

Chapter Three

The Organization of Effective Schools

THE GENERAL purpose of the analysis that will occupy us in this and the next two chapters is to clarify the rather hazy relationships among the institutional environment of the school, the school organization, and school performance. In so doing we also hope to provide a firmer foundation for thinking about the structural reform of schools.

Despite the long history and substantial influence of research into school organization—from studies of scientific management that helped establish the “one best system” to research on “effective schools” that guided much of the reform of the 1980s—there is little about the causes of school organization or even its consequences that is definitely settled.¹ We therefore want to begin our empirical analysis by reexamining the issue that effective schools research has addressed, and that logically must be the first issue resolved before any organizational reform should proceed: does the organization of schools really make a difference for school performance—specifically, for the achievement of students? With the benefit of data on some 20,000 students, teachers, and principals in a nationwide sample of schools, it is possible to address this issue with some precision and confidence.²

This chapter, an organizational comparison of high and low performance schools, is concerned mainly with description. It details how the goals, leadership, personnel, and practices of schools are associated with the achievement of students. It also discusses why these elements of school organization may be important causes of school performance. The next chapter takes up the issue of causality directly. There we will try to estimate just how much the organizational properties introduced in this chapter really matter.

Measuring School Performance

Across this diverse country, schools attempt to accomplish many things. They try to equip all students with basic literacy and computational skills. They strive to help many students master traditional bodies of knowledge and to reach higher cognitive planes. They aim to provide other students with the training and discipline that they will need for gainful employment. Public schools hope to socialize students of disparate backgrounds into the nation's civic culture. Private schools often work to inculcate specific systems of moral and religious values.

Since at least the middle of the nineteenth century, when schooling began to be universally provided, these and other school objectives have been a major source of political and professional contention.³ Parents and educators, business and labor, religious organizations and other interest groups have never been able to agree, at least for long, on such important matters as how much emphasis should be given to classical academic subjects as opposed to more relevant topics, or how basic moral training should be provided. Today the public seems to believe that if the nation is to prosper in a world of increasing technological sophistication, schools must make "academic excellence" a higher priority. But agreements on educational objectives tend to be fleeting—recall the brief commitments to science and mathematics education in the late 1950s, and the intense but passing concern with alternative education in the late 1960s. New priorities may well replace academic excellence in the 1990s.

The measurement of school performance is complicated by this unending debate. No single indicator can capture all that schools are trying to accomplish. No one criterion of performance will be completely fair to all schools. Nevertheless, it is highly impractical to evaluate schools along a number of dimensions. As will soon become clear, a proper analysis of even one dimension is a major undertaking. We will therefore direct our attention to one indicator of school performance, student academic achievement, throughout our analysis.⁴

We think this focus is most appropriate for an analysis of school performance. All schools take the academic development of their students to be one of their main orders of business. Circumstances may force schools, or free them, to pursue other student objectives—self-discipline, personal growth, moral development, occupational read-

iness. But academic achievement, at least in the basic subject and skill areas that we will examine, is an indicator of the kind of cognitive development that every American high school tries to promote. In addition, academic achievement is the most common indicator of school performance in education research; it is a pretty fair predictor of the future economic productivity of students; and it is the measure of effectiveness that school reformers now rely on most.⁵

To measure student achievement, we began with five of the six standardized tests that were administered as part of the High School and Beyond (HSB) survey.⁶ The tests—in reading comprehension, vocabulary, writing, mathematics, and science—were taken by a cohort of sophomores in the spring of 1980 and retaken by the same students at the end of their senior year in 1982. (We excluded from this study a civics test that the cohort also took, because the test was relatively unreliable.) The HSB tests were designed to measure basic skills ordinarily acquired before high school as well as the knowledge and abilities usually associated with a high school curriculum.⁷ Although the tests are somewhat short—together the five tests include 116 items to be answered in sixty-three minutes—each test is a reliable measure of the academic achievement it was intended to gauge.⁸ In addition, the scores on the five tests are all highly correlated with one another. This indicates that the tests are all tapping a student's general academic ability, and that they can be combined into more reliable, comprehensive indexes of total student achievement for sophomores and for seniors.⁹

Our analysis will focus on total student achievement, but our index of achievement will not be based on the sophomore or senior test scores alone. It will be based on the differences between them. We created our primary measure of student achievement by calculating the gains that students registered between the sophomore and senior years on each test. We then aggregated those gains into an index. We did this because gain scores are more valid measures of high school achievement than either sophomore or senior scores. Gain scores measure only the learning that takes place during high school whereas scores for the sophomore and senior years alone are contaminated by many years of prior learning. Since our main purpose is to account for the effectiveness of high schools in promoting student achievement, it is especially important to factor out of the analysis those influences—school, family, peer groups—that precede the high school years.

The Achievement Test Results

To appreciate the size of the contribution that schools might make to student achievement, it is useful to consider how widely student achievement varies across American high schools and their students. A representative picture of this variation is provided by the random samples of roughly 400 schools and 9,000 students in the final Administrator and Teacher Survey (ATS)-HSB data set.¹⁰ Here at the outset we offer a more detailed picture of academic achievement than we will ultimately analyze. We report the scores of students and schools for three indexes of achievement gains—an index of verbal achievement employing the reading, writing, and vocabulary tests, an index of quantitative achievement employing the mathematics and science tests, and an index of total achievement employing all five tests.¹¹ The verbal and quantitative indexes are each based on 58 test questions. On the verbal composite, sophomores and seniors each posted scores ranging from a low of 4 questions correct to a high of 57 correct. On the quantitative composite, the range was from 5 to 57 for sophomores and 3 to 58 for seniors. The spreads for the index of total achievement were 15 to 114 for sophomores and 11 to 115 for seniors. Plainly, the levels of academic achievement of American high school students range widely.

But what about the changes that occur in these levels over the last two years of high school? Those changes, our main interest, are described in tables 3-1 and 3-2. In each table, the first for students and the second for schools, the far left columns report achievement gains in terms of the raw test scores. Thus the average number of items gained by high school students (table 3-1) was 4.26 on the verbal battery and 2.35 on the quantitative battery. On the five tests taken together, the total achievement index, seniors gained an average of 6.64 items over their sophomore scores.

In a sense, these gains are rather small. The average test scores of sophomores left considerable room for improvement by the senior year. Sophomores averaged only about 31 items correct on each battery of tests. Typical sophomores therefore had 27 questions left to answer correctly on the verbal tests and 27 on the quantitative tests the second time around—54 missed questions to reflect their learning overall. Yet the gain scores indicate that high school students mastered only fractions of what they might have learned—16 percent

TABLE 3-1. Student Means for Sophomore-to-Senior Changes in Achievement Test Scores^a

<i>Test battery and population</i>	<i>Number of items gained</i>	<i>Gains measured in years</i>	<i>Log gain score</i>	<i>Gains measured in years</i>
<i>Verbal^b</i>				
All students	4.26	2.00	.231	2.00
Lowest quartile	-2.39	-1.12	-.119	-1.03
Highest quartile	11.97	5.62	.632	5.48
<i>Quantitative^c</i>				
All students	2.35	2.00	.119	2.00
Lowest quartile	-4.28	-3.64	-.177	-2.97
Highest quartile	9.97	8.49	.462	7.76
<i>Total^d</i>				
All students	6.64	2.00	.186	2.00
Lowest quartile	-4.66	-1.40	-.088	-0.95
Highest quartile	18.13	5.46	.500	5.38

a. Sample weighted to achieve a nationally representative sample of public and private high school seniors.

b. The verbal battery consists of tests in reading, vocabulary, and writing, with a total of 58 questions. The number of verbal items gained is the sum of the sophomore-to-senior differences in the number correct on each of the three tests. The verbal log gain score is the sum of the log gain scores on each of the tests.

c. The quantitative battery consists of tests in mathematics and science, with a total of 58 questions. The number of quantitative items gained is the sum of the sophomore-to-senior differences in the number correct on each of the two tests. The quantitative log gain score is the sum of the log gain scores on each of the tests.

d. The total battery consists of the five tests comprising the verbal and quantitative batteries, with a total of 116 questions. The total number of items gained is the sum of the sophomore-to-senior differences in the number correct on each of the five tests. The total log gain score is the sum of the log gain scores on each of the tests.

of the remaining verbal material, 9 percent of the remaining quantitative material, and only 12 percent of all the material that remained for them to learn. This is not to say that students all should have scored 100 percent by their senior year; the tests were designed to distinguish high from low achievers in the senior year too. It must also be said that some students may have mastered considerable amounts of new material, yet forgotten old material, and consequently posted only modest net gains. But the fact remains that the standardized tests left ample room for students to demonstrate cognitive growth, and the average American high school student used little of it.¹²

Not all students made such modest progress, however. And this is very important to note: the variations in student gains and school performance, and not their average levels, hold the key to understanding academic achievement. Thus we see in table 3-1 that while the gain scores of high school seniors were generally low, senior gain scores also varied rather remarkably. The students who gained the most, those in the highest quartile, improved their overall scores by

TABLE 3-2. School Means for Sophomore-to-Senior Changes in Achievement Test Scores^a

<i>Test battery and population</i>	<i>Number of items gained</i>	<i>Gains measured in years</i>	<i>Log gain score</i>	<i>Gains measured in years</i>
<i>Verbal</i>				
All schools	4.26	2.00	.230	2.00
Lowest quartile	1.97	0.92	.117	1.02
Highest quartile	6.46	3.03	.358	3.11
<i>Quantitative</i>				
All schools	2.22	2.00	.108	2.00
Lowest quartile	0.02	0.02	.012	0.22
Highest quartile	4.25	3.83	.217	3.98
<i>Total</i>				
All schools	6.50	2.00	.181	2.00
Lowest quartile	2.71	0.83	.091	1.01
Highest quartile	10.10	3.11	.279	3.08

a. Sample weighted to achieve a nationally representative sample of public and private schools. National school means are based on means of student achievement scores (calculated as described in table 3-1) for each school.

nearly 23 items more than the students in the lowest quartile did. In part this occurred because the best students learned nearly three times as much as the average student learned. But the wide range of student achievement also occurred because the worst students performed so badly. On average they scored nearly 5 items worse in their senior year than in their sophomore year. Indeed, while many students mastered impressive portions of the test material that remained to be learned after the sophomore administration, 18.3 percent of all students failed to learn any additional portion at all.

At the school level the variation in student achievement gains is somewhat less. As we see in table 3-2, the process of averaging the scores of students within each school tends to wipe out the highest and lowest student gain scores. Accordingly, the spread between the schools whose students gained the most, the top quartile, and the schools whose students gained the least, the bottom quartile, is about seven and a half items. Yet, even when student gains are averaged for each school, the variations across American high schools are substantial.

To appreciate this interpretation, let us assume that the average changes in verbal, quantitative, and total achievement for all schools are measures of the typical amounts of learning that occur in these

areas during the final two years of high school. If these two-year averages are reduced by half, they can then be thought of as indicators of the average amounts of verbal, quantitative, and total achievement that take place in a representative American high school each year. These one-year averages can also be used as straightforward standards—measures of grade equivalents of achievement—for interpreting changes in test scores. From the end of the sophomore year to the end of the senior year, the period spanned by this analysis, the average school, by definition, registers an improvement in achievement of two grade equivalents or years.

By this standard, students in schools in the highest quartile (see table 3-2) gained 3.03 grade equivalents or years in verbal skills, 3.83 years in quantitative skills, and 3.11 years overall. Students in the schools in the lowest quartile improved less than one year in every area, and scarcely improved at all in the quantitative area. The difference in total achievement between the most successful schools and the least successful ones, then, was about two and a quarter grade equivalents. The fact that this difference emerges during only two years of high school makes the difference a large one indeed.

In the analyses that follow, achievement gains will frequently be interpreted in years or grade equivalents. Our measures of achievement gains and grade equivalents will differ from the ones just discussed in an important respect, however. To this point we have been gauging student achievement in terms of the raw test and gain scores. This was useful for introducing our basic measuring instruments and methods. But there are better ways of gauging student achievement than by simply comparing the number of items answered correctly in the sophomore year with the number answered correctly in the senior year. Measurement should take into account such factors as the varied usefulness of individual test items and the different potential for improvement of students with different initial scores. We take account of these factors by making two adjustments to the raw gain scores.

In the analyses that follow, the raw scores on each of the five tests were first replaced with "IRT scores" (item response theory scores). These revised measures of the number of correct answers allow for item differences in difficulty level, discriminatory power, and the likelihood of being guessed correctly.¹³ The sophomore and senior IRT

scores were then used to construct "log gain scores" that adjust improvements for the level at which improvements begin. All things being equal, improvements are more likely for students who score poorly in their sophomore year than for students who score well. Students who score poorly as sophomores have many more items available to reflect their learning. They are also more likely, because of the chance of "regressing to the mean," to improve their scores even if they learn nothing. By gauging change scores on the individual tests against a logarithmic scale, the gains of below-average sophomores are deflated a bit and those of above-average sophomores inflated.¹⁴ For example, if two students each improved their IRT scores on a 20-item test by 5 items, but one scored 10 as a sophomore and the other scored 15, the one who began with only 5 items left to learn would register a log gain score (1.79) nearly three times that (0.61) of the student who had half the items still to master.

In the aggregate these measurement procedures scarcely alter the picture of student achievement just sketched. As table 3-1 shows, the adjusted student gains (the far right columns of the table) are only slightly less than the gains in raw scores. The total difference in grade equivalents between students who gained the most and those who gained the least is reduced from 6.86 years to 6.33 years. As table 3-2 shows, the changes in the school-level picture are more minor still. Between schools in the lowest quartile of gainers and those in the highest, improvements in verbal achievement continue to differ by about two years, in quantitative achievement by around four years, and in total achievement by roughly two years. Assuming for the sake of illustration that all high schools begin with students at the same tenth grade level of achievement, the better schools in our sample graduated their students at an achievement level equivalent to grade 13 while the worst schools graduated their students at a level comparable to only grade 11. Although this gap is also evident in the raw test results, our search for the correlates and causes of the gap will nevertheless employ the more valid IRT log gain scores.

An Exploratory Analysis

We begin our search for the causes of student achievement with a comparison of the organization of "high performance" and "low per-

formance" schools. Schools falling into the top quartile of the school-level distribution of total achievement log gain scores are classified high performance. Schools falling into the bottom quartile are labeled low performance. We compare the two types of schools on the four basic dimensions of school organization introduced in the last chapter. In exploring each dimension we consider a range of specific school characteristics that effective schools research has often found to be associated with student achievement.

We make these initial comparisons without any allowance for the host of circumstances or conditions that might cause school organization to differ. For example, we ask whether teachers in high performance schools have a greater sense of efficacy—a stronger belief in their ability to boost student achievement—than teachers in low performance schools do. We also ask whether students in the top schools take more academic courses than students in schools that perform at the bottom. But we do not ask whether teacher attitudes or student course-taking are associated with school performance when the schools being compared all have students of roughly the same academic ability or who come from families with about the same interest in education. In other words, we do not make "controlled" comparisons. We do not make such comparisons because our purpose at this point is not to determine what causes student achievement.

Our purpose here is exploratory. For that reason we also do not subject our comparisons to tests of statistical significance. We do not ask, for example, whether we can be 95 percent confident that high and low performance schools differ in their leadership. There is little point in knowing the answer to this question if it turns out that leadership has no independent effect on student achievement—if it turns out, in other words, that the relationship between leadership and student achievement disappears when other relevant factors, such as student aptitude or family background, are taken into account through statistical controls. By the same token, there is little point in knowing that high and low performance schools do not differ significantly in their leadership when leadership could easily turn out to have a significant effect on achievement once other factors are taken into account. In the next chapter we will consider such factors and conduct a proper causal analysis. In this chapter we want to explore organizational variables that deserve to be included in it.

Goals

In recent years researchers and reformers have become quite concerned with the goals and objectives of American high schools. Today, schools have many more purposes than they had decades ago. With the consolidation of schools and school districts, the increase in high school attendance by the poor and the working class, and the development of the comprehensive high school, America's schools grew larger. In addition, these larger schools began providing different programs of study and different kinds of courses—including a plethora of elective courses—to different kinds of students.¹⁵ During the 1960s and 1970s these trends were reinforced by a proliferation of federal and state programs—for compensatory, vocational, and bilingual education, for example—that caused schools to provide services that were more specialized still.¹⁶

To many observers the growth and internal differentiation of school purposes is a positive development. It permits schools to meet the varied needs of a heterogeneous population of students more effectively.¹⁷ But to other observers, especially those who have contributed to the literature on effective schools, the proliferation of school objectives is a serious problem. It has robbed schools of any clear sense of purpose and caused schools to lower their academic expectations for most students. Schools are no longer leading students—or teachers—to do their best, or to do anything in particular at all.¹⁸

In the early 1980s this line of criticism became the centerpiece of many of the national reports on America's education crisis.¹⁹ It also led to a very concrete proposal for reform. The states, which had allowed their high school graduation requirements to slip over the preceding two decades, should raise their requirements forthwith. In the coming years virtually every state did so.²⁰ Higher graduation requirements proved to be the kind of reform that state politicians and educational administrators could adopt easily. All they required were new state laws and simple new rules and regulations.

But observers of effective schools have a good deal more in mind when they argue that schools have become unfocused and undemanding. What they are talking about is not very well reflected in formal requirements. After all, there is little evidence that the decline in student achievement during the 1960s and 1970s was caused directly by declining graduation requirements.²¹ Research suggests that while

TABLE 3-3. 1982 Graduation Requirements for All Students in High and Low Performance Schools, in Years^a

<i>Subject area^b</i>	<i>Low performance schools</i>	<i>High performance schools</i>
English	3.56	3.75
Foreign language	0.04	0.52
History	2.48	2.72
Mathematics	1.58	1.89
Science	1.45	1.59

a. Sample weighted to achieve a nationally representative sample of public and private high schools.
 b. Requirements for all subjects are based on a four-year high school experience.

requirements may be a useful indicator of what a school is trying to accomplish, the best measures of a school's true goals are the priorities articulated—or not articulated—by the principal, and the objectives perceived and internalized by the teachers. Goals that are written down in an organization manual or posted on a bulletin board—however lofty and thoughtful those goals may be—will not have the impact on the day-to-day effectiveness of a school that goals shared and acted on by the school staff will have. Unfortunately for America's public schools, a clear and ambitious sense of collective purpose is not something that politicians can require or that administrators can easily encourage principals and teachers to develop.

The objectives and priorities of the ATS schools are basically consistent with the broadly critical view of school goals in the effective schools literature. That is, there is some evidence that formal requirements may account for differences in school performance. But there is more evidence that informal aspects of school goals are what matter most for student achievement.

The principals in the ATS schools were asked to report the number of years of instruction in five subjects that every student needed to complete in order to receive a diploma.²² As would be expected for the early 1980s, the averages for high and for low performance schools, reported in table 3-3, are indeed undemanding. Four years of English is not a universal requirement. Foreign language has been virtually eliminated as a prerequisite for high school graduation. Neither mathematics nor science need occupy a student in a typical school for even half of the high school years.

Requirements are not quite as abysmal in high performance schools as in low performance ones, however. Students in high performance

TABLE 3-4. Mean Priorities Assigned to Major School Objectives in High and Low Performance Schools^a

Objective	Low performance schools		High performance schools		Difference in rank
	Average ranking	Rank order	Average ranking	Rank order	
Basic literacy skills	1.57	1	2.47	1	0.90
Good work habits	3.30	2	3.37	3	0.07
Academic excellence	3.56	3	2.62	2	-0.94
Personal growth and fulfillment	4.16	4	3.51	4	-0.65
Citizenship	4.37	5	4.63	6	0.26
Human relations skills	4.50	6	4.26	5	-0.24
Specific occupational skills	5.78	7	6.53	7	0.75

a. Sample weighted to achieve a nationally representative sample of public and private high schools. Based on responses of principals.

schools must take more of every subject than students in low performance schools in order to graduate. The average difference, though, is only .272 years per subject. That amounts to a difference of a little more than one additional year of one subject overall. When other factors that influence student achievement are taken into consideration, small differences in graduation requirements may make significant differences for achievement. But for now, it appears that formal requirements are less important than their popularity among reformers suggests they ought to be.

More important for student achievement may be informal manifestations of what schools expect students to accomplish. To begin with, principals in high performance schools express different priorities than principals in low performance schools. Principals were asked to rank order a number of general objectives that their schools could be expected to pursue. The rankings, averaged for high and low performance schools in table 3-4, suggest that principals in academically successful schools are leading their students and teachers in a distinctly different direction than principals in unsuccessful schools are leading theirs. The direction in low performance schools is plainly pragmatic. The principals in those schools rank basic literacy, good work habits, citizenship, and occupational skills above where principals in high performance schools rank them. These are important goals, but they do not match the aspirations of principals in successful schools, who give relatively greater priority to higher-order individual needs: academic excellence, personal growth and fulfillment, and human relations skills.

To be sure, there is considerable similarity in the goals of successful and unsuccessful schools too. All but two goals have the same rank order in high performance schools as in low performance ones. On average, good schools as well as bad schools rate basic literacy their number one priority. But, especially among the highest priorities of successful and unsuccessful schools, there are unambiguous differences. Principals in low performance schools say that their second most important objective is to instill good work habits. Principals in high performance schools say that academic excellence is second for them—and a very close second at that. In low performance schools academic excellence is a poor third: it is nearly a full rank lower in average importance than its position in high performance schools.

Not surprisingly, successful schools are also more likely than

TABLE 3-5. Summary Characteristics of School Goals in High and Low Performance Schools^a
Percent

<i>School characteristic</i>	<i>Low performance schools</i>	<i>High performance schools</i>
Academic excellence is top priority	12.0	28.7
Goal clarity, above average ^b	54.0	63.0

a. Sample weighted to achieve a nationally representative sample of public and private high schools.
b. This measure is also part of the more general index of the principal's vision.

unsuccessful ones to make academic excellence their number one objective. As we report in table 3-5, nearly 30 percent of all high performance schools rate academic excellence their top priority. Only 12 percent of all low performance schools do the same. This is potentially quite important because observers of effective schools repeatedly stress the great impact that high expectations can have. Of course, it only stands to reason that a school will be more likely to find academic success if it makes academic excellence its major goal.

Naturally, schools with bright students may find it easier than schools without such students to focus on academic excellence. Principals whose schools are filled with educationally disadvantaged students may believe it is necessary for them to emphasize basic literacy skills and good work habits.²³ Or, they may just be taking the easy way out. High expectations are tough to meet. But whatever the reason, if the kinds of students in a school are a big influence on the kinds of goals a school sets for itself, the differences that we have observed in the goals of high and low performance schools may have somewhat different implications than we have proposed they have. School objectives may not be quite as important for student achievement as they now appear to be.

Not all of the differences that we observed in school goals can be so easily traced to differences in student bodies, however. The prime example of this is goal clarity (as measured by teacher perception), which we report in table 3-5. Principals in high performance schools not only articulate goals that are more academically ambitious, they also articulate goals that are clearer. About 10 percent more of the high performance schools than of the low performance schools are above average in goal clarity.²⁴ This is hardly a difference of day and

night. Many schools with unclear goals succeed and many schools with clear goals fail. But the tendency for successful schools to have relatively clear goals may have real significance for student achievement. There is little reason to believe that as schools try to establish a coherent sense of purpose they are either helped or hindered by the academic ability of their students. There is every reason to believe that once schools have a coherent sense of purpose they are better able to promote student achievement.

Observers of effective schools, especially schools serving the educationally disadvantaged, have often said that good schools succeed because they have a "mission." From what we can tell with the ATS-HSB data, high performance schools seem to have missions too. Their goals tend to be academically ambitious and their purposes better focused.

Leadership

If successful schools are in fact schools that have strong academic missions and other characteristics of effective organization, they may owe much of their success to their principals. Schools work in complex environments that impose all sorts of demands. Parents have countless ideas about what schools should do, and all schools must take parents into account. All schools have governing boards whose demands schools are obligated to meet. Most schools, and certainly all public schools, are surrounded by some sort of administrative apparatus that sees to it that the demands of local, and increasingly, federal and state authorities, are carried out. The problem for schools, and for the principals who must run them, is that there is no guarantee that this welter of demands will be consistent in any way, shape, or form with effective school organization. Indeed, as we argued earlier, the demands on public schools, the accumulated products of several levels of political decisionmaking, are likely to be inconsistent with effective organization.

Whether schools are public or private, however, principals are likely to shape their organizations. Principals must decide how schools should respond to the barrage of demands from authorities and interests on the outside. They must decide which demands to deflect and which ones to accommodate. Research has shown that it is often difficult for principals to manage these demands very effectively: the

external pressures on today's principals are sometimes simply overwhelming.²⁵ But research has also shown that successful schools are more strongly led. Effective schools seem to be headed by principals who have a clear vision of where they are going, who are knowledgeable enough about teaching and education to help teachers and students work toward desired ends, and who are able to protect schools from the kinds of demands that make it difficult for schools to operate on a professional basis.²⁶

We have already seen from the ATS-HSB data that principals in high performance schools articulate a different set of priorities than principals in low performance schools do. In the view of teachers, priorities are clearer in high performance schools too. Now we shall see that the principals of successful and unsuccessful schools differ in many other ways. These differences suggest, moreover, that the leadership of principals is likely to have a great deal to do with whether schools get organized effectively.

The principals of high and low performance schools differ in the basic motivations they bring to their jobs. Principals were asked to rank order a variety of possible reasons for assuming their current positions. Some reasons, such as the "desire to take on the challenges of being a principal" did not distinguish principals in high and low performance schools. But four reasons clearly did. Principals in academically successful schools gave higher priority to gaining control over their school's curriculum, gaining control over their school's personnel, and gaining control over their school's policies. Principals in low performance schools expressed a relatively greater desire to advance their careers.

We used these responses to create a composite measure of the principal's motivation. Principals who were more interested in gaining control over their schools—in one way or another—were less interested in advancing their careers. Accordingly, we decided to gauge a principal's motivation by taking the difference between the two (where motivation for control is measured by the highest ranked of the three control dimensions). Principals who score high on this composite measure are motivated more by concerns for career than by desires for control. In table 3-6 we report on the negative of this measure, the propensity of principals to be motivated by control. A clear majority of the principals in high performance schools are highly

TABLE 3-6. Leadership Characteristics of High and Low Performance Schools^a
Percent

<i>School characteristic</i>	<i>Low performance schools</i>	<i>High performance schools</i>
Principal's motivation (to control), above average ^b	18.9	61.9
Principal's dedication to teaching, above average	42.5	59.7
Principal's vision, above average	55.6	61.3

a. Sample weighted to achieve a nationally representative sample of public and private high schools.

b. These percentages are based on the negative of the principal's motivation index, which is coded such that stronger control motivations (lower rank orders) reduce the value of the index.

motivated by control, whereas only a fifth of the principals in low performance schools are so highly motivated.

A similar difference in job orientation is suggested by an index of what we call the principal's dedication to teaching. We measure this quality with two closely related indicators on the ATS principal's questionnaire, the principal's teaching experience and the principal's desire to move up to a higher administrative post. Principals with more years of teaching experience tend to be less interested in administrative promotions. We assume that principals with more teaching experience and weaker administrative aspirations are more dedicated to the pedagogical and instructional parts of their jobs than to the managerial parts. If effective schools research is correct, moreover, the ability of a principal to provide educational and instructional leadership may be important for school success. As it turns out (see table 3-6), principals in high performance schools are indeed more likely to exhibit an above average level of dedication to teaching.

Principals in better schools, then, not only come to their positions with a greater interest in the educational missions of their schools, they also seem to maintain that interest while they are there. At some risk of overinterpretation, America's low performance schools appear to be headed by principals who perceive their role to be more that of a middle manager while its high performance schools seem to be run by ones who view themselves more as educational leaders.

This interpretation is reinforced by a final measure of leadership

also reported in table 3-6. According to the teachers, the principals in high performance schools tend to show a greater propensity to know what kind of school they want, to value innovation and new ideas, and to keep the school apprised of where it should be going. Because these traits are also closely related to the perceived clarity of the school's goals, we combined our measure of goal clarity with our measures of these other qualities in a comprehensive index that we call vision. High performance schools are more likely than low performance schools to be led by principals who are above average in vision. The difference in likelihood is by no means great, but when taken together with the other differences in leadership, it reinforces the impression that better schools are headed by stronger educational leaders.

There are many indications, moreover, that this strength is an important source of superior academic performance. The qualities that distinguish the leadership of the high performance ATS schools—high expectations, clear goals, dedication to teaching, motivation to control, and strength of vision—also characterize the behavior of principals in many of the effective schools studied by others.

Personnel

Not surprisingly, research on effective and ineffective schools has more to say about teachers than about any other topic. Teachers, after all, do the teaching that determines whether students learn. What is surprising, however, is that research has found little to say about many of the qualities of teachers and teaching that reformers have long thought important. In particular, relatively little is said about the educational credentials of teachers, about how teachers score on competency tests, or about how much teachers are paid. Formal qualities such as these do not seem to make a significant difference for academic performance.²⁷

What seems to matter is a set of informal characteristics that encourage and support effective teaching. From one study to another these characteristics are labeled and listed somewhat differently. But all studies that find these characteristics to be important are talking about essentially the same thing. They are talking about teachers who operate as a true community of professionals.²⁸ They are talking about teachers who are not organized as bureaucratic underlings in a hierarchical administrative system.²⁹

In a community of professionals, educational values are widely shared. Teachers, perhaps associated with the same school for many years, know what other teachers in the school are doing. Schoolwide decisions are reached by discussion and consensus. Principals in effective schools are strong educational leaders—but their teachers are also influential. Principals encourage teachers to participate in planning and policymaking outside of the classroom. Principals and administrators also respect the professional knowledge, skills, and judgment of teachers and grant them ample latitude to run their classrooms.

Together these qualities are thought by many observers to be perhaps the most important source of school effectiveness. Schools with these qualities tend to buoy teachers' feelings, helping them to overcome the isolation, loneliness, and even victimization—by students, parents, and administrators—that they often experience in the classroom. Schools with these qualities also tend to nurture the development of genuine professionalism in their teachers. Students tend to benefit from all of this. Their instruction is provided by teachers who feel more efficacious and satisfied, and who are better able to respond to differing student needs. The total school experience of students is also more integrated and driven more by a common educational purpose.

The Administrator and Teacher Survey was designed to capture the various qualities of what it may be like to teach in a school that operates as a professional community. Our interest in these qualities is driven by more than their potential importance for school performance, however. To us they are doubly important because they stand to be greatly influenced by the bureaucratization of school administration and to be rooted in institutions of school control. We therefore want to take a very close look at the role that professional communities play in high and low performance schools.

We begin, in table 3-7, by looking at the experience of teachers. It turns out that the key to effective teaching is evidently not years of teacher service to a single school. Only a fraction more of the teachers in the best schools than in the worst schools have worked in their current institutions for at least ten years. This suggests not only that an unusual degree of staff stability is not crucial to the development of professional communities, but also that the sheer experience of a school's teaching staff may be unrelated to the achievement of its

TABLE 3-7. Staff Characteristics of High and Low Performance Schools^a
Percent

<i>School characteristic</i>	<i>Low performance schools</i>	<i>High performance schools</i>
Teachers at school for at least ten years	35.9	37.4
Teaching esteem, above average ^b	39.7	57.8
Teachers judged excellent by principals	23.3	31.7
Teacher professionalism, above average	27.7	59.3
Teacher influence, above average	44.5	52.5
Teacher efficacy, above average	32.7	60.1
Teacher absenteeism problem, below average	39.5	63.8
Staff harmony, above average ^c	42.7	61.4
Teacher cooperation, above average	33.8	62.0
Teacher collegiality, above average	49.2	65.9

a. Sample weighted to achieve a nationally representative sample of public and private high schools.

b. This index also includes the principal's dedication to teaching.

c. This index also includes the principal's vision.

students. Successful schools and unsuccessful ones are equally well staffed by veteran teachers. This is not totally surprising. Teachers who remain in their schools for long periods of time may improve with each year of experience, or they may simply reach a performance plateau and remain there. Especially given the personnel rules of most public schools, which reward seniority more than performance, it is quite plausible that teacher experience and student achievement are unrelated.

The differences in the teaching staffs of high and low performance schools appear to have much more to do with the quality of teacher service than with its quantity. To begin with, a larger proportion of the teachers in successful schools than in unsuccessful ones—one-third versus one-quarter (see table 3-7)—were judged by their principals to be excellent. This may mean that better schools have teachers who are objectively better—teachers with, perhaps, superior training or greater competence. Or it may mean that better schools have teachers who are subjectively better—that is, who are held in higher esteem

by their principals. Either way, students should benefit. Teachers who are held in high esteem by their principals, and who feel that their work is highly valued, should teach with greater dedication and enthusiasm, performing objectively better too.

Interestingly, schools in which principals rate their teachers highly are also schools that tend to be headed by principals who are more dedicated to teaching, as identified in table 3-6. Moreover, schools that are led by principals with either of these characteristics tend to have a host of other organizational characteristics in common. These relationships suggest (and various factor analyses confirmed this) that a principal's evaluation of teachers and a principal's dedication to teaching are probably alternative indicators of one more general school characteristic. We therefore combined these indicators in a new, broader index of school organization that we labeled teaching esteem. The values of this index for high and low performance schools are given in table 3-7. As gauged by the index, teaching is more highly regarded in good schools than in bad.

It is consistent with this high regard that teachers in the best academic schools are also entrusted with relatively greater responsibility and discretion. As we also report in table 3-7, teachers in high performance schools tend to enjoy above-average levels of influence while teachers in low performance schools tend to have levels of influence below the national average. This is potentially quite important for the development of professional communities because the matters over which teachers exert greater influence in effective schools—determining behavior codes, establishing the school curriculum, assigning students to classes, shaping teacher development programs, and disciplining students—are matters that are usually settled outside of the classroom, often at the discretion of principals and higher administrative authorities.³⁰

We also found (see table 3-7) that teachers in high performance schools have more efficacy than teachers in low performance schools. Of course, it only stands to reason that teachers with more influence over matters affecting their teaching would feel more efficacious, all things being equal. Thus teachers in the successful schools are less likely than teachers in the unsuccessful ones to believe, in the words of the survey, that their success or failure is beyond their control, or that it is a waste of time to try to do their best. Evidently, such

feelings of frustration also influence teacher behavior: we found (see table 3-7) that teachers in low performance schools present much more of a problem of absenteeism for their principals than teachers in high performance schools present for theirs.

This is not to say that high levels of efficacy and low levels of absenteeism are products of teacher influence alone. They are almost certainly conditioned by the kinds of students being taught—as teacher influence may be also. But all three of these traits—*influence, efficacy, and absenteeism*—are likely to represent a force of some independent importance in the educational process. Together they describe what is usually meant by teacher professionalism. Truly professional teachers are ones who are sufficiently knowledgeable, wise, and dedicated that they can be trusted to work effectively without extensive direction and supervision and to contribute constructively to the overall operation of an effective school. Truly professional teachers are also the kinds of teachers that reformers now strongly believe schools must recruit and develop.³¹ Because several of the teacher qualities that we measured—*influence, efficacy, and absenteeism*—are dimensions of professionalism, it is no surprise that they are correlated with one another and can be combined in an index of teacher professionalism. That index, employed in table 3-7, reveals that low performance schools strongly tend to be staffed by teachers who are below average in professionalism while high performance schools tend to be staffed by teachers who are above average.

This difference in professionalism also seems to be evident in the relationships among teachers in the two types of schools. By establishing a basis for mutual respect among teachers, professionalism tends to encourage cooperation and collegiality. Teachers who share a commitment to a school and who are collectively entrusted with significant responsibility for a school's success have good reason to work closely with one another as a community of equals. As we shall see, forces other than professionalism may also encourage this. But however bonds of community are created, cooperation and collegiality distinguish high performance schools from low performance ones.

The differences, as the indexes in table 3-7 show, are also rather large. In the better schools, teachers spend more time meeting with one another to coordinate instruction and matters related to it; they regard one another as more helpful with their classroom problems;

they work more assiduously to align their courses; and they are more knowledgeable about one another's classes. These are the components of our index of cooperation, on which high performance schools tend to be well above average and low performance schools far below average. High performance schools also tend to be much above average on our index of teacher collegiality. Concretely, this means that teachers in the best schools are especially likely to agree that their fellow teachers "can be counted on anytime, anywhere"; that they all "share beliefs in the central school mission"; and, among other things, that the school is "like a big family."

The coherence that characterizes the teaching staffs of high performance schools is consistent with other outstanding qualities of top schools, especially one of the qualities of good school leadership. The best schools tend to be led by principals who provide a clear vision of where their schools are going and who know how to get teachers moving in one direction. This kind of leadership would seem to encourage the sort of cooperation and collegiality that we found in the top schools, and to foster the kind of community feeling and esprit de corps that observers of effective schools argue are so important. It turns out, in fact, that our index of the vision of school leadership is correlated with our indexes of cooperation and collegiality. And the relationships among the three are sufficient to justify the creation of a more comprehensive index of a school's organizational coherence, an index we label staff harmony. Not surprisingly, as we report in table 3-7, high performance schools tend to have above average levels of staff harmony; low performance schools tend to have below average levels.

Overall, then, the organizations of academically successful schools and academically unsuccessful ones are rather different. The former tend to have goals that are more focused and ambitious, to be headed by purposeful educational leaders, and to be staffed by teachers who work with one another and with the principal as a community of professionals—as a close-knit team. Unsuccessful schools are organized rather differently. They tend to hold lower and more ambiguous expectations of their students, to be managed rather than led, and to be staffed by teachers who are lacking in the requisites of professionalism and effective interaction. Low performance schools look less like professional teams and more like bureaucratic agencies.

Practice

There are many reasons to believe that schools that are organized as teams of professionals will outperform schools that are not. Students will achieve more if more is expected of them and if their achievement is reinforced by similar expectations for all students in a school. Teachers will work more effectively as a group, and complement each other more in their teaching, if they have a clear idea of where the school is heading. Teachers will bring more enthusiasm and pride to their work if they have more control over it and understand that it is vital to the success of the school as a whole. The list goes on and on. But ultimately students learn in their classes. It is therefore important to ask whether there are differences in the courses that students take and in the way classes are conducted in successful and unsuccessful schools.

Course Work

Research has shown, to no great surprise, that course work is a key to student achievement. Students who take more academic courses and more courses that are academically rigorous tend to achieve more than students who do not.³² This is important because schools have considerable control over course work. They influence the amount and difficulty of the material being taught. And they influence what courses students take. We have no way of measuring course content directly, but we do have measures of what students take. We saw earlier that high schools do not require students to take very many academic courses in order to graduate, and that successful schools do not require much more work than unsuccessful ones. Nevertheless, there is pretty strong evidence that successful schools somehow get their students to take more academic courses and also more demanding ones.

The first evidence of this has to do with tracking. With the postwar proliferation of comprehensive high schools, students have increasingly been "tracked" into programs of study—typically, academic, general, or vocational—that organize course work according to student interest and ability. Courses in these programs differ in number, kind, and difficulty. Students in academic or college preparatory programs typically take more academic courses than students in general or vocational programs who are not being expressly prepared for college.

TABLE 3-8. Percentage Distribution of Student Bodies of High and Low Performance Schools, by Curriculum Program^a

<i>Program</i>	<i>Low performance schools</i>	<i>High performance schools</i>
Academic	28.3	63.7
General ^b	38.6	12.4
Vocational ^c	33.1	23.9

a. Based on responses of principals to questions about program distribution of tenth grade students. Sample weighted to achieve a nationally representative sample of public and private high schools.

b. This is a residual category that includes only nonvocational general students.

c. This category is the sum of enrollments in the following vocational specialties: agriculture, business, distributive education, health, home economics, technical, and trade.

The courses in English, history, mathematics, and science that make up an academic program are also likely to be more rigorous than the courses in the same subjects that make up the general and vocational programs.³³ To understand student achievement, it may therefore be important to know not only what courses students are taking but what program or track students are in. Schools may be able to promote student achievement by placing more students in academic programs or by encouraging more students to enroll in them.

In table 3-8 we compare the program enrollments of high and low performance schools. In high performance schools nearly two-thirds of the students are taking an academic program of study while only 12.4 percent are enrolled in the general track. In low performance schools the academic track is the least populated of the three major programs of study; students are more likely to be taking either a general or a vocational program. Of course, there is a complicated reciprocal relationship between student achievement and tracking. While enrollment in an academic track may boost student achievement, student achievement affects the track that schools place students in. Nevertheless, it is unlikely that school placement decisions and student program choices are unaffected by the expectations that schools hold of their students or by the encouragement that schools otherwise provide to academic work. The plain fact that high performance schools enroll more than twice the proportion of students that low performance schools enroll in academic programs may therefore be of real consequence for student achievement.

As we have said, this consequence may follow from the greater rigor of academic track courses, or from the greater number of academic courses that academic track students take. We therefore

TABLE 3-9. Mean Semesters of Course Work Completed by Student Bodies of High and Low Performance Schools, Sophomore Year through Senior Year, by Curriculum Program^a.

<i>Subject and program</i>	<i>Low performance schools</i>	<i>High performance schools</i>
<i>English</i>		
Academic	5.95	6.04
General	5.76	5.93
Vocational	5.50	5.70
All students	5.71	5.96
<i>Foreign language</i>		
Academic	2.42	2.96
General	0.70	1.35
Vocational	0.77	1.11
All students	1.14	2.48
<i>History</i>		
Academic	3.97	4.62
General	2.96	3.32
Vocational	2.47	2.89
All students	3.21	4.06
<i>Mathematics</i>		
Academic	4.74	5.19
General	3.68	4.11
Vocational	3.36	3.36
All students	3.91	4.62
<i>Science</i>		
Academic	4.51	5.03
General	4.48	4.83
Vocational	4.20	4.71
All students	4.47	4.97

a. Sample weighted to achieve a nationally representative sample of public and private high schools.

consider in table 3-9 the academic courses that students in high and low performance schools take. As could be expected, students in successful schools take more academic courses than students in unsuccessful schools. Unexpectedly, this is a fact for all students and all programs of study. In both the academic and the general tracks, students take more course work in English, foreign language, history, mathematics, and science in the high performance schools. For students in vocational tracks, greater course-taking is characteristic for all subjects except mathematics, which vocational students in high and low performance schools take in equal amounts. It is also notable that the difference in course work taken per subject is nearly as large for

general track students as for students in an academic track. The general track students in the high performance schools finish .396 semesters more course work per subject than their counterparts in the low performance schools while the academic track students in high performance schools top their counterparts by .450 semesters of course work per subject.

To be sure, the differences in course work that separate the best and the worst schools are not large. Once other factors such as student ability are taken into account, they may not explain the substantial differences in student achievement between these schools. But the differences in course work are 60 percent larger than the differences in graduation requirements between high and low performance schools. And the differences in course work reinforce the clear impression provided by the quite sizable differences in program enrollments: the country's best schools seem to succeed in part because they are somehow able to emphasize academic instruction.

Classrooms

When all is said and done, the bulk of formal education takes place in the classroom, and it is there that an effective school must ultimately succeed. Unfortunately, less is known about effective classrooms than about effective schools, especially at the level of secondary education. While instructional methods for elementary education have been the subject of voluminous research with relatively clear implications for practice, approaches to the teaching of high school subjects and skills have not been studied as extensively or yielded such firm conclusions.³⁴ Still, research does point to certain general qualities that seem to characterize more effective high school classes.³⁵ These include the common sense observations that effective classrooms are able to maximize learning time, or perhaps more accurately, minimize non-learning time; that they seem to experience fewer disruptions; that they expend less energy on administrative routines; and that they devote less time to student discipline. Effective classrooms also appear to be able to keep their students as focused on academics out of class as in class, getting them to complete more homework.

In table 3-10 we look at a variety of measures of effective classroom practices in high and low performance schools. What we see are basically two things. First, the classrooms of successful and unsuc-

TABLE 3-10. Classroom Characteristics of High and Low Performance Schools^a

<i>School characteristic</i>	<i>Low performance schools</i>	<i>High performance schools</i>
Mean minutes of homework assigned per subject daily	22.5	25.0
Mean number of writing assignments per subject annually	24.0	24.2
Amount of time devoted to administrative routines, above average (percent)	59.4	42.6
Amount of classroom disruption, above average (percent)	45.3	33.9
Disciplinary practices, above average in fairness and effectiveness (percent)	42.6	61.8

a. Sample weighted to achieve a nationally representative sample of public and private high schools.

cessful schools often differ very little. There is a remarkable sameness to the classrooms of America's schools. But what we also see is that where classrooms differ, the differences seem to be closely related to the differences that we have observed in effective and ineffective schools more generally. In other words, schools with effective organizations seem to encourage the operation of classrooms with at least some of the requisites of successful instruction.

Let us begin with those classroom characteristics that do not seem to distinguish successful and unsuccessful schools. Research has provided some evidence that student achievement depends on homework, and reformers, convinced of the relationship between the two, have been urging schools to assign more of it.³⁶ As we report in table 3-10, high performance schools ask their students to complete more homework than low performance schools require. But the average additional amount required is only two and a half minutes per subject per night. That adds up to about one additional hour of homework per week for students in the high performance schools when compared with those in the low performance ones. It remains to be seen whether this difference will help explain the variation in achievement across the ATS schools, but it is certainly a less promising difference than the recent enthusiasm for homework gives cause to expect.

Homework is not the only measure of classroom requirements to suggest this kind of conclusion. Teachers in the ATS schools were

also asked to report the number of writing assignments that they gave students each grading period. We used these reports to estimate the number of assignments that students were given each year in a typical class. The estimates, for good schools and for bad, are reported in table 3-10. In high and low performance schools alike, students are required to complete twenty-four written assignments of one page or longer in each class each year. The teachers in successful schools require their students to complete only a fraction more written assignments than the teachers in unsuccessful schools require theirs to complete. As with homework, students in better schools may devote more time and effort to writing than students in other schools. But if students in better schools do this, it is not because of additional requirements imposed in classrooms.

The big differences in the classrooms of high and low performance schools are not in the academic demands made on the time of students but in the nonacademic demands made on the time of teachers. In essence, teaching is subject to measurably less interference in schools that are succeeding than in those that are not. In a variety of ways, summarized by a comprehensive index reported in table 3-10, administrative routines are less burdensome in the top schools. In particular, this implies that in high performance schools the staff is less likely to complain that teaching is obstructed by "routines and paperwork," and teachers estimate spending less time on such things.⁸⁷ The difference in the index of administrative routines also implies differences in classroom administration: teachers in the better schools report spending less class time reviewing major examinations and quizzes, and are less likely to correct, grade, record, and return every homework assignment. This is not to say that teachers in the more successful schools are less effective in providing students with feedback—a practice that research strongly suggests is vital—only that they do not provide it in a manner that is quite so routinized, time consuming, and, by association with other indicators of administrative tasks, burdensome.

The classrooms of high performance schools are also subject to less disruption. In part this is an indication of the behavior of students who, teachers in the better schools report, spend less time "fooling around" or otherwise avoiding assigned tasks. But the difference in disruptions is also an indication of schoolwide organization. The index of classroom disruptions that we report in table 3-10 is based on a

measure of the attentiveness of students plus measures of the interruption of instruction by "messengers from the office," "announcements," "noise in the hallways," and other forms of intrusion. These seemingly disparate sorts of disruptions are closely related to one another in the ATS schools. We therefore use them in an index. Like the burdens of administrative routines, the frustrations of classroom disruptions may also stem from school organization. Schools that are organized along classic bureaucratic lines are more prone to formalism, routinization, and central interference than schools that are organized along more cooperative and decentralized lines, as professional teams.

To be sure, the intrusions on teaching in the low performance schools are not only the result of organization. Students are almost certainly an additional cause. They may be a source of routinization. For example, weak students may lack the self-discipline to be trusted to complete ungraded assignments or to review tests on their own. And students are almost certainly a source of disruption themselves. For reasons beyond the control of schools, the students of some schools will have a greater propensity to misbehave than the students of other schools. This implies not only different levels of prominent schoolwide problems such as fighting, vandalism, and alcohol or drug abuse but also different incidences of various disruptive behaviors in class.

Nevertheless, schools must attempt to maintain order, and their success in doing so is widely thought to exert an independent influence on student achievement. The ATS schools reinforce this line of thinking. The disciplinary climates of high and low performance schools appear to be substantially different. As the index in table 3-10 implies, students in the schools at the top of the distribution of achievement regard the discipline in their schools as fairer and more effective than the students in the schools at the bottom of the distribution view the discipline in theirs.

Again, differences in discipline may have as much to do with the problems presented by students as with the responses to them by schools. But apportioning responsibility, a difficult analytical task, is not appropriate or necessary at this juncture. The important observation is that teaching in high performance schools apparently takes place in a more disciplined atmosphere requiring less effort by teachers to maintain order. How this discipline is maintained—whether it benefits from the teamlike organization of successful schools or relies on tough sanctions—is not clear.⁸⁸ But what is clear is that the classes

of high performance schools are subject to fewer intrusions and disruptions of all kinds. Much of this is to be expected given the less hierarchical organization of high performance schools. Yet, whatever the source, the product is more class time for the educational activities deemed by teachers to be most appropriate.

Conclusion

Although this exploratory analysis is but a first cut at the data, it appears that school organization and performance are indeed related. High performance schools differ in goals, leadership, personnel, and educational practices from low performance schools. Their goals are clearer and more academically ambitious, their principals are stronger educational leaders, their teachers are more professional and harmonious, their course work is more academically rigorous, and their classrooms are more orderly and less bureaucratic. On any given indicator the differences between high and low performance schools are not always great; the organizational similarities across America's schools are quite impressive. But what is also very impressive is the consistency of the differences across so many dimensions of school organization.

Whether these differences account for the variation in performance across America's schools is, of course, another question. Prior research suggests that these are precisely the kinds of organizational differences that we should expect between effective and ineffective schools. But the differences in school organization that we have observed may well be artifacts of other, perhaps more fundamental, factors that we have yet to take into account—differences between schools, such as student abilities, for instance, or family values.

Even if the differences in schools that we have observed are not artifacts of other relationships, some of them may prove much more significant for academic performance than others. In particular, informal organizational differences may be far more important than formal ones. High and low performance schools appear to be distinguished more by their leadership, professionalism, and teamwork, for example, than by their graduation requirements, or homework and writing assignments. This has potentially important implications for school improvement. If school success really depends on the development of a professional, teamlike organization, improvement will be harder to

bring about than if it hinges on the imposition of rigorous requirements. In particular, for all of the reasons that we explained in chapter 2, improvement will be harder to achieve through the bureaucratized systems of democratic control that have governed public education for such a long time. Still, it is one thing for teamwork, professionalism, and the like to be associated with high performance; it is quite another for them to be its cause. Distinguishing between the two is the task to which we now turn.