For more than a century, American educators and education policymakers have chosen sides in a great debate about the nature and function of American high schools. The origins of this long-running argument can be traced to 1893, when the influential Committee of Ten, a blue-chip panel of educators, issued a report proposing that all public high-school students receive a strong, liberal-arts education. Ever since then we have been fighting about whether our high schools should be college prep for the masses or, as another blue-ribbon panel would put it 90 years later, a “cafe-teria-style curriculum in which the appetizers and desserts can easily be mistaken for the main course.”

There have been, of course, winners and losers on both sides throughout this long discussion, as our high schools have grown into multibillion-dollar institutions serving, or ill serving, hundreds of millions of American adolescents.

Yet the question of winners and losers in this debate about our secondary schools is, to borrow a phrase, academic. The reality is that, quite some time ago, our high schools were set on a course of diversification. And the questions today are whether and how much this “comprehensive high school” has contributed to the declining quality of secondary education in this country. On this issue, we can learn much from history.
Committee of Ten v. Cardinal Principles
There is little dispute about the historical importance of the report of the Committee of Ten. Appointed by the National Education Association (NEA), the committee, composed mainly of presidents of leading colleges, was charged with establishing curriculum standardization for public-high-school students who intended to go to college. During the previous half century, from roughly 1840 to 1890, the public high school had gradually emerged from the shadow of the private academy. While enrollments were still small by today’s standards (probably less than 5 percent of American teenagers attended public high school in the post-Civil War era), by the 1870s and 1880s the number of public secondary schools was increasing fast enough to occasion some attention. And the Committee of Ten was convened to bring some order to the varied curricula that were growing with them.

Under the leadership of Charles Eliot, president of Harvard University, the committee undertook a broad and comprehensive exploration of the role of the high school in American life, concluding, significantly, that all public-high-school students should follow a college preparatory curriculum, regardless of their backgrounds, their intention to stay in school through graduation, or their plans to pursue higher education. As Eliot, author of the final report, put it, “every subject which is taught at all in a secondary school should be taught in the same way and to the same extent to every pupil so long as he pursues it, no matter what the probable destination of the pupil may be, or at what point his education is to cease.…”

From Eliot’s perspective, high schools fulfilled the promise of equal opportunity for education by insisting that all students take the same types of rigorous academic courses. While the Committee of Ten did suggest different programs of study for high schools (for example, programs specializing in classical languages, science and mathematics, or modern languages) and introduced the concept of electives to American high schools, its guiding principle was that all students should receive the same high-quality liberal arts education.

It is not hard to see where the battle lines would have been drawn, even then, especially as a wave of new immigrants was bringing tens of thousands of foreign adolescents to our shores. G. Stanley Hall, a noted psychologist and president of Clark University, denounced the Committee of Ten’s curriculum recommendations, because, he said, most high-school students were part of a “great army of incapables … who should be in schools for the dullards or subnormal children.” Numerous critics joined Hall in attacking the Committee’s report as an elitist view of reality. But the reality was that soon the number of students aged 14–17 attending high school soared, rising from 359,949, less than 6 percent of the age group, to 4,804,255, almost 51 percent of the age group, between 1890 and 1930 (see Figure 1).

In the middle of this demographic revolution, in 1918, another NEA group, this one called the Commission on the Reorganization of Secondary Education, issued a manifesto that turned the fundamental belief of the Committee of Ten on its head. It called for expanded and differentiated high-school programs, which it believed would more effectively serve the new and diverse high-school student population.

This commission’s final report, Cardinal Principles of Secondary Education, built its case on two interrelated assumptions that became central to discussions of the American high school for most of the 20th century. First, it assumed that most new high-school students were less intelligent than previous generations of students. Second, it claimed that since these new students lacked the intellectual ability, aspirations, and financial means to attend college, it was counterproductive to demand that they follow a college-preparatory program.

The End of the Secondary-School Surge (Figure 1)
High-school enrollment increased dramatically over most of the 20th century. But after 1970 it leveled off and graduation rates started to decline.

High-School Enrollment and Graduation Rates

Note: Percentage enrollment is the total high-school enrollment divided by the total population aged 14 to 17. The graduation rate is the number of high-school graduates in a given year divided by the total number of 17-year-olds.

SOURCE: National Center for Education Statistics
Carnegie Units  Defining a high-school education  
by Barney J. Brawer

There may be much speculation about the origin of the education species that is the American high school. Was it intelligent design or simply evolution? In fact, the DNA of modern secondary schooling was implanted as a seemingly unrelated education initiative. In the early part of the 20th century, Andrew Carnegie decided to establish a retirement fund for elderly college professors, gave $10 million to his Carnegie Foundation for the Advancement of Teaching to get the project going, and the rest is, as they say, history.

A College by Any Other Name

Henry Pritchett, first president of the Carnegie Foundation, wrote in the foundation’s first annual report (1906) that “the most important question with which the Board has to deal [in creating the college pension fund] ... is that of determining what educational standard shall be set up: in other words, what is a ‘college’ ...?” College professors, Pritchett noted, frequently complained that high schools “do not furnish them pupils fitted to sustain high entrance conditions.” Principals of high schools complained, “with equal truth, that they cannot keep students in high schools when they are allowed to enter colleges and universities after completion of half or three-quarters of their high school work.”

The problem of where high school ended and college began was not a trivial one. In 1885, Charles Foster Smith of Vanderbilt University had attributed the scarcity of colleges and universities after completion of half or three-quarters of their high school work. “Since the boy is not required to prepare for college, he comes to college without preparation.” Nor was the problem restricted to the South. Even the nation’s most prestigious colleges were admitting half or more of their students “on condition,” that is, deficient in preparation. In 1908, for example, students admitted “on condition,” some as young as 14, constituted 49 percent, 53 percent, and 58 percent of their respective classes at Harvard, Yale, and Princeton.

Add to this nebulous college entrance environment the challenge presented by the proliferation of four-year high schools, whose numbers skyrocketed from 2,526 in 1890 to 10,213 in 1910, and it is easy to see why the trustees of the Carnegie Foundation felt the need to define college: “An institution to be ranked a college must have at least six (6) professors giving their entire time to college and university work, a course of four full years in liberal arts and sciences, and should require for admission not less than the usual four years of academic or high school preparation, or its equivalent, in addition to the preacademic or grammar school studies.” Tucked into this declaration was the determination that both high schools and colleges be standardized as four-year institutions. But the foundation also felt compelled to define “high school preparation.” And it settled on “units” of class time in a particular subject as the standard. “Thus, plane geometry, which is usually studied five periods weekly through an academic year, is estimated as one unit,” they concluded. To solve the problem of a possible “discrepancy between the amount of work required and the time specified for completion of the work,” the foundation determined exactly how many minutes of course time would be required for a given subject. In the end, 14 units of coursework would constitute “the minimum preparation which may be interpreted as ‘four years of academic or high-school preparation.’”

Money Talks

The Carnegie Foundation made the additional decision to require colleges, as a condition of participation in the new pension fund, to accept only students who had completed the designated number of “Carnegie Units.” For most of the 20th century, the near-universal definition of a high-school education has been the completion of 14 to 16 units of study: the time-served or seat-time standard. It would be hard to overestimate the impact this definition has had on the structure and organization of America’s high schools.

In 1954, the U.S. commissioner of education, Samuel M. Brownell, authorized a study that found the Carnegie Unit was being used “in almost every high school in the country.” Why? “In brief,” the report concluded, “it was a case of ‘money talks.’” To receive pension funds from the Carnegie Foundation’s program, colleges had to comply with the foundation’s rules. The colleges, in turn, “compelled” the high schools to accept the new definition of college preparation. Thus the unit-credit system came to define both the structure and the meaning of a high-school education: a rigid schedule of subjects and classes, an emphasis on time served rather than amount learned, and a belief that once a student obtained the required number of graduation units, his high-school education was complete.

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Such a hard-core regimen would force many of the “inferior” students to quit school, exactly the opposite of what the country wanted. Put simply, the Cardinal Principles proponents believed that requiring all students to follow the same academic course of study increased educational inequality. The proposed solution to these problems was curricular differentiation, a policy that allowed students to follow programs and take courses suited to their interests, abilities, and needs.

The Faux Equality of Diversity

It’s possible, of course, to see the origins of the fault lines in these early reports as a product of the differences of the perspectives of the people who were on the two committees. While the Committee of Ten membership leaned toward college (in addition to the college presidents, it included two headmasters and a college professor), the Commission for the Reorganization of Secondary Education was dominated by members of the newly emerging profession of education, specifically, professors from schools and colleges of education. Thus focused on high school as an increasingly independent entity, the Cardinal Principles team endorsed a new institution, the “comprehensive high school,” which would offer students a wide array of curriculum choices.

As we know now, the Cardinal Principles team won.

And they won because supporters of comprehensive high schools defined equal education as equal access to different and unequal programs. Guided by the new IQ tests (which did as much as any single thing to convince American educators that tracking was not only possible but preferable) and the rise of guidance and counseling programs (which could match young people with the curriculum track best suited to their “scientifically” determined individual profiles), America entered an era of democratic dumbing down: the equal opportunity to choose (or be chosen for) failing programs. Proponents of comprehensive high schools argued that these curriculum options would encourage increasing numbers of students to stay in school and graduate, already a standard by which to judge high-school effectiveness.

Unlike the Committee of Ten model, in which all students followed similar college preparatory programs, in the Cardinal Principles model equal educational opportunity was achieved because all graduates received the same ultimate credential, a high-school diploma, despite having followed very different education programs and having met very different standards in the process.

Economic Imperatives

By 1920 most big-city high schools in the country were offering four high-school tracks: college preparatory, commercial (which prepared students, mostly young women, for office work), vocational (industrial arts and home economics), and general (which offered a high-school diploma without any specific preparation for future educational or vocational endeavors). But most American high-school students were still following a college preparatory course of study, though few went on to college: less than 17 percent of 14–17-year-olds even graduated from high school. In 1928, for example, more than two-thirds of the classes taken by American high-school students were in the traditional academic areas of English, foreign languages, math, science, and social studies. Industrial arts and home economics, the most widely touted vocational courses, accounted for less than 9 percent of student course taking.

In essence, high schools in this period balanced important aspects of both the Committee of Ten and Cardinal Principles. These schools maintained strong academic programs, but they also offered enough vocational and elective courses for students to have some curricular choice. In effect, the nation’s urban high schools, which served increasing numbers of young people from poor and immigrant families, were arguably providing the best academic and, for a smaller number of students, vocational education available in the United States at that time.

Unfortunately, this situation changed drastically in the 1930s. The collapse of the national economy, particularly the collapse of the youth labor market, forced a huge number of adolescents back to school. By 1940, 7,123,009 students between the ages of 14 and 17 were in high school, more than 73 percent of the age group. Amid this unprecedented
enrollment surge (an increase of some 2.3 million students over 1930), education leaders once again argued that the intellectual abilities of the new high-school entrants were weaker than those of previous groups of students; and these new students needed access to less-demanding courses. L. A. Williams, an education professor from the University of California–Berkeley, wrote in a 1944 book that most American high-school students of the era were simply “incapable of learning so-called liberal subjects.” These education leaders reiterated their belief that a rigorous regimen of courses would force many of the new students to drop out, a dreadful prospect during the Great Depression.

The economic crisis and the resulting enrollment boom combined to produce a profoundly important shift in the nature and function of high schools. Increasingly, their task was custodial, to keep students out of the adult world (that is, out of the labor market) instead of preparing them for it. As a result, educators channeled increasing numbers of students into undemanding, nonacademic courses, while lowering standards in the academic courses that were required for graduation. Though justified by claims that these curriculum changes increased equal opportunity of education, in reality they had a grossly unequal impact on white working-class young people and the growing number of black students who entered high schools in the 1930s and 1940s. These students were disproportionately assigned to nonacademic tracks (particularly the general track) and watered-down academic courses.

The Great Depression produced a profoundly important shift in the nature and function of high schools. Increasingly, their task was custodial, to keep students out of the market instead of preparing them for it.

The Hell of Democratic Intentions
As David Angus and I discovered in researching our book on the history of the American high school (The Failed Promise of the American High School, 1890–1995), these curriculum policy changes led to changes in student course taking. Between 1928 and 1934, academic course taking dropped from 67 percent to slightly more than 62 percent. The most telling aspect of that shift: Health and Physical Education (PE) courses increased from 4.9 to 11.5 percent of total course taking nationwide. These courses were entertaining, relevant to young people’s lives outside of school, required little or no homework, and, for PE, were amenable to high student/teacher ratios.

Over the next half century health and PE was the fastest-growing segment of course taking. By 1973 it was second only to English in the percent of student course taking nationwide.

As these less-demanding, nonintellectual courses proliferated, a new “movement” was born, the Life Adjustment Movement, a federally sponsored curriculum reform effort that began soon after World War II. According to Charles Prosser, the father of Life Adjustment, only 20 percent of American young people could master academic content; another 20 percent were capable of doing vocational subjects; and the remaining 60 percent needed courses in subjects like health and PE, effective use of leisure time, driver training, and knowledge of such “problems of American democracy” as dating, buying on credit, and renting an apartment.

Stimulated by the Life Adjustment Movement, the dilution of the high-school curriculum continued apace. In 1928 nonacademic courses accounted for about 33 percent of the classes taken by U.S. high-school students; by 1961 that number had increased to 43 percent. One stunning fact puts into perspective this dramatic growth of the nonacademic segment of the curriculum: in 1910 the share of high-school work devoted to each of the five basic academic subjects (English, foreign language, mathematics, science, and history) enrolled more students than all of the nonacademic courses combined; by 1982, more than 39 percent of all high-school coursework was in nonacademic subjects.

Despite the sharp decline in the share of academic course taking, indeed, because of this decline, education leaders in the 1940s and 1950s declared that significant progress was being made toward equal opportunity for education. Pointing to growing high-school enrollments and graduation rates as evidence of the success of their policies, education leaders reiterated that getting diplomas in the hands of more students was far more egalitarian than having all students educated in discipline-based subject matter.

Still, as early as the late 1940s, researchers were discovering high correlations between track placements and social
class. And by 1961, a study of the Detroit public schools found that students from the poorest families in the district were eight times more likely to be in the general track than children from upper-income families.

As the cold war bore down on the nation, this transformation of the high school from a ladder to success into a vast warehouse for youth should have alarmed many Americans. Indeed, in the 1950s some critics, most notably University of Illinois historian Arthur Bestor, denounced these trends, claiming that they had turned high schools into “educational wastelands.” But educators gave little heed to such criticism.

Part of the reason for this complacency lay in the apparent success of the curriculum reforms, a success defined more by quantity than by quality. Between 1950 and 1970, the number of students in grades 9 through 12 more than doubled, from 6,397,000 to 14,337,000, from 76.1 to 92.2 percent of 14–17-year-olds. Citing these enrollment increases, defenders of the comprehensive high school, primarily school superintendents and professors in schools and colleges of education, declared that the institution was functioning well. Clearly, they argued, the relevant, less-demanding curriculum was attracting larger numbers of students and keeping them in school longer. As one education leader in Detroit put it, “We are trying to keep the dropout rate down and keep youngsters in school as long as possible by offering interesting, attractive, and constructive courses.” They did not consider that the decline of the youth labor market, which had begun in the 1930s, may have been a far more powerful “push” on increasing high-school enrollments than the “pull” of easier courses and watered-down graduation requirements.

The percentages of student course taking in academic subjects continued to fall. Between 1928 and 1973, foreign language course taking across the country plunged from 9.5 percent to 3.9 percent. Mathematics dropped from 12.8 to 9.2 percent. Moreover, during these years, the number and percentage of students taking low-level math courses such as “refresher mathematics” increased.

Indeed, there were dramatic increases in the percentages of students taking less-demanding courses in all areas. Put simply, by the early 1960s, most students in American high schools were getting, at best, a second-rate education compared with that of the generation before them.

Slouching toward Anti-Intellectualism

Compounding the impact of these trends was the emergence of a new phenomenon related to the dominant presence of high schools in the lives of young Americans, the development of what sociologist James Coleman called “the adolescent society.” In his now-classic 1961 study The Adolescent Society: The Social Life of the Teenager and Its Impact on Education (for excerpts, see p. 40), Coleman identified a series of problems that resulted from the separate society that high school had created for teenagers. Most troublesome, he said, was that within the new adolescent society peer groups often superseded adult authority in shaping behavior.

Not surprisingly, the young people who set the standards for their peers were those with athletic prowess, good looks, and winsome personalities, not those who devoted the most time and energy to doing well in school. In a sense, the rise of this important peer group dovetailed nicely with the changes that educators had introduced in high schools over the previous 30 years: namely, downplaying the role of academic subjects and promoting the subjects and activities that appealed to teenage interests and lifestyles. The confluence of institutional and cultural anti-intellectualism, which was incessantly reinforced by similar messages in films, television, and music, would bedevil American high schools for the rest of the century.

This drift toward increasing anti-intellectualism did not go entirely unchallenged. In October 1957, following the launch of Sputnik, criticism of high schools became front-page news, spurring a high-profile debate about problems of secondary education. Even though this debate coincided with the passage of the National Defense Education Act (NDEA), designed to stimulate interest in math, science, and foreign languages, the percentage of students taking foreign language and math courses actually fell slightly between 1961 and 1973.

Throughout these years, education leaders effectively defended the comprehensive high school, declaring time and again that demanding greater academic courses for all students would lead to a wave of dropouts and, thus, to greater education inequality. In 1959, another Harvard president, this one retired, James Conant, published a widely cited study that seemed to validate these views. Conant concluded that American high schools were sound and that the differentiated high-school curriculum was the key to secondary schools’ fulfilling their democratic mission. The Conant report, The American High School Today, effectively ended the debate about the quality of American high schools for the next two decades.

Today it seems surprising that Sputnik and the NDEA had so little impact on education. But equally remarkable is the modest influence of the major social movements of the 1960s and 1970s. Despite loud demands for greater education equality, access to first-rate college preparatory programs for large numbers of minority students remains an unrealized goal. Before the 1950s, most young black people, particularly those in the South, had few opportunities for any high-school education. But despite a series of unanimous Supreme Court decisions meant to reverse this trend, in the ensuing years large numbers of black students failed to gain access to the best programs the newly integrated schools offered. Indeed, in many large cities during the 1960s and 1970s, the problems facing minority high-school
students actually worsened, as their schools became battlegrounds for such issues as busing and identity politics, issues that overwhelmed more routine efforts to improve the quality of education.

Given these developments, it was not surprising that academic course-taking patterns of high-school students nationwide barely changed between 1961 and 1973, increasing about 2 percentage points. A number of new education policies contributed to this stability in course taking and to the declining quality of high-school education. First, many one-semester courses, designed to be highly relevant, differed widely in rigor and content, ranging from potentially substantive courses in areas such as African American literature to trendy offerings like “Rock Poetry.”

Second, school leaders began giving academic credit for various aspects of the extracurriculum, such as providing English credit for students working on the school newspaper or yearbook. Such actions further diminished the role that academic courses played in high-school education.

Third, educators began giving credit toward graduation for such courses as Consumer Math, Refresher Math, and Shop Math, watered-down material that had not previously satisfied a graduation requirement. In other words, even when the share of math course taking rose, the increases were coming largely from students taking less-demanding math courses, not algebra, geometry, trigonometry, or calculus.

Finally, but most important, during the 1960s and 1970s educators gradually shifted the onus of course and program selection away from guidance counselors and other education professionals and onto students and their parents. This policy greatly expanded student choice and clearly fit into the counterculture zeitgeist. It also enabled educators to duck accusations that they were responsible for reproducing inequality, since course and program selection now rested with students and their parents rather than with educators.

Back to the Future

By making choice the driving force behind high-school programs, as Arthur Powell, Eleanor Farrar, and David Cohen noted in The Shopping Mall High School (1985), the schools came to resemble education shopping malls, with students searching for bargains (that is, courses that were easy, relevant, and satisfied graduation requirements).

In some ways, the 1970s mark the low point of high-school development in the United States. A small percentage of students got a reasonably good education, but most adolescents drifted through their high-school years unchallenged and uninspired.

The Reagan administration’s 1983 manifesto, A Nation at Risk, gave voice to those who questioned this education pall. It also reintroduced several key ideas from the report of the Committee of Ten, which assumed that academic courses had greater education value than other courses. A Nation at Risk decried the “cafeteria style curriculum” of American high schools, rejecting curricular differentiation, the animating idea of Cardinal Principles.

By 1986, 45 states and the District of Columbia had raised high-school graduation requirements, 42 had increased math requirements, and 34 had boosted science requirements. These changes reduced the choices that students could make in their course selections and thus marked a dramatic shift away from the policies of the previous half-century.

They also produced the most substantial changes in student course taking since the 1930s. In 1982, for example, only 31.5 percent of all high-school graduates took four years of English, three years of social studies, and two years each of math and science. By 1994, however, the number of graduates who followed that regimen of courses had shot up to 74.6 percent. Even more impressive was the fact that the percentages for African American (76.7) and Latino (77.5) graduates were greater than for whites (75.5). These changes were positive steps away from curricular differentiation and toward greater curricular equality.

Unfortunately, despite these changes in high-school course taking over the past two decades, student achievement in core liberal-arts courses has not shown dramatic improvement, and American students have repeatedly fallen short on international comparisons of achievement, particularly in math and science. The most recent findings from the Long-Term Trend Reading and Mathematics Assessment of the National Assessment of Educational Progress (NAEP) illuminate this situation clearly. Despite substantially more high-school students taking more difficult mathematics courses between 1978 and 2004, the overall mathematics scores for 17-year-olds in that period remained unchanged. Similarly, the Program for International Student Assessment (PISA) recently released data comparing mathematical literacy and problem-solving skills for 15-year-olds in 39 developed countries: American students ranked 27th. As one commentator on the NAEP findings put it, we are facing “a deepening crisis in the nation’s high schools.”

The broad outlines of this crisis have been apparent for many years. High schools have been “selling students short” for decades, offering too many options and too many watered-down courses. They have sustained a culture of low expectations on both sides of the teacher’s desk.

Reforming our high schools should begin by going back to the future. The vision for American high schools articulated by the Committee of Ten in 1893 must inspire the reforms for our high schools in the 21st century. Clearly, returning to a curriculum model akin to that of the Committee of Ten is necessary but not sufficient to improve the quality of high-school education. What else is needed?
What We Can Do
First, we must effectively address the education problems of schools from preschool through 8th grade. High schools rest on the foundation set in the early grades. If 9th graders enter high school reading at a 6th-grade level, their prospects for success in a challenging high school would be precarious at best. With its emphasis on improving reading and mathematics skills, No Child Left Behind (NCLB) can have a powerful positive influence on preparing young people for high-quality secondary education.

We must also ensure that students entering secondary schools know more than just reading and math. In a troubling example of unintended consequences, because of NCLB elementary teachers may be tempted to set aside units on history, science, or literature in order to create more time for reading and math instruction. The result of such actions will be disastrous for high schools, as students enter with little or none of the crucial background they will be required to take on the secondary level. Again, the elementary grades must provide the disciplinary foundations for future learning in core subject areas.

Teachers at all levels need additional preparation in the subjects that they teach and how to teach them. Beyond the fact that large numbers of high-school teachers are teaching subjects in which they have neither a major nor a minor, even teachers who do have strong academic credentials are often clueless about how to teach their subjects to students from diverse backgrounds and abilities. Historically, as we have seen, school leaders “solved” this problem by assigning supposedly less able students to the general or vocational tracks and watering down the courses they took. This process eliminated the need for teachers to do the hard work of developing methods that would make challenging content accessible to all students.

Schools of education are equally culpable in this process, having shirked their obligation to do the kind of research that would aid administrators and teachers in implementing intellectually rich programs for all students. Programs to prepare new teachers and professional development programs for practicing teachers must address these problems if American education is to improve and thrive.

Finally, we must avoid reform efforts that hide curricular differentiation under an assumed name. This may be the legacy of the most popular high-school reform of the day: subdividing large high schools into small units serving about 500 students. There is certainly much to commend this idea, especially its effort to reduce the anonymity and alienation many students experience in high schools with enrollments of 2,000 or more. But recent research by sociologists Douglas Ready and Valerie Lee (of the University of Oregon and University of Michigan, respectively) found that the new arrangements simply re-created the differentiated curricula of the old system. Students now attended small schools within schools, each with a new name and mission, but the courses and education expectations were essentially the same as those of the tracking regime in the old, larger high school.

Curricular differentiation has proved to be a protean beast. The first step toward its defeat must be, as the Committee of Ten recognized more than 110 years ago, having all high-school students follow an intellectually rich liberal arts course of study. Given the social, political, and economic complexities of the modern world, high-school students need a broad, deep, liberal arts education that will enable them to meet the challenges of the future as informed, thoughtful adults. This means that American young people must graduate with first-rate knowledge, understanding, and skills in foreign languages, mathematics, the sciences, American history and civics, world history and cultures, and great literature from every part of the globe. People who advocate more vocational education in our high schools miss the most fundamental fact of the new world we are living in: today, the best vocational education is academic education.

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