

Common Ground

Clear, Specific Content Holds
Teaching, Texts, and Tests Together



BY HEIDI GLIDDEN

Imagine for a moment that you are a new fourth-grade teacher with 25 children squirming in front of you. There's a test at the end of the year, though you really aren't sure what's on it, and there are stacks of enormous textbooks—too enormous to tackle cover-to-cover—on the shelf. The one thing that is abundantly clear is that you are supposed to teach to the standards.

So, when you open up that standards document, do you hope to see something like this?

Analyze the style or structure of a text.

Or something like this?

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Describe the differences of various imaginative forms of literature, including fantasies, fables, myths, legends, and other tales.

Example: After reading some of the Greek or Norse myths found in such books as *Book of Greek Myths* or *Book of Norse Myths*, both by Ingri and Edgar D'Aulaire, discuss how myths were sometimes used to explain physical phenomena like movement of the sun across the sky or the sound of thunder.

Both are from current state standards, but one, obviously, offers much more guidance as to what your fourth-graders need to learn. If your instruction is guided by the first standard, you may or may not adequately prepare students for the test—or for fifth grade. But if your instruction is guided by the second standard, your students have a much better chance of being on grade level. And we can imagine an even clearer, more specific standard that would give you greater confidence that your instruction was on target. For example, instead of merely suggesting books to draw

from, the latter standard could specify exactly which myths, fables, legends, etc. students should read and ensure that none of those selections is repeated in other grades.

* * *

The AFT has been trying to drive home the need for clear, specific, grade-by-grade standards for many years. We first looked at states' efforts to develop content standards in 1995 and reported our findings in *Making Standards Matter*, the first in a series of reports looking at the quality of state content standards. I've had the unique opportunity to work on all the reports from 1995 to the present. I'll spend most of this article discussing current standards and the many ways they need to be improved. But first it's important to note that I have observed significant improvements to the standards over the past 13 years.

In 1995, most states were involved in setting content standards, but the quality of the standards varied greatly. It was the age of outcomes-based education, which in principle made sense: define the outcomes we want students to master. But in practice, this approach was skills-laden, with little to no attention paid to specific content. Too often the outcomes were controversial because they were impossible to measure. Here are a few typical outcomes: students will be lifelong learners; students will enjoy reading a variety of literature; and students will appreciate cultural differences. Laudable goals, but better suited to a mission statement than to a standards document.

In addition to outcomes being too vague to offer any real direction, back in 1995 my colleagues and I also noticed that almost all standards were written as one set of standards that applied to all of K-12 or were clustered to cover smaller grade spans (e.g., K-5, 6-8, 9-12). Only a handful of states had the foresight to realize that standards needed to be grade-by-grade. Nationally, there wasn't a strong emphasis placed on grade-by-grade standards, but we soon learned that they were necessary to help teachers, curriculum developers, and assessment designers distinguish one set of students from another (e.g., third-graders from fourth-graders), and therefore avoid costly repetitions and/or gaps in what students learned as they moved from one grade to the next.

Our first review of standards provided us with baseline data to compare to each subsequent year. Over the past 13 years we have changed our criteria several times, but our focus has remained constant: standards must be measurable, clear, specific, and focused on particular content.

Today, every state has content standards and every state has made efforts to articulate what students should master in the core subject areas. More states have moved to grade-by-grade standards, especially in reading and math. But there is more to do. For example, too many science and social studies standards are still clustered (e.g., K-5, 6-8, 9-12)—and too many language arts standards, although not technically clustered, simply repeat the same standards year after year. (For a table that summarizes the results of our latest review, see p. 19.)

Over the past decade, states have demonstrated that they can dramatically improve their standards. Let's turn now to AFT's most recent review of states' English, math, science, and social studies standards and focus on how states can continue to improve. After all, students in Elizabeth, Colo., for example, should learn the same content and skills as students in Denver—and

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clear, specific, content-rich, grade-by-grade standards are the only way to make sure they have the opportunity to do so.

Strong Standards Create Common Ground

Common, coherent, grade-by-grade standards are an important professional tool. When standards are neither too vague nor overly prescriptive, they enhance teaching and learning. Common, coherent standards:

- Allow teachers and parents to get a good sense of what students are expected to know and be able to do at any specific grade level.
- Help teachers identify which students are having difficulty and need extra help.
- Allow teachers to develop, share, and refine best practices with their colleagues, and professional development to be based on what teachers actually teach, not pedagogical fads.
- Ensure that transient students won't suffer from a new curriculum every time they switch schools.
- Guarantee that all students are exposed systematically to the knowledge and skills they need, without risking unproductive repetition or lack of exposure to key topics.
- Enable teachers to prepare their students for state assessments without drill and kill.

In brief, content standards are at the heart of a coherent, standards-based education system. They define our expectations for what's important for children to learn, serve as guideposts for curriculum and instruction, and should be the basis of all assessments, whether formal, informal, state-developed, or teacher-created. These state-developed, public documents are the source that teachers, parents, and the general public consult to understand content matter expectations.

Content standards should exist for every single grade, kindergarten through high school, in every subject. Grade-by-grade content standards increase the likelihood that all students are exposed to a rigorous, sequenced curriculum that is consistent

TABLE 1: EXAMPLES OF STRONG AND WEAK CONTENT STANDARDS

	STRONG STANDARDS	WEAK STANDARDS
ENGLISH	Distinguish between cause and effect and between fact and opinion in informational text. Example: In reading an article about how snowshoe rabbits change color, distinguish facts (such as <i>Snowshoe rabbits change color from brown to white in the winter</i>) from opinions (such as <i>Snowshoe rabbits are very pretty animals because they can change colors</i>). (Grade 4)	Demonstrate the understanding that the purposes of experiencing literary works include personal satisfaction and development of lifelong literature appreciation. (Grade 4)
MATH	Understand how real and complex numbers are related, including plotting complex numbers as points in the plane. Example: Plot the points corresponding to $3-2i$ and $1+4i$. Add these complex numbers and plot the result. How is this point related to the other two? (Algebra II)	Model and analyze real-world situations by using patterns and functions. (Grade 9-12)
SCIENCE	Describe how groups of elements can be classified based on similar properties, including highly reactive metals, less reactive metals, highly reactive nonmetals, less reactive nonmetals, and some almost completely nonreactive gases. (Grade 8)	Describe the historical and cultural conditions at the time of an invention or discovery, and analyze the societal impacts of that invention. (Grade 5-8)
SOCIAL STUDIES	Evaluate the significance of the presidential and congressional election of 1800 and the transfer of political authority and power to the Democratic-Republican party led by the new president, Thomas Jefferson (1801). (Grade 8)	Identify significant events and people and important democratic values (e.g., freedom, equality, privacy) in the major eras/civilizations of state, American Indian, United States, and world history. (Grade 8)

across grades, schools, and school districts. Grade-specific standards also facilitate greater alignment of standards-based curriculum, assessments, textbooks, professional development, and instruction. States that organize their standards grade-by-grade are best able to specify what students should learn and when they should learn it.

Unfortunately, the quality of content standards varies enormously from state to state, subject to subject, and grade to grade. Some standards are full of empty rhetoric, unclear, and devoid of content. Others are so vast and scattered that no teacher could prepare a student to meet them in the course of a school year. If they are too vague, teachers and test developers can't hope to focus on the same materials. If they are too narrow, they constrict the curriculum. If they are too long and/or fail to make priorities clear, teachers end up in a guessing game as to what to teach—and test developers end up guessing what to assess.* The quality of content standards matters greatly to the interrelated functions of teaching and learning, as well as to the fairness of tests and the accountability systems they support.

The Criteria

We examined each state's and the District of Columbia's content-standards documents to determine whether or not there was enough information about what students should learn to provide the basis for a common core curriculum and assessments. There is no perfect formula for this; we made a series of judgment calls based on a set of criteria. To be judged "strong," a state's content standards must:

- Be detailed and explicit, with little to no repetition, and firmly rooted in the content of the subject area to lead to a common core curriculum.
- Contain particular content:
 - ▶ English standards must cover reading basics (e.g., word attack skills, vocabulary), reading comprehension (e.g., exposure to a variety of literary genres), writing

conventions (e.g., spelling, writing mechanics) and writing forms (e.g., narrative, persuasive, expository).

- ▶ Math standards must cover number sense and operations, measurement, geometry, data analysis and probability, and algebra and functions.
- ▶ Science standards must cover earth, physical, and life sciences.
- ▶ Social Studies standards must require specific content in U.S. history, world history, and civics.
- Provide attention to both content and skills.
- Be articulated for every grade, K-8, and by grade or course at the high school level.

In general, strong content standards provide clear guidance to teachers, curriculum and assessment developers, textbook publishers, and others so that one person's interpretation of the central knowledge and skills students should learn at a particular grade will be comparable to someone else's. Table 1 (above) presents examples of state standards that meet and do not meet AFT's criteria.

What We Examined

We examined only those documents that states had posted on their Web sites in October 2007 and referred to as the state content standards. In our findings, we report on each state's standards by level (i.e., elementary, middle, and high school). To be judged as having strong content standards at any particular level, a state had to meet our criteria for strong content standards in more than half of the grades associated with that level. In order to have strong elementary standards, at least four of the six grades (K-5) had to

*For more on this all-too-common guessing game, see "Mismatch: When State Standards and Tests Don't Mesh, Schools Are Left Grinding Their Gears" in the Spring 2007 issue of *American Educator*, available online at www.aft.org/pubs-reports/american_educator/issues/spring07/Mismatch.pdf.

meet the AFT criteria; at the middle level (grades 6-8), at least two grades had to meet our criteria; and at the high school level (9-12), more than 50 percent of the required standards/courses needed for graduation had to meet our criteria.

Too Many States Give Teachers Little to Stand On

Only one state, Virginia, met the AFT criteria for strong standards in all levels and subjects. While some states have a lot of work ahead of them, others only have to focus on a few grades in one subject area (see Table 2 below).

Percentage	States
0%	Colorado, Illinois, Iowa, Montana, Nebraska, Pennsylvania, Wisconsin
1-24%	Maine, New Hampshire, New Jersey, Rhode Island, Vermont, Wyoming
25-49%	Alaska, Idaho, Kansas, Kentucky, Minnesota, Nevada, Oregon, Washington
50-74%	Arizona, Connecticut, Delaware, Florida, Hawaii, Maryland, Massachusetts, Mississippi, Missouri, New Mexico, North Dakota, South Dakota, Texas, Utah
75-99%	Alabama, Arkansas, California, Georgia, Indiana, Louisiana, Michigan, New York, North Carolina, Ohio, Oklahoma, South Carolina, Tennessee, Washington, D.C., West Virginia
100%	Virginia

In most states, the quality of standards continues to vary greatly by subject. Since AFT's first review of standards in 1995, states have consistently done a better job developing strong math and science standards than English or social studies standards. In our current review, 24 states have strong math standards and 22 have strong science standards. However, only eight states have strong English standards at all levels, and only two states have strong social studies standards at all levels (see Table 3 below).

Subject	States
ENGLISH	Georgia, Indiana, New Mexico, New York, North Carolina, Tennessee, Virginia, Washington, D.C.
MATH	Alabama, Alaska, Arkansas, California, Delaware, Florida, Georgia, Hawaii, Idaho, Indiana, Louisiana, Maryland, Mississippi, New York, North Carolina, Ohio, Oklahoma, South Carolina, South Dakota, Texas, Utah, Virginia, Washington, D.C., West Virginia
SCIENCE	Alabama, Arkansas, California, Connecticut, Delaware, Georgia, Hawaii, Indiana, Louisiana, Maryland, Michigan, Mississippi, Missouri, North Carolina, Ohio, Oklahoma, South Carolina, South Dakota, Tennessee, Virginia, Washington, D.C., West Virginia
SOCIAL STUDIES	Massachusetts, Virginia

Too many states have clustered K-2 standards or have chosen not to write them at all. This is a serious problem because the early grades are essential to building students' background knowledge and vocabulary.

The quality of the standards also varies by level. We found that for most subjects, the middle level standards are the strongest, while the high school level standards are the weakest (see Table 4 below). The weaknesses at the high school level are, in many cases, due to the high school standards being clustered (e.g., one set of standards for grades 9-12) instead of being grade or course specific.

Subject	% OF ELEMENTARY LEVEL STANDARDS THAT ARE STRONG	% OF MIDDLE LEVEL STANDARDS THAT ARE STRONG	% OF HIGH SCHOOL LEVEL STANDARDS THAT ARE STRONG
ENGLISH	47	31	25
MATH	78	84	47
SCIENCE	53	63	53
SOCIAL STUDIES	6	45	43
AVERAGE	46	56	42

Standards that failed to meet our criteria did so for three main reasons: they were repeated, clustered, or had missing or vague content. All three of these problems have the same, terrible consequences: teachers do not have a common understanding of what students should have learned in the previous grade, what they are expected to master in the current grade, or what they are preparing to learn in the following grade. (Neither do textbook writers, professional development providers, or assessment developers.)

So how did the failing standards break out by subject? A number of states received poor ratings for their English standards



because of significant repetition from grade to grade. Thirty-five percent of elementary school English standards (grades K-5), 41 percent of middle school English standards (grades 6-8), and 24 percent of high school English standards (grades 9-12) simply repeat more than 50 percent of their standards from grade to grade.

More than three-quarters (78 percent) of math standards that did not meet our criteria were clustered, an additional 13 percent simply repeated the same standards from grade to grade, and nine percent were vague.

The vast majority of science standards that did not meet our criteria had clustered standards: 87 percent of science standards failures were due to clustered standards; an additional 10 percent were due to missing or vague content.

The failures in social studies were more evenly distributed between clustering and missing or vague content: 58 percent of social studies failures were due to the standards being clustered and 39 percent of failures were due to missing or vague content.

Through our analysis we also found that too many states have clustered K-2 standards or have chosen not to write them at all. In fact, *nine states have clustered or no standards for K-2 in the crucial areas of literacy and numeracy*. This is a serious problem that states must address because specific, coherent, grade-by-grade standards at the early grades are essential to building students' background knowledge and vocabulary. They can help ensure that all kids enter middle school ready to comprehend challenging materials. Knowledge-rich K-2 standards are especially vital for young children from low-income families who, on average, have been exposed to roughly 30 million fewer words than children from professional families—and whose “word and world knowledge” is, therefore, substantially less than that of their peers.*

What Should States Do?

Develop grade-by-grade standards that are explicit. Too many states only write standards for those grades and subjects assessed by the state. Yes, state tests must reflect the content found in the standards. But as any teacher or student can attest, there is more to teaching and learning than the state test. In addition, tests are

*For more on how content in the early grades contributes to reading comprehension, see the Spring 2003 and Spring 2006 issues of *American Educator*, available online at www.aft.org/pubs-reports/american_educator/issues/index.htm.

not measuring the knowledge gained in any single grade. Knowledge is cumulative. For students to do well on the fourth-grade math test, for example, they had to master certain content and skills in grades K-3 to prepare for fourth-grade math. Clearly, the existence of standards should not be contingent on a state test. Instead, it is imperative that administrators, teachers, parents, and students know what all students should be learning regardless of how, or even if, the content and skills are measured by a state assessment.

Bring specific U.S. and world history into their early elementary standards. Currently, only three states bring specific U.S. and world history into their early elementary standards (Arizona, Massachusetts, and Virginia). Most states wait to bring specific U.S. history in at grade 4 and specific world history at grade 5. And, in too many instances, world history is included in the context of U.S. history only. Ultimately, this means students learn about other nations through U.S. exploration (e.g., Christopher Columbus and Spain) or through conflicts (e.g., Japan's role in World War II or the U.S. and Vietnam during the Vietnam War). This practice is most prevalent at the elementary level; however, a few states also do this at the middle and high school levels.

Describe what high school students should know and be able to do by course. The reality of high school is that students enroll in courses, not grade-specific subjects. In other words, students are enrolling in U.S. History from 1877, not in Social Studies 11. Standards should reflect the reality of how high schools function. States that have grade-by-grade high school standards have made a positive first-step in defining what high school students should learn. But, those grade-by-grade standards are not comparable to the coursework high school students are taking, and are, therefore, of little use to teachers, professional development providers, textbook writers, and assessment designers.

There are also too many high school standards that are clustered, meaning one set of standards applies to more than one grade (e.g., grades 9-10, 9-11, or even 9-12). Forty-seven percent of high school English and math standards, and 45 percent of high school science and social studies standards are clustered. In these states, there is no clear understanding of what students are expected to learn throughout their high school years.



A strong education system must begin with strong standards. However, it is important to remember that standards alone—no matter how strong—do not provide the common ground that educators, and students, need.

An effective education system must include curricula and assessments aligned to the standards, professional development for teachers, help for children struggling to meet the standards, and policies that make meeting the standards count. And, states need to develop all of these components in an ordered and systematic fashion. Imposing consequences without also having aligned curriculum, teacher preparation, and adequate resources is a sure recipe for disaster. Administering tests disconnected from a state's standards and curriculum can only lead to student failure and widespread discontent, potentially undermining support for public education.

Ultimately, state officials must ask themselves: Do students in district X cover the same content and skills and at the same depth of understanding as students in district Y? If the answer is 'No' or 'I don't know,' then more work is needed to ensure that all students, regardless of where they live in the state or their socioeconomic status, are given opportunities to learn and ultimately master the content standards. This process must start with strong content standards that reflect the qualities discussed throughout this article.

Today, testing and accountability, instead of curriculum and instruction, have taken center stage. As more accountability provisions are piled on schools, staff, and students, attention has shifted away from what kids should be learning and moved toward test scores and their implications. However, what seems to have been forgotten is that student achievement and test scores are a reflection of what is taught in the classroom. If we want students to have a deeper understanding of important topics, then we need to ensure that they have opportunities in the classroom to delve deeper into various concepts and skills. This is not possible in the current environment, which requires teachers to spend endless hours on test preparation and teaching-to-the-test activities. Now more than ever, the need for content-rich, common standards has become critical. □

Finally, too many states have graduation requirements that don't complement or reflect their standards. For example, in one state, Algebra I may be a required course to graduate from high school, but there are no Algebra I standards. Or, a state may require four years of English, but only provide one set of standards to cover all grades 9-12.

Provide instructional guidance and teacher resources to help teachers bring the standards into the classroom. It isn't enough to develop a strong set of standards. There must be an understanding of what the standards mean and the concepts and skills necessary for students to demonstrate mastery of them. Teachers should have access to detailed guides that explain the content to be taught, offer ideas (not mandates) for how to present the material, show sample student responses that indicate a standard has been met, and include sample classroom assessments.

By addressing these four areas, we believe that states can strengthen their standards and make them more meaningful to teachers, students, textbook writers, teacher preparation programs, professional development providers, and test designers. A strong education system must begin with strong standards. However, it is important to remember that standards alone—no matter how strong—do not provide the common ground that educators, and students, need.

WHICH STANDARDS MET AFT'S CRITERIA FOR CLARITY, SPECIFICITY, AND CONTENT?

E = ELEMENTARY LEVEL M = MIDDLE LEVEL H = HIGH SCHOOL LEVEL	ENGLISH			MATH			SCIENCE			SOCIAL STUDIES		
	E	M	H	E	M	H	E	M	H	E	M	H
ALABAMA	○	○	●	●	●	●	●	●	●	○	●	●
ALASKA	○	○	○	●	●	●	○	●	●	○	○	○
ARIZONA	●	○	○	●	●	○	●	●	○	●	●	○
ARKANSAS	●	○	●	●	●	●	●	●	●	○	●	●
CALIFORNIA	●	●	○	●	●	●	●	●	●	○	●	●
COLORADO	○	○	○	○	○	○	○	○	○	○	○	○
CONNECTICUT	●	●	○	●	●	○	●	●	●	○	○	○
DELAWARE	○	○	○	●	●	●	●	●	●	○	○	○
FLORIDA	●	●	○	●	●	●	○	●	○	○	○	○
GEORGIA	●	●	●	●	●	●	●	●	●	○	●	●
HAWAII	○	○	○	●	●	●	●	●	●	○	●	●
IDAHO	○	○	○	●	●	●	●	●	○	○	○	○
ILLINOIS	○	○	○	○	○	○	○	○	○	○	○	○
INDIANA	●	●	●	●	●	●	●	●	●	○	●	●
IOWA	○	○	○	○	○	○	○	○	○	○	○	○
KANSAS	○	○	○	●	●	○	○	○	○	○	●	●
KENTUCKY	○	○	○	○	●	○	○	●	○	○	○	●
LOUISIANA	●	●	○	●	●	●	●	●	●	○	●	●
MAINE	○	○	○	○	●	○	○	○	○	○	○	○
MARYLAND	○	○	○	●	●	●	●	●	●	○	●	○
MASSACHUSETTS	○	○	○	●	●	○	○	○	●	●	●	●
MICHIGAN	●	●	○	●	●	○	●	●	●	○	●	●
MINNESOTA	○	○	○	●	●	○	●	●	○	○	○	○
MISSISSIPPI	●	○	○	●	●	●	●	●	●	○	○	○
MISSOURI	○	○	○	●	●	○	●	●	●	○	●	○
MONTANA	○	○	○	○	○	○	○	○	○	○	○	○
NEBRASKA	○	○	○	○	○	○	○	○	○	○	○	○
NEVADA	●	●	○	●	●	○	○	○	○	○	○	○
NEW HAMPSHIRE	○	○	○	●	●	○	○	○	○	○	○	○
NEW JERSEY	●	○	○	○	●	○	○	○	○	○	○	○
NEW MEXICO	●	●	●	●	●	○	●	●	○	○	●	○
NEW YORK	●	●	●	●	●	●	○	○	●	○	●	●
NORTH CAROLINA	●	●	●	●	●	●	●	●	●	○	○	●
NORTH DAKOTA	○	○	●	●	●	○	●	●	○	○	●	○
OHIO	●	○	○	●	●	●	●	●	●	○	●	●
OKLAHOMA	●	●	○	●	●	●	●	●	●	○	○	●
OREGON	●	○	○	●	●	○	○	○	○	○	○	○
PENNSYLVANIA	○	○	○	○	○	○	○	○	○	○	○	○
RHODE ISLAND	○	○	○	●	●	○	○	○	○	○	○	○
SOUTH CAROLINA	●	○	○	●	●	●	●	●	●	○	●	●
SOUTH DAKOTA	○	○	○	●	●	●	●	●	●	○	●	●
TENNESSEE	●	●	●	●	●	○	●	●	●	○	●	○
TEXAS	○	○	○	●	●	●	○	●	●	○	○	●
UTAH	○	○	●	●	●	●	○	●	●	○	●	●
VERMONT	○	○	○	●	●	○	○	○	○	○	○	○
VIRGINIA	●	●	●	●	●	●	●	●	●	●	●	●
WASHINGTON	●	○	○	●	●	○	○	○	○	○	○	○
WASHINGTON, D.C.	●	●	●	●	●	●	●	●	●	○	●	●
WEST VIRGINIA	●	○	●	●	●	●	●	●	●	○	○	●
WISCONSIN	○	○	○	○	○	○	○	○	○	○	○	○
WYOMING	○	●	○	○	○	○	○	○	○	○	○	○

● = STANDARDS MET CRITERIA
○ = STANDARDS DID NOT MEET CRITERIA