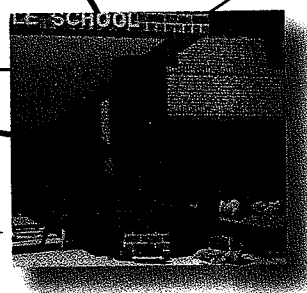
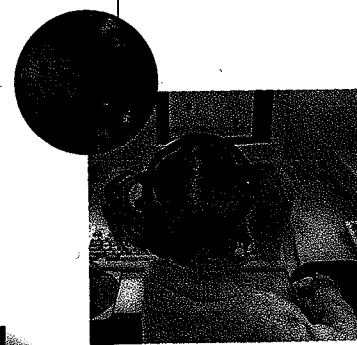
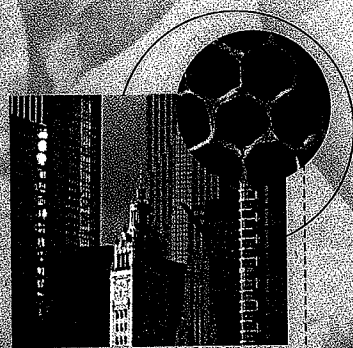


A COMPREHENSIVE GUIDE TO

Designing Standards-Based Districts, Schools, and Classrooms

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Standards-Based Education

In this book we attempt to describe a new structure for school reform entitled standards-based education. Our intent is to draw from the best ideas contained in mastery learning and OBE. Table 7.1 highlights some of the similarities and differences between standards-based education, mastery learning, and OBE. As we conceive of it, standards-based education has eight basic tenets. We should note that these tenets represent our conceptualization of standards-based education with our preferences and biases. No doubt others would articulate different tenets representing different conceptualizations of standards-based education.

1. *Standards-based education holds students accountable for specific schoolwide or districtwide content standards that have accompanying benchmarks.* Mastery learning sometimes leaves the identification of outcomes to individual teachers, whereas standards-based education makes the identification of learning standards a school-wide or district-wide endeavor. This is similar to OBE's emphasis on the school-wide or district-wide construction of outcomes. However, unlike OBE, which has general outcomes that deal with life roles, standards-based education and mastery learning hold students accountable for specific content knowledge. Unlike mastery learning, which involves thousands of outcomes, standards-based education involves scores of standards.
2. *Standards-based education holds students accountable for specific thinking and reasoning standards.* The thinking and reasoning standards described in chapter 2 represent a type of information and skill that a district or school ideally should hold students accountable for learning. Neither mastery learning nor OBE places explicit emphasis on this type of information and skill, although neither model precludes teaching and reinforcing thinking and reasoning. Because of their importance to learning, we include them as a critical aspect of our definition of standards-based education. The thinking and reasoning standards may either be set apart as a separate category of standards or embedded in specific subject areas. Our preference is to establish a separate category of standards so that they might be addressed in a wide variety of subject areas.
3. *Standards-based education separates out lifelong learning standards.* Like OBE, standards-based education identifies lifelong learning standards as a unique category. However, unlike OBE, these standards are not superordinate to the other types of standards. Also unlike OBE, standards-based education does not necessarily hold students accountable for these standards. In fact, given the current criticism of these types of standards, it is perhaps advisable to report students' progress on such standards but not to hold students to specific performance levels.

Table 7.1 Comparison of Standards-Based Education with Mastery Learning and OBE

	Research base	Nature and format of outcomes	Identification of outcomes	Student progress through outcomes	Number of outcomes	Instructional model	How students will be asked to apply knowledge	Thinking and reasoning	Reporting emphasis	Assessment
Mastery Learning	Extensive	No constraint on format or nature Students are held accountable for specific content knowledge	Commonly left to teachers who consult textbooks and curriculum guides	Students move at similar pace	Thousands	Explicit model	Does not prescribe how students will be asked to apply knowledge	No explicit emphasis on T&R	Students' standings on specific outcomes	At beginning of unit Teachers are primary assessors of whether students have met specific outcomes Commonly traditional forms of assessment are used
OBE	Sparse	General outcomes LLL standards are unique category, superordinate to others Students held accountable for LLL standards	Schoolwide or districtwide process based on life-role descriptions	At their own rate	Commonly 10 or less	No explicit model	Format in which students will apply knowledge "institutionalized" by mandating exit outcomes be written as performance tasks	No explicit emphasis on T&R	Students' standing on specific outcomes	Use of performance tasks as exit requirements
Standards Based	Emerging	Students are held accountable for specific content knowledge LLL standards are unique category, not superordinate to others Students not necessarily held accountable for LLL standards	Schoolwide or districtwide process usually informed by national subject-area documents	Varies depending on approach (see chapter 9)	Scores	No explicit model	Does not prescribe how students will be asked to apply knowledge Encourages application of knowledge through use of performance tasks in class and as external forms of assessment	T&R are critical aspect of	Students' standing on specific standards	Individual classroom teachers External assessments supplement classroom assessments Student self-assessment encouraged

Note: OBE = Outcome-based education; LLL = Lifelong learning (standards)

4. *Standards-based education has no explicit, mandatory instructional model.* Unlike mastery learning and like OBE, standards-based education has no mandatory instructional model. Teachers are free to organize instruction in any manner they see fit. However, they are still accountable for students effectively learning necessary knowledge and skills.
5. *Standards-based education emphasizes the application of knowledge.* Standards-based education emphasizes students' application of knowledge; this is similar to OBE's emphasis on demonstrations and exhibitions. However, like mastery learning, standards-based education does not prescribe the manner in which students will be asked to apply knowledge. OBE, on the other hand, institutionalizes the format in which students will apply knowledge by mandating that exit outcomes be written as performance tasks. Standards-based education encourages the application of knowledge through the use of performance tasks in the classroom and through the use of performance tasks as external forms of assessment.
6. *Standards-based education provides direct feedback to students on their standings relative to standards.* Whether reporting is done by specific standards (the preferred method) or by overall letter grades, students within a standards-based system can interpret report cards and transcripts in terms of understanding and skill relative to specific standards. If overall letter grades are used, then a written policy describes the relationship of specific grades to performance on specific standards. This reporting emphasis on specific standards is similar to OBE's emphasis on reporting students' standing on specific outcomes.
7. *Standards-based education relies heavily on classroom teachers for assessment data.* Because student performance on standards is best evaluated by assessing performance multiple times in a variety of ways, individual classroom teachers are the primary source of assessment data in a standards-based system. This is reminiscent of the mastery learning approach within which classroom teachers are the primary determiners of whether students have met specific learner outcomes. Additionally, a standards-based school or district will commonly use external assessments (i.e., assessments designed and administered externally to the classroom) as supplements to classroom assessments.
8. *Standards-based education emphasizes student self-assessment.* Although the classroom teacher is the primary source of assessment data, individual students are also a key source of information. Students are asked to self-assess and provide evidence for their self-assessments on all standards.

These eight tenets form the parameters within which many different versions of a standards-based system can be built. Within these parameters there are still many issues that a district or school must address. The manner in which a district or school addresses these issues can drastically affect the type of standards-based system that it designs. Here we consider four

basic issues: (1) the issue of levels, (2) the option of being standards referenced, (3) conjunctive versus compensatory systems, and (4) the issue of students with special needs.

The Issue Of Levels

The issue of levels refers to the grade levels at which a district or school will hold students accountable for meeting specific standards. At one end of the continuum, a district or school could be standards based at every grade level. Within this approach, students are not able to pass from one grade to another without demonstrating competence in the standards and benchmarks specified at that level. At the other end of the continuum, a district or school could be standards based at high school graduation only. Here, students progress from grade level to grade level regardless of their performance on specific standards up until the 12th grade. At that point, students must demonstrate competence on specific standards to receive their diploma. Somewhere in the middle of the continuum is to be standards based at the major transition points with the K-12 sequence of grades. Probably the most logical transition points are

1. between the primary and upper elementary grades;
2. between the upper elementary grades and middle school or junior high school;
3. between middle school or junior high and high school; and
4. at high school graduation.

Within this approach, students must meet the performance standard on specific standards before they can pass from the primary level to the upper elementary level, from the upper elementary level to the middle school level, and so on.

Obviously, the approach with the "lowest stakes" is to be standards based only at high school graduation and the approach with the "highest stakes" is to be standards based at each grade level. This latter position—being standards based at every grade level—seems extreme, particularly when one considers the research on grade-level retention.

There is a common sense belief among noneducators and educators alike that retaining students is advantageous if a student has not demonstrated mastery over the information and skills at his current grade level. As researchers Lorrie Shepard and Mary Lee Smith (1990) note:

The assumption is that by catching up on prerequisite skills, students should be less at risk for failure when they go on to the next grade. Strict enforcement of academic standards at every grade is expected both to ensure the competence of high school graduates and lower the dropout rate because learning deficiencies would never be allowed to accumulate. (p. 84)

Unfortunately, this common-sense notion is simply not true. In fact, it has been contradicted by virtually all of the research on retention (see Holmes, 1989; Grissom &

Shepard, 1989; Shepard & Smith, 1989, 1990). That research can be summarized in the following way:

- Students who are retained actually perform worse on average at the next grade level than those with similar academic failing who have been promoted to the next grade.
- Dropouts are five times more likely to have repeated a grade than are high school graduates.
- Sending a student to summer school to enhance academic deficiencies costs only about one-fourth of the cost of retaining a student.
- Students perceive retention as a punishment and it generates a level of stress and a sense of failure that takes years to overcome.

Being standards based at every grade level carries the risk of producing an inordinate number of retentions. Indeed, the research against retention is so strong that a district or school should also be cautious about being standards based at major transition points, although we believe that this latter approach could be designed to work well.

The Option Of Being Standards Referenced

Given the dangers of holding students back because they do not meet standards, a viable option is to be *standards referenced*. In a standards-based system, students must demonstrate that they have met the standards at one level before they are allowed to pass on to the next level. In a standards-referenced system, students' standings relative to specific standards are documented and reported; however, students are not held back if they do not meet the required performance levels for the standards. This provides students and parents with highly specific information about students' standing relative to standards but allows students to progress through the system even if they have not met specific standards.

Wiggins (1993a, 1996) was perhaps the first modern-day reformer to recognize the utility of a standards-referenced approach. He explains that it is unrealistic to expect all students to meet high standards in all content areas. For Wiggins, being standards referenced represents a powerful alternative to the sometimes precarious endeavor of being standards based. It represents a major shift in perspectives. Rather than viewing themselves as "gate-keepers" who decide who is permitted to pass from one level to the next, Wiggins suggests that educators might see one of their major roles as providing information; specifically, they should provide students with highly accurate information regarding their standing in terms of standards. Wiggins posits that this type of nonthreatening "referencing" in and of itself may provide students with the motivation to reach levels of achievement to which they would otherwise not aspire. This is based on the assumption that if students are presented with a goal (i.e., a specific performance standard) along with accurate information as to where they stand relative to the goals (i.e., their level of performance), they quite naturally may be motivated to improve their performance. This assumption is supported by much of the research on feedback (e.g., Glasser, 1981; Powers, 1973).

In effect, if a district or school chooses to be standards based at the high school graduation level only, it could be standards referenced at all other levels. That is, students' progress on standards would be reported at each grade level, but it would be only at the level of high school graduation that students would be held responsible for meeting specific standards only. Similarly, if a district was standards based at the four transition points described above, it could be standards referenced at the other grade levels. This is depicted in Figure 7.4.

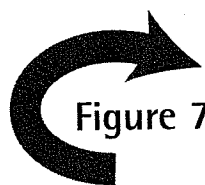


Figure 7.4 Options for Combining Standards-Based and Standards-Referenced Approaches

Grade	Approach
Grade 12	SB
11	SR
10	SR
9	SR
8	SB
7	SR
6	SR
5	SB
4	SR
3	SR
2	SB
1	SR
K	SR

SB = *Standards Based* (students are held accountable for meeting standards)
 SR = *Standards Referenced* (students' progress is reported out at each grade level)

Mixing standards-based and standards-referenced approaches provides districts and schools with a wide range of options that can retain the inherent power in holding students accountable for meeting certain standards but alleviate the dangers inherent in retaining students at inappropriate levels.

Compensatory Versus Conjunctive Approaches

One important yet technical consideration a district or school should address is whether to use a *conjunctive* or a *compensatory* approach to standards. In a conjunctive approach students must reach the minimum performance level on all standards (Plake, Hambelton, & Jaeger, 1995). To illustrate, consider the following science standards:

1. Understands the nature of scientific inquiry and makes effective use of the scientific method.
2. Understands the basic features of earth and earth processes.
3. Understands essential ideas about the composition and structure of the universe and the Earth's place in it.
4. Knows about the diversity and unity that characterize life.
5. Understands the genetic basis for the transfer of biological characteristics from one generation to the next.
6. Understands the cycling of matter and flow of energy through the living environment.
7. Understands basic concepts about the structure and properties of matter.
8. Understands energy types, sources and conversions, and their relationship to heat and temperature.

If these standards are approached using a conjunctive system, a student's performance on each standard is considered individually. For example, a student's performance on science standard 2 is considered in isolation of her performance on the other seven standards. The student might do quite well on standards 2, 3, 4, and 8, yet do quite poorly on standards 1, 5, 6, and 7. Performance on one standard has no bearing on performance on other standards.

In a compensatory approach, performance on one standard affects performance on others (Kifer, 1994). More specifically, performance on one standard can "compensate" for performance on another. To illustrate, assume that a student received the following scores (on a four-point scale) on the eight science standards:

- Standard 1: 1
- Standard 2: 3
- Standard 3: 3
- Standard 4: 4
- Standard 5: 2
- Standard 6: 1
- Standard 7: 1
- Standard 8: 4

In a compensatory approach, the student's strong performance on standards 2, 3, 4, and 8 would compensate for her weak performance on standards 1, 5, 6, and 7. Usually the compensation is accomplished by averaging the scores on specific standards within a domain. In the example above, the student's average score on the eight science standards would be 2.38. Other approaches include excluding the lowest scores from the average, weighting some standards higher than others in the calculation of the average, and considering the most common score (the mode) as the most representative score.

What About Students With Special Needs?

Since the passage of Public Law 94-142 in 1975, school districts have been required to provide a continuum of services for handicapped students ranging from special schools, to special classes within regular schools, to various part-time placements (Slavin, 1989). That bill generated a great deal of activity in three basic areas: (1) getting children with disabilities who were not in school into school, (2) ensuring that children with handicaps who were in school were receiving the proper services, and (3) guaranteeing a fair process in designing programs for individual students (Roach, 1991).

One of the negative consequences of that bill is that Individual Education Plans (IEP) tended to focus on minimal skills and broad process goals. This emphasis did little to enhance the achievement and aptitude of students with special needs (Braven, O'Reilly, & Moore, 1994; Roach, 1991). The standards movement challenges the tacit assumption that special education students cannot meet high standards. Indeed, this expectation was made explicit by the National Education Goals Panel (1993b):

The purpose of standards-based reform is to include everyone in deeper understanding of the most important and enduring knowledge and skills. To succeed, the nation must raise achievement at all levels—among the most able as well as the disabled. . . . The standards discussed in this report would apply directly to all students except those, like the severely mentally retarded, whose diagnosis implies a judgment that the student cannot meet them. (p. 27).

How to accomplish the goal laid out by the National Education Goals Panel is the subject of much discussion. One option commonly proposed is to lower the expected level of performance for students with special needs (Braven, O'Reilly, & Moore, 1994; Roach, 1991). Recall from the discussion in chapter 6 that various levels of performance can be associated with each benchmark within a standard. Those levels of performance are commonly labeled advanced, proficient, basic, and novice. Whereas regular education students might be held to the proficient level of performance, special education students might be held to the basic level of performance.

Another option is to increase the amount of time students need to meet specific standards (McLaughlin & Warren, 1992). Here special education students are held to the same level of

performance as are regular education students; however, they are simply given significantly more time to attain those performance levels.

A third option is to provide instructional services for special education services above and beyond those provided for regular education students (Braven, O'Reilly, & Moore, 1994). These "extraordinary" services would, no doubt, be similar to those currently provided within compensatory programs (see Slavin, Karweit, & Madden, 1989, for a discussion).

What Will We Hold Students Accountable For Learning?

Ultimately, the most critical question a district or school must answer is, What will we hold students accountable for learning? In general, there are four options to consider when answering this question.

Option 1: Hold students accountable for all standards in all content areas. One option is to hold students accountable for all standards in all content areas. For example, assume that a district or school identified some 75 standards in mathematics, science, language arts, history, foreign language, the arts, health education, and physical education. Under this option, students would be held accountable for meeting all 75 standards. This option has a strong intuitive, but unfortunately naive, appeal. There is a surface-level appeal to the notion that requiring students to meet standards in all subject areas will increase their achievement somewhat uniformly across all domains. However, current research and theory on the nature of intelligence and aptitude do not support this. For example, Gardner (1983, 1991) has posited seven different types of intelligence: language, logical mathematical analysis, spatial representation, musical thinking, the use of the body to solve problems or make things, an understanding of other individuals, and an understanding of ourselves. Competence in one type of intelligence does not necessarily transfer well to competence in another type of intelligence. In fact, according to Gardner's theory, people tend to have highly uneven profiles relative to their competence across these domains; they may be strong in some areas, weak in others, and have moderate competence in still others. This multitrait conception of intelligence and aptitude has been supported by a number of researchers and theorists (Carroll, 1982; Feuerstein, 1980; Fischer, 1980; Gagne, 1977; Guilford, 1967; Meeker, 1969; Perkins, 1981, 1986, 1992; Presseisen, 1987; Sternberg, 1979, 1984, 1991). If this theory is accurate, requiring students to meet standards across all content areas flies in the face of natural learning tendencies. In fact, research and theory support the assertion that forcing students to excel in all areas might detrimentally affect their development in their natural areas of competence.

Option 2: Hold students accountable for standards in the core subjects only. By "core subjects" we mean those that have traditionally formed the basis of what most Americans would consider a "basic" education. Although there is no official list of core subjects, there does appear to be some agreement regarding those subjects that most educators and noneducators consider the basis of a general understanding of our culture. These subjects are

- reading
- writing
- mathematics
- science
- history
- geography

The validity of this list is supported by the fact that these subjects were identified by the governors in the first Education Summit in 1989. Specifically, Goal 3 of the six goals mentions that American students will master complex content in the areas of English (i.e., reading and writing), mathematics, science, history, and geography (National Education Goals Panel [NEGP], 1993b). These are also the areas identified by E. D. Hirsch, Jr. as central to a well-rounded education (Hirsch, 1993a, 1993b, 1993c, 1993d, 1993e, 1993f).

This option is obviously less demanding than the first, yet requires a great deal more of students than is currently the case. In fact, geography is rarely required for high school graduation, and most districts and schools place only moderate expectations on students regarding mathematics, science, and history.

Option 3: Hold students accountable for minimum competencies only. Again, there is no official list of subject areas considered minimal, but there seems to be agreement that reading, writing, and rudimentary aspects of mathematics (i.e., computation and number sense) are essential to success in academic as well as nonacademic endeavors. Evidence for the importance of these subjects can be found in federally funded programs for students at risk. As researchers Robert Slavin, Nancy Karweit, and Nancy Madden (1989) note, the vast majority of Chapter 1 programs for students at risk focus on reading, writing, and mathematics (see also Madden & Slavin, 1989; Slavin & Madden, 1989). Evidence for the rudimentary nature of these domains is also found in the world of work. For example, both the SCANS report (Secretary's Commission, *What Work Requires of Schools: A SCANS Report for America 2000*, 1991) and *Workplace Basics* (Carnevale, Gainer, & Meltzer, 1990) specifically mention reading, writing, and basic mathematics as skill areas that are essential for an effective work force. Finally, these three areas formed the basis of the minimum competency movement of the 1970s (OTA, 1992).

The major problem with this option is that it is minimalistic; it tends to focus on minimum standards as opposed to those that would raise the overall level of understanding and skill for American students.

Option 4: Let students identify the standards for which they will be held accountable. Another option is to have students identify the specific standards they will meet within a limited set of choices. This is in keeping with the current thinking on student-centered learning and self-regulated learning (see Covington, 1983, 1985; McCombs, 1984, 1989; McCombs & Marzano, 1990; Zimmerman, 1990). This theory asserts that students learn

best the content that they select based on their interests and aptitude. Additionally, this theory asserts that over time, students will quite naturally see the need for competence in areas to which they might not initially be drawn. This approach is also consistent with what Darling-Hammond and her colleagues (Darling-Hammond, Aness, & Falk, 1995) refer to as achieving standards without standardization. In other words, students strive for high standards within various subject areas, but the subject area on which students must focus is not standardized.

One drawback to this approach is that it appears to run counter to some strongly held beliefs about the purpose of education. E. D. Hirsch, Jr. (1987), for example, states that "the basic goal of education in a human community is acculturation, the transmission to children of the specific information shared by the adults of the group or polis" (p. xvi). The selection of such "specific information" seems to rule out the possibility that students could be permitted to personally select the content they will cover. Another criticism to this option is that students are not knowledgeable or experienced enough to make decisions concerning which standards they should meet (Frost, 1996).

The Price And Promise Of Standards-Based Education

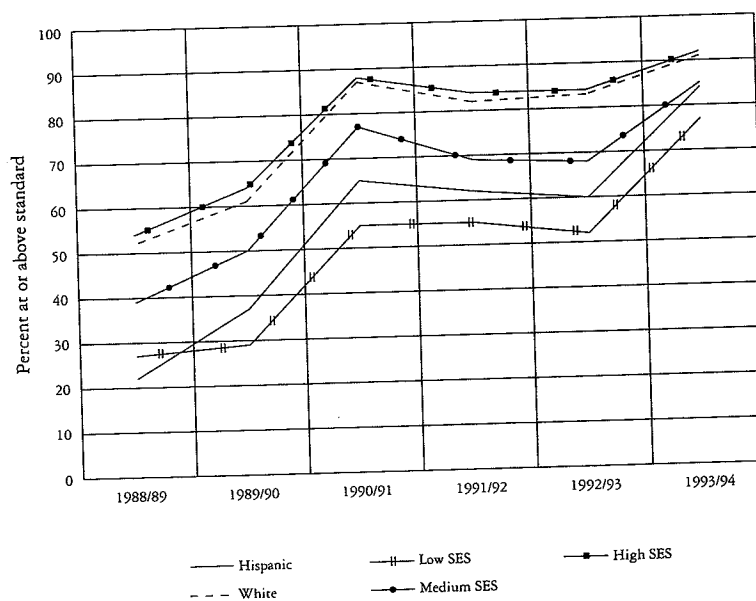
From the previous discussion, it is reasonable to infer that standards-based education can place extreme demands on a district or a school. Perhaps the most difficult issue standards-based education raises is what to do with students who do not meet the standards at identified transition points. The current system has no obligation to help those who are failing, and apparently many districts and schools opt not to provide any extraordinary support for such students. This was dramatically illustrated in Jonathan Kozol's *Savage Inequalities* (1991). After studying public schools across the country, Kozol concluded that America has two public education systems. One system provides both implicit and explicit support for those who do not demonstrate competence quickly; the other system does not. Unfortunately, the ability and willingness of a school or district to provide such support is a direct function of the level of financial support available. Not surprisingly, districts and schools that serve students from low socioeconomic backgrounds have lower funding available and consequently provide less extraordinary support for those students who need it the most. Within a standards-based system, extraordinary support is mandatory; it is built into the system. Those students who initially do not meet required performance levels must be provided the opportunity and resources to do so at later dates. This approach to schooling would obviously place great demands on the time, energy, and financial resources that are available, which is no small price to pay. Consequently, a district or school should not enter into standards-based reform lightly. It takes a great resolve to effectively design and implement a standards-based system. However, those few districts that have succeeded report that the results justified the effort. One of those districts is Weld County District 6 in Greeley, Colorado.

As reported by educators Waters, Burger, and Burger (1995), the Greeley district serves 13,500 K-12 students, 65% of whom are Anglo, 33% of whom are Hispanic, and 2% are of other ethnicities. One of the primary motivations for designing a standards-based system was not only to increase the achievement of all students in the district but to narrow the gap in achievement among different ethnic and socioeconomic (SES) groups. As in most large districts, middle and high SES groups consistently and significantly outperformed low SES groups, and Anglos consistently and significantly outperformed Hispanics and African Americans. In 1988, the district introduced a standards-based system that focused on reading, writing, and mathematics. As described by Waters, Burger, and Burger (1995):

We introduced a system that is based, not on grade levels, but on evaluations at various junctures in a student's schooling. Before students can proceed to the next level (for example, middle school), they must demonstrate their mastery of certain concepts and skills in writing, reading, and mathematics that are important for everyone to know. In short, it is no longer acceptable to send students from one level of the system to the next knowing they have not met minimum standards. (p. 35)

The results of their effort were most promising. Figure 7.5 reports the results in writing.

Figure 7.5 District 6 Writing Assessment
Gap Reduction Between Race/Ethnicity and Socioeconomic Groups



Note: Composite adapted from "Moving Up Before Moving On," by T. Waters, D. Burger, and S. Burger, 1995, *Educational Leadership*, 52(6), 35-40.

The key feature of Figure 7.5 is that there is not only a gradual increase in overall student achievement, but there is a dramatic decrease in the variance among socioeconomic and ethnic groups. Waters, Burger, and Burger (1995) describe this achievement in the following way:

Since the introduction of the standards-based measures for writing, reading, and mathematics, there has been a dramatic increase in the percentage of students who have met or exceeded the performance standards (the Essential level or higher) in each assessment area.

In 1991-92 and 1992-93, there was a slight decrease, which we believe was a consequence of introducing the new reading test. As teachers concentrated on reading skills, they paid less attention to writing skills than they had in previous years. Performance on the reading assessment improved dramatically in 1991-92, however, and again in 1992-93.

In 1992-93, the new math tests were introduced. Although they, too, required additional time and attention of teachers, we were better prepared this time and so did not lose our focus on writing and reading. By 1993-94, both teachers and students were familiar with the standards and the expectations of the reading, writing, and math assessments.

Overall, our progress has been encouraging and exciting. Each year, more and more students are moving to the next level with the skills required to be successful. Teachers report that new classes of students are better prepared than ever. And as student performance continues to improve, teachers expect more of all students. (p. 38)

Perhaps what is most impressive is that the standards-based emphasis in reading, writing, and mathematics apparently produced positive results on a very general measure of aptitude—namely the ACT (American College Test). There was an overall increase in the achievement of all students as well as a narrowing of the gap between various ethnic and socioeconomic groups.

The success of Weld County District 6 does not appear to be unique. As a result of an effort to collect data on the effectiveness of standards-based education, the Education Commission of the States (ECS) concludes that reform efforts designed around standards are developing an impressive track record. For example, ECS (1996) reports the following results in Colorado:

- In Colorado's San Luis Valley, a district began working to define specific student proficiencies in language arts in 1987. The percentage of high school students passing Adams State College's English Proficiency Examination (an exam used to measure the writing skills of first-year college students) rose from 33% in 1987 to 72% in 1994.

- In a Colorado Springs district, work on standards began in 1989. The percentage of 11th grade students scoring "proficient" or "advanced" on a locally developed writing exam climbed from 60% in 1989 to over 90% in 1994. For 8th grade students, the proportion rose from 30% to 60% over the same period. (p. 12)

ECS (1996) reports the following results in Maryland:

The state expects that 70% of its students will perform at the "satisfactory" level on the Maryland School Performance Assessment Program (MSPAP) by the year 2000. The percentage of schools already reaching that goal climbed from 31.7% in 1993 to 39.7% in 1995. At grades 3, 5 and 8, there have been increases each year in the number of schools that meet or approach the standards in at least one of the assessment categories. In addition:

- In 1993, 158 schools (or 20% of all schools tested) were, in the state's estimation, "far" from meeting the standards in 3rd grade mathematics. By 1995 only 7.7% were "far" from the standard.
- In 1993, 113 schools approached or met the 3rd grade mathematics standards. The total reached nearly 300 in 1995.
- In 1995, elementary school attendance reached the state objective of 95% in 23 out of 24 school systems. (p. 13)

Certainly it is true that standards-based education is difficult to design and implement. However, as evidenced by the discussion above, the rewards appear to be worth the effort. According to Waters, Burger, and Burger (1995), the formula underlying its success appears quite simple:

Students know exactly what is expected of them and where they stand in relationship to standards, which help them focus on continuous improvement. Teachers get accurate feedback on their instruction, and they know what each student needs to do to meet or exceed the next standard. In other words, they can base teaching decisions on solid data rather than on assumptions, and they can make adjustments early on to avoid the downward spiral of remediation. (p. 39)

Summary And Recommendations

In this chapter we have considered the questions of who will be held accountable and what will they be held accountable for learning. One viable unit of accountability is individual schools as opposed to individual students. This is the basic approach used in the state of Kentucky under the Kentucky Educational Reform Act. However, the most common approach is to consider the student as the basic unit of accountability.

This chapter also described the basic characteristics of standards-based education as we define it. To establish a context for this approach, we considered in depth the important

distinctions between mastery learning and outcome-based education. Standards-based education attempts to draw from the strengths of both of these reform efforts. If a district or school chooses to be standards based, it must decide whether it will hold students accountable for all standards, for core standards, for minimum standards, or allow students to personally identify those standards for which they will be held accountable. A viable option is to be standards referenced, as opposed to standards based, about some or all standards. Finally, this chapter addressed the power and potential benefits of a standards-based approach.