The Teaching Gap

Best Ideas from the World's Teachers for Improving Education in the Classroom

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Preface to the Paperback Edition

The aim of The Teaching Gap, now nearing its tenth anniversary, was to bring classroom teaching to the center of the education stage. Much has happened since the book was published, including a new and more ambitious study comparing teaching in different countries, and new developments on the U.S. education scene. To catch up with these developments and interpret what they mean for teaching, we add an Afterword to this edition. But we also wanted to add a new Preface to underscore a single point, one that has taken on increased significance during the past decade and is critical for understanding everything in this book.

In the first Preface, and throughout the book, we underscore the importance of teaching as the key lever for improving students' learning. Teaching, we say, is the passageway through which all education reforms must travel if they are to make it through the classroom door and, ultimately, improve students' learning. Unless teaching changes, students won't notice the difference. Many recent policy documents and improvement initiatives endorse this view. Considerable attention is now devoted to improving teaching.

But something interesting happened along the way. The grow-
ing attention to teaching moved in a different direction than the one we had in mind. Simply put, most policy efforts to improve classroom teaching focus on teachers rather than teaching, attending mostly to who is in the classroom instead of to what they do when they get there. Most policy work aimed at improving teaching has focused on recruiting better teachers: increasing the qualifications of teachers, making the certification processes more rigorous, and improving the salaries and working conditions for teachers. Little attention has been paid to the methods these teachers will use to promote better student learning. The distinction between teachers and teaching is an important one. In fact, we believe that until U.S. educators understand and appreciate the difference, classroom teaching will not change much, even with different teachers, and students will continue to learn less than they could.

Why the confusion between teachers and teaching? Obviously, teachers are the people who teach, so perhaps it is understandable to assume that if the people change, their behaviors in the classroom will change. But one of the most striking things we learned from conducting two international studies of teaching is that what teachers do in the classroom, the methods they use to interact with the students about the content, are not determined as much by their qualifications as by the culture in which they teach. Teachers learn to teach by growing up in a particular culture, by watching the methods their teachers used when they were students. The methods most teachers use are inherited from earlier generations of instructors, not invented when they reach the classroom. Teachers may believe that they are inventing their own methods, but this is rarely the case. Much of what happens in the classroom is determined by a cultural code that functions, in some ways, like the DNA of teaching. That’s why changing teachers will not automatically produce changes in teaching.

Perhaps this view of teaching is difficult for U.S. citizens to appreciate because it violates so many of our beliefs about teachers and schools. For most of our history, classroom teaching has been viewed as a personal skill, invented and refined by each teacher during his or her career. Good teaching is believed to be idiosyncratic, dependent on individual style and personality. Naturally gifted teachers, says this folklore, blossom into effective teachers. Other educators just need to get out of the way and let these teachers do their thing. And schools will improve if we can just recruit more of these talented people.

Compelling as the story might sound, just recruiting more qualified or talented teachers doesn’t lead to improved teaching. As far back as records have been kept, the nature of teaching in U.S. classrooms hasn’t changed much. In mathematics, which provides the focus for this book, teaching now looks pretty much like it did 100 years ago. Why? Because most talented teachers do not go behind their classroom doors and create new and more effective methods than those used by their predecessors. Most teachers continue the tradition of teaching and use the same methods. To break with the past, to make even small improvements in teaching, the United States will need to shift its focus from teachers to teaching. Recruiting talented and well-qualified individuals is always welcome, but recruitment alone will not fundamentally improve the quality of classroom instruction.

What does it mean to focus on teaching? It means, first of all, becoming aware of the cultural routines that govern classroom life, questioning the assumptions that underlie these routines, and working to improve the routines over time. It means recognizing that the details of what teachers do—the particular questions teachers ask, the kind of tasks they assign students, the explanations they provide—are the things that matter for students’ learning.

But, more than that, focusing on teaching means recognizing that all of these details of teaching are choices teachers make. Once teachers have decided exactly what they want their students
to learn and have examined what they already know; teachers can make choices about how to help their students move forward. The wisdom of a choice can be measured against its effect on students’ learning, and the effectiveness of various choices for improving learning can be studied over time. Teachers can ask themselves “Does this question elicit better responses than an alternative one? Does this task engage students in more productive work than that one? Does this explanation provide just the information that is most needed at this point in the lesson?” Teaching is unlikely to change until teachers, and all educators, recognize that it can be studied and improved.

Although the strategy of systematically studying teaching might sound like an obvious way to improve it, the strategy runs counter to many U.S. beliefs about education. Reinforcing the belief, described earlier, that good teaching is an inborn trait, related more to personality than to a carefully studied skill, is a constellation of beliefs about education. Infused in society’s view of education is the notion that teaching is not that difficult. Anyone who loves children and has some patience and charm should be able to do it. If one holds this belief, there is not that much to learn about teaching. As it turns out, many U.S. citizens have held this belief and have held it for a long time. Indeed, as a profession in the United States, teaching was initially seen as a kind of day-care occupation, especially suited to women and deserving of little pay and low status. Related to the belief that teaching is not that difficult is the belief that everyone can be an expert in education—witness the uniquely (and passionately protected) U.S. tradition of placing education decision-making in the hands of local school boards made up of citizens with no professional training.

To change the U.S. approach to improving teaching in the face of cultural beliefs that pull attention away from studying it directly, two transformations are required. First, the U.S. public, and the policymakers that represent the public, must adopt a new view of teaching as a knowledge-based profession that can be improved directly over time through careful and systematic study. Second, the profession of teaching must be redefined to give teachers both the responsibility and the resources to study and improve teaching. Part of a teacher’s job description must be learning from and contributing to a growing knowledge base for teaching. This new path moves away from viewing teaching as an inborn trait with little intellectual demand and toward viewing it as a complex skill that can be studied and learned over time. This path also moves away from viewing teaching as a solitary activity, owned personally by each instructor. It moves toward a view of teaching as a professional activity open to collective observations, study, and improvement. It invites ordinary teachers to recognize and accept the responsibility for improving not only their own practice, but the shared practice of the profession as well.

Looking back, we can now see that we wrote this book for classroom teachers. Judging by the letters and e-mails we have received from teachers all over the United States it appears that teachers may be the first ones to understand the importance of teaching (beyond the importance of teachers). And, we hear from many who are looking for opportunities to take on the challenge of studying and improving teaching. Many are even marshalling the courage to open their classroom doors, invite others to observe and critique their practice, and work with colleagues to improve the teaching throughout their school. We continue to be impressed by the numbers of teachers who recognize the importance of placing the spotlight on teaching, not just to celebrate and imitate the work of a few but to begin the hard, unrelenting, but rewarding work of improving the practices of the entire profession.

As you read this book, think about teaching. Ask yourself how it can improve in a steady and lasting way over time. To increase the urgency, ask yourself the question in a different way: If the U.S. wanted to guarantee that it is teaching better twenty
years from now than it is today, what should it do tomorrow? We hope this book provides a path toward improvement that can capture the imagination of classroom teachers and all those who support teachers in their efforts to improve.

Preface

This book is about teaching and how to improve it. It is not another attempt to bash teachers or blame them for the ills that beset America's schools. It is also not another set of recommendations that tell teachers how to teach. It is, instead, a tribute to the importance of teaching, and to the key role that teachers must play in its improvement. School learning will not improve markedly unless we give teachers the opportunity and the support they need to advance their craft by increasing the effectiveness of the methods they use.

Our viewpoint arises from a collaboration that started more than five years ago. At that time, the Third International Mathematics and Science Study (TIMSS) was well into the planning stages. This study, the latest in a series of international studies stretching back more than thirty years,1 compared mathematics and science achievement among students in forty-one nations. TIMSS was the most carefully designed international study of achievement ever conducted. One component of TIMSS was a video study that compared the teaching of eighth-grade mathematics in Germany, Japan, and the United States. The video study, on which we collaborated, marked the first time ever that national samples of teachers had been videotaped teaching in their classrooms. For the first time, we could see what teaching
actually looks like on a national scale, and we could do this for three countries.

Figuring out how to analyze and summarize these videos was challenging. But it also was a breathtaking experience. We often are blind to the most familiar aspects of our everyday environment, and teaching turns out to be one of these aspects. Looking across cultures is one of the best ways to see beyond the blinders and sharpen our view of ourselves. As we looked again and again at the tapes we collected, we were struck by the homogeneity of teaching methods within each culture, compared with the marked differences in methods across cultures.

Readers who are parents will know that there are differences among American teachers; they might even have fought to move their child from one teacher’s class into another teacher’s class. Our point is that these differences, which appear so large within our culture, are dwarfed by the gap in general methods of teaching that exist across cultures. We are not talking about a gap in teachers’ competence but about a gap in teaching methods. These cross-cultural differences in methods are instructive because they allow us to see ourselves in new ways.

But the teaching gap we describe refers to more than cross-cultural teaching differences. It refers to the difference between the kinds of teaching needed to achieve the educational dreams of the American people and the kind of teaching found in most American schools. Although many of the American teachers we observed were highly competent at implementing American teaching methods, the methods themselves were severely limited.

The teaching gap becomes even more significant when one realizes that while other countries are continually improving their teaching approaches, the United States has no system for improving. The United States is always reforming but not always improving. The most alarming aspect of classroom teaching in the United States is not how we are teaching now but that we have no mechanism for getting better. Without such a mechanism, the teaching gap will continue to grow.

This book started out as a description of teaching in different cultures based on the data we collected in the video study. As we wrote the book, however, these differences in teaching methods turned out to be only part of the story. Equally important are the general truths we came to understand about teaching and the implications of these truths for the improvement of classroom teaching. Thus, although this book was initially intended as a report of the TIMSS video study, it quickly became much more than that. We do describe mathematics teaching in Germany, Japan, and the United States. But we also examine current reform efforts in the United States, and based on what we learned about teaching and about learning to teach, we propose a new plan for improving classroom teaching in the United States. Because the video study focused on eighth-grade mathematics, most of the classroom examples we present are from eighth-grade mathematics classrooms. The points we make go well beyond mathematics, however—and certainly well beyond eighth grade. Mathematics teachers might find the book especially interesting, but our intention became to write a book that would be of interest to teachers in all subjects at all levels.

Teachers are not the only audience for this book. We have written it for school administrators, policymakers, politicians, and parents. Although teachers hold the key, they teach in a system that currently works against improvement. Unless other
important players get involved, our country cannot implement a program that allows teachers to improve teaching. This would be unfortunate, not because it would miss an opportunity but because it would miss the only opportunity. The system must support teachers to improve teaching, because teachers are the key to closing the gap.

This book, and the study from which it grew, could not have been completed without the help of many people.

The TIMSS video study was funded by a contract from the National Center for Education Statistics (NCES), U.S. Department of Education, to WESTAT, Inc. The views expressed in this book, however, should in no way be construed to be those of NCES or of the U.S. Department of Education.

We are grateful to Emerson Elliot, past commissioner of NCES, and to Pascal Forgione, the current commissioner, whose support and enthusiasm went well beyond the financial. Lois Peak, the NCES program officer who oversaw the study, worked tirelessly to help us through the intricacies of a government project. Without her unwavering belief in the importance of this work, the study would never have been done. And we thank Nancy Caldwell of WESTAT for her constant and dependable help throughout the contract.

The TIMSS video study could not have been done without the help of our international collaborators. Juergen Baumert and Rainer Lehmann (in Germany) and Toshio Sawada (National Institute of Educational Research, Tokyo) managed the data-collection process and helped us to understand teaching in their countries.

Clea Fernandez, of Teachers College/Columbia University, played a major role in the early planning and conceptualization of the project; Scott Rankin trained the videographers for the study; Takako Kawanaka, Steffen Knoll, and Ana Serrano led our coding-development efforts; Patrick Gonzales managed the transcription and translation process and contributed to our analyses of classroom discourse; Eric Derghenarian, Fumiko Ichioka, and Nicole Kersting worked endless hours in the analysis of videotapes; Gundula Huber and Alyne Delaney handled the digitizing of the tapes; and Ken Mendoza wrote the software that enabled us to manage the huge quantity of video collected in the study. We want to recognize these individuals for the important role they played in the project.

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CHAPTER 1

The Teaching Gap

Conditions for improving education in the United States are more favorable today than they have been in a generation. Both politicians and the public recognize that education needs to be improved. Bad news from international comparisons of student achievement is no longer seen as esoteric by the American public; these days it is on the front page and a linchpin of many politicians’ stump speeches. In our increasingly global economy, citizens see direct evidence that America’s future will depend on the education of its workforce, and they are determined to compete. Education has become a high priority among the electorate.

But the real reason for optimism is that all this attention to education is not just rhetoric. We are witnessing a tidal wave of educational reform that appears to gain momentum with each passing year. Virtually every state in the nation is working to develop high standards for what students should learn in school, along with means for assessing students’ progress. In a field where fads have ruled, we are seeing something new: a growing commitment to the idea that clear and shared goals for student learning must provide a foundation on which to improve education and achievement. Without clear goals,
we cannot succeed, for we cannot know in which direction to move.

Yet it is equally important to recognize that standards and assessments, though necessary, are not enough. What must be done now is to find ways of providing students with the learning opportunities they need to reach the new standards. Making higher standards a reality for students will require more than just the status quo inside our nation’s classrooms; curriculum, assessments, and—above all—teaching must improve dramatically. In our view, teaching is the next frontier in the continuing struggle to improve schools. Standards set the course, and assessments provide the benchmarks, but it is teaching that must be improved to push us along the path to success.

Our contention that standards alone are not enough is shared by many politicians and school reformers, and they stand ready to help. President Clinton has successfully pushed through legislation that will pour millions of dollars into reducing class size in elementary schools nationwide. Many states are actively considering making vouchers and school choice a central part of their educational systems. And many school districts are embarking on additional initiatives, such as creating charter schools, outfitting schools with new technologies, and sanctioning new forms of school management.

We believe that these highly visible efforts, though well intentioned, miss the mark, because they leave out the one ingredient most likely to make a difference in students’ learning: the quality of teaching. Reducing the class size from thirty to twenty certainly will make teachers happier. But if teachers continue to use the same methods they used with larger classes, learning opportunities for students will change little. Similarly, implementing a voucher system might increase competition among schools and spur their desire to improve. But desire alone does not provide teachers with the knowledge they need to implement more effective methods. Class size reductions, vouchers, and most other popular efforts to improve schools will end in disappointment if they do not fundamentally improve what happens inside classrooms.

We are not the only ones to decry this lack of attention to the improvement of teaching. Jerome Bruner, an elder statesman in educational psychology, made the same point in his 1996 book, *The Culture of Education*:

It is somewhat surprising and discouraging how little attention has been paid to the intimate nature of teaching and school learning in the debates on education that have raged over the past decade. These debates have been so focused on performance and standards that they have mostly overlooked the means by which teachers and pupils alike go about their business in real-life classrooms—how teachers teach and how pupils learn.

Our goal in writing this book is to convince our readers that improving the quality of teaching must be front and center in efforts to improve students’ learning. Teaching is the one process in the educational system that is designed specifically to facilitate students’ learning. Of course, there are many other factors that influence learning in a significant way, such as students’ home and social life, and the resources of the school and community. We do not want to minimize the importance of these for the well-being of children. But much of what our society expects children to learn, they learn at school, and teaching is the activity most clearly responsible for learning.
Robert Slavin, long a leading educational researcher, made a similar observation in a recent article:

The problem, I would argue, is that reforms so often debated in the media, in the White House, in Congress, and in statehouses across the country do not touch on the changes needed to fundamentally reform America’s schools. . . . These reforms ignore a basic truth. Student achievement cannot change unless America’s teachers use markedly more effective instructional methods.\(^5\)

What makes this argument compelling is that not only is teaching essential, it is a process we can do something about. Overemphasizing the importance of nonschool factors that often are, frustratingly, beyond the reach of public policy can become an excuse for not trying to improve. Teaching lies within the control of teachers. It is something we can study and improve.

The Learning Gap and the Need to Improve

Good questions to ask at this point are “Why is it so important to improve teaching?” and “How do we know that improvement is needed? Maybe we are doing fine.” Surprising as it may seem, there is considerable controversy about the answers to these questions. Influential educators and writers disagree.\(^6\) One answer is simply that there is always room for improvement; no matter how well our students are doing now, it would be foolish not to try to improve.

The truth, as we see it, however, is that the situation in the United States demands improvement, not just because improve-
The results from TIMSS have garnered a great deal of media interest and have caught the attention of politicians, policymakers, and the general public. The results are dramatic, and they do not paint a flattering picture of American education. For example, in eighth-grade mathematics, twenty of the forty-one nations scored significantly higher, on average, than the United States, while only seven nations scored significantly lower than the United States. The seven nations scoring lower than the United States were Lithuania, Cyprus, Portugal, Iran, Kuwait, Colombia, and South Africa. Nations scoring significantly higher than the United States included Singapore, Korea, Japan, Canada, France, Australia, Hungary, and Ireland.

Of course, the results of large international studies are always open to question. So much differs across cultures and educational systems, it is hard to know where to find the most meaningful comparisons. Are the samples comparable? Do we even have the same goals for education across cultures? Although the answers to these questions are important for interpreting the differences, the gap in achievement between U.S. students and those in other countries is simply too wide to be dismissed on methodological grounds. U.S. education is in need of improvement.

Beyond the Learning Gap

Americans increasingly are aware of this learning gap and are seeking ways to address it. The international comparisons grab the front-page headlines, and officials try to infer recommendations from how one country performs compared with the performance of another. Policymakers carefully study, state by state, scores on the most recent National Assessment of Educational Progress, as if one could divine a strategy, from the scores, for improving performance. Scores of all local schools are printed in the newspaper, and school boards and parents discuss why students in some schools score much lower than others.

As important as it is to know how well students are learning, examinations of achievement scores alone can never reveal how the scores might be improved. We also need information on the classroom processes—on teaching—that are contributing to the scores. Unfortunately, many policymakers have ignored this fact, making decisions about the future of education without even the most rudimentary information about what is happening in classrooms. In 1995, faced with low reading and mathematics performance on the National Assessment of Educational Progress, California’s superintendent of public instruction formed two task forces, one for mathematics and one for reading, to study the situation and propose solutions. California, after all, was highly respected for its Curriculum Frameworks that guide reading and mathematics instruction in the state. The Frameworks provided a comprehensive outline for what students should learn and guidelines for appropriate instructional methods. If the Frameworks were so good, why was achievement so low?

In meetings of California’s mathematics task force, the discussion often turned to the Frameworks. Were the teaching methods or curricular emphases recommended in the Mathematics Framework perhaps to blame for students’ low achievement? A debate ensued among members of the task force, a debate that has been reflected more broadly in public debate around the country between proponents of “reform” teaching and those in favor of more “traditional” teaching methods. Some believed that the Frameworks were not working and
should be changed; others believed that the state should stay the course. But often lost in the discussion was a key fact: the state of California had collected no data on the extent to which the Frameworks had been implemented in the state’s classrooms. This did not stop the state, however, from undertaking a revision of its Mathematics Framework. But on what basis could the Framework be revised? Without knowing what teachers were doing, how could the effectiveness of the Framework be determined?

We do not mean to single out California; no state that we know of regularly collects and uses data directly related to instructional processes in the classroom. Policymakers adopt a program, then wait to see if student achievement scores will rise. If scores do not go up—and this is most often what happens, especially in the short run—they begin hearing complaints that the policy isn’t working. Momentum builds, experts meet, and soon there is a new recommendation, then a change of course, often in the opposite direction. Significantly, this whole process goes on without ever collecting data on whether or not the original program was even implemented in classrooms—or, if implemented, how effective it was in promoting student learning. If we wish to make wise decisions, we need to know what is going on in typical classrooms.

Fortunately, the same TIMSS that generated a new wave of concern about students’ achievement also collected a wealth of information about educational factors that might help us understand the different levels of performance in different countries. TIMSS researchers analyzed textbooks; asked administrators, teachers, and students about their beliefs and practices; and videotaped teachers teaching typical lessons. The TIMSS video study of teaching, which forms the basis for this book, is especially significant because it provides a penetrating and unparalleled look into classrooms in three different countries. For the first time, we had a full video record of a representative sample of U.S. classrooms. More than that, we had the same kind of information from Germany and Japan. We could now compare more than achievement scores. We could examine similarities and differences in the instructional methods that lay behind these scores.

A Unique Opportunity

The data collected in the TIMSS video study allow us to answer questions that we could not answer previously yet are crucial for the formation of education policy in the years to come. What are the instructional methods that most teachers currently use? Are the highly publicized reform recommendations being implemented in the classrooms of the United States? Are there alternative ways of teaching in other cultures, or is mathematics teaching pretty much the same everywhere? As was pointed out earlier, a major obstacle in our efforts to improve education is the dearth of information about what is happening in our nation’s classrooms. Video provides us with a unique way of gathering the information we need to examine our current practices and then improve them.

Video data, such as that collected in TIMSS, also help us discover new ideas about teaching. If alternative ways of teaching exist, video will capture them, even when they lie completely outside our society’s current theories of teaching and learning. And because the new ideas are illustrated through actual classroom teaching, they can have immediate practical significance for teachers. Video information can shake up the way we think and let us take a fresh look at classrooms.
What We Have Learned from the Video Study

As we look back over what we have learned from the TIMSS video study, several things stand out. We foreshadow these things here because they form the basis for the book you are reading.

Teaching, Not Teachers, Is the Critical Factor

Americans focus on the competence of teachers. They decry the quality of applicants for teaching positions and criticize the talent of the current teaching corps. But we come away with a different conclusion: Although variability in competence is certainly visible in the videos we collected, such differences are dwarfed by the differences in teaching methods that we see across cultures. (In Chapters 2, 3, and 4 we present our analyses of teaching and describe what teaching looks like in each country.)

We have watched many examples of good teachers employing limited methods that, no matter how competently they are executed, could not lead to high levels of student achievement. Although there are teachers using extraordinary methods in all cultures, the extraordinary is not what defines most students’ classroom experiences. Students’ day-to-day experiences are mainly determined by the methods most commonly used by teachers within a culture. Cross-cultural differences in these commonly used methods are what we have termed the “teaching gap.”

What we can see clearly is that American mathematics teaching is extremely limited, focused for the most part on a very narrow band of procedural skills. Whether students are in rows working individually or sitting in groups, whether they have access to the latest technology or are working only with paper and pencil, they spend most of their time acquiring isolated skills through repeated practice. Japanese teaching is distinguished not so much by the competence of the teachers as by the images it provides of what it can look like to teach mathematics in a deeper way, teaching for conceptual understanding. Students in Japanese classrooms spend as much time solving challenging problems and discussing mathematical concepts as they do practicing skills.

Teaching Is a Cultural Activity

To put it simply, we were amazed at how much teaching varied across cultures and how little it varied within cultures. When we started, we believed there would be great variability in teaching methods within the United States. Political battles between advocates of, among other teaching techniques, phonics and whole language, and basic skills and conceptual understanding, would lead most Americans to assume that there are many different paths that teachers can follow. But these differences paled when we looked across countries from a cross-cultural, comparative perspective. Although we saw variation in the U.S. videos we collected, comparing them with videos from Germany and Japan allowed us to see something we could not see before: a distinctly American way of teaching, which differs markedly from the German way and from the Japanese way.

Teaching is a cultural activity. We learn how to teach indirectly, through years of participation in classroom life, and we are largely unaware of some of the most widespread attributes of teaching in our own culture. (In Chapters 5 and 6 we pull together what we have learned about teaching and argue that if we are going to improve teaching, we must appreciate its
cultural character.) The fact that teaching is a cultural activity explains why teaching has been so resistant to change. But recognizing the cultural nature of teaching gives us new insights into what we need to do if we wish to improve it.

A Gap in Methods for Improving Teaching

Finally, we have learned a great deal from the video study about the results of efforts to improve teaching in the United States. Earlier in this chapter we pointed to the dearth of information about the effects that educational policies have in the classroom. The videos provide us with this kind of information, and it is quite striking. Although most U.S. teachers report trying to improve their teaching with current reform recommendations in mind, the videos show little evidence that change is occurring. Furthermore, when teachers do change their practice, it is often in only superficial ways.

This will not surprise those who have worked in the field of teacher professional development. The problem of how to improve teaching on a wide scale is one that has been seriously underestimated by policymakers, reformers, and the public in this country. The American approach has been to write and distribute reform documents and ask teachers to implement the recommendations contained in such documents. Those who have worked on this problem understand that this approach simply does not work. The teaching profession does not have enough knowledge about what constitutes effective teaching, and teachers don’t have a means of successfully sharing such knowledge with one another.

To really improve teaching we must invest far more than we do now in generating and sharing knowledge about teaching. This is another sort of teaching gap. Compared with other countries, the United States clearly lacks a system for developing professional knowledge and for giving teachers the opportunity to learn about teaching. American teachers, compared with those in Japan, for example, have no means of contributing to the gradual improvement of teaching methods or of improving their own skills. American teachers are left alone, an action sometimes justified on grounds of freedom, independence, and professionalism. This is not good enough if we want excellent schools in the next century. (In Chapters 7, 8, and 9 we discuss the problem of how to improve teaching, and offer a proposal to make improving teaching the focus of our efforts to close the achievement gap.)

We opened this chapter by describing the opportunities that exist at present for improving education. In this positive environment, the challenge that awaits our nation is to find a way to improve classroom teaching so that our educational goals can be realized.