INSIDE TEACHING
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How Classroom Life Undermines Reform

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For Tom
I am grateful to the Pew Charitable Trusts for providing financial support for this study. Their generosity paid for research assistants, for videotaping equipment, for transcribing expenses, and for time, the most valuable of commodities in research.

Throughout this book I rely on the rhetorical convention of using “we” whenever writing about anything a researcher saw in a classroom or anything a researcher asked a teacher in an interview, even though no more than one person directly witnessed any classroom or interviewed any teacher. These observations and interviews were conducted not only by me but also by my colleagues Rachel Lander, Paula Lane, and Brenda Neumann. They not only gathered data but also contributed in numerous ways to the design of the study, the sample selection, the interview guides, and the analytic strategies.

Teachers demonstrated a generous willingness to participate. Because we not only interviewed them but also entered their classrooms and videotaped their lessons, the study was much more invasive than most research projects. Some teachers were accustomed to being videotaped, but many had never seen themselves on tape, including one teacher who had taught for 30 years. The prevailing norms of privacy in teaching make it all the more impressive that
these teachers were willing to allow a stranger to enter, videotape, and then interrogate them about their teaching practices. I am indebted to them all.

Once teachers were interviewed, audiotapes came streaming into Michigan State's College of Education, where an extremely organized person, Kathy Lessard, trained and coordinated a pool of transcribers who converted the tapes to transcripts. Although I don't know the names of all the transcribers, I thank them and Kathy for their contributions.

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1. The Mysterious Gap between Reform Ideals and Everyday Teaching

I never understood the phrase “knowing everything and knowing nothing” until I examined my knowledge of teaching. Like most educated adults, I knew everything, and yet nothing, about teaching. The “everything” part of our knowledge has to do with what teaching looks like. As children, we spent many days sitting before teachers. As adults, many of us have visited our own children’s classrooms. From these experiences, we have a sense of the variety of ways in which teaching occurs, and we have a sense of what counts as good teaching or bad teaching. Some of us also have strong views about what teaching should look like, and some of us become education reformers, devoting substantial energy to trying to improve teaching.

But reforms typically fail, forcing us to acknowledge that although we know a lot about what teaching looks like, we know almost nothing about why it looks like this. We don’t understand why teaching seems so intractable to reform efforts, why teachers seem to ignore the guidance offered to them by so many concerned groups. Most American teachers are highly educated and highly dedicated. They are members of professional associations, receive various kinds of continuing professional development, and have access to textbooks and other materials. They care about their students and work long
hours preparing their lessons and reading their students’ work. The question we have to ask is this: How can it be that people who are well educated and committed to their work engage in practices that receive so much criticism?

This book aims to fill in these large knowledge gaps—to go as deeply as possible into classrooms, and into teachers’ heads, to learn why teaching looks the way it does and in particular to learn why teachers appear to be immune to reform efforts. The study I describe shows how classroom events appear to teachers and how routine conditions of classroom life often dictate teaching practices. It reveals that teachers are not unaware of reform ideals, and indeed are sympathetic with them. But they also have to attend to many other things, simultaneously orchestrating time, materials, students, and ideas. They must finish a lesson by 11:33 so that students can be in the cafeteria at 11:35. They must make sure that all students are on the same page, digesting the same ideas, gaining the same understandings. They must make sure that the right diagram, chart, or globe is readily accessible to show to students at exactly the right moment, and that the handouts students will need are also nearby. They must be prepared to respond to individual confusions, misunderstandings, and tangential observations without distracting or boring the rest of the class.

They must also be prepared to have the entire plan disrupted or defeated by some unforeseen event. Someone from down the hall may enter the room and interrupt the lesson midstream. A student may poke another student or ask a question that other students don’t understand or don’t care about. The projector may break, or there may not be enough copies of a handout to go around. Though such distractions appear everywhere, schools seem more susceptible to them than other organizations. Perhaps because schools are teeming with children, they are subject to much higher levels of distraction than most other organizations. And in schools, distractions are not merely temporary setbacks; they are obstacles to intellectual progress. They get in the way of good teaching. All these interruptions and complications can distract teachers from the thread of their own
thought and make it harder for them to present coherent lessons. Ironically, schools are places where sustained thought is rare.

These difficulties provide an explanation for our long history of failed reform efforts in education. Reform movements have come and gone for decades without much visible impact on teaching practices. The problem is so widely recognized that historians are now chronicling these movements (e.g., Cuban, 1984, 1990; Gold, 1999; Tyack and Cuban, 1995). Yet reformers continue to try, and others continue to generate hypotheses to account for the failures. Perhaps teachers need more knowledge or better guidance; perhaps we need to change their values or their dispositions. The sad fact is that most reforms don’t acknowledge the realities of classroom teaching, where both God and the devil are in the details.

What Do Reformers Want?

Teachers in the United States have remarkable flexibility in what they teach and how they teach it. Virtually all other countries have national curricula, which can significantly influence practice. For example, in a comparison of American, Chinese, and Japanese schools, Stevenson and Stigler (1992) found that in the Asian schools, which had national curricula and prescribed texts, the lessons in all classrooms were virtually the same from one day to the next. And while American teachers are all provided with textbooks and other materials, they can and do skip sections they think are irrelevant and add material not covered by the text (Porter et al., 1989).

Teachers also design their own classroom settings, including what is on the walls, how the furniture is arranged, whether student activities are structured or unstructured, and whether students work alone or in groups. They often create their own demonstrations, their own problems for students, their own homework assignments.

Meanwhile numerous groups try to influence teachers’ local decisions. Textbook publishers, professional associations, parent associations, religious groups, and business alliances all enter the education arena. Some compete with state and local policies, some try to
change them, and some reinforce them. The education policy landscape is routinely crowded with competing, often conflicting, ideas about what is the most important thing for teachers to accomplish in their classrooms. Teachers may encounter educational ideas and arguments in state or district pronouncements, specific textbooks or tests, workshops, professional newsletters or conferences, parents, neighbors, or their daily newspapers. Teachers may seek some of these ideas themselves, but others may be pushed toward them by bureaucrats, parents, businessmen, or other interested groups.

Despite their apparent instructional autonomy, and despite the many ideas available to them, teachers have very little time to digest these proposals and to make decisions about what to do in their classrooms. Again relying on international comparisons, we find that American teachers have less time away from their students than teachers in many other countries, and thus less time to plan their instructional activities or to gain access to ideas about how to teach specific content. Stevenson and Stigler (1992), for instance, found that Asian teachers are typically at school for nine hours a day, but are directly teaching students for only three or four hours a day. The American teacher has a shorter school day, but she teaches almost the entire day, frequently having only one “free” period. A recent study comparing teachers in nine industrialized countries found similar ratios of instructional time to total time: the amount of total time spent teaching ranged from 65 percent to nearly 100, and the U.S. average was 81 percent (Stoel and Thant, 2002).

The practices teachers devise in this environment are often criticized, with different reformers focusing on different problems. Some reformers perceive the process of learning as dull and dreary, some perceive classroom life as stultifying, some perceive the knowledge acquired in schools as uninteresting, unimportant, or thin. One source characterized the American curriculum as “a mile wide and an inch deep” (Schmidt, McKnight, and Raizen, 1997). These general perceptions have been reinforced by researchers throughout the twentieth century. For instance, in 1932 Willard Waller noted that
school subject matter was boring and irrelevant to life outside schools. Decades later, Hoetker and Ahlbrand (1969) reviewed a series of studies stretching back almost to the beginning of the twentieth century, in which researchers observed that teachers relied heavily on recitations—rapid-fire questions requiring rapid-fire responses—that focused on trivial facts and denied students the opportunity to think much about the content. Another review done at around the same time (Gall, 1970) also noted that teachers focused primarily on factual recall.

In the 1980s a spate of studies examined school content and found it wanting. Walter Doyle (1986) found that teachers transformed academic content into academic tasks, and that this transformation frequently destroyed the original significance of the content. Linda McNeil (1985) found that teachers reduced complex ideas to labels and lists, sacrificed depth for breadth, glossed over difficult topics, and omitted controversial ones. Both Doyle and McNeil attributed these practices to teachers’ need to maintain control over their students. Doyle argued that routine tasks were easier to manage, and McNeil argued that as teachers became more concerned about control, they were more likely to trivialize knowledge, and their students were less likely to be engaged.

Many reformers have referred to such observations to justify their goals. For instance, Mary Campbell Gallagher rationalized the 1960s curriculum reform with the assertion: “Disgusted with the dull and inaccurate lessons in commercial school textbooks in science and mathematics, a handful of scientists, mathematicians and educators . . . [decided to develop] new precollege curricula” (Gallagher, 2001, p. 283). And in its 1983 report, A Nation at Risk, the National Commission on Excellence in Education offered this dramatic statement: “We report to the American people that while we can take justifiable pride in what our schools and colleges have historically accomplished and contributed to the United States and the well-being of its people, the educational foundations of our society are presently being eroded by a rising tide of mediocrity that threatens our very future as a Nation
and a people. What was unimaginable a generation ago has begun to occur—others are matching and surpassing our educational attainments” (p. 5).

These perceptions, whether correct or not, frequently motivate reform movements. Though reformers disagree on what is needed, their proposals can be grouped into three broad ideals: more rigorous and important content, more intellectual engagement with content, and universal access to knowledge.²

More Rigorous and Important Content

The first persistent reform ideal is sometimes expressed in a call for “more demanding” or “more challenging” content or for “central ideas.” But there are many different views about what makes content important. One group of reformers focuses on meanings. Thus they want students not only to learn the relevant names and dates of the Civil War but also to understand the causes and consequences of that war; not only to read or recite passages from Shakespeare but also to understand the significance of these passages; not only to learn computational procedures but also to understand how those procedures work; not only to learn a body of scientific details but also to understand how those details were ascertained and why they are thought to be true. Most of these reformers also want students to learn the intellectual habits and values of these fields of study.

Another group of reformers wants to give students the knowledge and skills they will need to function in our society. They want students to acquire the ideas and values that define our culture and to be prepared for constantly changing technology and for an increasingly complex economy. They fear that too much attention to the liberal arts will interfere with these goals. For these reformers, the most important ideas are those that are most culturally and technologically relevant.

The reform proposal developed by the American Association for the Advancement of Science (1989) emphasized the first set of ideas. It advocated that students learn not just specific scientific facts but also ideas related to the essential nature of science—that science as-
sumes that the world is understandable, that science demands evidence, and that scientific knowledge is durable, for instance. The proposal also emphasized the importance of large organizing ideas such as the nature of the universe and the structure of matter. Similarly, the National Council of Teachers of Mathematics focused on central mathematical ideas: “School mathematics curricula should focus on mathematics content and processes that are worth the time and attention of students. Mathematics topics can be considered important for different reasons, such as their utility in developing other mathematical ideas, in linking different areas of mathematics, or in deepening students’ appreciation of mathematics as a discipline and as a human creation. Ideas may also merit curricular focus because they are useful in representing and solving problems within or outside mathematics” (2000, p. 12).

In contrast, the National Commission on Excellence in Education stressed the importance of practical knowledge: “The people of the United States need to know that individuals in our society who do not possess the levels of skill, literacy, and training essential to this new era will be effectively disenfranchised, not simply from the material rewards that accompany competent performance, but also from the chance to participate fully in our national life. A high level of shared education is essential to a free, democratic society and to the fostering of a common culture, especially in a country that prides itself on pluralism and individual freedom” (1983, p. 7).

Despite their different agendas, these groups share a perception that the content currently offered in classrooms is either not very important or not very demanding, and that the task of reform is to correct that situation.

More Intellectual Engagement
The second persistent reform ideal focuses on how students interact with school subject matter. Reformers want teachers to increase students’ interest, capture their imagination, or pique their curiosity. They want students to be actively engaged with important ideas. The notion of intellectual engagement is often associated with progres-
sive education, where the emphasis is on physical activity as well as mental activity. One of the earliest examples of a progressive reform is William Heard Kilpatrick’s (1918) proposal for projects. Kilpatrick argued that the *purposeful act* was the central feature of life in general, and that it should also be the central feature of school life. He wanted classroom lessons to be organized around projects that students wanted to do, whether they involved building a boat, putting on a play, or trying to solve an intellectual problem of some sort. All of these would be more meaningful and engaging to students than the sort of learning activities that teachers normally assigned.

These twin ideas of meaningfulness and engagement reappeared in the 1960s reform movement, which relied heavily on a pedagogy called discovery learning. Discovery learning was intended to ensure that students acquired the most important ideas and that they thought hard about those ideas. It assumed that students would find those ideas meaningful and engaging because of the way they interacted with them. Numerous curricula were developed during this period, most of them in mathematics and the sciences, and nearly all relied on complicated classroom activities that were designed to promote students’ intellectual engagement with content. Jerome Bruner, a central figure in the discovery learning movement, defended the proposal for discovery learning again in 1996, when he summarized his original reasoning as follows: “Acquired knowledge is most useful to a learner when it is ‘discovered’ through the learner’s own cognitive efforts, for it is then related to and used in reference to what one has known before. Such acts of discovery are enormously facilitated by the structure of knowledge itself, for however complicated any domain of knowledge may be, it can be represented in ways that make it accessible through less complex elaborated processes” (p. xii).

The importance of meaningfulness and intellectual engagement resurfaced yet again in the 1990s standards-based reform. Here is how the National Council of Teachers of Mathematics laid out the meaning-and-engagement theme:
In effective teaching, worthwhile mathematical tasks are used to introduce important mathematical ideas and to engage and challenge students intellectually. Well-chosen tasks can pique students’ curiosity and draw them into mathematics. The tasks may be connected to the real-world experiences of students, or they may arise in contexts that are purely mathematical. Regardless of the context, worthwhile tasks should be intriguing, with a level of challenge that invites speculation and hard work. Such tasks often can be approached in more than one way, such as using an arithmetic counting approach, drawing a geometric diagram and enumerating possibilities, or using algebraic equations, which makes the tasks accessible to students with varied prior knowledge and experience. (2000, p. 18)

This interest in real-world activities is held by a subset of reformers, referred to broadly as “progressives,” who assume that the inherent interest of the instructional task is an essential tool for motivating students and engaging them in learning. Other reformers believe that an overemphasis on activities can suffocate rigorous content. They worry that activities lead to hands-on learning but not to minds-on learning.

Still, even nonprogressive reformers must acknowledge the importance of intellectual engagement, for learning cannot occur without it. The debatable question is whether learning requires the kind of activities that progressive reformers tend to seek. There may be ways to engage students intellectually that don’t involve complicated activities. These disputes about the strategy for achieving intellectual engagement need not concern us. The central issue is intellectual engagement, not whether this engagement must be achieved through particular kinds of learning activities.

Universal Access to Knowledge
The third persistent reform ideal reflects a commitment to making school knowledge accessible to the full range of students attending
American schools, not just those who are gifted or who are college-bound. When Cronbach and Suppes wrote their book on disciplined inquiry in education in 1969, they put the issue this way:

The older form of education—transmitting facts and rules of thumb, and issuing a lifetime certificate of professional competence—has no validity in a world where social goals, communication patterns, and even scientific theories are changing constantly. At the other end of the spectrum, the school is asked to instruct the children from homes where there is no educational tradition and no preparation for responsible intellectual effort. The nation, speaking through its local and national leadership, is calling for the invention of new educational methods that will wipe out the cultural depression of the inner city. . . . Yet the reforms have not truly succeeded. An International Study that compared the mathematical achievements of adolescents in various countries showed that American students have a proper understanding of mathematics as a growing field of knowledge, but find mathematics more alien and uninteresting that students in several other nations. (Pp. 2–3)

In her reminiscence about the 1960s curriculum reform movement, Gallagher also stressed the importance of universal access: “I must emphasize that while the Curriculum Reform movement benefited from national interest in keeping up with Russia’s scientists, the Reformers themselves believed so passionately in their subjects that they wanted to teach all students, not just aspiring scientists and mathematicians. Phylis Morrison told me, A thing that we saw again and again . . . is that if you treat science as an open-ended exploration, all the students learn science” (2001, p. 286).

Following the curriculum reform of the 1960s, the nation went through a spate of federal legislation designed to increase educational opportunities to students who had historically been underserved. Congress passed legislation creating the Head Start program, and the Elementary and Secondary Education Act, both of which included a large entitlement for disadvantaged students. These were followed by the creation of programs for students with limited
English and for special education students. In each case, a central purpose of the legislation was to provide greater access to education for a broader range of students.

In 1983, when the National Commission on Excellence in Education wrote its now famous *A Nation at Risk*, it said: “All, regardless of race or class or economic status, are entitled to a fair chance and to the tools for developing their individual powers of mind and spirit to the utmost. This promise means that all children by virtue of their own efforts, competently guided, can hope to attain the mature and informed judgment needed to secure gainful employment, and to manage their own lives, thereby serving not only their own interests but also the progress of society itself” (p. 8).

This third reform ideal is probably less contentious today than ever before. Nearly all reformers, nearly all citizens, and nearly all teachers agree on the importance of giving all students access to school content. However, there are still vigorous debates about how to achieve that ideal, with one side wanting to maintain a focus on important content and a rigorous curriculum and the other wanting to focus on meaningful and engaging activities. In his history of efforts to “popularize” education, Cremin (1990) noted that this debate goes back at least to the 1830s, with one side pushing to expand educational opportunities and the other worrying that expansion would mean diluting the curriculum. It is not clear that these two ideals must be mutually exclusive, but advocates frequently pit them against each other, forcing a complicated issue into a simple dichotomy. Chall (2000), for instance, pitches “teacher-centered” instruction against “student-centered,” and Ravitch (2000) pits “progressive” education against “traditional” education. These dichotomies do not address the fundamental nature of instruction, which is that it cannot occur without both important content and intellectually engaged students. Teachers must think about both things at once.

My goal here is not to settle any of these disputes, but to use these broad ideals as a way to evaluate teaching practices. Throughout this book I refer to this general constellation of ideas as the reform ideals. The question that motivates this study is this: Given that reformers
have tried repeatedly to achieve these three ideals, why have they failed to persuade teachers to be as ambitious as they themselves are?

Hypotheses about the Failure of Reform

The four most widely mentioned reasons given for the failure of reform are:

- Teachers need more knowledge or guidance in order to alter their practices.
- Teachers hold beliefs and values that differ from reformers’ and that justify their current practices.
- Teachers have dispositions that interfere with their ability to implement reforms.
- The circumstances of teaching prevent teachers from altering their practices.

There is a fifth hypothesis that also needs to be considered, for if there is merit to any of the others, there is also merit to this:

- The reform ideals themselves may be unattainable or may actually impede practice.

Reformers rarely consider this hypothesis, but the history of reform requires us to consider it.

Teachers Lack Sufficient Knowledge or Guidance

The first hypothesis is that teachers cannot teach in the way reformers want because they lack some important body of knowledge or some important guidance (for a review of this literature, see Borko and Putnam, 1996). The missing knowledge may have to do with content, student learning, pedagogy or some other area, but the most frequently proffered version is that teachers lack subject matter knowledge. Several studies have documented areas in which teachers’ content knowledge tends to be thin, and there is some evidence that
teachers’ understanding of the content influences the strategies they use to teach that content (see, e.g., Ball, 1991; Carlsen, 1987, 1997).

Another popular version of the knowledge hypothesis is that reform calls for a kind of pedagogy that is unfamiliar to most teachers; therefore, change will require substantial professional development to help teachers learn the new approaches (Cohen and Ball, 1998; Elmore and Burney, 1999; McLaughlin and Oberman, 1996). Yet another version is that teachers could improve their teaching if states provided clearer and more coherent direction to teachers through their curriculum guidelines, student assessments, and other guidelines (e.g., Rowan, 1996; Porter, 1989).

Each version of this hypothesis has some supporting evidence, but the history of reform itself provides strong evidence against it. Nearly all reform efforts have provided knowledge or guidance to teachers, yet most have failed to produce consistent or persistent changes in practice. Often, in fact, teachers claim that their practice has changed substantially as a result of professional development, but observers are unable to see the differences (Applebee, 1991; Cohen, 1990; Spillane, 1999). From such findings one could conclude that knowledge and guidance are not the best avenues for altering teaching practices, but most analysts conclude instead that past efforts to provide additional knowledge and guidance have been insufficient.

Teachers Hold Beliefs and Values That Differ from Reformers'

Teachers hold a number of important beliefs that are relevant to teaching—beliefs about the nature of school subjects and what is important to learn about them, about how students learn and what motivates them, about how teachers influence students, and so forth. Researchers who have studied teachers’ beliefs (Kagan, 1992; Kennedy, 1991; Pajares, 1992) have identified their relevant features: they tend to be very durable and resistant to change; they are part of internally consistent networks of ideas, a factor that also makes them resistant to change; and they are used to filter and interpret new ex-
periences in a way that reinforces the beliefs instead of challenging them.

Like people in other walks of life, teachers form their ideas about teaching when they themselves are children in school, as their childhood selves respond to their teachers. Lortie (1975) has called this early experience an apprenticeship of observation, and he notes that teaching differs from most other occupations in the amount of time youngsters spend observing practitioners. Yet children are not privy to the whole of teaching. They are unaware of the decisions teachers make, the plans they make, and the work they do outside class. Moreover, they are emotionally dependent upon teachers, so their interpretation is not likely to be based on a close analysis of events. Yet from these naive experiences, many durable values are formed about the nature of school subjects, how teachers and students should behave in classrooms, and what constitutes “good” teaching.

Notice that all of us share these early experiences, so the ideals that drive reformers can derive from their personal responses to their teachers, just as teachers’ ideas derive from their personal responses to their teachers. In each case, a complex set of beliefs and values about the nature of classroom life—both how it is and how it should be—continues to influence people’s thinking even into adulthood, and in the case of teachers it may continue to influence their thinking as they develop their own practices.

Teachers Have Dispositions That Interfere with Their Ability to Implement Reforms

The third hypothesis suggests that teachers may possess dispositions or attitudes that interfere with their ability to create ideal practices. There have always been some who argue that teachers simply don’t care, that they don’t like children, or that they are merely marking time until retirement. This is a cynical hypothesis, suggesting that teachers themselves are cynical. Though there undoubtedly are some teachers like this, they probably appear in the same proportions that might be found in any other line of work. Every field has some members who are disgruntled or emotionally disabled to the point where
they are unable to function well. But this hypothesis does not plausibly explain widespread resistance to reform ideals.

The Circumstances of Teaching Prohibit Teachers from Changing Their Practices
The fourth hypothesis moves away from teachers and suggests that the problem may lie in the teaching situation itself. The argument is that circumstances place so many constraints on teachers that they cannot rise above these circumstances to create the kind of practices that reformers want to see. There are at least two versions of this hypothesis, one that refers to specific daily details of work and one that refers more broadly to the structure of the job itself.

With respect to the daily details of teaching, instruction can be interrupted by public address systems, office personnel bringing questions or messages, classroom telephones, and students entering or leaving for special-purpose classes. Less frequently, instruction is interrupted or temporarily postponed for tests and examinations, fire drills, assemblies, holiday celebrations, field trips, parent-teacher conferences, and so forth. In her examination of instructional time in Chicago, Smith (2000) estimated that sanctioned noninstructional events such as these occurred about 35 days per academic year, and that teachers lost anywhere from 20 percent to 100 percent of their instructional time on these days.

The academic calendar itself also imposes constraints. Teachers schedule their units of instruction to fit into uninterrupted segments of the year, taking account of scheduled breaks for Thanksgiving, Christmas, and spring vacations, when students may lose the thread of a unit.

School governance also creates difficulties for teachers. Johnson (1990) enumerates a wide range of difficulties teachers face in trying to do their jobs—complicated bureaucracies that make it difficult to order supplies or make the supplies arrive too late, leaky ceilings, electric outlets that don’t work, and so forth. Johnson argues that the bureaucratic processes themselves can interfere with thoughtful teaching. Ingersoll (2003) found that secondary teachers felt that
they could influence the particulars of their own classroom practices but that they had little influence over other matters that were highly pertinent to their teaching, including their own teaching assignments, the evaluation of teachers in their schools, and even discipline policies in the schools, which they were required to enforce.

There are also circumstances inherent in the teaching profession, apart from daily annoyances, that can deeply affect teachers. Lortie (1975) noted, for example, that the work itself does not change much throughout one’s career. The responsibilities of a 30-year veteran are virtually the same as those of a first-year novice. There is also little reward or recognition for extra effort. Moreover, it is relatively easy to leave the profession temporarily and to return at will. These circumstances encourage teachers to think about their work as an avocation rather than a vocation, as something that does not require substantial intellectual or emotional investment.

Lortie also pointed out that there is very little induction into teaching: teachers normally convert in just a few months from being full-time college students to being full-time teachers with complete responsibility for their classrooms and their students. The transition is usually abrupt, and the teacher is expected to create her entire practice on her own. This approach to induction encourages teachers to rely on their own prior beliefs and values for guidance and to think of their practice as a highly personal and idiosyncratic endeavor.

Several observers, including Lortie, have also noted that teachers are almost entirely dependent on their students for evidence of their own successes or failures. If students appear to be bored, this is evidence that the teacher has failed. Teachers need student cooperation in order to do anything in their classrooms, and they often obtain that cooperation through tacit bargaining. These bargains usually take the form of offering a more predictable and routine curriculum or a curriculum with fewer serious intellectual challenges in exchange for a more docile and pliant student body (Cusick, 1983; Doyle, 1986; Metz, 1993; Sedlak, Wheeler, Pullin, and Cusick, 1986). Thus student pressures to reduce complexity and reduce intellectual
burdens are an important part of the circumstances in which teachers must teach.

David Labaree (2000) has also weighed in on this hypothesis, noting that, in addition to the problems found by Lortie and others, teachers must manage emotions as well as children and academic ideas, and that their task is made more difficult by the facts that they “serve” a compulsory clientele and that they are isolated from other adults most of the time.

Notice that these circumstances have to do with teaching itself, not with the institutions or organizational structures in which teachers and students function. Sociologists have long sought an organizational theory that could account for the caliber of teaching that occurs in schools and have been unable to show systematic relationships between most organizational features and the quality of teaching practices (Gamoran, Secada, and Marrett, 2000). The results of the study detailed in the following pages indicate that circumstances inherent in the practice of teaching itself combine to make rigorous, intellectual teaching difficult even for highly knowledgeable and committed teachers.

The Reform Ideals Are Not Realistic
The hypotheses surveyed above have received far more attention than one that, in a sense, follows from all the others: that if teachers in general lack needed knowledge and guidance and hold different beliefs and values from those of reformers and work in entropic circumstances, then indeed reformers are asking too much. But even apart from all these problems, there are reasons to be skeptical about the reformers’ ideals. The ideals assume, for example, that it is possible to teach rigorous and demanding content to all students, and that it is possible for all students to become intellectually engaged with this content. These assumptions may not apply to, say, students whose parents have instilled anti-intellectual attitudes in them, or they may not apply when classrooms contain an exceptional array of students, or they may not apply when there are gang rivalries among
students that dominate all interactions and render serious intellectual discourse impossible. Rarely do reformers think seriously about the array of real students and situations that teachers face in their classrooms.

For the most part, the reform ideals also don’t address the nitty-gritty problem of how to organize and manage learning in large groups, where managing the group can interfere with managing the ideas. And reformers tend not to think about ways in which, in real schools, their ideals may conflict with one another. For instance, the ideal of universal access to knowledge implies that some classrooms will contain severely handicapped children, yet the presence of such children may hinder the teaching of rigorous and important content to other children. Moreover, the ideal of intellectual engagement does not address the question of how students with widely differing backgrounds and interests can take an intellectual interest in the same content. Reformers also don’t address the problem of how teachers are to respond to parents who disagree with their curricular goals, sometimes wanting less demanding curricula for their children.

Finally, there is some evidence that reforms are exhausting for teachers. Even though teachers can get swept up in reform movements, the time and effort required by reform eventually wear them out. In their review of the eight-year study, Tyack and Cuban (1995) noted that participating teachers gradually returned to their traditional practices at the end of the study because they were depleted by the demands of the reform. Given that most teachers have just one planning period per day, reformers may be asking too much when they expect every lesson in every subject to be intellectually spirited, rigorous, engaging, and accessible to all students.

The Study

This book poses three questions. First, it asks what teachers are actually doing, in an effort to evaluate the accuracy of reformers’ perceptions and to see if their dissatisfactions are justified. For this part of the work, it adopts the reformer’s critical eye, preferring to cri-
tique teaching practices rather than merely describing them. Second, it asks how teachers account for these practices, in an effort to see if and how teachers’ intentions and values differ from those of reformers. For this task, it tries to take the teachers’ point of view rather than the reformers’ and to learn as much as possible about how teachers think about their work and what they are trying to accomplish. Third, it asks where teachers got the ideas that motivated their practices, in an effort to learn more about when and how teachers are influenced by outside sources such as professional development or policy guidelines, sources frequently used by reformers to convey their ideas.

Pursuing these questions required several procedural decisions: what kinds of practices to study, what schools, teachers, and lessons to study, and how to talk to teachers about their practices.

What Teaching Practices to Study

Over the past century, researchers have tried dozens of strategies for documenting teaching practices. Some characterize classroom atmosphere on dimensions such as businesslike versus warm (e.g., Ryan, 1960), while others tally the frequency with which very tiny bits of behavior occur. The former approach is criticized for failing to define what teachers actually do, and the latter is criticized for reducing teaching practices to units that are so small that their educational meaning is not apparent. In the past couple of decades researchers have begun to focus on more meaningful segments of lessons. For instance, Doyle (Doyle, 1983, 1986; Doyle and Carter, 1984) focused on what he called the academic task; Stodolsky (1988) divided lessons into segments such as uniform seatwork, recitation, and individualized seatwork; and Leinhardt, Weidman, and Hammond (1987) sorted out “activity structures” that include things like homework review, monitored practice, and transitions. All these researchers were seeking segments of practice that are discrete enough to analyze, yet still large enough to be educationally meaningful.

In devising this study, I sought segments of practice of that sort: segments that were analytically distinct enough that they could be
examined independently, yet substantively rich enough to have educational meaning. The study capitalizes on lessons as the fundamental unit of instruction because they are themselves discrete and coherent. They typically have a beginning, a middle, and an end, and distinct parts within them. Two features of interest are how they construct their lessons and how they manage a handful of tasks that are essential to each lesson. These essential tasks are outlined below.

**Developing the Day’s Agenda**

Three tasks that must occur in every lesson are establishing learning outcomes, portraying content to students, and constructing learning activities.

1. **Establishing learning outcomes.** While institutional policies may outline an official body of content, teachers define its larger meaning, and they often have an epistemological stance on the character and quality of the content itself. If we want to see whether and how teachers respond to reform ideals, we need to examine their decisions about learning outcomes, for it is here that teachers translate official curriculum topics into issues, themes, morals to the story, and emphases. It is here that teachers decide, for instance, whether the Earth’s atmosphere will be presented as an ecosystem or as a list of layers with labels and ingredients, and whether the American Revolution will be presented as a collection of names and dates, as a dramatic narrative, or as an event involving difficult political issues.

2. **Portraying content to students.** Teachers portray content in a number of ways. The most direct approach is simply to tell students about it, perhaps through lectures alone or perhaps with physical props such as illustrations, diagrams, pictures, or physical demonstrations. Sometimes they portray content by presenting a puzzle or a dilemma, by raising questions or posing problems for students to think about. Portrayals can vary considerably, and much of the variation reflects different ideas about learning outcomes. If the official content is the Civil War, for instance, teachers may portray the war as a political, economic, military, or social event. If the content is
division with fractions, teachers may portray this content as procedural (that is, how to do it), conceptual (that is, what it means to do it), or integrative (e.g., how this process relates to division with decimals). Reformers often take strong positions about the kind of portrayals they believe are most appropriate. Certainly if we want to see whether or how teachers respond to reformers’ ideals, we want to see how they present and represent content to students, for it is through these portrayals that they tell students, in effect, what matters about this content.

3. Constructing learning activities for students. Teachers also provoke students into interacting with the content, to enable them to assimilate it. They may ask students to read texts, write papers, solve problems, conduct experiments, or engage in other activities. It is through these learning activities that students become acquainted with the new content, grasp its nuances and complexities, gain facility with it, and, in general, come to know it.

With respect to reform ideals, some advocates prefer the kind of learning activities that might be called “traditional,” such as reading texts, listening to lectures, writing, or solving a set of assigned problems; others prefer more progressive activities such as participating in debates, conducting laboratory experiments, or engaging in open-ended explorations. Regardless of one’s position on this matter, the fact remains that some kind of learning activity is likely to occur. What is of interest here is how and why teachers construct their learning activities as they do.

Managing Conversations about Content
Questions and answers are essential to instruction, as both teachers and students need to clarify ideas and sort out important distinctions. On one side are questions teachers ask, which may be used to guide students or to assess their understanding; on the other side, teachers respond to the questions and comments offered by students. Both are important to instruction.

1. Q&A routines. Most teachers have routine ways of organizing
their questions. One teacher might begin each day with a series of questions designed to see what students recall from the previous day, while another might put forward a series of questions after introducing something new, to see where student confusions might lie. A third might use questions to orient students to new content or to push their thinking in a particular direction. These varied uses of questions share one important feature: all allow the teacher to ask students about content and to see what they understand or don’t understand about that content. I will refer to these question-and-answer sequences as Q&A routines. These routines offer an excellent opportunity to learn whether or how teachers respond to reformers’ ideals, for their approaches to Q&A routines can direct students toward larger or smaller ideas, can encourage or discourage intellectual engagement, and can encourage participation from everyone in the class or from a select few.

2. Responding to unexpected student comments. Just as teachers may pose questions to guide learning, students may introduce ideas of their own, either by offering ideas about the content or by asking questions about that content. Through their questions and comments, students convey to teachers, either intentionally or inadvertently, their own interpretation of the content or of what the class as a whole is doing. Many such comments and questions follow the substantive direction the teacher has set, but sometimes students veer into entirely new terrain, and their ideas have the potential, if seriously addressed, to take the entire class in a different direction. Teachers must therefore develop strategies for responding to students’ comments and questions.

The practice of responding to unexpected student ideas differs from other practices in two important ways. First, these responses cannot be planned ahead. Teachers may design entire lessons so that they include elements such as portrayals, learning activities, and Q&A routines, but they cannot anticipate the ideas that students may introduce on their own. So their responses must be constructed on the spot. And even though these exchanges may be brief, they can influence the overall coherence and integrity of the lesson.
...ers manage these situations may give us important insights into their responses to reformers’ ideals.

*Establishing a Tranquil Learning Environment*

Teachers try to make their classrooms orderly and tranquil in many ways. They want intellectual tranquility—a lack of distractions—so that students can concentrate on their work. They want social tranquility—courteous interactions among students—so that students learn to adopt social and cultural norms. And they want emotional tranquility—lack of stress and distress—so that students will be more willing to participate in their lessons. To further all these ends, teachers establish a wide variety of classroom rules, routines, and social norms. Rules about poking and teasing, taking turns, listening, and generally being respectful to one another help establish social norms. Operating procedures such as where students should store their book bags or when they may move about the room make classroom life more efficient. Some routines, such as greeting each child at the beginning of the day or calling students by their names rather than simply pointing to them, make the learning environment more friendly to students and thereby increase their willingness to participate. Classroom routines create the ambiance that leads us to view classrooms as being organized or disorganized, friendly or cold, exciting or boring. Classroom norms and rituals are rarely discussed when reformers describe their ideals, so an important question we need to ask is whether or how these routines may hinder or facilitate teachers’ ability to respond to those ideals.

Each of these essential teaching tasks has a clear function and meaning in the context of the lesson as a whole, yet the tasks themselves are analytically distinct. Notice, too, that this method of parsing the lesson does not prescribe the sequence in which these various parts are used. Different teachers may arrange these events in different sequences, using Q&A routines at the beginning of a lesson to orient students to new ideas or at the end to review ideas that have already been examined. One teacher might organize an entire lesson around...
a single learning activity while another might use several different learning activities.

**Which Schools, Which Teachers, Which Lessons?**

In a nation as large and varied as the United States, finding schools and teachers to study is no simple task. There are too many variations, too many options, and too many considerations. As a result, every researcher must make important limiting decisions. In my case, these decisions had to do with which reform contexts, grade levels, and subjects to study.

**Reform Contexts**

Since one major goal of this study is to learn more about why ordinary teachers do the things they do, it seemed important to study schools that were ordinary—not renowned for their reform activities. At the same time, I wanted to ensure that teachers had been at least exposed to reform ideas, so that I could see how they responded to those ideas. My solution was to seek schools that lay within the catchment areas of significant reform initiatives but were not particularly notable for their own local reform efforts. I hoped that such schools would represent the kinds of places that reform initiatives often hope to influence but rarely do. I also reasoned that a mix of schools, exposed to a mix of reform messages, would yield a collection that roughly represented the variety of ideas currently reaching teachers. The reform ideas encompassed in this sample include two that emphasized content, one that emphasized intellectual engagement, and one that emphasized all three reform ideals. The appendix provides details about these sites.

**Grade Levels and School Subjects**

I sought teaching situations that might maximize my ability to test the various hypotheses listed above, and settled on upper elementary classrooms, for several reasons. First, concerns about teachers’ knowledge, particularly of their subject matter, are most acute in the upper elementary grades, where teachers tend to hold elementary
teaching certificates, perhaps with no subject matter major in college, and yet are expected to teach all school subjects. Moreover, in the upper elementary grades the curricula in these different subjects can be relatively complex and demanding. At the same time, we might expect these grade levels to reveal more variation in teachers’ beliefs and values. Whereas secondary teachers tend to focus more tightly on their discipline, and early elementary teachers to focus more on nurturing their children, we might expect upper elementary teachers to struggle with the competing ideals of nurturing students who are still young and emotionally immature, of managing students who are nevertheless old enough to be more brazen and boisterous, and of helping them learn important academic content. Finally, we might also expect the influence of teaching circumstances to be more apparent in upper elementary classrooms. For the most part, students in elementary schools are too young to drop out of school, and they are not tracked by ability levels, so teachers may confront substantial variation among students in a single classroom. At the same time, schools do offer several special-purpose classes for students who need remedial assistance, language assistance, or other kinds of help, so students in elementary schools are often pulled from their regular classrooms to attend special classes.

Finally, these grade levels are included in nearly all reform initiatives. Student assessments nearly always include at least one upper elementary grade, and data from the Third International Mathematics and Science Study (TIMSS) suggest that the upper elementary grades are where a great deal of U.S. achievement decline occurs relative to other countries. These grade levels have been the focus of many national and international assessments and of a great deal of classroom research and observation. They are high enough to permit some attention to academic content, and yet low enough that teachers are expected to teach all content areas and to nurture students as well.

With respect to the particular lessons that would be examined, my colleagues and I left this decision up to the teachers. The research process was more invasive than most teachers are accustomed to (we videotaped each lesson and then interviewed teachers about it),
and we wanted them to be as comfortable as possible with our visit. The appendix furnishes more detail about how these decisions were reached.

To solicit teacher participation, we generally presented the study to the entire school staff and invited participation from all attending teachers. About half of those who were asked to participate agreed to do so. This is a lower response rate than I have experienced in other research projects, and I suspect that it reflects, at least in part, the invasive nature of the research.

Talking to Teachers about Their Practices

The original idea for these interviews was to ask each teacher about at least one routine, at least one learning outcome, one portrayal of content, one learning activity, one Q&A routine, and one response to an unexpected student idea. However, teaching practices don’t present themselves with labels, and sometimes teachers categorized their practices differently from the observer. For instance, when we observed Mr. Awles introducing a new unit on the ocean, we saw him ask students to open their science journals and to write down two facts and three opinions about the ocean. We asked about that practice, assuming that the “facts and opinions” writing assignment constituted an instructional routine. However, Mr. Awles explained that he had introduced the distinction between facts and opinions earlier in the day in his language arts lesson. He then used his science lesson to give students more opportunities to work with this distinction.

Because teaching practices are necessarily embedded in a continuing stream of activity, the interviews dealt with entire episodes rather than the teacher’s practices per se. Teachers generally described what preceded their actions, what they saw or were concerned about, and what they did and why. On average a given interview addressed about 11 episodes from the teacher’s observed lesson, with episodes varying in length from very brief exchanges between teacher and students to long and detailed learning activities or Q&A routines. Altogether, the 45 teachers who participated in this study discussed 499 episodes of teaching practice. Table 1 summarizes the distribution of these episodes.
For the most part, these 499 episodes constitute the material of this study. They do not reflect everything that occurred in these lessons, just those that were talked about. The distinction is important, particularly with regard to two categories: responding to student behaviors and responding to unexpected events. We made a policy of asking teachers about most of the categories of practice listed in Table 1, but we didn’t ask about student misbehaviors unless they were particularly egregious. We also tended not to ask about other interruptions, such as an interloper entering the classroom or a telephone ringing, because these fell outside our list of core teaching practices. Thus, the small number of episodes tabulated as interruptions reflects an a priori decision about what to ask about, and not the actual frequency of these events.

Table 1  Number of episodes examined representing each type of teaching task

<table>
<thead>
<tr>
<th>Number of mentions</th>
<th>Teaching task</th>
<th>Total no.</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>111</td>
<td>Constructing the day’s agenda</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>60</td>
<td>Establishing learning outcomes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>56</td>
<td>Portraying content (demonstrations, definitions, visuals, etc.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>75</td>
<td>Constructing learning activities (experiments, dice games, writing, problem solving)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>189</td>
<td>Managing conversations about content</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>59</td>
<td>Q&amp;A routines (question and answer patterns)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>102</td>
<td>Responding to unexpected student ideas</td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>Responding to student misbehaviors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>191</td>
<td>Creating a tranquil environment</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>38</td>
<td>Instructional routines (journals, homework assignments, etc.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>Participation routines (grouping practices, systems for calling on students)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>36</td>
<td>Behavior control routines (attention-getters, reminders, seating assignments, etc.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Other misc. routines (beginning the hour, students finishing early, etc.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Responding to unexpected events</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>499</td>
<td>Total practices examined</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>
The remaining chapters describe the findings from this study. Chapter 2 provides an overview of the way teachers generally accounted for their practices. It describes a line of reasoning that appeared frequently in the interviews. It also describes teachers’ intentions and the main areas of concern that appear to drive them. Of interest here is the extent to which teachers appear to be guided by reform ideals, as opposed to other possible areas of concern they may have. More than other chapters, this one tests the hypothesis that teachers may hold different values and beliefs from those of reformers. One important finding reported here is that teachers’ intentions address far more areas of concern than reformers tend to think about. In addition to concerns about content, intellectual engagement, and universal access to knowledge, teachers think about how to foster student learning, the kind of classroom community they want to create, how to maintain lesson momentum, and how to satisfy their own personal needs for order and calm. When these different areas of concern conflict, teachers most often lean toward maintaining the momentum of the lesson, a tendency that can, ironically, reduce their attention to fostering student learning.

Chapter 3 describes the strategies teachers use to create tranquil learning environments. Since every classroom contains a large number of energetic and easily distracted youngsters, teachers devise a host of classroom norms and routines that make their lives more stable, more predictable, and more calm. Chapter 3 shows how these routines work, the extent to which they contribute to reform ideals, and the lines of reasoning that teachers use to account for their routines. More than other chapters, this one tests the hypothesis that the circumstances of teaching create the teaching practices we often see. One finding presented here is that teachers are frequently motivated by a fear of distractions and that this fear sometimes motivates them to suppress intellectual engagement. Chapter 3 also shows that many of the distractions teachers experience are caused by local institutional policies and organizational norms. We saw distractions from
public address systems, students entering and leaving the classroom, telephones ringing in the classrooms, and other teachers entering to ask irrelevant questions. When these disruptions occurred, students distracted both teachers and one another.

Chapter 4 describes two kinds of conversational practices: the habitual Q&A routines that teachers rely on, and their responses to student ideas. Again the goal is to ascertain the extent to which teachers’ practices reflect reformers’ ideals and also to learn the lines of thinking that lead teachers to construct these particular practices. The most important finding revealed in this chapter is that intellectual engagement can significantly add to teachers’ difficulties, and that as a result teachers frequently discourage intellectual engagement. Just as students who are disengaged can disrupt lessons by misbehaving, so can students who are engaged disrupt a lesson by enthusiastically offering ideas that move the lesson away from the direction teachers are aiming for. Student enthusiasm can substantially complicate classroom discussions about content.

Chapter 5 describes three practices essential to acquainting students with academic content: the establishment of learning outcomes, portrayals of content, and learning activities. This chapter shows the variety of learning outcomes, portrayals, and learning activities that teachers construct and shows how these practices can heighten or suppress content and intellectual engagement. One important finding from this chapter is that the extent to which learning activities succeed in intellectually engaging students depends in large part on teachers’ own theories of learning, a set of beliefs that are rarely considered by reformers. Chapter 5 also shows that logistical problems associated with complicated presentations and learning activities frequently reduce students’ access to content.

Chapters 6 through 8 synthesize the results to provide insight into how reformers might better help teachers improve their practices. Chapter 6 examines problems in teachers’ lessons—both the kinds of things that went wrong and why they went wrong—from three points of view: things that teachers mentioned as problems, things that reformers would be likely to mention as problems, and things
that a parent might notice as interfering with the progress of the lesson. It outlines three main sources of these problems. First, students themselves create problems for teachers. Because they are novices, their thinking frequently doesn’t go in directions teachers expect. Second, local institutional policies and norms introduce complications and interruptions into lessons. Third, teachers’ own beliefs, values, dispositions, and attitudes can create problems for teachers.

Chapter 7 examines practices that teachers believe have improved over time and the sources of the ideas that appear to have motivated these improvements. It contrasts three main sources of ideas: knowledge vendors such as colleges, universities, and professional developers; experience and other informal sources for ideas; and institutions, which provide teachers with guidelines and policies, usually about curriculum content and learning outcomes. All three sources make important contributions to improvements in practice, and each also has important drawbacks. Ultimately teachers need all three, and the burden on policymakers is to coordinate them for maximum benefit.

Finally, Chapter 8 summarizes the book’s overall argument. It reviews each of the hypotheses frequently used to explain reform failures and summarizes the evidence for each. All hypotheses have at least some supporting evidence. Two that demand more attention from reformers, however, are the hypothesis that the very circumstances of teaching thwart reform and the hypothesis that reform ideals are inherently unattainable.