

Fad or Reform?

The Standards Movement in the United States

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Abstract

For two decades, concern has risen in the United States over low student achievement and poor rankings of U.S. students in international educational studies. This led to a national call for renewal in education. In 1989, the president and the governors of the fifty states defined six national goals that are to be reached by the year 2000. A nationwide movement to define content standards with less emphasis on knowledge and more on skill building was initiated which also requires new performance assessment measures. Issues concerning national goals and content, as well as performance standards are discussed.

1 Past Fads and Fixes

The United States Constitution assigns responsibility for education to the states. However, this has not kept the federal government from setting up a Department of Education and mingling in education affairs by demanding specific school and instructional organization in exchange for money. The most important federal impact on elementary and secondary education in the U.S. was initiated by President Johnson's Great Society in the 1960s. Congress enacted legislation that still provides substantial federal support for improving the quality of education for children with special educational needs: socioeconomically disadvantaged children, language minority students, physically or mentally disabled children, and children who live in migratory families. Yet, the hope that increased funding (input) would result in higher achievements (outcomes) of students was not realized. In the mid-seventies, achievement test scores were generally declining (Harnischfeger & Wiley, 1975).

States responded to the bad news with mandatory competency testing. By the early eighties, 37 out of the 50 had such programs; by the end of the decade 47

had adopted testing or assessment programs. In essence, these are outcome-oriented programs that mainly test knowledge. The federal government addressed the test score decline with some delay in 1981 by appointing The National Commission on Excellence in Education. Its report with the gloomy title "A Nation at Risk" (1983) covered pivotal points for reform: leadership and fiscal support, including a call for parents to actively take on responsibility for the education of their children; more time and more effective use of school time for learning; increased high school graduation requirements in terms of years for five core subject matter areas (4 years of English; 3 years of mathematics; 3 years of science; 3 years of social studies; one-half year of computer science; and for the college-bound, 2 years of foreign language); higher standards and expectations for elementary, secondary, and higher education; higher standards for teacher education and professional development, and an incentive structure for the teaching profession. Following this report, course taking of high school students in core subject matter areas actually did increase.

However, the focus on educational outcomes gained momentum fueled by a federally initiated state level competition: (1) The National Assessment of Educational Progress (NAEP), a federal assessment program which has reported on achievement nation-wide since the mid-1960s, was extended to allow state-by-state comparisons. However, few states signed on for that competition; (2) a federal wall chart displayed each year state-by-state comparisons of all available test scores. The federal government also began to pay more attention to international comparative studies, especially the large scale studies of the International Association for the Evaluation of Educational Achievement (IEA) which has carried out many comparative studies since the 1960s.

There was some good news in reading. In the 1990/91 IEA study, American 9-year-olds ranked second and 14-year U.S. students were in the top third of the IEA distribution (Elley 1992). But in a 1983/84 science study, U.S. students were from the middle to the bottom of the achievement score distribution (Postlethwaite & Wiley 1992) and ranked near the end of the distribution in a 1981/82 mathematics study (McKnight et al. 1987). These examples of international comparisons show that U.S. students have strong points. However, the poor rankings in mathematics and science, as well as, the lack of improvement in achievement in domestic testing and assessment programs, except for a slight increase in scores for the very low achievers, prompted broad concern for the quality of education. This led President George Bush and the governors of the fifty states to declare in an education summit meeting in

1989 "the time has come, for the first time in United States history, to establish clear national performance goals, goals that will make us internationally competitive" (U.S. Department of Education 1990, p. 1).

2 National Goals and Content Standards

In his state of the union address, in January 1990, President Bush unveiled six national performance goals for education to be reached by the year 2000. In 1992, Congress codified these goals in the "Goals 2000: Educate America Act" (Public Law 103-227):

1. All children in America will start school ready to learn.
2. The high school graduation rate will increase to at least 90 percent.
3. 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.
4. U.S. students will be first in the world of science and mathematics achievement.
5. Every adult American will be literate and will possess knowledge and skills necessary to compete in a global economy and exercise the rights and responsibilities of citizenship.
6. Every school in America will be free of drugs and violence and will offer a disciplined environment conducive to learning.

Obviously, these goals did not emanate from a vision of an educated American with the skills required to compete in a global society, but were conceived in response to widespread desperation over the state of education. How otherwise could there be no mention of health, the arts, and foreign languages? Except for 1 and 6, all goals are defined in terms of outcomes. Goal 1 is to secure appropriate input (school readiness), and Goal 6 is to secure a basic precondition for effective teaching and learning. In Goal 3 English, mathematics, science, history, and geography are mentioned. This is a step back from the core academic areas in "A Nation at Risk" that included foreign language for college-bound students. After all, six out of ten high school graduates enrolled in college in 1991 (National Education Goals Panel 1993).

The goals are very ambitious. Considering the U.S. rankings in international comparisons, Goal 4 presents the greatest challenge: " By the year 2000, U.S.

students will be first in the world in science and mathematics achievement." What does that entail for mathematics and science curricula in the United States? Does this mean that the U.S. is competing for rank one on an international gauge? Do the governors and Congress actually believe that this goal can be realized?

Educate 2000 pointed out that the national goals were not an attempt to mandate a national curriculum or specific reforms but to inspire educational reform on all levels. Guided by the National Education Goals Panel, an intergovernmental and bipartisan group, consisting of eight governors, two federal administration officials, and four members of Congress, a goal rush was initiated.

National associations of teachers, national societies, and academies began, with federal financial support, to develop goals, now termed standards, for the core subject matter areas for kindergarten-12th grade. This movement was spearheaded by the National Council of Teachers of Mathematics who was first to publish standards. Its "Curriculum and Evaluation Standards for School Mathematics" (1989) and its "Professional Standards for Teaching Mathematics" (1991) profoundly influenced the movement. While the mathematics standards received much praise, others, such as the standards for social studies and geography, drew little response. Still others were heavily criticized. For example, the draft science standards were criticized by the National Science Teacher Association for mainly representing the views of the American Association for the Advancement of Science and largely ignoring its own reform efforts. The Department of Education criticized the English-language arts standards, developed by the National Council of Teachers of English, the International Reading Association, and the Center for the Study of Reading for being too process and not sufficiently outcome oriented. The Department withdrew funding from the English-language arts project. The history standards, that had been developed with more than 2 million dollars of federal support, created by far the most public controversy. Even the U.S. Senate (in a 99:1 vote) disapproved of them for failing to appropriately weigh the contributions of Western civilization. The standards were so heavily critiqued for distortion of American history that work on revision has begun.

National standards have been and are being developed in the arts (dance, music, theatre, visual arts), foreign languages, geography, health, history, language arts, mathematics, physical education, science, and social studies. They are impressive and challenging. For example, the eighteen standards in geography (beautifully presented on glossy paper with many color photos) are grouped into six essential elements: The World in Spatial Terms; Places and Regions; Physical Systems; Human Systems; Environment and Society; The

Uses of Geography. The standards under each of these categories are described in about a page of text and specified in terms of knowledge, understanding, and what students should be able to do; for kindergarten-4th grade, 5th-8th grade, and 9th-12th grade. For example, kindergarten-4th graders in "Places and Regions" are held to the following in Standard 4 (Geography Education Standards Project 1994, pp. 113f.): "The Physical and Human Characteristics of Places. By the end of the fourth grade, the student knows and understands:

1. The physical characteristics of places (e.g., landforms, bodies of water, soil, vegetation, and weather and climate)
2. The human characteristics of places (e.g., population distributions, settlement patterns, languages, ethnicity, nationality, and religious beliefs)
3. How physical and human processes together shape places."

The fourth grader is therefore able to describe and compare the physical and human characteristics of places, as well as, different places at a variety of scales, local to global. The fourth grader is also able to "describe and explain the physical and human processes that shape the characteristics of places."

Instructional time requirements are specified for each level. Without doubt, these are demanding standards. Standards in other subject matters are similar in structure and challenge. The work completed or still in progress presents a fundamental rethinking of what students should know and be able to do. Generally, the heavy emphasis on knowledge has been replaced with skill building. Students learn to reason, to solve problems, to integrate and evaluate knowledge, and to communicate.

Many states have also initiated work on goals and standards in line with the national goals. However, this process takes more time in the states, because more diverse constituents and the legislature are involved. Further, standards have to be developed with a view of all subject matters and performance assessment which is required in most states. For these reasons, states are unlikely to settle for extensive wish lists. Actually, the state documents tend to contain fewer and more broadly defined standards. The standards are imbedded into curricular frameworks for kindergarten-12th grade, often with suggestions for teaching approaches added. These frameworks are intended as guides for curriculum development on the local level.

California, a leader in the development of curricular frameworks, adopted curricular frameworks for the core subject matters during the 1980s. The documents contain standards for student learning but also suggestions for teaching approaches and evaluation of instructional materials. The recently revised mathematics framework (California State Board of Education 1992) draws heavily on the standards for student learning and teaching that were

developed by the National Council of Teachers of Mathematics which are considered to be in line with the national goals. Many states are presently either reworking older curricular frameworks to align them with the national goals or are reviewing newly developed standards. They will benefit from the work completed by the national organizations. By the end of 1995, probably half of the states will have adopted standards that relate to the national goals.

3 National Goals and Performance Standards

Meanwhile, the National Education Goals Panel has selected a number of indicators that inform about each of the six national goals. Each year, beginning with 1991, the Panel has published a Goals Report. It constitutes a progress report for the six national goals, for the nation as a whole and for each of the fifty states. For Goal 4 (by the year 2000, U.S. students will be first in the world in science and mathematics achievement) new international achievement comparisons are reported. Referring to the International Assessment of Educational Progress (IAEP), a comparative study in science and mathematics of 13-year-old students in twenty countries and of 9-year-old students in 14 countries, the Goals Report ((National Education Goals Panel 1993, Vol. 1) concludes:

"American 13-year-olds were outperformed by students in Hungary, Korea, and Taiwan in three out of four areas tested in an international science assessment in 1991. American students were also outperformed by students in Korea, Switzerland, and Taiwan in all areas tested in a 1991 international mathematics assessment, and by students in France and Hungary in four of the five areas tested" (p. 90).

By international standards, the U.S. has obviously a titanic task ahead to reach Goal 4.

The 1993 Report suggests linking performance to instructional indicators. Based on national studies in science (NAEP, 1990) and mathematics (NAEP, 1992) the Panel states:

"In 1990, most students were not receiving the kinds of instruction needed to apply science ideas outside of the classroom, and many teachers did not have adequate facilities or supplies to pursue these types of instruction" (p. 91).

"In 1992, teachers reported that substantial numbers of 4th grade students were not receiving the kind of instruction recommended by mathematics education experts, such as working with mathematics tools and equipment, developing reasoning and problem solving skills, and learning to communicate mathematics ideas" (p. 93).

These findings call for a massive reform effort. The newly proposed content standards require instruments with which proficiency can be assessed or tested. Traditionally, assessment instruments and tests, norm-referenced, standardized, or teacher made, have heavily relied on knowledge recall by means of multiple choice answers. That is still the "standard" measure of achievement. My 10th grade daughter just had semester finals: biology, mathematics, or French, in each subject the 90-minute final exam consisted of more than 140 multiple-choice questions and two essays or open-ended (show-your-work) tasks. These exams could be called knowledge speed tests. In contrast, the new goals and content standards which require, reasoning, problem solving, and communicating call for new means of measurement. Consequently, test developers, state testing/assessment programs, districts, and schools have begun to go new routes in performance testing.

Again, California has been leading the development of performance standards. This includes open-ended mathematics questions, hands-on assessment in science, group assessment in history, integrated English-language arts assessment in reading, writing, and collaborative learning by students, and portfolio assessment in various subjects. Scores are to be aligned with California standards, national goals, and also international assessments. Even performance scores for individual students were computed, but found not reliable or valid enough to be informative for individual student performance. A student's score of a few performance tasks is not necessarily representative of a student's performance in a defined content area. For example, hands-on science tasks have been found to have such serious problems (Shavelson, Baxter & Pine 1991, 1992; Dunbar, Koretz & Hoover 1991). While it takes relatively little student and scoring time to make multiple-choice tests representative of a defined content area by adding more tasks to a test, it is very time consuming for both, the student and the scorer to accomplish the same with performance assessment (Madaus & Kellaghan 1991; Nuttal 1992). Therefore, if the aim is to develop performance measures for individual students, in particular, if high-stakes decisions are involved, the question of what we can and want to afford has to be answered.

4 Certification of Standards

Once all these state standards are in final form, the federal government hopes to have the opportunity to judge their compliance with the national goals. For that purpose the National Council on Education Standards and Testing

(NCEST), established by Congress in 1991, was charged with providing advice with respect to the feasibility and desirability of national standards and testing in education. NCEST (1992) suggests that national student performance assessments could become (1) valuable high-stakes outcome measures for students in making decisions on high school graduation, college admission, and employment and (2) useful measures for assessing state and local accountability. NCEST clearly identifies its outcome-driven position: "The Council finds a need to shift the basis of educational accountability away from measures of inputs and processes to evidence of progress toward desired outcomes" (National Council on Education Standards and Testing 1992, p. 17). That stance is in line with the earlier mentioned outcome wall chart and state-by-state achievement comparisons. But the new and quite treacherous twist is the sole focus on outcome for accountability and high-stakes individual student decisions.

Subsequently, Congress assigned this task of reviewing and certifying standards, which are to be submitted by states on a voluntary basis, in its "Goal 2000: Educate America Act" to the National Education Standards and Improvement Council (NESIC), a 19-member group to be appointed by the President. The appointments were to be made in August 1994, but have not been made, to this day (Jan. 31, 1995). Since the focus in the new Republican-dominated Congress is on state and local control, NESIC might never be.

Presumably out of concern over the accountability and high-stakes application of new performance assessments, NESIC was also charged with addressing opportunity to learn standards (OTL). The logic here applied says that students can be held accountable for learning only if their schools are accountable. Therefore, national certification of OTL standards needs to accompany certification of content and performance standards. The accountability indicators used in the past, such as number and kind of courses offered or teachers' years of professional experience, do not inform about OTL. More meaningful indicators that focus on quality of education related to the content standards and that can guide school improvement need to be developed (Porter 1993, 1995). However, promoting effective, goal-related instruction and school organization does not necessitate a call for certifiable OTL standards. Actually, the standards documents and curricular frameworks contain many suggestions that relate to OTL.

What is the need for the federal government to certify states' content, performance, and opportunity to learn standards? This smacks of distrust in states' ability and interest to define curricular frameworks and standards that correspond to the national goals. It smacks of a national curriculum and federalism.

The federal government ought to be lauded for taking initiative in activating national organizations and states to rethink goals of education. However, it seeks to centralize power over education in Washington when it declares itself to be the judge on standards in education. Its role would be better served, if it would restrict itself to offering assistance to states.

5 How Good is Good Enough?

Inspired by President George Bush and the States' Governors, the nation has embarked on fundamentally rethinking education. In standards documents and curricular frameworks challenging content standards have been related to sample content and suggestions for teaching approaches. They represent rich sources for building new curricula. Another still valid source for school improvement are the above mentioned recommendations in "A Nation at Risk" (1983).

Higher standards require new curricula and perhaps more time for certain subjects. But, more importantly, they demand new ways to educate and further professional development of teachers. That is costly and takes considerable time.

Corresponding to the content standards, new performance standards need to be developed. This is another very costly enterprise. Koretz et al. (1992) estimate that it would cost 3 billion dollars per year to test core subject areas in three grades, as suggested by NCEST (1992). Obviously, the success or failure of these new measures is closely linked to costs. Besides, there is a danger that performance tests will result in test-driven curricula. Are we aiming for Advanced-Placement-type Courses and Examinations? Schools and districts need performance assessments in line with content taught. This could, perhaps, be accomplished by developing large pools of performance tasks from which districts and schools can select for their assessments. State-level equating and summarizing of these performance measurements should be possible. What would be the gain of state-by-state comparisons? Most likely, the within-state variation of performance scores is larger than among states, and school improvement has to occur on the local level.

Some economies of scale might be achieved by pooling expertise among states. The federal government could take on an important role in technical assistance to avoid duplication of effort and to provide state-of-the-art support. A group under the leadership of Lauren Resnick (Learning Research and Development Center, University of Pittsburgh) and Marc Tucker (National

Center on Education and the Economy) is presently filling that void. Under the name "New Standards Project," they began a collaborative effort of seventeen states and six school district. The Project is financed by these member states and private foundations.

The national goals do require nation-wide assessment. The federally funded NAEP has measured educational achievement for thirty years. It should continue to do so. NAEP could be aligned with the new national goals, on the one side, and international gauges, on the other. Actually, NAEP also has the technical expertise to assist states in developing performance standards.

Will all these efforts result in substantial progress towards the Goals 2000? Realistically, we do not expect all students to reach advanced performance levels, although the general statements induce this fantasy. Critical for an answer to the question is the measuring stick and the expectations for the student distribution on a performance standard. Typically, the measuring sticks in the standard documents have three markers for successive mastery. In the arts (Consortium of National Arts Education Associations 1994) they are termed: basic, proficient, and advanced. The document calls for all high school students to reach the proficient level in at least one area of the arts. The geography standards' benchmarks are: aspiring to standard, at standard, and beyond standard (Geography Standards Education Project 1994). Students may fall short on the measuring stick because of lack of opportunity to learn the content, lack of ability, lack of interest, or because students' basic nurturing, nutritional, and health needs are unmet. Such students with special educational needs will benefit from more challenging curricula, from better educated teachers, from a safe learning environment. But for them to overcome educational disadvantage requires a substantial increase in resource allocation and time. Differential resources are needed for students with different educational difficulties. How much can we afford and are willing to spend for whom? Only, once we relate goals or standards to characteristics of the learners and to available and needed resources, will the reform movement reach solid ground. We will then be in the position to reason over resource allocation.

The National Education Goals Panel concludes for 1993: "Overall, this Report shows that the current rate of progress is wholly inadequate if we are to achieve the National Education Goals by the year 2000" (p. XV).

How good is good enough? And how good is enough for whom? So far, the standards movement has resulted in fundamental rethinking of content in most subject matter areas. A careful look at comparative studies indicates, in support of recommendations in "A Nation At Risk," that reform has to reach beyond curriculum and teacher education to include governance, structure and

organization of schooling, and funding (Stedman 1994). All over the United States projects addressing these issues have begun. More than five years are needed to build and implement new curricula, to educate teachers, to improve schools' learning conditions, to restructure teaching and learning. Let's take the time needed and find the necessary resources, now and beyond 2000. Let's not settle for another fad, but engage in reform.

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