

THE  
**INSTRUCTIONAL  
DEMANDS**  
OF STANDARDS-BASED  
REFORM





RANDI WEINGARTEN, President

ANTONIA CORTESE, Secretary-Treasurer

LORRETTA JOHNSON, Executive Vice President

© 2009 American Federation of Teachers, AFL-CIO (AFT). Permission is hereby granted to AFT state and local affiliates to reproduce and distribute copies of this work for nonprofit educational purposes, provided that copies are distributed at or below cost, and that the author, source and copyright notice are included on each copy. Any distribution of such materials by third parties who are outside of the AFT or its affiliates is prohibited without first receiving the express written permission of the AFT.

# THE INSTRUCTIONAL DEMANDS OF STANDARDS-BASED REFORM

**A** MERICANS HAVE LONG PRIDED THEMSELVES ON A PUBLIC SCHOOL system that welcomes all comers. Since the middle of the 19th century the immigrant poor, the children of the working class and those from well established families have had access to what Horace Mann envisioned as a system of “common schools” that “equalized the conditions of men.”

The recent standards movement was born of the realization that—despite the fact that public schools opened their doors to everyone—what students experience there varies greatly. America’s system of common schools has been revealed to provide anything but a common experience for those who attend them.

In the schools most of us grew up in, and the ones we know today, the teacher’s job is to plan engaging instructional experiences that will help students cover the grade level curriculum to which they are assigned. Teachers choose lessons or learning activities from texts—or make up their own—to address key topics from the curriculum. They individually determine how long they will spend on a given topic, when and how they will test students on what they have learned, and what criteria will be used to determine the quality of the work students produce. What teachers teach and expect of students is a function of what they know about their subject matter, what they like to teach, and what

they believe any given child is capable of learning. When the current chapter or instructional unit is finished they move on to new topics.

From the students' point of view, what they are exposed to, what they learn, and "what counts" in terms of their grade, is determined by the teacher they happen to have that year. Other students taking the same course, or at the same grade level, might be required to do very different work or to produce work of much greater, or much lesser quality. For the most part, students who the system deems capable of college level work land in the classes of those teachers that demand the most, while others experience a range of expectations from the challenging to the "mickey mouse."

In a system that expects only some students to achieve to high levels, it is easy to predict who those students will be. Over and over it has been shown that poor students and students of color have been systematically denied educational opportunities available to their middle-class, white peers. Even after desegregation plans and compensatory educational programs went into effect, the disproportionate assignment of poor students and students of color to remedial or vocational tracks denied many students opportunities available to others. Recent analyses of resource allocations show that even where tracking is not the issue, poor students and students of color are more likely than white, middle-class students to experience a series of poorly prepared or unqualified teachers (The Education Trust, 1998).

Yet, for the greater part of the last 200 years this educational system seemed to suffice. The vast majority of students attending public elementary and secondary schools eventually took jobs in manufacturing plants, on farms or as homemakers. A much smaller group—what has been called by some "the educated one-fifth" went on to college and took on leadership roles in business and government. Students who left school before high school graduation were not considered "drop-outs," but rather practical and critical contributors to this country's growing industrial economy.

But the decline in agricultural and manufacturing jobs and the advent of the "information age" have emphasized the disparity between those well served by our schools and those that are not. Jobs available today require a new level of "basic" skills—requiring the ability to solve high-level, non-routine problems, to work in complex, diverse environments and to collaborate effectively with others (Murnane, 1996). Where once America's public schools may have been content with a system designed to support a small group to achieve to high levels, we can no longer afford the inequities. What was once considered the standard for only some students must now become the expectation for all.

## Goals of Standards-Based Reform

Standards-based reform envisions school systems driven by agreements about what every student should know and do; guided by data from assessments which tell whether or not students have adequately learned those things; and motivated by accountability mechanisms designed to assure every student access to effective opportunities to learn. Unfortunately, the rhetoric of the standards movement has largely ignored the subtle, but profound shifts in classroom and school practice that are required if we are to get beyond the platitude “high standards for all” and realize that goal in actual student performance.

To date, the standards movement has been characterized by innumerable, sometimes competing sets of content standards developed by professional organizations, states and districts and a growing number of high stakes tests designed to measure whether or not students have learned these things. While these large-scale, standardized tests reveal patterns of achievement among large groups of students and provide information that compares one student’s achievement to others, they are neither comprehensive enough, nor timely enough to guide day-to-day teaching.

Often missing from the rhetoric about standards-based reform is discussion about how the “wish lists” of what students should know and be able to do get translated into changes in practice at the school and classroom level.<sup>1</sup> If we are to achieve the promise of the standards movement, we need to understand the demands of standards-based instruction and develop the capacity of every classroom teacher to carry it out effectively.

## Key Differences Between Standards-based and Traditional Instructional Planning

Expectations for student performance in standards-based systems are not left to individuals, but set by the larger community—by schools, district or the state—to apply to every student. The standards describe not only what students should know (content standards), but the quality of work every student will be expected to do (performance standards). Ideally the knowledge, skills and dispositions described in the standards mirror those demanded in the world out-

---

<sup>1</sup> A report from Public Agenda, a non-partisan public opinion group, recently published “Reality Check 2000” which surveyed teachers, parents, and students and found that “While talk about standards is ubiquitous, teaching patterns remain much the same.”

side school. Instructional and programmatic resources are allocated to assure that every student reaches—and is not limited to—this high-level foundation.

In a standards-based classroom the traditional process the teacher goes through to plan her course and daily instructional activities must be turned on its head (Figure 1). The teacher’s work requires planning backwards from an understanding of shared expectations for student performance to the lessons that will be required to assure that every student can achieve at that level.

**FIGURE 1**

THE PROCESS OF INSTRUCTIONAL PLANNING

**Traditional Practice**

**Standards-based Practice**

Select a topic from the curriculum

Select standards from among those students need to know

Design instructional activities

Design an assessment through which students will have an opportunity to demonstrate the knowledge and skills to meet the standards

Design and give an assessment

Decide what learning opportunities students will need to learn those things

Give grade or feedback

Plan instruction to assure that each student has adequate opportunities to learn

Move on to new topic

Use data from assessment to give feedback, re-teach or move to next level

## Planning Backwards from Demonstrations of Achievement

In order to assure the achievement of high standards by all students, the teacher must have a clear vision of the performance required to demonstrate achievement of the standard(s). What will the student have to do to demonstrate achievement? And what qualities will the performance have to have in order to be considered good enough to demonstrate sufficient progress or mastery? Answers to these questions guide the design of lessons and decisions about how to plan and pace instruction.

In traditional instructional planning, teachers develop assessments only after they teach a curriculum unit; the test is designed to check whether students know what has been taught. In standards-based systems, by contrast, the

**FIGURE 2****6TH GRADE STANDARDS TO BE ASSESSED****Math: Statistics, Data Analysis and Probability**

1.0 Students must compute and analyze statistical measurement for data sets including:

- Compute the range, mean, median and mode of data sets
- Understand how additional data added to data sets can affect these computations of measures of tendency
- Understand how the inclusion or exclusion of outliers affect measures of central tendency
- Know why a specific measure of central tendency (mean, median, mode) provides the most useful information in a given context

**Writing: Composition**

1.0 Students write persuasive essays or letters that:

- States a clear position on a proposition or proposal
- Supports the position with organized and relevant evidence
- Anticipates and addresses reader concerns and counter arguments

assessment represents what students need to know and thereby guides what is taught. The teacher begins instructional planning by conceptualizing the task or tasks students would have to do, and the qualities of the work they would need to produce, to demonstrate the achievement of the standards for which they are being held accountable; and only then plans a set of lessons designed to assure that every student in the class will be able to do those things.

This shift alone has important implications for teacher preparation and professional development. Teachers are woefully unprepared to design or even be good consumers of assessments. Few pre-service or in-service programs address assessment design or the selection of appropriate assessments from published materials. Research on teacher practice shows that the tests teachers make on their own provide little evidence of student learning, reflect no common quality criteria, and are often unclear or unfair (Stiggins, 1992).

Good teaching involves consistently balancing the responsibility to provide students with opportunities to learn and practice new skills and the need to collect accurate evidence of whether or not they can do the same or similar tasks on their own. Teachers, therefore, must have or devise a means of collecting periodic, valid evidence of the progress of student learning at the classroom level. They must be well versed in what Stiggins has called “assessment literacy” (Stiggins, 1994). They must know how to design or administer an assessment

### FIGURE 3

#### ASSESSING THE STANDARD

##### Assessment A

Calculate the mean, mode, median and range of each of the following sets of numbers:

**1) 42, 98, 15, 15, 12, 7**

Mean = \_\_\_\_\_ Median = \_\_\_\_\_

Mode = \_\_\_\_\_ Range = \_\_\_\_\_

**105, 120, 79, 108, 105, 105**

Mean = \_\_\_\_\_ Median = \_\_\_\_\_

Mode = \_\_\_\_\_ Range = \_\_\_\_\_

**3) 12, 8, 6, 3, 8, 8, 10**

Mean = \_\_\_\_\_ Median = \_\_\_\_\_

Mode = \_\_\_\_\_ Range = \_\_\_\_\_

##### Assessment B - The Bowling Task

The tables below show the season's bowling scores for two members of your team. A higher number indicates a better game.

**Dave's Scores: 152; 138; 141; 144; 141; 158**

**Bill's Scores: 210; 105; 118; 131; 105; 215**

Both Dave and Bill are hoping for a spot on the team you will take to the League Championships. As the coach, you must decide which one should be chosen. You have only one spot left on the team. Examine the data and consider the statistical procedures that might be used to make your decision.

**Part 1:** On one side of your paper show all the statistical procedures you considered in making your selection. This part of the assessment will be scored on the appropriateness of the statistical procedures you consider and the accuracy of your calculations.

**Part 2:** The person you do not choose will be very disappointed and will want to understand how you determined your choice. Write a letter to the person you did not choose explaining what statistical procedures you considered and used to make your decision. Use charts and graphs as necessary to illustrate your findings.

The purpose of your letter is to persuade the reader that you made a thoughtful selection. It should:

- State a clear position on a proposition or proposal.
- Support the position with organized and relevant evidence.
- Anticipate and address reader concerns and counter arguments.



activity that is a good match to the kind of learning outcome required by the standard(s) (Figure 2). They must decide how much support to provide students as they do the task, and when those supports confound the data the assessment is designed to provide. For example, consider the standards to be assessed in Figure 2.

The math standard asserts that all students should know both how to calculate statistical measures accurately and in what contexts each should be used. Figure 3 presents two teacher assessments designed to assess those standards. Note that Assessment A is aligned to only one part of the standard. In Assessment B, students are required to calculate accurately and to consider and justify a variety of statistical measures while anticipating the counter arguments of the child not chosen for the team. If students are prepared only for Assessment A, they will not have the opportunity to learn the higher standard.

Teacher preparation and professional development programs should focus a great deal more than they do now on how teachers obtain credible evidence of student learning and how they use that evidence to plan targeted learning opportunities. Professional development programs must hone the ability of teachers to make professional judgements about both the nature of the evidence they have about student learning and how that evidence should be used to plan instruction.

## Teaching While Thinking About the End

Traditional instructional planning is driven by a text or curriculum guide. Far too often curriculum guides list the topics students should be exposed to, but not what they should know about or be able to do with the information or skills they have acquired. Lesson plans are sequenced according to the order of the topics listed, or by the table of contents in a text, with little consideration of prerequisite knowledge or skills. The activities students are given to do are dictated by the text, or devised by the teacher to engage students. Students busily complete text-based tasks, do book reports, construct posters or dioramas or write reports with little knowledge of what is expected of them save turning it in on time. A large part of the success of a classroom activity is gauged by supervisors and teachers alike in terms of whether students completed the task and enjoyed it. But, being engaged and learning are not the same.

Standards-based instruction targets the quality of performance we want from students. It is not enough to have completed an assignment; the work students do must demonstrate progress toward mastery of specific knowledge, skills or dispositions. With the quality of performance expected clearly in mind,

teachers plan and conduct lessons aimed at teaching students how to achieve these specific characteristics (Figure 4). Instruction is not random, but planned in relation to what students already know and can do and the qualities of work they are expected to do.

## The Demands of Standards-Based Instruction

A high quality, standards-based unit might begin with the teacher explaining what students will be required to do at the end of the unit and an explanation of the criteria on which that performance will eventually be judged. At some point, the teacher might introduce examples of work done by other students representing various levels of quality in response to a similar task and help students discern which is of better quality and why. Later, after having participated in lessons designed to teach to those qualities, students might be guided to practice their new skills by revising and improving upon the weaker sample responses.

Standards-based instruction demands that teachers know their content and their students well. Teachers' capacity to pose questions, select tasks, evaluate their students' understanding and decide what to teach next all depend on how they themselves understand their subject matter. Staying one chapter ahead of the class will not suffice. Research suggests that in order to help students learn to high levels, teachers must understand how concepts within their discipline are related to others within their field and outside of it. They must understand how knowledge in that field is generated and verified. They must understand their subject matter deeply enough to identify how particular phenomena or events are commonly interpreted and the fundamental ideas that underlie those interpretations (McDiarmid, Ball, & Anderson, 1989).

It is their strong knowledge of the content they teach that makes teachers sensitive to the misconceptions or misunderstandings that students may bring to new learning experiences. It is their knowledge of content that helps them determine the skills that are prerequisites to the achievement of certain standards, and that helps them discern from a student's work what he or she is ready to learn.

In standards-based instructional planning, the end is held constant for all students, but the means used to get students there may vary greatly within and across classrooms. As has always been true, teachers in standards-based systems must have a repertoire of differentiated strategies that can be drawn upon to serve the variety of learning needs represented among any group of learners. Teachers must be artful orchestrators of effective lessons and choreographers

## FIGURE 4

### INSTRUCTIONAL UNIT PLANNING (THE BOWLING TASK)

**Math: Students compute and analyze statistical measures of mean, mode, median and range and know why a specific measure of central tendency provides the most useful information in a given context.**

**Writing: Writes persuasive compositions**

**What opportunities to learn and practice will students be given in order to prepare them to do well in the assessment?**

- Lessons on calculation of mean, mode, median and range
- Lessons identifying appropriate use of these statistical procedures—why/when one over the other
- Lessons using charts or graphs to illustrate statistical information or findings
- Opportunities to select and justify the choice of a statistical procedure in a given context
- Practice problems that require consideration of more than one statistical procedure
- Practice describing mathematical concepts in writing to others
- Practice laying out an argument in writing and using evidence (even visuals) to support conclusions
- Practice with problems and arguments requiring author to state assumptions before proceeding
- Practice writing letters that anticipate, acknowledge and state counter arguments
- Practice anticipating counter arguments
- Exposure to written counter arguments in other situations
- Others

of groupings that allow students to progress at their own rate while at the same time assuring that no student falls through the cracks. As conductors of standards-based instruction, teachers are not driven by texts or other instructional materials, but know how to draw on these to assure all students learn what they need to know.

## Judging Performance and Giving Feedback

In most traditional classrooms, judgments of performance are given in terms of summary grades. Teachers individually determine their grading policy. Grades often confound the quality of performance with judgments about the student's level of effort and attitude. A student who gets an "A" may not have produced high quality work, but makes up for that with a positive attitude and hard work. Work that is otherwise of high quality might receive only an average grade because the student failed to meet length specifications or to include all required components of the assignment.

In standards-based instruction the teacher's judgment about a student's

**FIGURE 5a**

BOWLING RESPONSE PAPER 'O'

O

Part 2

Dear Dave,

I'm very sorry, but the choice I made was for Bill to go to the League Championships. As the coach this decision had to be made using my best judgement. I took your's? Bill's scores from the last 6 games, added them up and divided by 6 to find both averages.

DAVE'S SCORES:

$$\begin{array}{r} 152 \\ 138 \\ 141 \\ 144 \\ + 141 \\ \hline 158 \\ 874 \div 6 = 145.6 \end{array}$$

BILL'S SCORES:

$$\begin{array}{r} 210 \\ 105 \\ 118 \\ + 131 \\ 105 \\ \hline 215 \\ 884 \div 6 = 147.3 \end{array}$$

Bill's average was just a little higher. Therefore, I choose him. Better luck next year.  
- coach

progress and the quality of his performance, reflects hard-won, district- or school-wide agreements about the specific intellectual characteristics of adequate performance. These performance standards might be reflected in cut scores on an assessment, or exemplars of the quality of work expected of all students (Figure 5). While acknowledging that there will always remain differences that can be attributed to individual preferences, the student can be reasonably sure what is considered good work by one teacher, will be considered good work by the others. What is considered reasonable progress by one teacher will be considered reasonable progress by the others.

Feedback to students is specific to the shared expectations for that type of assignment and distinguishes between the quality of the work students produce and the effort or attitude demonstrated while doing it. A teacher's evaluative comments and analysis of a student's progress are based not on what any one teacher thinks a given student can do, but on what evidence shows all students can reasonably be expected to do when provided with high quality instruction. Students are taught to evaluate their own work and progress in respect to specific characteristics of quality. Students learn to say, "This essay needs more evidence from the text to bolster my argument" rather than "I didn't do very well on this essay."

FIGURE 5b

BOWLING RESPONSE PAPER 'H'

H

PART 2:

Dear Bill,

I'm sorry to inform you that you did not make the team. I considered accepting you very thoroughly & I appreciate your trying out for the team, but after intense meditation on the matter, I decided upon Dave becoming the next member. Yet I respect your efforts to make the team. I would like you to know the reasons for my decision.

You had a higher average than Dave by 1 point. But when I looked at your scores, I saw that you got low scores in 4 games out of 6. You made up for them by bowling 2 excellent games. When I compared this to Dave's scores, I saw how he had gotten a score of 138 or higher each time. I had to choose the consistency of Dave over the sporadic talent you possess. The team needs some one we can really depend on. If by chance you scored 115 at a crucial game, it would not be good for the team. I am sorry Bill. I truly respect your talent, but the team needs the consistency of Dave. Thank you for trying out.

Sincerely,

Coach

In systems where judgments of performance are guided by agreed-upon performance standards, professional development is designed to assist teachers to internalize expectations for quality work at the grade levels they teach. Teachers must have exposure to numerous exemplars of the kinds of work considered adequate for the students they teach, and should be expected to be able to analyze student work samples not only in terms of whether they are adequate, but in terms of what they reveal about a student's needs for additional

FIGURE 6

BOWLING TASK RESPONSE

N

Part II) Dear Britt

I know how you must be feeling right now, and the cause is because you didn't make it to the championships, but don't be dissapointed, and mad at me, I'll give you an explanation of why I choosed Dave, I choosed Dave because he had average scores than you, I know that he had 10 less points than you, but I made a graph and found out that he was in the same place, and you went down and up. But I know that if you keep up your work you'll make it for the next championship. so please try again and the whole team will be glad to have you

Sincerely  
your Coach

instruction. For example, in Figure 5 which of these two responses better meets the standard? Should Paper O be considered good enough for a sixth grader doing this task? Or can we expect that students should anticipate more counter arguments and choose from more than one statistical procedure as does Paper H? Both teacher induction and on-going professional development programs should include ample opportunities for teachers to identify the types of assignments and learning experiences that provide adequate intellectual challenge and to develop confidence that their own expectations for the work students produce reflect what is known about cognitive development as well as the standards agreed upon by the larger community.

Critics of standards-based reforms vehemently deny that there can or should be a description of the quality of work expected of all students at a given age. Children, they argue, are too unique in their experiences and their interests to warrant what they call a “one size fits all” approach. One wonders what these same critics might do if their own child’s teacher expressed no concern when their third grader had yet to demonstrate any interest or ability to read. Or if they found themselves parent to a tenth grader who could not produce a coherent written argument. Standards needn’t confine or limit what teachers teach, or students learn. They should instead work as agreements about what schools can and should promise to those who pay for, or depend upon, the fruits of public education.

## Planning and “Re-teaching”

In schools designed to accept that some students will “get it,” and others will not, a unit of instruction ends when the teacher gives the assessment, grades the work and moves on. The success of standards-based instruction is based on evidence of adequate student learning. No longer can it be sufficient to say, “I taught a good lesson, but my students didn’t get it.” Acceptable evidence of good teaching is student work or student performance that meets or moves towards agreed-upon standards. When the work is inadequate, the teacher or the school as a whole is responsible for providing additional, refocused opportunities to learn.

In standards-based instruction, teachers use the work that students produce to find patterns of strength or weakness that point to the success or need to revisit the lessons they taught. They look at the work of each student to understand what that student already knows that can be built upon to address those things he still needs to learn. Figure 6 provides an example. When analyzed carefully, the work reveals a good deal about what this student knows and what she still may be confused about. It is obvious that this student knows the concept of consistency, but not the term itself. The phrasing in which she uses the term “average” should make the teacher suspect about whether the student understands this statistical procedure. In planning for “reteaching” for this student, the teacher will want to address both these issues.

The obligation to circle-back to assure the success of each student requires that teachers develop a strong repertoire of instructional skills designed to address a variety of learning needs. In addition, it requires that the school function in such a way that teachers have the capacity to call on other resources when his/her own skills are limited.

## The Need for Schools to Change to Support Student and Teacher Learning

The rhetoric and much of the action surrounding standards-based reform pretends that once we have named the standards and accurately measured achievement of them, improved student performance will necessarily follow. Missing is acknowledgment that this movement asks of schools and of teachers behaviors never before required.

Schools committed to the achievement of high standards by all students are organized around shared definitions of what students are expected to do. That means that even if standards have been established at the state level, school life involves negotiating common interpretations of those standards as reflected in the work students are given and produce every day. Decision-making and resource allocations in these schools are driven by a single criteria: “Will this help with the goal of assuring that every student can and does meet the standards?”

Teaching in these schools requires more diagnostic and analytical capacity than ever before. Teachers don’t just “deliver” instruction, they examine readiness, analyze results and monitor the effects of their actions on student performance. Teachers in schools committed to the achievement of high standards by all students draw on their individual content and pedagogical expertise and their ability to contribute to a system that behaves as more than the sum of its parts.

In schools that support all students to achieve to high standards, collaboration is not simply a desirable working condition, it becomes a requisite professional responsibility. Teachers engage in professional dialogue to challenge each others’ expectations for what students should and can do, to share effective instructional strategies and, as necessary, to adjust or reallocate resources or expertise to address shared programmatic concerns. Teachers in these schools have the skills necessary to negotiate common interpretations of quality, and to collaborate in planning collective action.

Unfortunately, the norms and practices that have supported systems of differentiated standards are deeply ingrained in school practice, in teacher education and in professional development. Today it is still true that most teachers are taught, rewarded for being, and sustained as, purveyors of learning activities from which some students benefit and others do not. Investments in assessments are generally small, and seldom provide for development or use of tools that provide diagnostic information useful for planning instruction. The private practice of setting standards and judging performance is guarded in the name of teacher autonomy and perpetuated by the difficulty of finding time



for collaborative planning or analysis of student work. The challenge before us is to deeply understand what all teachers need to know and do to assure that all students achieve to high standards, to examine the implications of these insights for changes in how teachers are prepared and supported in their work and to make those changes, both in teacher education and induction, and in the school culture.

## **Bibliography**

The Education Trust. Education Watch: 1998 State and National Data Book, vol. 2 (1998): 20-24.

Murnane, Richard J. & Frank Levy. Teaching the New Basic Skills: Principles Educating Children to Thrive in a Changing Economy. New York: The Free Press, 1996.

McDiarmid, G. W., Ball, D. L., & Anderson, C. W. (1988). Why staying one chapter ahead doesn't really work: Subject-specific pedagogy. East Lansing, MI: National Center for Research on Teaching Learning Publications.

Public Agenda and Education Week, Reality Check 2000, January 2000.

Stiggins, Richard J. Student-Centered Classroom Assessment. New York: Macmillan College Publishing Company, Inc., 1994.

Stiggins, Richard J. & Nancy Faires Conklin. In Teachers' Hands: Investigating the Practices of Classroom Assessment. Albany, NY: State University of New York Press, 1992.







*A Union of Professionals*

American Federation of Teachers, AFL-CIO  
555 New Jersey Ave. N.W.  
Washington, DC 20001  
202/879-4400  
[www.aft.org](http://www.aft.org)

Item Number 39-0186

June 2009