**National Standards in Education**

*by Nancy Morrison*

The challenge to those who seek to improve education by raising standards is not to go back to the schools of their childhood, but to create schools that never were: schools where all children are expected to learn, schools where expectations are high for all students.

**Introduction**

What should students know and how does society know they have learned it? Those are the two questions at the heart of the debate on establishing national education standards and assessments for the nation’s public school students.

It is a debate that starts with high aspirations. A system of standards and assessments is designed to:
• Raise the academic achievement of all or nearly all children;

• Signal students and teachers about the kind of achievement that is possible with hard work;

• Emphasize the value of education for future success in college and careers;

• Encourage improvement of instruction and collaboration among teachers; and

• Motivate students to have higher aspirations in their school work.

Yet however strong the rationale for national standards may be, the problems of their implementation and the possibility of their politicization remain deep concerns.

This paper explores both the promise of a nationwide system of standards and the problems surrounding their implementation. It highlights the U.S. experience and draws comparisons to other countries. This paper summarizes a book by Diane Ravitch who, as both a scholar and policymaker, is well-situated to analyze the movement toward national standards and assessments. One of the leading education historians in the United States, Ms. Ravitch is a senior research scholar and adjunct professor at New York University and nonresident senior fellow at the Brookings Institution. She is the author of dozens of articles and several books, among them The Troubled Crusade: American Education, 1945-1980 (1983) and The Great School Wars: New York City, 1805-1973 (1974). From 1991-93, she headed the office in the U.S. Department of Education that made awards to major organizations of teachers and scholars to develop voluntary national standards in science, history, geography, civics, the arts, English, and foreign languages.

This summary of Ms. Ravitch’s book, National Standards in American Education: A Citizen’s Guide, is offered in the hope that the lessons learned from the U.S. experience will prove valuable to educators and policymakers throughout Latin America and the Caribbean. The document begins with a discussion of the idea of standards and explores different sorts of standards in education. It examines the main types of assessments used to gauge student performance. It summarizes the case for and against a national system of standards and assessments, as voiced in the context of the U.S. debate.

It then describes that debate: why consensus for reform gathered, how momentum for change grew, and the backdrop against which the issue proceeded. The discussion centers on a law passed by the U.S. Congress in 1994 which was intended to begin the process of creating national content and performance standards.

National standards are a starting point, which states and localities can use to define their own curriculum frameworks. The standards promulgated at the national level must be authoritative (in the sense that they must be based on the best scholarship, the best research, and the best classroom practice). They must define what children should know and be able to do in preparation for citizenship, work, and a fulfilling life. They should be
clear, precise, and brief, rather than encyclopedic compromises intended to satisfy every splinter group in the field.

But no matter which way the federal government moves, dangers loom—including the danger of making a lot of noise yet accomplishing little. The complexity of the challenge guarantees that doing it right will be hard; doing it wrong will be easy.

As the effort to establish national standards proceeds, questions must be raised again and again. Are standards high enough? How can we know? Who will make sure they contain no political or ideological bias? How will they be revised? When the new national standards are synthesized by state or local departments of education, will they end up looking very much like the status quo?

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**The Idea of Standards**

This document presents a framework to begin answering these questions. Ms. Ravitch explores these matters in greater depth in her book.

What are standards? A standard is both a goal (what should be done) and a measure of progress toward that goal (how well it was done). Every meaningful standard offers a realistic prospect of evaluation; if there were no way to know whether anyone was actually meeting the standard, it would have no value or meaning. So every real standard is subject to observation, evaluation, and measurement.

Standards may be mandatory (required by law), voluntary (established by private and professional organizations and available for use by anyone else) or de facto (generally accepted by custom or convention, such as standards of dress or behavior).

Standards are created and perfected because they improve the quality of life (or standard of living). Without them, life would be chaotic, unpredictable, and dangerous. The history of standards is a history of people agreeing on ways to improve materials, processes, and products and communicating that information to people who need to know it.

**Standards in Education**

The term "standard" in education means different things to different people. Sometimes the word is bandied about with no concrete meaning at all ("we should improve our standards," for example). Some boards of education think they have standards when all they really have are hortatory or obscure statements about aspirations that are inherently immeasurable (for example, "all students can learn"). Many use terms such as
"standards," "objectives," "outcomes," and "goals" interchangeably, without defining any particular meaning.

For purposes of this discussion, the meaning of the word "standard" as it pertains to education should be made clear. The term has three common uses, each with distinct meaning and purpose. These are:

*Content standards* (or curriculum standards). These standards describe what teachers are supposed to teach and students are expected to learn. They provide clear, specific descriptions of the skills and knowledge that should be taught to students. A syllabus containing the content standards of each school district or state should be easily available to students and parents, so that the school’s expectations are well understood. A content standard should be measurable, so that students can demonstrate their mastery of the skills or knowledge.

In the absence of clear content standards, each teacher and each school must figure out what students are supposed to learn. Under such circumstances, in the U.S. system of locally funded and controlled neighborhood schools, students with educated parents and schools in affluent neighborhoods get a fuller curriculum than students from poor families in poor neighborhoods. The gap between students grows larger because they are not offered equal educational opportunities.

*Performance standards.* Performance standards define degrees of mastery or levels of attainment. They answer the question: "How good is good enough?" Performance standards describe what kind of performance represents inadequate, acceptable, or outstanding accomplishment. Well-designed performance standards indicate both the nature of the evidence (such as an essay, mathematical proof, scientific experiment, project, exam, or combination of these) required to demonstrate that students have mastered the material stipulated by content standards, and the quality of student performance (that is, some sort of a grading system).¹

*Opportunity-to-learn, or school delivery, standards* define the availability of programs, staff, and other resources that schools, districts, and states provide so that students are able to meet challenging content and performance standards. Advocates of such standards believe that students should not be expected to meet high standards unless their schools have adequate resources.

These three types of standards are interrelated. Content standards without performance standards are meaningless. Content standards define what is to be taught and learned; performance standards describe how well it has been learned. Without content and performance standards, there is no way to determine objectively whether resources are deployed effectively.

A primary reason to establish educational standards has been to make sure that all children have access to schools that offer education of similar, high quality. Over the
years, standards—some purposeful, some serendipitous—have evolved to foster some degree of similarity in the quality of schooling, such as:

• The use of identical or similar textbooks;

• The specification of requirements for high school graduation or college entrance;

• The use of standardized or comparable achievement tests for promotion or college admission;

• The prescription of curriculum patterns; and

• The professionalization of teacher training, with shared norms and expectations.

What is most controversial about educational standards is how they will be enforced and by whom. Will standards be mandatory, voluntary, or de facto? Educators and elected officials in the U.S. generally agree that content and performance standards should be voluntary, not mandatory; that they should be created by professional associations of teachers and scholars, free of political interference; that they should serve as guidance, rather than as directives; and that there should be enough leeway in their implementation to permit continual revision and improvement.

Another source of controversy stems from the confusion between standards and assessments. In a well-integrated educational system, standards and assessments go hand in hand. National content standards describe what children are supposed to learn; national performance standards describe how well children are supposed to learn (through such measures as advanced, proficient, basic, or below basic).

Yet this distinction is not often made. Instead, discussions of standards tend to turn at once into debates about testing, such as whether tests are fair, whether tests can measure what is really important, and whether tests should influence decisions about college admission and employment. Focusing only on testing makes it easy to forget that a standard is also a description of what is to be achieved, a model to be aimed for.

Many educators also associate standards negatively with "standardization," and most especially with standardized tests, the multiple-choice tests that are scored by machine. But standardized tests are not the only means of measuring progress toward meeting standards; student achievement can also be measured by essays, mathematical calculations, scientific experiments, projects, performances, or similar demonstrations of what was learned.

The Internationalization of Standards

The trend to extend the reach of standards is global. In education, standards are also becoming international. Accelerating this trend is the push for international standards in
mathematics and science. This is occurring not only because international assessments in these subjects have been administered to students in many nations since the mid-1960s, but also because these subjects are truly international in scope.

Number systems operate in exactly the same way regardless of the race, gender, ethnicity, or religion of the person performing the mathematical operation. Nor are the principles of science culturally determined. Although science is vulnerable to religious battles (especially regarding the origins of the world), the operations of science are everywhere the same: the laws of gravity and motion do not differ in different lands. The validity of the life sciences, earth science, and physical sciences does not depend on the identity of those who engage in their study or use.

Thus, the mathematics and science taught in one modern country are not — and should not be — markedly different from the mathematics and science taught in other modern countries. International assessments of mathematics and science pose precisely the same questions to students of the same age all over the world, with the expectation that they will have (or should have) studied the same material.

The internationalization of standards in mathematics and science has helped promote the development of content standards in the United States. When testing experts gather to decide which topics to include on international assessments, they must agree both about what is taught and what should be taught in their subject.

In this process, educators are forced to grapple with the same issues: if there are international standards in these fields, what should students be taught? Should world standards be used to shape instruction only for students preparing for elite colleges, for all college-bound students, or for all students? Should international standards shape the teaching of these subjects in the early grades, long before students know whether they are college bound? These questions have pushed along the movement to identify external standards.

**An International Perspective**

Many countries have external examination systems, external standards that provide guidelines both for instruction (what is to be taught, described in a published syllabus) and a means of gauging how well the subject has been learned (an examination based on the syllabus). The United States does not.

Some countries—such as Japan, France, and Great Britain—have a national curriculum that describes content standards. Other countries—such as the United States, Germany, and Canada—rely on states or provinces to define content standards. Many educators regard the absence of guidance from the government as a good thing; they fear the imposition of a state or national curriculum. Theoretically, this allows freedom for experimentation, but in practice most districts, schools, and teachers follow the direction provided by commercial textbooks and mass-produced, standardized tests.
Nations that establish national standards do so to ensure quality of education as well as higher achievement. They make explicit what they expect children to learn in order to ensure that all children have access to the same educational opportunity. For example, Japan has a well-developed national curriculum prepared by its Ministry of Education, Science, and Culture. (See Box 1.)

In other nations large numbers of students prepare for national examinations at the end of high school—which concentrates their attention on learning. In France, England, Wales, and Germany, for example, students must pass subject-based examinations to qualify for admission to university.

By contrast, most students in the United States are not expected to take any subject-based examination to enter college. Only a minority of the nation’s colleges and universities requires any sort of entry exam: the two tests required, the Scholastic Aptitude Test (SAT) or the American College Testing (ACT) program, test general aptitude and are not based directly on what students have studied in high school. None of the college-entry tests that American students take is considered comparable in rigor to the English A-levels, the French baccalaureate examination, or the German Abitur.

When one considers authoritative, syllabus-based examinations, whether the international baccalaureate, or the French baccalaureate, the point that emerges clearly is that the test does not stand alone; rather, it embodies carefully delineated standards that have previously been communicated to teachers and students. The test is the measure of whether the standards have been met. It is not a mysterious process that students must puzzle out at the end of the year, or one that asks for a quick response to an unanticipated question. The examination is based on a syllabus that identifies what is most important and what students need to learn. Each examination is not just a test, but also an integrated, well-conceptualized set of standards and assessments.

**Box 1**

A Tale of Two Sets of Standards: Japan and the United States

The contrast between the Japanese and U.S. approach to educational standards is stark. Japan’s national course of study is contained in three slender volumes, one for elementary schools, one for lower secondary schools, and one for upper secondary schools. The course of study contains content standards for every subject in every grade, but it does not dictate what is to be done every day nor how teachers should teach. For example, elementary school science in Japan is organized around three topics: "living things and their environment," "matter and energy," and "the earth and the universe." Fifth graders are expected (among other things) to understand the function of air in combustion. In doing this, they are supposed to learn that, for example, air is essential for combustion, substances burn more strongly in oxygen than in air, and air contains oxygen.

This description is typical of the Japanese approach in every subject area throughout the national curriculum. Clear and free of jargon, it identifies the main ideas that children
should learn; in each grade, new concepts and skills are added to what has previously been learned. Japanese textbooks reflect the central ideas contained in the national curriculum.

In the United States, by contrast, schools have a haphazard approach to teaching science in the elementary grades; there is no agreement about what content is appropriate, and the teaching of science often depends on the interest or experience of the teacher. Because the schools have no particular expectations about what is to be taught, science may not be taught at all in some grades. In addition, textbooks often fail to explain the big ideas of a field in ways that children can readily understand; instead, the texts err on the side of mentioning numerous facts, ideas, and definitions. Everything is surrounded by flashy—although not necessarily relevant—illustrations and graphics.

The Japanese national standards are notably comprehensible and brief. The entire national course of study for all subjects in all grades is smaller in size than the documents prepared by U.S. subject matter groups for the teaching of a single subject.

In America, educational standards are neither explicit nor established by design. They are the incidental result of disparate decisions made in various states and localities about tests, textbooks, and teacher preparation. Instead of being consciously selected and framed, these educational standards have emerged serendipitously from a patchwork of activities at the local, state, and national levels. Moreover, the same school may have different standards, depending on whether students are in the college "track" or not.

The problem is that there are many standards and that they are for the most part low, unchallenging, and inconsistent. These standards establish minimal expectations for student learning and signal that what is learned in school is not very important, either in higher education or in the workplace.

The Case Against National Standards and Assessments

Many people, for different reasons, object to national education standards and national testing. Some object on principle to any effort to establish national standards, even voluntary ones, rejecting the presumption that there is value in uniformity. Others fear that any standards controlled by a federal agency cannot long remain voluntary, because of the federal government’s power to coerce compliance by withholding funds. The critics range from conservatives, who oppose expansion of the federal role in education, to liberals, who fear that meaningful standards will cause poor children to fail or drop out of school.

There are genuine risks in any activities setting education standards; these risks are even larger when a federal agency controls the standards. These dangers cannot be dismissed out of hand; they must be confronted directly, and steps must be taken to minimize them.
The objections to a U.S. system have been strong and varied. As the movement to establish standards gained force, the following criticisms were voiced:

- *National standards will be minimal, reduced to the lowest common denominator, especially if they are controlled by a federal agency.*

This is a realistic fear, especially when the standards are to be certified by a politically appointed board that by law has a large representation of historically low-achieving populations. The best safeguard against inadequate standards is the public nature of the process; if national standards are not comparable to the best standards in the states and other nations, they will be ignored or ridiculed.

- *The government might impose controversial values and opinions.*

This concern is strongest not for subject areas such as reading, writing, and mathematics, but subjects such as history and English, where people hold divergent views. Americans are not likely to want any government agency settling historical debates and giving official sanction to certain ideas, values, and policies, when others have equal claims to the truth. The challenge is to pose issues and controversies without resolving them; to recognize that historical and scientific debates are always subject to investigation and evidence; and to acknowledge those instances where investigation and evidence have established conclusive facts.

- *National standards based on traditional subjects such as mathematics, science, and history will narrow the curriculum.*

Critics charge that subject-based national standards will stifle teachers who want to focus on real-life problems in an interdisciplinary or nondisciplinary way, or who want to organize the school day around themes and problems.

What appears to be "narrowing" to some critics may also be seen as setting priorities and making sure that students have equal educational opportunity. A consensus has grown in the United States that every student should study mathematics, science, history, English, the arts, civics, and a foreign language. Identifying the essential skills and knowledge that students should master in each of these subjects in no way limits the creativity of teachers and may even make their lives easier. Teachers must be free to adapt the standards in each field into interdisciplinary lessons, hands-on experience, problem-solving activities, or anything else they think appropriate.

- *National testing will harm children and distort priorities in the classroom.*

Critics fear that teachers will teach only material pertinent to the tests, trivializing instruction and enforcing uniformity in classrooms.

Critics of testing usually make two assumptions: first, that in the future, tests will be the same kinds of multiple-choice tests that are widely used today (and that are already being
used to label children); and second, that teaching what is tested or testing what is taught is bad. But should not tests incorporate the best aspects of performance assessment: essays, projects, portfolios of student work, open-ended answers, as well as a limited core of well-crafted multiple-choice questions?

Moreover, if tests are thoughtful and thought-provoking, teaching to the test makes sense because the teacher is helping students prepare for the test. Teaching to the test is appropriate if the test gives students a chance to show that they understand and can use what they have learned.

- National standards and national tests will do nothing to help poor inner-city schools.

Critics argue that the most urgent need in inner-city schools is money, not standards and assessments.

While they are no substitute for resources, standards and assessments are nonetheless a crucial part of a strategy to increase equal educational opportunity. Absent standards, poor and minority children do not have equal access to challenging courses; absent assessments, no one can know the size of the gap between schools of groups of students or whether that gap is growing larger or smaller.

- National standards and assessments will not expand equality of opportunity.

Rather, setting high standards will discourage minority students, merely confirming what is already well known about their lackluster performance.

If the act of setting standards is seen as the first step in educational reform, rather than the end of the process, then standards can become a means of ensuring equality of opportunity. In other countries national content standards ensure that all students have access to the same curriculum, no matter where they live, and that teachers are prepared to teach it, because they know what is expected of them.

- Teachers will ignore national standards and assessments and do what they have always done.

To work, standards must precede and be linked to student tests; for the standards to matter to teachers and students, the tests must be based on the standards. If the two are linked, both teachers and students will know that what is taught counts. When a state or nation announces standards but continues to use old tests, then the new standards will be ignored. If the standards form the basis for the state’s testing program, they will not be ignored.

- The failure of national standards will undermine faith in public education and pave the way for privatization of education.
Critics charge that providing information about schools’ and students’ performance would encourage parents and students to choose their own (presumably high-performing) school, rather than accept the one nearest them (the current practice). As attendance dropped at poorly performing schools, schools might be taken over by private entities that promised to do a better job. This could spell the end of the public school system, with its promise of universal free education.

Advocates of standards respond that parents and the general public should have the right to full information about educational performance, not only of their own children, but of all publicly funded schools. Moreover, without valid standards and assessments, there is no way to identify low-performing schools or to determine whether all students are receiving equal educational opportunity.

- National standards and assessments will accomplish little by themselves. Unless they are accompanied by better teaching, a better school environment, better instructional material and more highly motivated students, student achievement will not improve.

This is true.

**The Case for National Standards and Assessments**

Proponents of national standards base their arguments on philosophical and practical rationales, as well as research findings. They maintain that content standards—what children are expected to learn—are necessary for educational improvement; in fact, such standards are the starting point for education. When educators fail to agree on what children should learn, it means they have failed to identify their most fundamental goals. In the absence of such agreement by educators, decisions about what should be learned are left to the marketplace—textbook publishers, testmakers, and interest groups.

Supporters of standards make the following claims:

- Standards can improve achievement by clearly defining what is to be taught and what kind of performance is expected.

They define what teachers and schools should be trying to accomplish, and let parents know what is expected of their children in school. Standards can raise the quality of education by establishing clear outlines as to what students must learn if they are to succeed.

- National standards provide a valuable coordinating function.

Content standards make it possible to coordinate the various parts of the educational system to promote student learning. Teachers can use content standards to prepare their lessons. Colleges and universities can use them to prepare teachers so that they will know
what they are expected to teach. Software designers can use them to create new technology that will teach what children are supposed to learn. Testing experts can use them as the basis for tests that children will take to determine whether or how well they have met the standards. Explicit content standards can become an organizing force for education, in which all the different pieces of the system are focused on the same goal: helping children learn at high levels of achievement.

- *There is no reason for different standards in different communities, states, or regions, especially in mathematics and science, when well-developed international standards already exist.*

International assessments of mathematics and science have identified clear parameters for what is expected of students at various ages. Why should state and local standards depart radically from international standards? In addition, because so many Americans move from state to state and region to region, there is no justification for extreme variation among state educational standards.

- *Standards (national, state, and local) are necessary for equality of opportunity.*

Standards establish the principle that all students should encounter the same educational opportunities and the same performance standards, regardless of who their parents are or what neighborhood they live in. One essential purpose of standards is to ensure that students in all schools have access to equally challenging programs and courses of study, that expectations for learning are equally high for almost all children, and that all teachers are well prepared to teach.

- *Standards and assessments provide consumer protection by supplying accurate information to students and parents.*

Students and their parents have the right to know whether their school offers a full curriculum, appropriate facilities (such as a library and science laboratories), and a well-educated staff; how student achievement compares to other schools in the district and the state; and how their individual performance measures up to the school’s expectations.

- *Standards serve as an important signaling device to students, parents, teachers, employees, and colleges.*

Standards tell everyone in the educational system what is expected of them; assessments provide information about how well expectations have been met. Standards tell students what they need to do to succeed in school; assessments tell them whether they are making progress. Assessments also tell employers and colleges whether high school graduates truly possess the necessary knowledge and skills for work or further study.
Gauging Student Performance:  
A Review of Assessments

The U.S. press and the public want to know whether schools are 'better' or 'worse' than they used to be. However, there is no reliable source of data to provide an answer in the United States. That may not even be a useful question.

The more important question is whether students today are learning as much as they can or should to prepare for postsecondary education and demanding technical careers. Changes in technology, the workplace, and the economy, as well as the sheer complexity of social and civic issues, make it clear that professionals, technicians, and citizens will need more knowledge and skills in the future than in the past.

How can we know whether "students today are learning as much as they can or should"? Those questions can be answered more thoughtfully and completely with well-structured assessments.

At their best, assessments serve as a signal to students, teachers, parents, and the community. They test not only what students have learned, but help to identify what they have not learned so that they can improve their performance in the future.

None of the assessments commonly used in the United States meets these criteria; all have strengths and weaknesses. Several important assessments are considered below:

- a major college entrance examination, the Scholastic Aptitude Test (SAT);
- the National Assessment of Educational Progress (NAEP), which, in the absence of a national test that all children take, has become known as "the nation’s report card";
- international comparisons of student achievement; and
- student course-taking patterns, which indicate the extent to which students take certain subjects and the changes that have occurred over the years.

A fifth measure, a cross-cultural analysis of student performance, is also examined, to lend an international perspective.

An examination of these assessments can help answer such fundamental questions as: How should student performance be assessed? What is the state of educational performance? Has there been a decline? If so, what are the reasons? Should the public be satisfied with current levels of academic performance? Does the educational system need fixing?

A review of these assessments also yields some conclusions about what types of instruction and assessments are most effective; these conclusions are summarized below.
**The Scholastic Aptitude Test (SAT)**

The SAT is a standardized, multiple-choice test with verbal and mathematical sections, used (in conjunction with high school grades) to predict students’ readiness for college-level academic work. The SAT serves as an unofficial barometer of American education—despite the disclaimers of the officials who devise and administer the exam. Much attention has been paid to the decline in average SAT scores, which began in 1964 and lasted about fifteen years; declines or upturns of a point or two inspire despair or jubilation about the condition of U.S. schools.

The debate over the SAT score decline is of more than academic interest because one’s diagnosis of the cause determines one’s view about the nature of the problem and whether anything can be done about it. Some attribute the decline to diversification of the test-taking pool; to them, the decline was not a problem but a victory for democracy in education, to be welcomed rather than deplored. Others maintain that the decline resulted in large part from low expectations, the diffusion and fragmentation of the curriculum, and the influx of large numbers of students into undemanding programs through the process of "tracking" (separating students into different courses of study depending upon their perceived abilities). (See discussions on tracking and curriculum diffusion, below.) If these critics are right, then educators could take specific actions to improve achievement. Studies of SAT scores and comparisons with other assessments lend support to this second diagnosis.

**The National Assessment of Educational Progress (NAEP)**

The NAEP is a federally financed, congressionally authorized program that tests a representative sample of U.S. students at ages 9, 13, and 17 (or lately, grades four, eight, and twelve) in basic skills, such as reading, as well as specific subjects, such as history.

Launched in the mid-1960s amidst concern that the test could pave the way to a national curriculum, a national testing program, and federal control of local schools, the test was designed to prevent comparisons of individual students, schools, and even states. As demands for accountability arose in the 1980s, many education leaders expressed interest in using NAEP as a model for state or local testing because of its reputation as a reliable and valid measure of educational quality. In 1986, eight southern states administered a NAEP-based test to develop state-by-state comparisons and in 1990 Congress authorized trial state assessments.

In 1990, NAEP adopted a new reporting format. In addition to the proficiency scales that describe what students know and can do, NAEP began reporting "achievement levels" that gauge what students should know and be able to do. The purpose was to establish standards for what students should know at a given age or grade, not just to measure what they do know.
Another innovation has been to move away from total reliance on multiple-choice questions. A portion of the questions on some tests have used "constructed response" questions (either short answer questions or tasks that require students to explain how they solved problems by writing, giving examples, or drawing diagrams).

Two important findings have resulted from this pioneering effort. First, the constructed-response questions provide more information about what students understand (and fail to understand) than do multiple-choice questions. Second, these kinds of questions can be successfully incorporated into a national assessment and reliably scored by trained readers.

**International Assessments**

International assessments allow comparison of the skills and knowledge of students in one country with that of their contemporaries in other countries. These measures provide a valuable contrast to national tests like the SAT and NAEP, which compare students within only one country.

The educators who design and administer the surveys see them as a way to encourage participating nations "to examine the structure, practices, and curricula of their educational systems and, as a consequence, to envision the possibility of rethinking curriculum content and the ways in which students are taught." The results of the assessments have been used to identify the kind of performance that is possible and to explore the likely relationships between student achievement and school variables. The subjects most frequently assessed are mathematics and science. These are especially worthy targets for international surveys because they are taught in every nation and are least subject to linguistic and cultural differences; in addition, the importance of these studies is widely recognized for education, technical careers, and participation in a technologically advanced society.

U.S. students have performed poorly in the international assessments, seldom rising above the median, often scoring near the bottom. Only in an international survey of literacy—a subject stressed in U.S. schools—have U.S. students performed well.

After international assessments were highlighted as evidence of the low quality of American education, they—like the SAT—became a focus of media attention, reported as though they were sporting events, with headlines proclaiming which country was first and where the United States placed. The sponsors of the international assessments warn repeatedly that the surveys are not an intellectual olympics or an academic horse race, but to no avail; such cautions usually are neither reported nor heeded.

Although journalists, researchers, and others scour the international assessments for clues to explain low or high student achievement, it may not be possible to draw valid conclusions based on aggregate, cross-sectional country data. Despite these and other
technical flaws of the international surveys of educational achievement, certain trends appear to be clear:

- The more students are taught, the more they learn, and the better they perform on tests.

- The content of instruction among countries at common levels of schooling differs significantly.

- The school affects learning in some subject areas more than in others.

- Use of a differentiated curriculum based on early tracking is negatively associated with student performance on the international assessments and also reduces opportunities for some students to be exposed to more advanced curriculum.

- Countries committed to keeping students enrolled in secondary school score less well on the international surveys, but they spread more knowledge across a larger population. (Japan is an exception. Even with high retention rates at the secondary level, Japanese students perform very well on the mathematics and science achievement surveys.)

- Generally the "best" students in the United States do less well on the international surveys when compared with the "best" students from other countries.

The international assessments demonstrate that students tend to learn what they have studied and that they cannot learn what they have not studied. If this point seems obvious, it nonetheless is important advice for the United States, where many youngsters choose whether or not to study basic academic courses; where many students are "tracked" into programs that deny them access to courses necessary either for college or a technical career; where students in many schools are taught arithmetic again and again until the high school years, instead of being introduced to higher-order mathematical thinking drawn from statistics, probability, geometry, algebra and other areas.

The international assessments are the source of the concept "opportunity to learn." Analysts realized that students could not learn materials that they had never studied, so they wrote about the curriculum as a "distributor of the opportunity to learn."

Reviewers of the international surveys concluded that "students learned what they were taught, and those from countries with more demanding curriculum learned more of the kinds of items tested in the survey and performed better..." In particular, the survey of mathematics assessments "revealed something that many Americans had not supposed possible—that students can be taught complex mathematics at a relatively early age."

American students, it seems, are disadvantaged by low expectations and by a diffuse, unstructured curriculum that inappropriately allocates opportunity (including tracking students and denying them opportunity and resources to learn). What the international assessments seem to suggest is that students learn more when expectations are high;
when all students are expected to learn; and when the content of the curriculum is well planned, challenging, and coherent.

**Course-Taking Patterns**

Course-taking patterns are no less important than test scores in objectively gauging educational performance; they may be even more important, because they may reveal whether students are even exposed to what they need to know to participate successfully in a demanding, technologically advanced economy.

If one consistent message can be found in the studies of test score data, it is that students perform best when they have taken a challenging program of studies. Students who take a full program of history, geography, English, mathematics, science, foreign language, and the arts are best prepared for whatever lies ahead in their lives. In other words, a liberal education—one that opens the mind to new worlds and liberates the individual from ignorance—remains not only the best education for free men and women, but the best preparation for the future, whether one chooses to enter higher education or the work force.

Time is an important variable in education. "The more courses and time spent in a given curricular area, the better the resulting achievement in that area," some studies concluded.

Another important factor is whether students take certain critical courses—"gatekeepers"—necessary for college entrance. Successful completion can determine whether poor and minority students prepare adequately for college. The College Board identified algebra and geometry as the critical gatekeepers, recommended that "schools consider the strategy of requiring mastery of algebra and geometry of all students and that schools develop a plan to encourage college aspirations in all students."

In determining what courses they will take, students are powerfully affected by requirements for high school graduation and college admission. In the absence of clear graduation requirements (that is, expectations set by the school), social class differences in achievement will likely grow stronger in the United States, because the children of the best-educated parents tend to take the courses necessary for college entry in response to their parent’s expectations, while children whose parents are not well educated are less likely to be prodded to raise their aspirations. It is unfortunate that requirements for graduation and college admission deal only with the last four years of high school. The years spent in elementary and junior high school are no less critical in establishing the foundation for success in high school, college, and career.

One of the principal obstacles to a common curriculum is the practice of tracking, which spread throughout American education with the introduction of intelligence testing after the First World War. Once educators were given the technology to sort students on basis of their intelligence or aptitude, they proceeded to use it because sorting, or tracking,
seemed both educationally effective and administratively efficient. The leaders of progressive education supported tracking because it promised to put each student into the curriculum that was appropriate to his or her needs.

Over the years, widespread tracking has led to distortions in course content and course-taking patterns. By the late 1970s, the general track had become the dominant track in high school. Neither vocational nor academic, the general track consisted of courses such as driver education, typing, and home economics. The high school curriculum "has become diffused and fragmented... as have college courses and degrees," a report to the National Commission on Excellence in Education concluded.

Curricular differentiation is a major source of educational inequity. Large racial and socioeconomic differences occur among academic, vocational, and general tracks. Black, Hispanic, and low-income students are disproportionately assigned to low-ability groups and nonacademic tracks, where they are denied access to educational opportunities afforded to students in the academic track. The decisions are usually well-intentioned; however, they amount to a form of invidious differentiation which in turn legitimates providing different educational opportunities and lower expectations to certain groups of students. Tracking actually widens the gap between advantaged and disadvantaged students.

What is the solution? To raise the graduation requirements for all students. Recognizing the need for higher standards, 42 states raised their high school graduation requirements, and 47 mandated student testing standards in the 1980s.

The state-led reforms, coupled with widespread public dissatisfaction with the course of U.S. public education, paved the way toward a remarkable decade of progress in the United States. Enrollments in advanced courses in foreign language, mathematics, and science went up substantially for every group of students. Students’ aspirations for higher education rose, as did the percentage of students enrolling in college.

Ten years is a relatively short time to change ingrained patterns of behavior. Although the gains were impressive, they are not cause for complacency. Overall, a review of student achievement suggests the test scores declined in the late 1960s and throughout the 1970s; that the decline ended around 1980; that average achievement improved during the 1980s (probably because higher graduation requirements spurred a significant increase in academic course-taking among all groups of students), and that the achievement gap between majority and minority students is narrowing.

The changes indicate that student achievement goes up or down in response to expectations and standards. The state, the school district, the schools, teachers, parents, peers, colleges, employers, the community, and the media, each in their own way, send a message to students about the kind of behavior and performance that is expected of them. The higher the expectation and standard, the better the achievement.
Box 2

An Analysis of Student Performance Across Cultures

Why do students from one country perform better than their peers in other countries? International assessments provide rankings but little basis for answering that question. A series of cross-national studies led by Harold W. Stevenson, a research psychologist at the University of Michigan, suggests some answers.

Stevenson’s group developed an extremely sophisticated causal analysis of students in Taiwan, Japan, the United States, and later, in China. In contrast to the international assessments, which are a snap-shot of a single performance, Stevenson used a combination of testing; interviews with students, teachers, and parents; and classroom observations to monitor performance over time and to understand differences in performance.

What they found was that schoolchildren in Asia performed better academically than those in the United States, and that the academic gap grew larger between the first and fifth grades. The differences in mathematics achievement were especially striking. The top students in the United States were on par with the average students in Taiwan and Japan. To those who assumed that Asian students were "smarter" than American students, Stevenson explained that there were no differences in cognitive functioning among the children in the three nations.

What, then, accounts for these large gaps? Stevenson identified several factors:

• First, American students spent less time in academic activities, either in school or at home.

• Second, American teachers usually worked in isolation, while Asian teachers collaborated to improve their teaching.

• Third, American parents were very satisfied with their children’s schools and their children’s performance, while Asian parents were not.

• Fourth, American students and their parents attributed academic success to ability; Asian students and their parents attributed academic success to effort.

Stevenson’s research demonstrated that "the achievement gap is real, that it is persistent, and that it is unlikely to diminish until, among other things, there are marked changes in the attitudes and beliefs of American parents and students about education." Perhaps most disturbing among his findings is that American students and parents are generally satisfied with the current level of academic performance.

That high level of satisfaction reflects the fact that parents and their children have no external standard by which to gauge the quality of academic achievement, and
consequently neither parents nor students are accurately informed about whether students’ achievement is good enough and how it compares to standards of achievement in other modern societies.

The Momentum Toward Standards in the United States

Momentum to create a national system of standards and assessments has grown steadily in the past two decades in the United States. The impetus has been widespread dissatisfaction with the performance of U.S. schools. The current system has become one in which schools expect little effort from students while offering them inflated grades and self-esteem. Concern has spread that American students will not keep pace with their peers in other countries, and that the gap between strong and weak students within the United States is growing.

The consensus for establishing national standards has bridged both political parties, and efforts to institute a system of standards and assessments have proceeded at all levels: local, state, and national. The initiative has proceeded in the face of three distinctively American features of the educational system.

The first is a tradition of local control of schools—a tradition dating to the earliest years of the republic. By law, the federal government has not been allowed to supervise, control or direct curriculum. This restriction stems from fears that the federal government might attempt to exert control over what children learn. Fundamentally, the agreement to keep the federal government out of curriculum decisions has been based on lack of trust; U.S. political leaders at every level have agreed not to create a centralized ministry of education because of mutual fear that it would inevitably impose someone else’s unwanted ideas into local schools.

The outgrowth of this tradition of local control is a highly decentralized system that includes fifteen thousand local school districts; fifty state boards of education (plus one for the nation’s capital, the District of Colombia); and a federal Department of Education. Joining that already crowded list of actors is a slew of interest groups, elected officials, state and federal judiciaries, schools of education, researchers, universities, unions, test-and textbook-publishers, and journalists. Because there are so many different centers of power, changes in education policy are brought about through public argument, campaigns, crusades, and movements.

Further complicating steps to adopt national standards is another strong U.S. tradition: nonconformity. Americans have long prized rugged individualism. Attempts to standardize education challenge this long-held value.
Moreover, over the years, Americans have come to use their public schools not only as educational agencies, but also as instruments of social policy. The development of public education in the United States coincided with the onset of waves of immigration from Ireland, Germany, and elsewhere in the 1840s and 1850s. As the nation’s diversity grew, the schools promoted social cohesion by teaching a common language and shared civic values. Over the years, the schools have been asked to respond to a slew of programs and mandates, from "mainstreaming" handicapped and learning disabled children to teaching positive social attitudes, such as respect for the environment and tolerance for those who are culturally different. All the while, demands on the public schools have increased, at the same time that dissatisfaction with performance has spread. By the early 1990s, much of the public recognized that higher levels of education than were necessary in the past would be needed in the twenty-first century and that American schools must expect more effort and higher levels of performance from all students. Many of the actors in American education had come to believe that national standards and assessments would help to provide accurate information and raise the quality of schooling for all students.

Policymakers and the public were ready to consider these unusual initiatives for several reasons:

First, as mentioned, the American public school had become a catch-all institution, lacking in priorities or focus. In trying to be all things to all people, the school had lost its sense of mission. Much of the movement for standards aimed to reestablish priorities by clarifying that schools were responsible, first and foremost, for developing the intelligence of their students.

Second, Americans became distressed by measured declines in student performance on tests. Following a host of critical reports and well-publicized discussion, many governors, legislators, business leaders, and parents began to recognize that student achievement had to improve to prepare students better for college and the work force.

Third, the public was repeatedly dismayed during the 1980s by the poor performance of U.S. students on international assessments of math and science. The results were particularly unsettling because Americans had long been accustomed to thinking that their schools were the best in the world.

Fourth, changes in the economy increased inequality between those who were educated and those who were not. During the 1980s international competition eliminated many semiskilled jobs; as demand for less-educated workers fell, the earnings gap between high school graduates and college graduates grew. Economists predicted that international competition, new technology, and the restructuring of the workplace would continue to favor educated workers with portable skills. In the future not everyone would need a college degree, but every successful worker would need to be literate and numerate and have the ability to solve problems, work with others, and keep learning new skills.
Fifth, Americans worried that badly educated youngsters would impair the nation’s productivity and international competitiveness.

Sixth, Americans were troubled by the persistence of large gaps in achievement among students of different racial and ethnic groups. It became clear that education could not serve as a significant route to upward social and economic mobility unless the educational performance of minority youngsters was strengthened.

Seventh, many of those concerned about educational equity concluded that low expectations were contributing to poor performance of the lowest-achieving students. Educators usually explained wide variations in achievement by noting that the United States educates almost everyone while other nations educate only their elites. Several other nations, however, now educate an even larger proportion of their population than does the United States. The comparison with other nations raised questions about the customary practice of "tracking" weak students as early as age eleven or twelve into undemanding programs, instead of introducing them to the kind of instruction that would challenge them to learn more.

Eighth, the idea spread that schools should be judged not only by their inputs (money spent, resources, facilities, number of advanced degrees among teachers, and so forth), but also by their outputs, or results (that is, student performance). Dissatisfied by the returns on increased education spending in the 1980s, many policymakers demanded accountability for results; in a major conceptual change, the focus of reform shifted to student performance as the best measure of the success of a particular school or school system.

Finally, in trying to assess the health of American education, many of the concerned parties—educators, public officials, parents, and business leaders—came to realize that there is no clear agreement about what students are supposed to learn and that there were no reliable measures of individual student performance.

The promise of standards prompted an unusual political convergence. People who worried most about excellence looked to standards to raise achievement; people who worried most about equality looked to standards to provide students with equal access to challenging curricula and learning experiences. Together they forged an unusual and effective alliance.

The debate about national standards and assessments happened very quickly, perhaps too quickly; even a bipartisan consensus, shaped mainly in Washington, D.C., was insufficient to guarantee that the public understood and supported the changes that were proposed. (See Box 3.)

The debate and the policies it launched represented a sea change in the role of public school and the nature of schooling.
The Public’s View of Reform: Different than the Experts

What does the public think about the increasing attention to standards and assessments in education? The results of U.S. public opinion polls highlight the pitfalls likely to entangle efforts to raise standards or to change the status quo when the debate moves from the nation’s capital and educational experts to local communities.

National pollsters found that the American public has strong opinions about educational reform and that they are more willing to consider a national curriculum and a national test than their elected representatives or the education interest groups in Washington. They like the idea of raising expectations; it fits with their commonsense understanding of human nature and the way things work. But at the same time, the public fears that higher standards will be accompanied by unacceptable levels of pressure on all students and by failure for some. They are worried about who will set the standards: they distrust academics and educational administrators—and do not trust the federal government at all. And they are angry and defensive about claims that other nations do a better job of educating their children. If some other country’s students are doing better, it must be because they are putting too much pressure on their children. Americans prefer to have children who are "well-rounded" rather than children who are good in school.

Some polls found that education experts and policymakers were dangerously out of touch with public opinion. By wide margins, the public’s major educational concerns were safety, order and mastering the basics—issues that educational leaders tend to ignore or belittle.

These polls carry a powerful message. When leading educators advocate higher standards, they often link them to new teaching methods, new forms of assessment, and other classroom innovations. But when the public endorses high standards, it means a return to traditional education, with emphasis on the basics, an end to social promotion, removal of disruptive students from the classroom, firm disciplinary policies, and clear standards for promotion and graduation. People who were polled expressed skepticism, even outright opposition, toward innovative practices—including the use of calculators instead of rote computation. Most people want schools that are cheerful, disciplined, and purposeful, where learning is interesting and enjoyable; where children are expected to meet clear demands for school work and good behavior; and where students learn such values as honesty, tolerance, and equality.

These public attitudes portend resistance to many current reform initiatives, unless reformers can make a better case for their proposals. What is more, the polls clearly reveal a deep fissure between the public’s definition of high standards and the expert’s definition. In the abstract everyone gladly pays homage to the idea of higher standards, but when state and local officials present a specific program that flies in the face of what the public thinks is needed, trouble lies ahead. And when that program is couched in jargon and laden with unrealistic promises, the public is likely to be unresponsive and
suspicious. The public clearly supports national standards and national testing, but the way these initiatives are introduced and translated at the state and local level has the potential to generate intense controversy.

Paradigm Shifts

While the movement toward standards was the first attempt to set national standards, it expanded upon several efforts to use federal funds as a lever to redefine the school’s purpose. The first such attempt followed the Soviet launching of Sputnik, which accelerated the Space Race. In the late 1950s and early 1960s, U.S. schools were urged to identify their best students and encourage them to take rigorous courses in the sciences and foreign languages. Then, in the mid-1960s, the civil rights revolution shifted the focus of educators from meritocracy to egalitarianism, from a talent search to a search for equity. The measure of success was no longer the accomplishments of a gifted few, but the ability of schools to lower their dropout rate, desegregate their classes, and retain students of all different backgrounds through high school graduation and even into postsecondary education. By the 1980s, however, the federal government joined with the states in efforts to raise educational standards, not just for the elite and talented, but for all students. Informed by the egalitarianism of the 1960s, the reformers of the 1980s asked the schools to do what they had never done before: to educate all students well, without regard to social class or background.

That expanded focus received support from the emerging field of cognitive science. This new field sought to understand how children learn and to use that understanding to improve both instruction and assessment. Its advocates sought nothing less than a paradigm shift in the way children are taught and tested. Behind the paradigm shift was the recognition, first, that American education was changing from a system of selection (that is, a system in which most students gained only basic literacy, while a small elite was selected for high-quality education) to a system that was expected to educate everyone; second, that modern life requires higher levels of competence from more people than life did in the past; and third, that most current educational tests had serious limitations.

Advocates of change sought a reconsideration of both instruction and testing, as well as of the linkage between them. For most of the twentieth century, tests were used to sort students according to their ability and to assign them to different tracks (academic, vocational, or general) or to admit them to advanced courses. Reformers, notably Robert Glaser, instead suggested that tests should be used to improve instruction: to find out not only what students had learned, but why students had not learned what was taught. By understanding student errors and misconceptions, teachers could improve instruction and reduce failure. The object of assessment, in other words, would be to improve instruction and learning, not just to produce a grade or a ranking.

The central role of assessments received a boost from the work of Lauren Resnick. The New Standards Project she helped found had as its goal to design a national examination system. Resnick and her colleagues argued that the United States in the nineteenth
century had "developed two educational systems—one designed for an elite, the other for the mass of our population." While elites learned high-level skills such as reasoning and problem-solving, the mass system was "intended to teach routine skills" such as simple computation or reciting civic or religious codes. What was needed, Resnick argued, was a "thinking curriculum" for all.

The only way to change the current systems’ low expectations and to introduce a thinking curriculum, Resnik and her colleagues held, was to change the means of assessing students. Their work lent legitimacy to the value of performance assessments as way to encourage thoughtfulness and understanding. It also suggested the importance of involving teachers (not just as teacher representatives on a committee of experts) in putting reforms into practice.

The link between instruction and assessment, and the necessity of teacher involvement, was put to the test in California during the 1980s. There, state superintendent of public instruction Bill Honig pioneered what now is called "systemic reform." Beginning with a vision of what education ought to be, Honig oversaw the development of content standards and linked together all the parts of the educational system—including new tests, new textbooks, and staff development activities to teach teachers how to teach the new materials—in support of achieving higher standards. Once the systemic reforms were under way, the state department of education helped create networks of schools, each working toward a common goal, such as getting more low-income students into college or strengthening elementary school science. Through these networks, teachers and principals could take responsibility for implementing change in their own school.

Honig created a model for systemic reform that influenced policymakers in the Bush and Clinton administrations, as well as in other states. Meanwhile, the push for national standards was being propelled by other events.

One of the most important was the publication in 1983 of *A Nation At Risk*, a report on the state of U.S. education prepared by the National Commission on Excellence in Education. In clear and dramatic language, the study painted a picture of an educational system where high school graduation and college entrance requirements and expectations for students were uniformly minimal.

The response to *A Nation At Risk* was unprecedented. It unleashed an extraordinary amount of press attention, public interest, and state-level reform. In the decade that followed, the southern states became leaders in education reform.

Also adding impetus for reform was the emergence, in 1989, of a model for national standards. Leaders in the field of mathematics showed how classroom teachers and the nation’s leading mathematics educators could cooperate to raise standards.

These efforts, and many more, resulted in a growing consensus about the importance of paying attention to what and whether students were learning. It was neither a conservative nor a liberal consensus. Some worried that students were not learning
enough; some that they were not exposed to "the best that has been thought and known." Others worried about the yawning gaps in achievement that divided rich and poor, white and nonwhite, advantaged and disadvantaged.

Logic suggested the need for national standards. A surprisingly wide agreement coalesced around the potential value of national standards and assessments.

**A Growing Consensus**

What should schools do? From many different perspectives, contentions, and experiences of educational reformers in the 1980s emerged certain ideas. These helped to forge a consensus on the following points:

• First, what students should know and be able to do must be clearly defined (in the form of content standards), so that they, their teachers, and their parents know and understand what is expected of them.

• Second, content standards should define what is to be learned, not the kind of behavior, attitudes, or personal qualities that students should display when a course is concluded. Content standards define knowledge and skills (and are measurable), not behavioral or attitudinal objectives (which are usually immeasurable).

• Third, tests should be aligned with content standards so that students know they will be tested on what they have been taught.

• Fourth, content standards should be used to reform examinations; textbooks; teacher training, education, and certification; and other parts of the educational system.

• Fifth, all students should be expected to learn mathematics, science, English, history, geography, civics, the arts, and a foreign language.

Although some ability grouping may be necessary for students at the extremes, curricular tracking should be discouraged or eliminated because it excludes students from the opportunity to learn the knowledge and skills that are needed for good jobs and education.

• Sixth, teachers should encourage students to think, to apply what they have learned to novel situations, and to develop the ability to explain how they arrived at the answer to problems.

• Seventh, parents and teachers should stress the importance of effort, rather than ability, as the key to success in school.

• Eighth, tests should stress achievement (what is learned in class) rather than aptitude.
• Ninth, tests should be designed to determine whether students really understand what they have studied, rather than simply having them pick a correct answer from a series of boxes.

• Tenth, public agencies should pay more attention to results (whether students are performing at high levels) and regulate less (that is, leave schools and teachers free to do things their own way so long as they aim for high performance for all students).

These ideas became guiding principles in the growing movement to establish national standards and national assessments.

The Complex Process of Setting Standards

By 1989, the push for standards was receiving the highest levels of political attention. In the fall of 1989, President George Bush convened an education summit with the nation’s governors; there they agreed to establish national educational goals, which the president announced in his State of the Union speech in 1990. Two of the six goals were pledges to increase academic achievement. The third goal declared that by the year 2000 "American students will leave grades four, eight, and twelve having demonstrated competency in challenging subject matter, including English, mathematics, science, history, and geography; and every school in America will ensure that all students learn to use their minds well, so they may be prepared for responsible citizenship, further learning, and productive employment in our modern economy." The fourth goal stated that by the year 2000 "U.S. students will be first in the world in science and mathematics achievement." The other goals focused on helping preschool children; raising the high school graduation rate to 90 percent; increasing adult literacy; and pledging that all schools would offer a disciplined environment, free of drugs and violence.

From the onset, it was not clear where responsibility would lie for implementing the goals, nor was there any agreement on who would establish national standards or devise national examinations. The only consensus was that any national standards and assessments should be voluntary, not mandatory, and national, not federal. But no one knew with any certainty how to launch a process for creating voluntary national standards that would remain free of federal control.

The Bush administration did not offer legislation to establish national standards and assessments precisely because it feared that authorization by Congress would inevitably place the federal government in control of what the administration believed should be a voluntary process. Instead, the administration sought to encourage professional fields—in such areas as science, history, geography, foreign languages, the arts, English, and civics—to shape a consensus about what students should know and be able to do. The federal government, through the U.S. Department of Education, made grants to leading groups of teachers and scholars to create these standards. Eventually, the standards would make their own way into the schools by virtue of their quality—not because of the coercive power of government to impose them. The results of a voluntary national test,
when known to parents and teachers, would encourage schools, districts, and states to adopt high standards, or so the administration argued.

The Bush administration plan was not a new federal program, but a nationwide strategy with several complementary parts. First, every community and state was encouraged to organize its own citizens’ committee to work toward the goals (eventually, nearly 3,000 such groups were created). Second, a privately funded entity was established to manage a design competition for "break-the-mold" schools. Congress was asked (and declined) to fund such a "new American school" in every congressional district, but the private entity awarded grants (which did not require congressional approval) for innovative schools.

Third, school choice would be promoted through a small number of demonstration programs (Congress refused to authorize such projects). These would complement the "world class standards" devised for core subject areas, along with the voluntary national tests.

The Clinton administration pursued a different path, enacting legislation in 1994 with assurances that any national standards would be voluntary. In fact, there is no federal agency to certify national standards or even to review different state standards. So it is not clear how national standards can emerge without any coordinating agency. However, since there are already de facto national standards embedded in tests like the SAT, ACT, and NAEP, as well as in the expectations of major universities and employers, the problem is not to create national standards, but to discover and explain them.

Over time, content standards might look like a three-tiered cake, composed of national, state, and local layers. The national standards might identify in broad strokes the essential skills, concepts, and knowledge of each field; state standards might build on the national standards, making them more concrete and adding content pertinent to the state; and localities could tailor the national and state standards, making them more specific and adding content prized in that locality. This may seem unduly complicated, but complexity is necessary in a federal system, where states and localities bear primary responsibility for education.

One unmistakable lesson emerges from the U.S. experience: Getting legislation to establish national voluntary standards through the national legislature is difficult—but ultimately easier than the process of actually developing meaningful standards in a democratic system. The diversity of political agendas that has fragmented the education system may also fragment the effort to establish standards. The multiplicity of often conflicting goals, purposes, and intentions that have become commonplace in American education will make it difficult, if not impossible, to establish high standards. The politics of U.S. education guarantees a veto to a broad assortment of interest groups, creates entitlements for others, and permits exceptions for still others. These are the very conditions that created the current educational system. It is unlikely that standard-setting activities can be insulated from the interest group politics that promotes uniformity of practice and tolerance of mediocrity.
Federal funding will keep alive the discussion about standards, as well as state-level activities. Hundreds of millions of dollars will be appropriated to encourage states to engage in their own standard-setting programs and to create state tests. Inside the nation’s capital, Goals 2000 is seen as a mighty achievement, a forceful step in a new direction. Outside Washington, educators and ordinary citizens are confused. They are confused by the legislation because it is complicated and not easily understood. Even those in the field of education do not understand who will do what and how national standards will work. People are confused by declarations that all children can learn when they know that many students—especially in urban schools—are achieving at levels far below what is needed to enter college or take on a skilled job.

Is the goal of higher levels of academic achievement for all students worth the effort? Absolutely. Although not every student will reach the highest levels of performance, all students can learn much more than they do now and improve their academic performance.

The process that will work is one of continuous improvement. It is also one that involves risks. Deep risks must be taken in the process of setting and revising standards, observed Irving Louis Horowitz of Rutgers University. But "there are catastrophes in the failure to run such risks."13

Conclusions and Recommendations

The challenge today is to educate the entire rising generation and to educate it at least as well as its peers in other modern societies. Pursuing this goal involves admitting that the standards of 1960 or 1970 are inadequate to the requirements of the present or the future.

What steps will raise educational standards in a democratic society? The following conclusions and recommendations emerge from the U.S. and international experience and careful research:

- The model that works begins with a vision of what education ought to be.

It starts with the belief that all children can learn at high levels.

- The mere act of raising expectations can raise student performance.

Given enough time, all children can reach higher levels of learning than children currently achieve. This does not mean that all children should be taught at the same pace; some children learn faster than others, and they should move forward more quickly so they do not get bored. Every nation in the world has a spread of student achievement,
with some students at the bottom and others at the top. The goal must be to raise
achievement for all students, while narrowing the range from top to bottom. This does not
mean dragging down the students at the top but expecting more of all students, especially
those who are in the bottom half.

- Once a vision for higher performance has been articulated, three broad
  requirements are then necessary to achieve success.

They are clear content standards, embodied in coherent statements of what students are
expected to learn and do; changes in all other parts of the education system, including
testing, professional development, textbooks, and technology; and a long-term
commitment to build support for the reform agenda in every school, so that teachers come
to feel a sense of ownership in its success.

- Change must be systemic.

Systemic reform in education means that the entire system must change. The two
essential components of systemic reform are standards and assessments. National
standards must be coordinated with assessments. What happens if they are not? If schools
continue to use standardized, multiple-choice tests that bear no relationship to the new
standards, the national standards will simply be ignored and have no influence on
textbooks, teacher training, instruction, or anything else.

- Strong leadership is key.

A critical element of success is a leadership willing to say no to inappropriate demands
and pressures. This process does not compromise every difference by acceding to every
demand.

The same determination will be necessary to prevent the dilution of national standards
into minimum standards. The effort to create national standards will fail if the standards
are so low that they challenge no one, so vague that no one takes issue with them or so
vast in their coverage that they are beyond the comprehension of students and teachers
alike.

- Reform will not succeed without shared values.

Ultimately, the improvement of American education depends not on a technocratic
solution, not on getting the right laws written, not even on reorganizing the schools’
bureaucratic structure. The missing ingredient continues to be widespread agreement on
the value of a challenging and rigorous education for everyone.

If we are serious about building a society in which everyone is well educated, then we
have to realize that our efforts must extend far beyond the walls of the school. Children
need to know that working hard in school is important and that they must devote
themselves to their education. The adults in their lives—their families and teachers—
must continually reinforce the value of learning, of investing in one’s mind and skills. But this lesson cannot be taught unless adults believe it.

Recommendation: Parents must let their children know that nothing is more important than getting a good education and that they must apply themselves earnestly to their school work. Parents should read to their children when they are very young, set limits on television watching, monitor their homework, and visit regularly with their teachers. Parents can set a good example by reading and showing that they too want to keep learning. They should talk to their children about current events and take them to libraries, museums, concerts, and historical sites. Parents are their children’s first teachers, and if they ignore their responsibilities, the schools are at an enormous disadvantage.

- Change can happen quickly.

A notable example was the adoption of standards for mathematics recommended by National Council of Teachers of Mathematics (NCTM) in 1989. Although full implementation of the standards requires sweeping change—the revision of instructional methods, teacher education, professional development, technology, and assessment—significant change could be seen in every one of these areas within three years after the release of the NCTM standards.

- Standard-setting should involve the public.

Recommendation: Every school and school district should reexamine its standards for promotion and graduation to determine whether students are learning the skills and knowledge that they will need for college, citizenship, personal development, and work. Educators should call on parents, local employers, colleges, and civic leaders to help establish academic standards for students and the schools. Schools and school districts should also adopt standards for student conduct.

- Standards can help ensure equality of opportunity.

If setting standards is seen as the first step in educational reform, rather than the end of the process, then standards can become a means of ensuring equality of opportunity.

- Standards can—and should—accommodate different teaching styles and methods.

The point is not to create uniformity of practice, but a challenging curriculum that is equally available to all students.

National content standards should remain voluntary and should be regularly revised. They should serve as a vision of what is possible. They should be clearly understood as goals for academic achievement. They should not be used to dictate instructional methods, to discredit unorthodox (or orthodox) educational programs, or to silence
innovators and dissidents. If some visionary teachers find a better way to teach mathematics or history, the national standards should not get in the way.

- Attention must be paid to the school-to-work transition.

Students need to understand that what they learn in school will matter in the world of work, and schools need to incorporate that material into their lessons. For their part, employers must do a better job of communicating their expectations to the nation’s schools.

**Recommendation:** Employers should insist on high school transcripts when they are hiring, and the schools should develop transcripts that are ‘employer friendly.’ These transcripts should provide clear information about grades, courses taken, attendance, behavior, efforts, and extracurricular activities. Transcripts should include a teacher’s recommendation.

**Recommendation:** In helping students prepare for the adult world, schools should teach standards of comportment as well as academic standards. Basic skills—including how to speak properly, how to dress for the world of work, and how to be punctual—may be needed for some students. For all, school should instill common sense, common decency, and a willingness to teach and learn the fundamental skills needed to succeed in the workplace.

- Colleges and universities should be aware of how their entry standards affect the graduation requirements of high schools.

**Recommendation:** Schools should consider integrating coursework, particularly in areas such as science and math, much earlier—in the elementary and junior high school years. A course of study in which lessons build on one another over the years would lay a much better foundation for success in high school, college, or career.

**Recommendation:** Institutions of higher learning should work closely with high schools to eliminate the necessity of remedial courses in college. Even when colleges intend to accept most applicants, they should make clear in advance what kind of educational preparation is needed for success in their institution. Colleges should not accept students who are not prepared to do college-level work.

- Assessments must have meaningful consequences.

Well-structured examinations have clear and relevant consequences, such as success in being admitted to college or getting a job. Good assessments are also based directly on what is taught in school. Therefore students work hard to master what is taught in school.

- To gauge student performance, multiple kinds of assessments will be needed.
Recommendation: The customary method of testing in the classroom should be performance assessment, not multiple-choice tests. Students should be expected to demonstrate an ability to apply what they have learned. Students should know that they will be expected to write essays, perform science experiments, engage in debates about historical issues, and exhibit acquired knowledge in a variety of ways.

Recommendation: College selection examinations, such as the SAT, should test not only general aptitude, such as reasoning ability and mathematical skills, but also subjects such as science, history, geography, English, and civics, so that students know that what they learn in school will count on their college admission examination.

Recommendation: An examination for individual students should be created and administered that would provide comparative performance data for students of the same age and grade, at home and abroad. (The U.S. Goals 2000 programs does not lay the groundwork for a national examination. Private testing organizations may have to fill the gap.) If the test devised were widely recognized for its quality, students could submit their results with their college and employment applications.

- Schools and districts, as well as students, need better benchmarks to improve performance.

Recommendation: States and districts should create report cards for individual schools and districts. These report cards should provide relevant information for parents, students, and the public. They should include information about overall student performance, dropout and completion rates, staff qualifications, resources, facilities, program offerings, and course-taking patterns. Such information helps to establish performance benchmarks and to determine where resources and improvements are needed.

- A reliable system of standards and assessments will make it possible for districts and states to monitor school quality and to target assistance where it is necessary.

Recommendation: States and local school districts should focus on improving student performance, and should minimize regulations and mandates. Schools must be free to meet high standards in different ways. States and school districts must also take seriously their obligation to ensure that schools have adequate resources and that funding patterns among schools are fair. To this end, school-based budgeting will be necessary.

- Finally, a system of standards and assessments, no matter how reliable, is not a panacea. But establishing such a system is well worth the effort.

A system of standards and assessments might help to focus the priorities of the educational system on teaching and learning, which is no small matter in a world where what you are and what you can aspire to depends increasingly on what you know.
Notes


4 Ibid., p. 29, viii.

5 Ibid., p. 35.


10 Australia, Belgium, Canada, France, Ireland, Japan, the Netherlands, New Zealand, and Spain have a higher proportion of their population ages 2-29 enrolled in school than does the United States; Denmark, Finland, France, Germany, Ireland, Japan, Sweden, and Switzerland have higher rates of secondary school completion. Organization of Economic Cooperation and Development, Education at a Glance: OECD Indicators (Paris: 1992), p. 97.
