## From Teacher Quality

When it comes to promoting good teaching, classroom conditions may play a more important role than teachers' skills and qualifications.

#### Mary M. Kennedy

ocieties have been arguing about why some people are better teachers than others since the days of Socrates. And we're not much closer to finding an answer today.

One of the most prominent hypotheses is that teaching depends on personality-that some people have a form of charisma that enables them to connect to kids, inspire them, and communicate with them. If this is true, we should search for teachers who have particular personality traits like creativity, intuition, or tender-heartedness. Most of us probably remember at least one teacher who seemed to affirm the wisdom of this hypothesis (although if we pursued the idea, we might also discover that we each favored different personality traits).

Another hypothesis is that teaching depends on a set of beliefs and values that motivates the teacher to treat students fairly, encourage all students to participate, and present the content with intellectual honesty and integrity. Professional development programs based on this hypothesis aim to convey more than mere knowledge—they try to persuade teachers to think differently about their practices. Again, most of us can probably recall a teacher whose beliefs and values substantially enhanced the quality of his or her teaching.

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# to Quality Teaching

Another hypothesis suggests that teachers are made, not born-specifically, that they are made in carefully constructed higher education programs where they acquire both content and pedagogical knowledge. Most states subscribe to this hypothesis when they outline their accreditation standards for teacher education programs and their licensure requirements for prospective teachers. But almost all U.S. teachers are certified, which means they all have the professional knowledge that states believe they need. So why aren't we satisfied? The very fact that we continue to wring our hands about teacher quality suggests that content and pedagogical knowledge must not be enough.

Each of these hypotheses contains a kernel of truth, but none of them is completely satisfactory. Notice that all three hypotheses assume that the quality of teaching depends entirely on the quality of the teacher. This assumption is flawed. Even teachers who are endowed with all three of the aforementioned qualities are still at the mercy of unreliable circumstances that affect the quality of their teaching.

Both the quality of the teacher and the conditions of teaching figure into schools' efforts to improve instruction. Schools and school districts can influence the quality of teaching in three ways: through the teachers they hire, through the professional development and other supports they provide, and through their own standard operating procedures. The first of these strategies focuses on the *teacher*, and the remaining two focus on *teaching*.

#### **Hiring Better Teachers**

Most of the recent discussion about quality has focused on teachers rather than on teaching. Consequently, most of the proposed solutions have to do with improving hiring practices and being more particular about teachers' qualifications. Some evidence indicates that teachers who obtain better college educations—who attend more selective colleges, take more courses in the subjects they teach, and take more courses in education—tend to promote higher student achievement (Kennedy, Ahn, & Choi, in press).

But a great college education is not enough, and the three hypotheses I laid out earlier help explain why. Local hiring strategies don't guarantee highquality teaching because the ingredients for good teaching don't always show up on a résumé.

Most districts, of course, don't select new teachers solely on the basis of their résumés. Districts may use résumés to generate a shortlist of candidates, but they rely on interviews to assess the personal qualities of their candidates and make their final selections. In fact, many districts pay substantial sums to use standardized interview protocols in the belief that these protocols will be more effective than the haphazard interviews that people conduct spontaneously on their own. Reliance on a professional interview protocol seems like a good idea, given the many factors that we know contribute to good teaching. However, commercial interview protocols do not reliably differentiate between effective and less effective teachers. Moreover, they are enormously expensive, especially relative to their predictive power (Metzger & Wu, in preparation).

A more effective and less expensive strategy is to view the teaching practices of your shortlist of candidates on videotape. Videotaping is no longer an expensive or obscure technology. Even teachers who have just completed their teacher education programs probably have videotapes of themselves as student teachers. By asking candidates to provide videotapes, you can see how they behave when they are teaching real content to real students. You may worry that these tapes will represent your candidates' best practice rather than their typical practice, but all the tapes will likely be equally biased. And you'll be basing your decision on concrete observations rather than on interviews that socially astute candidates can game.

#### Conditions That Hinder Teaching

Findings from a recent study that I conducted illustrate why, in addition to hiring good teachers, we need to pay attention to the conditions of teaching. In this study, I observed a sample of 45 upper-elementary classroom lessons and asked teachers to talk about why they did what they did in these lessons (Kennedy, 2005). I was searching for evidence of how teachers' practices were influenced by their personality traits, beliefs and values, and knowledge or lack of knowledge.

I saw all three factors at work in determining what teachers did during the lesson. Sometimes their actions reflected strong values; sometimes they reflected personality traits, such as anxiety or obsessiveness. For instance, in the midst of a mathematics word problem involving bunches of broccoli, one teacher realized that she didn't know how to spell *broccoli*. She tried a few different spellings and finally went to a dictionary to find the correct spelling. In our interview, she chastised herself, calling this behavior obsessive and admitting that the spelling was irrelevant to the mathematical problem. She realized that her own obsessiveness had cost time and derailed the lesson.

Across the many lessons I observed, I found episodes that supported each of the hypotheses about teacher quality. But I also saw evidence supporting the importance of a factor that I hadn't anticipated: the nature of the work

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itself. Three conditions of classroom life can diminish teaching quality: teachers' dependence on lesson props; unnecessary interruptions; and disruptive student behavior. An understanding of how these daily complications influence teaching can help us imagine many ways in which schools can foster better teaching.

#### Dependence on Lesson Props

Teachers rely heavily on materials. They hang posters on the walls, project overhead transparencies, hand out worksheets, and use physical props, such as globes, diagrams, models, and yardsticks. The first thing that struck me about these materials was that most were homemade. I would guess that the teachers I observed spent hundreds of hours making materials to use in class. Here are some examples:

■ For a lesson on symmetry, a 5th grade teacher cut out dozens of shapes

from construction paper and then laminated them so that students could search for lines of symmetry.

■ For a lesson on the water cycle, a 3rd grade teacher brought in a hot plate, a saucepan, and some ice cubes. She boiled water to show evaporation and then placed an ice cube on the lid to demonstrate condensation as the ice melted.

• For a lesson on the earth's atmosphere, a 6th grade teacher took a blank overhead transparency and cut darts into it to create the curved shape of the classroom globe. He placed it on the globe like a cap representing the earth's atmosphere to impress on students how thin the atmosphere is relative to the size of the earth.

• For a lesson on finding the circumference of a circle, a 6th grade teacher invited students to wrap pieces of string around a variety of circular objects and then measure the length of their strings. For this lesson, she had collected dozens of objects, including pie tins, coffee can lids, plates, and Frisbees.

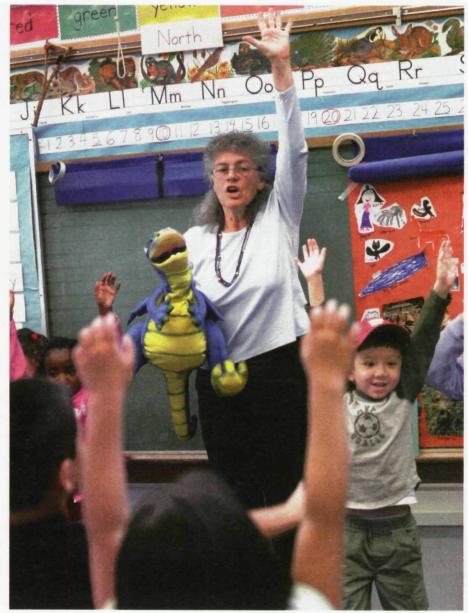
These materials were clearly central to their respective lessons. But the fact that teachers were so dependent on them raises some important questions. Why are teachers obliged to make all of their own materials alone and from scratch? Why don't schools maintain storerooms with such supplies or ask volunteers to make them? Why don't teachers routinely share their own stores of materials with one another? Why has our school culture evolved in such a way that we tolerate this large investment of teachers' limited time?

Think how much better teachers might teach if they could use that time to read student work or reflect on curriculum content rather than cut up construction paper. Creating materials is not intellectual work; it is busywork that distracts teachers from the conceptual core of teaching.

My observations revealed a second reason to give teachers more support in this area. Lesson props often created problems for teachers. Sometimes whole lessons were ruined by prop failures. For example, one teacher was reviewing a unit on physical versus chemical change. He reminded students that chemical change occurs when two substances are mixed together and permanently become something else; when you look at an example of chemical change, therefore, you see only one thing. As an example of chemical change, he picked up a beaker of powdered juice drink that students had mixed in an earlier lesson and asked, "How many things do you see here?" The students replied, "Two." Mold had grown in the beaker since the drink had been mixed.

In our conversations, many teachers described moments of panic when they suddenly discovered that they didn't have enough handouts, and didn't want to lose their momentum by pausing to rearrange desks so that students could share. I also saw lessons stumble when teachers asked students to manipulate materials in ways that didn't work. In one case, a teachers' guide suggested having students fold a sheet of paper first in half vertically and then into thirds horizontally, as a way of helping them understand multiplication with fractions. But students were not coordinated enough to fold their sheets into thirds, and the lesson misfired because its message was lost in the resulting confusion.

How can lessons go awry so easily? Sometimes the problems derive from bad ideas in teachers' manuals. Publishers may provide materials and suggest learning activities that they have not necessarily pilot-tested. Sometimes problems arise because teachers don't have the time they need to plan out their lessons, especially complicated ones. In their hurry, they make mistakes or forget important details. Even if teachers spend time in the evening planning out a lesson, they often don't have time in the morning to get themselves mentally prepared. A



teacher who must rush to her classroom at the last minute after pulling hall duty is apt to be distracted instead of collected and ready to teach.

#### **Unnecessary Interruptions**

Interruptions are another aspect of classroom life that diminishes teaching quality. Many teachers whom I observed had telephones in their classrooms, but none had answering machines. When the telephone rang, they stopped midlesson to answer it. Sometimes these calls were embarrassingly trivial—a parent checking that his daughter had remembered her lunchbox, or the school secretary asking for some sort of clerical information. In addition, lessons were interrupted by people walking in unannounced, perhaps from the central office or from a neighboring classroom, also with relatively trivial questions: Did the teacher fill out a form? Did she get the memo? Will she be at the meeting Thursday night?

Apparently, the culture of our schools holds such little regard for teaching that interruptions like these are considered acceptable. Yet every teacher who was interrupted was upset by it. In each case, the teacher had been developing a concept, trying to move a group of students into an intellectual space without any student falling behind. In each case, the interruption threatened to disrupt that flow of ideas. Once the interloper left, the teacher had to back up, regroup, and reestablish the train of thought that the class had been developing. When teachers have to back up and retrace their steps, the loss of time caused by the interruption ends up being greater than the time of the interruption itself.

Many interruptions came from the movement of students being pulled out of class for various activities. Some left the class midlesson and others returned midlesson, going to and from classes in special education, remedial reading or math, bilingual education, gym, music, or art. These moves didn't appear to fall into any systematic pattern; the schedules seemed designed to meet the needs of the resource teachers, not the needs of the main teacher. So the teacher of record-the one whose evaluation depended on his or her students' achievement-had to find a way to teach students who missed the early portion of the lesson as well as students who missed the latter portion while somehow managing not to bore those students who were actually present for the entire time.

And then, of course, there was the public-address system, which some principals appear to use with no thought as to what they might be interrupting. The announcements I heard were not necessarily brief. I saw lessons stop midsentence when the PA suddenly began to blare. I saw teachers and students wait patiently through three or four minutes of news, admonitions, and announcements.

These interruptions were rarely necessary, and always disruptive. They did their damage not only through a plethora of small distractions, but also through the expectations they created in



teachers. In our conversations, teachers appeared resigned to teach trivial content because that strategy was easier to manage in an unpredictable and unreliable teaching environment. If you can't be certain that you will be able to carry on an uninterrupted and coherent dialogue for some length of time, you have little motivation to try to teach complex ideas.

Here, school leadership can make a difference. Surely schools can find a way to schedule students' supplemental services and special classes that is not so disruptive to teaching. Surely schools can find a way to convey announcements without interrupting learning. Surely if schools can afford telephones, they can afford answering machines.

#### Disengaged and Overly Engaged Students

The third aspect of classroom life that can diminish teaching quality is student behavior. Students are young, boisterous, and easily distracted. They are also always in uncertain territory, trying to come to terms with new, complicated, or elusive ideas. And even though teachers have a script for how they plan to orient students to new ideas, students often don't know their lines. They are likely to generate any number of ideas that the teacher had not anticipated. This aspect of classroom life is unavoidable.

Of course, teachers don't want students to be bored or alienated. But my discussions with teachers led me to a surprising realization: Teachers also have problems when students are overly enthusiastic. These students ask unexpected questions and generate unexpected thoughts that are hard for teachers to respond to. Imagine trying to get a particular idea across to 25 students who are all veering off in different directions as they contemplate this new idea in their own idiosyncratic ways. So although most of us tend to assume that the best teaching leads to the most enthusiastic learning, teachers often strive to keep students' enthusiasm within manageable boundaries.

#### **Improving Teaching**

This discussion of the realities of classroom life can help school leaders consider the merits of various approaches to improve the quality of teaching. We've already discussed hiring practices. Now let's look at professional development and standard operating procedures.

#### Making Professional Development More Relevant

The findings of my study of upperelementary classrooms suggest that teaching quality resides in the smallest details of practice. An astonishing variety of conditions and events can wreck a lesson. Some teachers seem resigned to this situation; they accept chaos as a natural part of school life. Others express sharp anxiety about these events and fret over them.

Schools can enhance teaching quality through professional development

about teaching. The schools can then encourage teachers to use the extra time to form study groups addressing some of the problems that undermine their work.

#### Changing Standard Operating Procedures

My conversations with teachers suggest that teaching quality is threatened every time a teacher has to rush from a hallway discipline problem to a classroom lesson, every time a student leaves and returns midclass, and every time a lesson prop fails. Schools could greatly improve the quality of teaching by altering their standard operating procedures to reduce these problems. Schools need policies restricting classroom interruptions; policies limiting

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programs that focus on these small details. U.S. schools waste millions of dollars each year on programs that offer fluffy slogans like "All students can learn," or "Believe and achieve!" Instead, schools need to search for programs that help teachers address ordinary problems. Find programs that help teachers think about what to do when an unexpected student comment threatens to derail a history lesson or that help teachers reduce the time they spend cutting up construction paper and increase the time they spend thinking about the deeper meaning they want to convey to students in a mathematics lesson.

In fact, schools might be better off using part of their professional development budgets to pay for paraprofessionals who can monitor hallways, lunchrooms, and playgrounds so that teachers have more time to think the invasion of telephone calls, publicaddress announcements, and people; and policies addressing the problem of students coming and going unnecessarily. Schedules should honor the main classroom and the lessons that occur there rather than require classroom teachers to accommodate everyone else's needs.

We should also think about procedures that would not just stop interfering with teaching, but would actually help teachers. If administrators know that teachers are spending countless hours developing lesson props, for instance, and that each teacher carries out this work in isolation, perhaps we could form gradelevel groups of teachers to compare materials, share notes on how well those materials work, find ways to improve them, and learn from one another's experiences with them.

#### The Path to High-Quality Teaching

Schools and districts can indeed improve teaching, and they can do so in at least three different ways. They can improve their hiring procedures by reducing the time they spend on interviews and increasing the time they spend watching candidate videotapes. They can improve their professional development by reducing the money they spend on programs that offer bromides and exhortations and increasing the money they spend on paraprofessionals and on programs that address the real nuts and bolts of teaching. And they can improve their standard operating procedures so that they stop interfering with good teaching and start facilitating it.

The important lesson here is to think not just about *teacher* quality, but also about *teaching* quality. Teaching is inherently an unpredictable, complex enterprise. But we are making it far more unpredictable than it has to be with policies and practices that get in the way of highquality teaching and learning.

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