personally for teenagers, who may or may not be motivated by the nation's desire to measure their progress, and thus it is unclear how seriously students attempt to do well on it. Overall, NAEP results indicate that close to half of all seventeen-year-olds demonstrate moderately complex procedures and reasoning skills in mathematics and can understand complicated information in reading. The results also indicate that less than 10 percent demonstrate the highest levels of achievement. ${ }^{23}$ In the Education Longitudinal Study of 2002, only 35 percent of seniors achieved the second-highest level of mathematics performance and demonstrated "understanding of intermediate-level mathematical concepts and/or having the ability to formulate multistep word problems." ${ }^{, 24}$ International comparisons of secondary achievement generally show U.S. students performing in the middle to the bottom of the pack. However, as Daniel Koretz points out in his article in this volume, these international comparisons are complicated by differential student populations and motivations. ${ }^{25}$

Results on the Advanced Placement exams provide a different window on high school student achievement. They indicate that significant numbers of high school students are
already capable of college-level work. Among the class of 2007 , approximately 15 percent of students scored a three or higher on an Advanced Placement exam-the level generally required to be awarded college credit. ${ }^{26}$

## College-Preparatory Coursework

Another way to examine the outcomes of high school is to ask what share of graduates took the academic courses that would prepare them for college or postsecondary training. Here, too, depending on how one presents the data, different pictures can emerge. According to the Education Longitudinal Study (ELS), the graduating class of 2003-04, on average, earned the following credits: 4.3 English, 3.9 social studies, 3.6 mathematics, 3.3 science, 2.0 fine arts, and 2.0 in a foreign language. Thus the typical high school graduate now completes the college-preparatory or New Basics curriculum identified as a key national goal in A Nation at Risk, the 1983 report by the National Commission on Excellence in Education. Moreover, according to the ELS, fully 30 percent of seniors in 2003-04 earned a credit in an Advanced Placement (AP) or International Baccalaureate (IB) course. ${ }^{27}$

Recently, however, the college-preparatory curriculum has been redefined by some to include not just total credits but specific courses, including one credit of mathematics higher than Algebra II, one science credit higher than general biology, and two credits in a single foreign language. Applying these more stringent criteria, only 26 percent of the graduating class of 2004 met the standard. These results mirror those reported by students who took American Council of Testing (ACT) exams for college admission. Of that group, 56 percent stated that they took the traditional college-preparatory curriculum, but only 28 percent reported
taking the specific and more advanced course sequence the ACT identifies with the greatest odds of passing college courses.

Recently, investigators, including Melissa Roderick, Jenny Nagaoka, and Vanessa Coca in their article in this volume, have argued that what is essential is not taking a specific set of college-preparatory courses, but engaging in coursework that develops the knowledge, skills, and habits of mind required for success in postsecondary schooling. ${ }^{28}$ Interviews and surveys of college students aimed at identifying why some high school graduates succeed in college and others do not regularly point out that what college students believe matters is being able to keep up with the pace, volume, and intensity of college work. This in turn requires strong reading, writing, study, and self-management skills. ${ }^{29}$

Evidence on how well high schools are preparing students in these domains is slim, and what exists is not encouraging. NAEP reading scores for seventeen-year-olds have been essentially flat since 1971, despite the rise in academic course-taking. Differences in the instructional time that high school and college students spend in class are not huge, but great differences surface in high school and college students' self-reporting on the reading and writing and the volume and pace of course assignments they complete outside of class. More than half of the students completing the High School Survey of Student Engagement reported spending less than three hours a week preparing for all their courses. On similar surveys, first-year students at four-year and community colleges reported spending more than double that time. Only 8 percent of the high school students, compared with more than half of firstyear students at four-year colleges, reported spending more than ten hours a week
preparing for their classes. And the minimal out-of-class effort reported by the high school students appears to be all that is required. Four-fifths of them stated that they often or very often came to class prepared, and twothirds of those who reported spending three hours or less a week preparing for class stated that they received mostly A's and B's.

Just 2 percent of the high school students reported reading as much material outside of class as college students do, and only 8 percent of high school seniors reported doing as much writing-in both the number of papers and their length. Despite these obvious gaps between high school work and college expectations, two-thirds of the high school students responding reported that their high school education was preparing them for college. One caveat in interpreting these findings is that although students from across the nation took part in the survey, by far the largest concentration of students was in the Midwest, which has the highest number of states without statewide graduation requirements or exit exams. ${ }^{30}$

In sum, based on available evidence it is possible to make a case that somewhere between a third and a half of high school graduates leave high school prepared with a reasonable chance to succeed in college. The higher figure roughly corresponds to 75 percent of high school graduates enrolling in college within two years, with about 28 percent needing to take one or more remedial courses in college. The lower figure roughly tracks the share of high school students who ultimately graduate from college. ${ }^{31}$ Within these national averages, however, wide disparities persist. The college graduation rate of lowincome students has been flat for decades, at less than 10 percent, ${ }^{32}$ and recent research in a number of large high-poverty cities shows
that college graduation remains a rare feat for their high school students. ${ }^{33}$

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## Workforce Preparation

Despite claims that the goal of high school should be to make sure all students are college- and career-ready, in practice the evidence seems to suggest that workforce preparation has become decidedly a secondary goal-both in the minds and actions of students and in the policies and offerings of school districts and high schools. Vocational schooling has been renamed career and technical education (CTE), but by whatever name, it is not a dominant feature of today's high school. Less than 3 percent of students attend vocational or technical high schools, and the number of vocational credits students earn has been in steady decline, falling from an average of 4.4 credits in 1982 to 3.5 credits in $2004 .{ }^{34}$ According to the ELS, only 15 percent of the 2003-04 graduating class took an "occupational curriculum concentration" defined as "at least three credits in one specific labor market preparation area such as agriculture, business, marketing, health care, etc." The ELS also found that high school seniors with an occupational curriculum concentration had decidedly lower
mathematics skills than students with either academic or general curriculum concentrations. ${ }^{35}$

A number of high-profile organizations including Achieve (founded by business organizations and the nation's governors) and the ACT have advanced the position that fundamentally the same set of knowledge, skills, and capacities is needed to succeed in college and the workforce. ${ }^{36}$ In their view, college readiness leads to workforce preparation. Scholars such as Jeannie Oakes and Norton Grubb, among others, have hotly contested this view, stating that to blur the distinction leads to a narrow academic focus in high school and the loss of valuable knowledge, skills, and outlooks rooted in effective career preparation. ${ }^{37}$ College-going rates and labor market outcomes for students who receive a General Educational Development (GED), as noted by Tyler and Lofstrom in their article in this volume, provide some implicit support for the position that the narrowest of academic preparation is neither the best preparation for college nor rewarded in the labor market. The GED is designed to capture the knowledge and skills equivalent to those recognized by a high school diploma and is benchmarked so that 40 percent of high school seniors fail it. As such, the GED would seem to be a reasonably rigorous exam of academic knowledge. Yet students who successfully complete the GED do not do as well as high school graduates either in college or in the labor market. This finding suggests that success in both college and the labor market depends on more than just the acquisition in high school of academic knowledge and skills. Proponents of a blend of academic and CTE experiences in high school are also supported by the few available studies that indicate that students who combine academic and CTE preparation
do well in postsecondary schooling and are rewarded in the labor market. ${ }^{38}$ This group, however, represents only a tiny fraction of high school students. Just 3 percent of the class of 2003-04 combined an occupational curriculum concentration with an academic concentration. ${ }^{39}$

## Future Prospects for the American High School

The uneven academic and workplace outcomes of today's high school students make it possible to conclude that the American high school is falling short in realizing its new mission of preparing every student for postsecondary schooling or career training. Looking ahead to whether the American high school can become an engine of advancement for all, however, requires understanding not only its current state, but also its recent evolution, as well as some forces that may constrain further progress and some that may advance it.

## Evolution over the Past

## Twenty-Five Years

The picture of the American high school painted by high school reformers during the early 1980s is barely recognizable today. Classics such as Ernest Boyer's High School, Theodore Sizer's Horace's Compromise, and Arthur Powell, Eleanor Farrar, and David Cohen's Shopping Mall High School collectively depicted an institution whose predominant goal was to keep students occupied through an ever-diversifying assortment of courses and pathways designed to accommodate their presumed interests and needs. High schools of that era required more credits in physical education than in mathematics. Many required typing. Scholastic Aptitude Test (SAT) scores were declining, and students could graduate with just a single mathematics credit earned by taking consumer mathematics. ${ }^{40}$ These reports from the

Table 3. Percentage of Students Taking Selected Upper-Level High School Courses, 1982 and 2004

| Percent | School year |  |
| :--- | :---: | :---: |
| Course | $\mathbf{1 9 8 2}$ | $\mathbf{2 0 0 4}$ |
| Geometry | 47 | 76 |
| Algebra II | 40 | 67 |
| Chemistry | 32 | 64 |
| Pre-Calculus | 6 | 28 |
| Physics | 15 | 33 |

Source: M. Planty, S. Provasnik, and B. Daniel, High School Coursetaking: Findings from the Condition of Education 2007 (Washington: Department of Education, National Center for Education Statistics, 2007).
field, combined with growing recognition of the role high schools would need to play in forming human capital for the information age, led the authors of A Nation at Risk to call for strengthening the academic component of high schools through both the New Basics course-taking standards (essentially a college-preparatory curriculum) and increased standardized testing. In the intervening twenty-five years, the standards and accountability movement has thoroughly transformed the American high school.

## Raising Standards

One result of the accountability movement has been a substantial increase in academic course-taking. Three-fourths of states have significantly raised the number of credits needed for graduation (in the six states where graduation credits are determined locally, it is not possible to make state-level judgments), and twenty-three states have fully adopted the academic core of the New Basics (four credits in English, three in mathematics, three in science, three in social studies). A recent federal study shows that the average number of credits earned by a high school graduate increased from 21.7 in 1982 to 25.8
in 2004. ${ }^{41}$ The greatest upsurge in credits has been in mathematics-from 2.7 to 3.6-and science-from 2.2 to 3.2. History and social studies, arts, and foreign language credits have also risen significantly, as vocational and elective credits have declined. Perhaps the most dramatic increases were in the share of students taking upper-level collegepreparatory courses such as geometry, Algebra II, chemistry, pre-calculus, and physics (see table 3). By 2004, moreover, male and female graduates were not earning materially different numbers of total credits or math and science credits. ${ }^{42}$ The shopping mall high school had been replaced by a smaller number of "big boxes," primarily academic subject stores.

States have also raised standards by widely adopting increased standardized testing. Twenty-two states now require students to pass exit exams (or in some cases to demonstrate comparable proficiencies) to receive a diploma. With three more states planning to mandate exit exams by 2012, approximately two-thirds of high school students will have an exit exam requirement. Because exit exams are concentrated in Southern and Western states, which have higher minority populations, 76 percent of minority students face exit exams compared with 58 percent of white students. ${ }^{43}$ In addition to exit exams, high school students face a wide range of local, state, and federal standardized testing. The federal No Child Left Behind Act, for example, mandates that every high school student be tested in mathematics and reading in at least one high school grade.

Many local school districts have also significantly increased grade-to-grade promotion requirements in an effort both to end social promotion and to ensure that students earn the necessary credits to graduate. ${ }^{44}$ Districts
have also adopted zero tolerance disciplinary policies, which have led to an increase in suspensions, expulsions, and student involvement with the juvenile justice system. ${ }^{45}$

## The Consequences of Accountability Reforms

Taken together, it is clear that all these accountability reforms-a significant increase in graduation requirements, the growth of exit exams, the tightening of grade-to-grade promotion requirements, and the advent of zero tolerance discipline policies-have made it harder to earn a high school diploma today than it was thirty years ago. What is less clear is whether the reforms have led to better student outcomes. One major consequence of making it harder to earn a high school diploma, for example, appears to be a large increase in high school grade retention, particularly between the ninth and tenth grades, as Ruth Curran Neild describes in detail in her article in this volume. Tougher graduation requirements seem, at a minimum, to be forcing more students to take longer to earn their high school diploma. But some fairly convincing evidence suggests that students who repeat high school grades do not, for the most part, ultimately obtain their diplomas. Case studies from large urban districts have repeatedly demonstrated that students who are not promoted on time to the tenth grade are less likely to graduate than those who are promoted on time. ${ }^{46}$ Other research has also shown that the more rigorous recent exit exams have lowered graduation rates, particularly in states with a large high-poverty and minority population. ${ }^{47}$ Finally, no evidence indicates that increased grade retention is leading to higher academic achievement. Some observers had hoped that providing students with extra time in high school would boost their achievement scores or that the threat of grade retention would
motivate them to work harder, or both. But as high schools became less efficient in graduating students on time, NAEP scores did not increase significantly. ${ }^{48}$

## School and Classroom Changes

The past twenty-five years have also seen significant changes in student-teacher and teacher-teacher interactions. In many high schools, the movement of special education students into the least restrictive environment, the increase in the number of students learning English as the result of immigration, and the formal dismantling of a rigid tracking system have led to much more diverse and heterogeneous classrooms. In urban and increasingly in older suburban communities, as well as low-wealth rural districts, the growing concentration of poverty has further changed the composition of classroomsbringing in more students who face a host of environmental and individual challenges associated with living in high-poverty neighborhoods and, often, single-parent households. ${ }^{49}$

At the same time, the standards and accountability movement has brought high-stakes testing, district-wide curricula, pacing guides, and instructional coaches all pushing for more homogenized instruction. ${ }^{50}$ Especially in grades and subjects that face high-stakes testing, test preparation has become a commonplace and often time-consuming activity. ${ }^{51}$ In high schools with numerous lowperforming students, reform has become a habitual activity, often accompanied by a high turnover in administrators. ${ }^{52}$

Many high schools have also adopted scheduling or organizational changes that have altered the number of classes and students that teachers teach, lengthened their class periods, and in some cases, changed the
nature of their daily interactions with fellow teachers from a primary focus on a single subject area to a more interdisciplinary focus. Such changes have often been accompanied by efforts to personalize large high schools by breaking them up into smaller learning communities or creating ninth-grade academies. ${ }^{53}$ In some cases, career academies in which students take a linked series of career and technical electives have created opportunities for academic and vocational teachers to work together and for teachers to blend workforce applications into their core classes. ${ }^{54}$

## Efforts to Improve

## Low-Performing Schools

Over the past decade, reformers have made a concerted effort to improve the low-performing high schools that educate primarily the nation's low-income and minority students. Investments by the federal government in comprehensive whole-school reform models, as well as philanthropic efforts to promote evidence-based high school reform, have led to the development of several strategies for transforming lowperforming high schools. The new reform models, explored in detail by Steve Fleischman and Jessica Heppen in their article in this volume, have significantly improved student attendance, course passing, and grade promotion and graduation rates in challenging environments. ${ }^{55}$ A multibillion dollar investment by the Bill \& Melinda Gates Foundation has led to the formation of hundreds of new small schools, district-wide efforts to reform large comprehensive high schools, and a large network of research, policy, and advocacy groups dedicated to improving the high school education of primarily poor and minority students. ${ }^{56}$ The combination of federal and philanthropic investments has led to reforms that have
been proven effective, thus challenging the view that improving the nation's lowestperforming high schools is impossible. ${ }^{57}$ Recent efforts in New York City, for example, have demonstrated that even the nation's largest and most complex city, which educates more than one million students, can successfully raise its graduation rate. ${ }^{58}$ Overall, available evidence suggests that the nation's low-performing high schools can be improved, though reform is difficult and often uneven. The need to implement a reform model in precise accord with evidence-based practice offers multiple and constant challenges, as does ensuring that effective reforms are sustainable. ${ }^{59}$

The American high school may thus be able to continue on a reform trajectory that would enable it to reach far more of the students whom it now leaves unprepared to succeed in college or postsecondary training.

Finally, awareness is growing of the need to experiment with different forms of high schooling, as elucidated by David Stern in his article in this volume. Emerging reforms include efforts by charter management organizations to create networks of new high schools; the early college movement, which aims to smooth the transition from high school to college; and attempts to create multiple pathways to high school graduation based on careful analysis of the needs of students who fall off the graduation path. ${ }^{60}$

Many of these emerging reforms have generated preliminary evidence of positive effects, but must await further research before final judgments can be made about their effects and scalability.

## What about the Future?

On one hand there is reason to be pessimistic that the nation's high schools as currently conceptualized and organized can prepare all students for postsecondary schooling or career training. A case can be made that even after a quarter-century of reform, high schools prepare only half of their graduates, at best, to succeed as adults, while leaving the remainder of graduates less than fully prepared and failing totally the one-fifth to a quarter of all U.S. high school students who drop out.

Moreover, because the nation's dropouts are heavily concentrated among its low-income and minority students, who, in turn, are geographically concentrated in a subset of large and medium-sized cities, low-wealth rural districts, and, increasingly, the suburbs of the South and Southwest, the result is worse than simply diminished life chances for individuals. In some of these locales, up to half of all high school students drop out and up to half of these dropouts are simply idle, neither joining the labor force nor seeking further education. Entire communities are thus being shut off from full participation in American society. ${ }^{61}$

On the other hand, it is possible to make a case that the trend in high school reform is going in the right direction. The American high school is not only more focused and more academic than it was twenty-five years ago; it is a very different place. In addition, Americans seem to have reached a deep social consensus that the role of the high school in the twenty-first century is to
provide universal preparation for postsecondary schooling or career training. A growing body of research on high school reform, the emergence of a number of reforms that have been proven effective in transforming or replacing low-performing high schools, and current efforts by the Department of Education to require and support rigorous evaluation of new reform models may within another generation create the conditions necessary to attain this goal. The American high school may thus be able to continue on a reform trajectory that would enable it to reach far more of the students whom it now leaves unprepared to succeed in college or postsecondary training.

But to reach that goal, high schools must move beyond increasing the number of academic courses students take and assessing their accomplishments with greater rigor. Reformers must find ways to enhance the quality, coherence, and value of the coursework high school students complete, to align that coursework with the cognitive tasks required by college work and the workplace, and to increase the effort students put into their work. Reformers must also create a system of academic and social supports for students who enter high school with inadequate academic skills and declining levels of school engagement. ${ }^{62}$

Several challenges must be overcome if the more hopeful vision is to prevail. First, the American high school is in reality a multiplicity of micro-systems, as can be seen by cross-referencing the number and size of high schools within a school district. Close to 40 percent of U.S. high schools, for example, are the only secondary school in their school district, but these schools range in size from 50 students to more than 2,000. At the other end of the spectrum, about 12 percent of high
schools are located in large urban and county districts that have twenty or more high schools each. Each of these systems of high schools (as well as all those in between the extremes) offers its own set of challenges to the work of improving the quality of student coursework. Districts with a single high school must meet the needs of all the students in a community; the smaller schools, especially, may find it hard to provide multiple pathways to adult success. Large systems with twenty or more high schools may have difficulty achieving consistently high outcomes in so many locations, especially systems that are tiered, with students at or above grade level attending selective schools or programs, students below grade level going to neighborhood high schools, and students who struggle in neighborhood high schools being sent to alternative schools.

Second, although the social consensus on the goals of the American high school is strengthening, agreement on the best ways to achieve the goals is elusive. The federal government, states, local school districts and schools may thus proceed in many different directions. Larger schools will also be challenged to mobilize the one hundred to two hundred adults who staff them to work collectively toward a common goal over time. Recent analyses of teachers' reactions to direction given by states and districts in response to No Child Left Behind have shown that almost all differences are between teachers within schools, not across schools or districts. ${ }^{63}$ Improvements in instruction depend much more on teacher cooperation and effort than on more rigorous course requirements or additional testing.

The third challenge is resources. Local control of education means, by and large, local funding of education. Although some states have moved to equalize funding or at least provide a sufficient base of funding for all school districts, many have not. Nor has the federal government to date shown a willingness to step in to provide all high schools with the resources they need to meet the challenges they face. Rather, Washington has invested heavily in early, elementary, and postsecondary education. ${ }^{64}$ Finally, advances in the learning sciences, which might provide the basis for more successful instruction, may not be easy to implement using the current core technology of mass schooling-a single teacher working with twenty to thirty adolescents.

## Conclusion

In sum, although the American high school has experienced a remarkable transformation over the past twenty-five years, it still has a considerable way to go to achieve its current mission-to prepare all students for further schooling or training. To serve as a means of advancement for all of its students and the nation, the American high school will need to find a way to bring to scale the methods and mechanisms, conditions, and know-how that have enabled a few high schools to achieve this transformation in the past decade. The in-depth examinations in the following articles will provide a deeper sense of both the possibilities and limits of the American high school in achieving this goal.

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