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The Achievement Gap

Framing Our Minds to Set Our Sights

This book is intended to provide a framework and mindset for using data as a lever to create K-12 equitable school reform. It seeks to awaken those who are in a state of day-to-day survival; to offer insights to those who are experiencing a sense of hopelessness about creating fundamental changes for young people who are not academically successful; to encourage those who are already engaged in equity reforms; to help others realize that using standardized testing as the only reform strategy is shortsighted; and to offer ways to assess, challenge, and address inequitable practices so meaningful reform can occur.

Moreover, this book is about how school communities can use data tools and strategies to help defy a scenario where low-income students and students of color remain underachievers. But we cannot expect school communities to meet this challenge without understanding the context in which most find themselves, however strong their desire for improved student outcomes. This chapter describes the critical issues that schools must surmount in order to turn around achievement levels of students. The stages of an equity-focused change process are then outlined, including how the use of data fits into each. Chapters 3 through 11 of this book are built around these stages.

What do I mean by the term *equity*? In the context of this book, I use the term *equity* "as an operational principle for shaping policies and practices which provide high expectations and appropriate resources so that all students achieve at the same rigorous standard—with minimal variance due to race, income, language or gender" (Hart & Germaine-Watts, 1996, p. xx).

THE ACHIEVEMENT GAP

Public education is currently in an era of accountability, high-stakes standardized testing, and standards-based reform. However, there is an absence of meaningful discussion on how to achieve equitable outcomes that do not unfairly penalize the most underserved students. Despite countless school reform efforts during the last two decades of the 20th century, we begin the 21st century with continuing gaps in academic achievement among different groups of students. The gaps in achievement appear by income and by race and ethnicity. Large percentages of low-income, African American, Latino, and Native American students are at the low end of the achievement ladder, and large percentages of middle- and high-income white and Asian students are at the top of the achievement ladder.

The longitudinal results from the National Assessment of Educational Progress (NAEP, a test that is administered nationally to voluntary school districts in grades 4, 8, and 12) indicate a narrowing of the achievement gap among diverse groups in the 1970s and 1980s. This pattern began to reverse in the 1990s, at which time the gap began to widen again (Blank & Gruebel, 1995; Haycock, 1998; Haycock, Jerald, & Huang, 2001; National Center for Education Statistics, 2000; Viadero, 2000).

The College Board's National Task Force on Minority Achievement (1999) offers compelling evidence about the persistent gaps between African American, Latino, and Native American students and their white and Asian counterparts that begin in elementary school and continue through the postsecondary levels of education:

- The gaps are found among these groups regardless of socioeconomic level.
- At second and third grade, African American, Latino, and Native American youngsters are scoring much lower than their white and Asian counterparts are.
- African American, Latino, and Native American 12th graders made up only about in 1 in 10 of those students scoring at the Proficient level on the 1996 NAEP math and science tests, although they represented about one third of the population who took the test. They did somewhat better in the 1998 reading tests, but their scores were not comparable to those of their white and Asian counterparts.
- There are gaps in other measures of achievement, such as grades and class rank.
- Achievement gaps are evident in the Advanced Placement and SAT exams.
- Although college-going rates are increasing for all groups, African American, Latino, and Native American students earn much lower grades than do white and Asian students with similar admission test scores. Data for 1995 show that they represented only 13% of the bachelor's degrees, 11% of the professional degrees, and 6% of the doctoral degrees earned, although they make up 30% of the under-18 population.

The picture is not all bleak. There are some promising indicators that show increasing numbers of students of all backgrounds taking college preparatory courses and Advanced Placement and college entrance tests. These encouraging signs, however, must be supported by systems that provide not only access, but also appropriate preparation and resources for success.

SOME OTHER CONSIDERATIONS

There are other measures of equity related to student achievement that are not receiving the same attention as test scores. The first is the overrepresentation of some groups

in special education, and second, the technology divide. These areas have long-term consequences for students' life opportunities and therefore need careful monitoring.

A recent report on special education by the Civil Rights Project at Harvard University (cited in Fine, 2001) found that African American youngsters are more often classified as needing special education, and once they are classified they are not likely to be placed in mainstream classrooms or returned to regular classes. African American students were more often given labels such as *mentally retarded* and were provided with a less rigorous curriculum. U.S. Department of Education data for 1997 cited in the project report found that "Black students were 2.9 times more likely than whites to be identified as having mental retardation. They were 1.9 times more likely to be identified with an emotional problem, and 1.3 times more likely to be identified with a specific learning disability" (Fine, 2001, p. 6). The study indicates that bias plays some role in the overrepresentation of African American students in special education.

Likewise, the technology "divide" has the potential to perpetuate "haves and have nots," not only in the area of hardware, but more importantly by denying large numbers of students exposure to the kinds of software that give students access to high levels of knowledge. Although more students at all income levels and groups have access to computers, low-income students, females, low-achieving students, minority students, students whose primary language is not English, students who live in rural areas, and students with disabilities are not likely to have the same access to computers as higher-income and white students do (Bushweller & Fatemi, 2001; Scoon Reid, 2001). Other contributing factors that I have observed in many urban schools are woefully old school buildings that do not have the space, the up-to-date wiring, or the security equipment. In these schools, computers were gathering dust or still in the boxes.

The other technology "divide" concerns the type of computer programs students use. Kohl (quoted in Scoon Reid, 2001) states,

> Schools with predominantly minority enrollments are more likely to use their state-of-the-art technology for drill, practice, and test-taking skills. Meanwhile, white students in more affluent communities are creating Web sites and multimedia presentations. The computers become nothing much more than trivial workbook and control mechanisms for kids in the heavily minority schools. . . . In other communities, they are instruments used toward the success and the futures of kids. (p. 16)

There is also a gender divide. Young women are not choosing technology majors, and The College Board reported only a small percentage of the almost 20,000 students who took the Advanced Placement exam in computer science were females (Gehring, 2001).

RETHINKING THE ISSUES: CREATING THE CONDITIONS FOR MOVING FORWARD

We must aim to create a nation of high achievers regardless of background. Most Americans seem to believe that the achievement gaps among groups are inevitable—the result of obvious differences in the economic and educational resources that different groups can bring to bear. But this doesn't explain why some schools—indeed, some whole districts—serving poor and minority children achieve much better

results than comparable schools and districts do (see Chapter 2). Indeed, if the causes of underachievement rest primarily in families or the students themselves, these results shouldn't be possible. Perhaps it isn't poverty or racial/ethnic background in and of itself, but rather our response to it (Haycock et al., 2001; Howard, 1991; Irvine, 1990; Jones, 1994; Ladson-Billings, 1994).

Explanations of why the gaps exist are often one-dimensional and offer insufficient, or at worst inappropriate, evidence as to how to address the gap problem. The explanations most frequently cited point to the inadequacies in the child's culture and community and the socioeconomic levels of the family. The assumption about the correlation between low income and low achievement is reinforced by a steady stream of data.

Mickelson (2001), Irvine (1990), the College Board's National Task Force on Minority Achievement (1999), and others give evidence to dispute these simplistic explanations. For example, Singham (1998) found that in Shaker Heights, Ohio, a predominantly African American and white middle- and upper-middle-class community, there were large academic achievement disparities at the high school between African American and white students with similar income levels. Despite having a school enrollment of equal numbers of African American and white students, the composition of the general education track was about 95% African American, whereas the composition of Advanced Placement classes was about 90% white.

Explanations must be more complex than simple. Responding to the notion that the reason for underachievement rests solely on the backs of the students and their families, Singham (1998) concluded, "An alternative explanation is that the primary problem lies not in the way black children view education but in the way we teach all children, black, whites, or other" (p. 12).

There is evidence from as early as the 1970s (Edmonds, 1979) and beyond (see references below and in Chapter 2) that describes how schools with large populations of low-income students and students of color mitigate perceived achievement barriers. Some of the major factors are the following:

- High goals, high standards, high expectations, and accountability for adults and students ("Better Balance," 2001; Haycock et al., 2001; Kahle, Meece, & Scantlebury, 2000; Kim et al., 2001; Olson, 2001)
- Whether or not students receive well-qualified and culturally competent teachers (Darling-Hammond, Berry, & Thoreson, 2001; Ferguson, 1997, cited in Haycock, 1998; Haycock, 1998; Kain & Singleton, 1996; Ladson-Billings, 1994; National Commission on Teaching and America's Future, 1996)
- Curriculum content and rigor (Adelman, 1999; Gamoran & Hannigan, 2000; National Center for Education Statistics, 1995; National Commission on the High School Senior Year, 2001; Office of Education Research and Improvement, 1994; Valverde & Schmidt, 1998)
- Continuous inquiry and monitoring through the use of data (Johnson, 1996a; Olsen, 1996; Sandham, 2001a)

High Goals, High Standards, High Expectations, and Accountability for Adults and Students

We are in an era of a standards-based reform agenda embodied in Goals 2000, the Improving America's Schools Act, and other initiatives. Forty-nine states have standards in at least one academic area (Iowa is the exception). There is mounting evi-

dence that clear goals, high standards and expectations for all, and assessments that are aligned to standards can help in the effort to raise student performance in all schools. There are hopeful indicators. Formerly low-achieving schools that have embraced these principles are demonstrating dramatic gains in student achievement. Throughout the 1990s, the states demonstrating the largest gains in mathematics and reading on the NAEP were Connecticut, Kentucky, North Carolina, and Texas. These states have consistently supported standards-based reform since its beginnings.

Other hopeful signs that support standards-based teaching are cited in a multiple-year study of Ohio's National Science Foundation State Systemic Initiative project (Kahle et al., 2000). The study's major findings were as follows:

- Standards-based teaching in science resulted in improved achievement and attitudes in science for African American students in Grades 5 through 9 in urban schools.
- Although females scored higher, there was a strong and "more positive relationship between attitudes and achievement for boys" (p. 1033).
- Students of teachers who participated in standards-based professional development that focused on content knowledge, inquiry, and problem solving scored higher on the science achievement test.
- The gender achievement gap between African American girls and boys was reduced.

We need to continue to push forward. Although 49 states have adopted standards in one or more subjects, many of the assessments are not aligned with the standards, there is still a lot of focus on low-level testing, the curriculum is often inadequate, and teachers are not receiving appropriate professional development (Olson, 2001). At the inception of the standards movement, Winfield and Woodard (1994) strongly urged us to examine inputs, related to whether and which students are afforded "opportunities to learn," using indicators such as content covered, materials used, quality of teaching and learning, and support systems. This message is still timely. Opportunity-to-learn indicators need to be monitored as stringently as test scores and graduation rates are. If they are not, the standards reform movement, like others, will fail many of our young people. Changing content and performance standards without fundamentally transforming educators' practices, processes, and relationships cannot lead to success.

Teacher Quality

There must be an unrelenting focus on improving the quality of teaching. The National Commission on Teaching and America's Future (1996) is emphatic in its message that teacher content knowledge and strategies absolutely affect student achievement, particularly for students in low-achieving, low-income urban and rural schools. Across the nation, students in low-income schools are more likely to be taught by unqualified teachers. Figure 1.1 demonstrates that low-income students are more frequently taught by teachers who lack a minor or major in the content area that they are teaching.

Studies done in Tennessee, Dallas, and Boston also link teacher quality to student achievement. The teacher effectiveness study in Dallas by Jordan, Mendro, and Weerasinghe (cited in Haycock, 1998) shows the three years' cumulative effect on students who were taught by effective or ineffective teachers. Students who began at similar starting points in fourth grade experienced very different outcomes three

Figure 1.1   Classes in Low-Income Schools Are More Often Taught by Underqualified Teachers
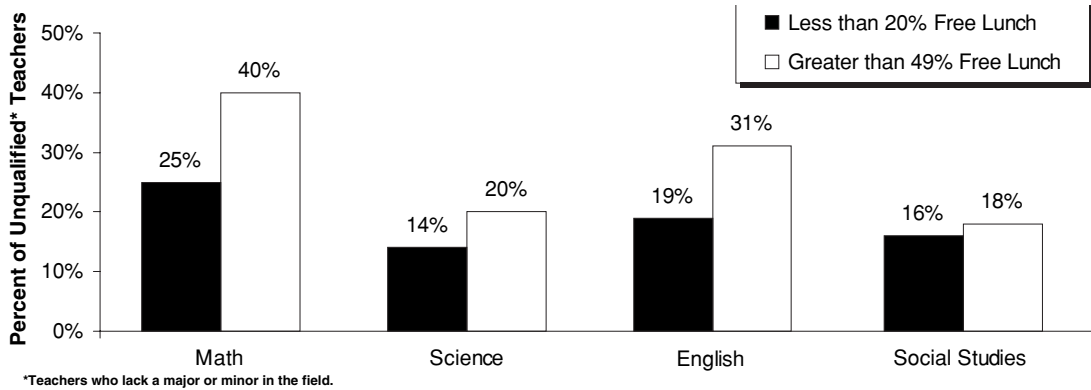
SOURCE: The Education Trust, Inc. *Achievement in America 2000* (Slide 46).

Secondary Source: National Commission on Teaching and America's Future (1996). *What matters most: Teaching for America's future*, p. 16. New York: Author.

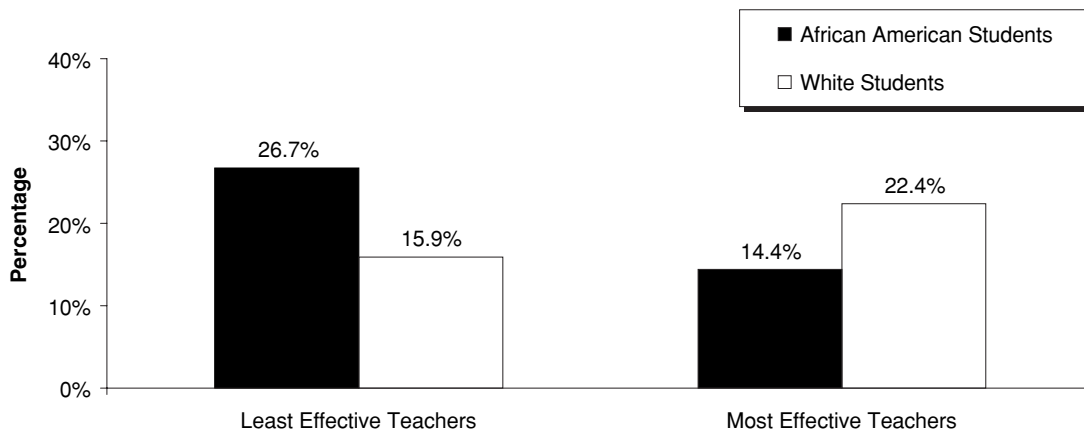**Figure 1.2**   Effects on Students' Math Scores in Dallas (Grades 3–5)
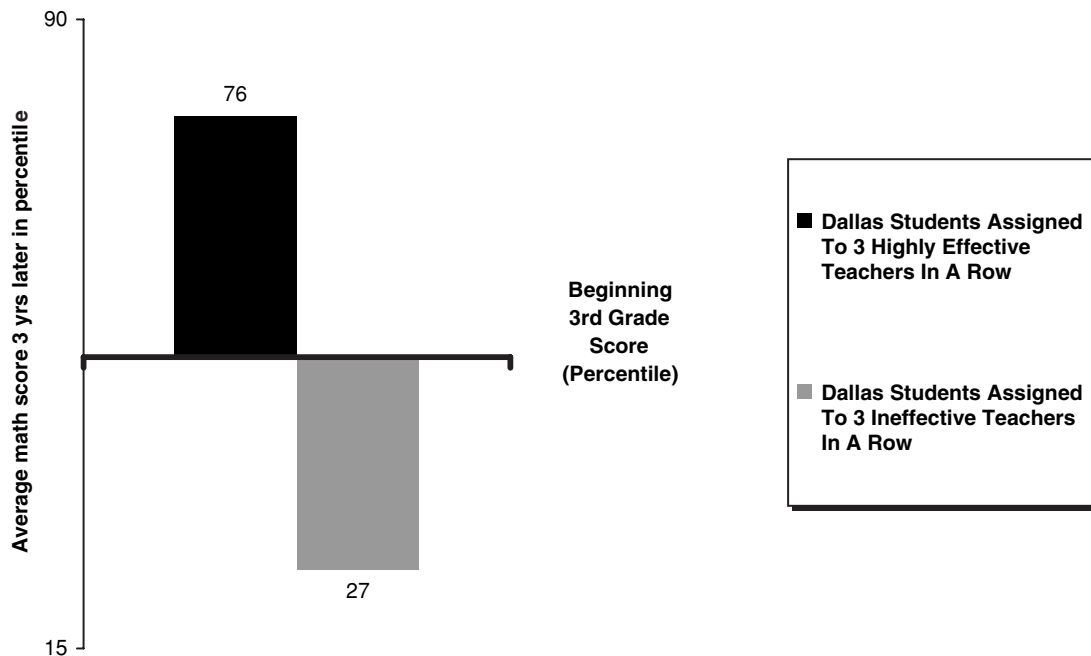
SOURCE: The Education Trust, Inc. *Achievement in America 2000* (Slide 49).

Secondary Source: Jordan, H., Mendro, R., & Weerasinghe, D. (1997). *Teacher effects on longitudinal student achievement*. Paper presented at the CREATE annual meeting, Indianapolis, IN.

years later. Those with three very effective teachers in a row rose to the 76th percentile from the 59th percentile by the end of sixth grade, whereas those with three ineffective teachers had fallen to the 42nd percentile by the end of Grade 6 (see Figure 1.2).

In some cases race is more of a factor than income. Kain and Singleton (1996) found evidence of situations where race played a more prominent role than income. African American students in Texas had less chance of receiving qualified teachers

Figure 1.3 African American Students More Likely to Have Ineffective Teachers: Tennessee

Legend:
- ■ African American Students
- □ White Students

Least Effective Teachers: African American Students 26.7%, White Students 15.9%
Most Effective Teachers: African American Students 14.4%, White Students 22.4%

SOURCE: The Education Trust, Inc. *Achievement in America 2000* (Slide 51).

Secondary Source: Sanders, W. L., & Rivers, J. C. (1996). *Cumulative and residual effects of teachers on future student academic achievement*. Knoxville: University of Tennessee Value-Added Research and Assessment Center.

than poor white students did. Sanders's and Rivers's work (cited in Haycock, 1998) in Tennessee shows that African American students were more likely to have an ineffective teacher than white students were (see Figure 1.3).

It is clear that teacher quality has an impact on student achievement. It is also clear that students in low-income schools who need the best are getting the least qualified teachers. Closing the gap requires high-quality teaching and underscores the need for leaders to examine system policies, contracts, and practices that continue to perpetuate conditions of underachievement. It also requires teachers who use culturally relevant approaches to create meaningful learning experiences for students. This approach to instruction builds on rather than "tears down" or devalues a student's background and experiences.

Leadership

Educators look to their leaders for direction and support. But most school districts —particularly urban school districts—are hierarchical systems with honored routines that can be traced back to the early 20th century. These practices inhibit collaboration and true collegiality, resulting in allegiance to institutional norms rather than to student achievement. As a result, schools and districts may inhibit risk taking and stymie individual initiative (Johnson, 1996a; Winfield, Johnson, & Manning, 1993).

If supervisors lack vision and seek only control and containment, they will most certainly not encourage or appreciate any reforms on the part of their staff that might rock the boat. There may be isolated success in some classrooms, but not in entire schools or districts. For reform to take hold, leaders muct engage in the process rather than remain outside of the action. Similarly, if leaders offer rhetoric without attending behaviors, educators will become disenchanted.

There has been a continuous stream of literature that has focused on the critical role of leadership in whole school transformation (Barth, 1990; Edmonds, 1979; Elmore, 2000; Evans & Teddlie, 1995; Sergiovanni, 2001). The principal and other leaders in the district must have a vision of change, communicate effectively, lead the

instructional path, monitor progress, and support the staff continuously. Fullan (1993) suggests that district administrators are the single most important individuals for setting the expectation for reform within local school districts. He argues that districts need to elevate instruction as a focus, using management to sort out the right choices for curriculum professional development, and so on. It is of critical importance for district administrators to fully understand and be able to implement successful reform strategies (Elmore, 2000; Johnston, 2001; Jones, 1994; Tewell, 1995).

Curriculum Content and Rigor

The evidence continues to build around the necessity for all students to engage and become proficient in rigorous curriculum content and problem-solving skills. There are vast inequities in what gets taught to whom, and many students and their parents are duped into thinking that they are receiving an education that will qualify them for college admission or a "good-paying professional job," when in reality their education may be relegating them to low-paying service positions. In schools that place students in lower curriculum tracks, students are likely to receive watered-down instruction. Chapter 2 will provide a fuller discussion of this area.

Continuous Inquiry and Monitoring Through the Use of Data

The goals, standards, and long-term outcomes for students are important and must be clearly stated so they are measurable. This involves both quantitative and qualitative measures to get authentic information about the school and district culture. Measures are needed to assess the progress of all students—in both the short and long term. The school community must ask the right questions to create a climate of high academic achievement that is good for students and adults. Measuring and monitoring outcomes, program effectiveness, and policies and practices at all levels of the institution should become interwoven into the everyday life of the institution. When policies and practices are analyzed, there is a very high probability that institutional biases and other uncomfortable issues may surface. Surfacing the issues provides the potential for problem solving and improved practices related to student achievement.

STAGES IN THE CHANGE PROCESS: HOW DATA OFFER HELP AND HOPE

Educators who desire broad-scale improvement in student outcomes must embark on a challenging process of changing whole systems—and the cultures within them. This book encourages educators to embrace data as an empowering tool in this work.

The barriers to change—and the conditions that must be created to allow for change to take hold—are significant. But what must give us hope is that many schools have risen and continue to rise to these challenges, using data inquiries at every stage to inform their direction. This section outlines the core stages of the change process that seriously committed schools should anticipate—and around which this book is constructed.

The stages in the change process are presented to assist in visualizing the deep-level work required—they are not necessarily recommended as an implementation

model in the strictest sense. They also are not rigid; schools and districts may well enter the stages at different points. Some stages are overlapping and ongoing, and two or three might be active simultaneously. For example, even though monitoring of progress is discussed last in this book, it must be planned and carried out from the beginning of the change process. All of the stages take dedicated time and must be addressed if substantive change is to occur. Finally, although the stages suggested here are fundamental, they are not all-inclusive—educators may identify a number of additional substages within each stage in the reform process.

1. Getting Started: Building the Leadership and Data Teams

Reform begins with individuals within the school, the district, and the community. Sometimes there is an outside catalyst, such as an external review, that identifies the need for major reform. Whatever the reason, individuals must recognize from the beginning the value of an inclusive and equitable reform process and how data can be used as a fundamental tool in the process. Chapter 4 describes the basics of launching the school change leadership team and the data team, and it offers a variety of instruments for teams to assess their internal dynamics and effectiveness as well as to carry out their planning.

The school change leadership team must be committed to initiating and maintaining communication among the entire school community and to building consensus around the change process based on meaningful data. The leadership and data teams must be trained with the proper skills and allowed adequate professional time to collect and analyze data for the school.

2. Killing the Myth/Building Dissatisfaction

Schools are socializing agencies for both educators and students, and the content and context of that socialization are very powerful. As a result of a series of educational practices, educational outcomes are affected. When practices are manifested in low expectations, low-level curricula, and essentially low-level instructional strategies for low-income children, low achievement is the outcome. These can become accepted, institutionalized practices, to which administrators, teachers, parents, and students become accustomed. Thus, the practices go unquestioned and are systematically perpetuated (Haberman, 1991).

Dedicated educators must therefore set about "killing the myth" that low-income children and some racial/ethnic groups are incapable of anything but low outcomes. The school community must review national data on the economic outlook for students who receive an inferior education. They need to see data from schools that have defied the myth that low-income students cannot achieve at high levels. And they need to see the broad discrepancies between rhetoric and actual teaching practices at schools like their own. This is necessary to help build a momentum of dissatisfaction among colleagues that inspires commitment to change. The examples provided in Chapter 2 can be used by school communities for this purpose.

3. Creating a Culture of Inquiry: Assessing Where You Are, Why You Are There, and What Needs to Change

Willingness to ask questions—and to look for the real answers—gets to the heart of how data can stimulate the school change process. School communities and

districts need to evaluate the practices and services offered to students and how both are delivered. Creating a "culture of inquiry" involves analyzing relevant data, probing perceptions about why things are as they are, and examining the academic culture, including issues of access, equity, and opportunities to learn. The strategies, a variety of instruments, and the sample data presentations are found in Chapters 5 through 10 to help school communities to

- Measure outcomes
- Assess the academic culture, policies, practices, and programs
- Establish multiple and combination quantitative and qualitative indicators of the school's or district's academic health
- Assess differential expectations and behaviors on the part of staff in providing different groups of students opportunities to learn the curriculum
- Utilize the voices of students and parents to improve access to academic courses and college-going opportunities
- Assess access and equity of achievement opportunities for students using current data sets by disaggregated groups, such as test scores, program placements, course enrollments, and college-going rates by race, ethnicity, language, and gender

4. Creating a Vision and Plan for Your School

Once the school community understands its possibilities and its needs through the inquiry process, it is time to begin envisioning the future. What should institutional practices look like? How will people be behaving and interacting? What types of student outcomes are desired? And what do we want the school to look like in three to five years' time? This planning stage requires long-term intensive collaboration among the implementers of the change. Schoolwide priorities must be identified, responsibilities assigned, resources allocated and reallocated, measures of progress determined, and timelines established. Chapter 11 provides guidance on these issues, including models for school visions and plans.

5. Monitoring Progress

Monitoring must become part of the school culture. Not only do test scores not tell the whole story, they sometimes tell the entirely wrong story and are used unwisely. The quest must be to evaluate whether the reforms are appropriate and whether they are raising the level of student achievement. A plan to monitor the progress of every goal should be devised. In addition to objective indicators of progress, changes in the academic culture of the institution or district need to be monitored. Chapters 6 through 11 provide assistance in looking at both student outcomes and changes in the culture and practices of the school. A wide variety of indicator combinations for monitoring progress are offered.

Before launching into the chapters on the stages of the change process, Chapter 3—"Data in the Reform Process: How and Why"—gives an overview of how school communities can make the shift from unwilling "data providers" to ready and willing "data users" focused on changing outcomes for their students. It describes the fundamental roles data can play in a change process and outlines some basic strategies for collecting, analyzing, and presenting data and creating the data dialogue.