# Preface

It has long been my contention that many teachers who go home exhausted do so because they did most of the work during the course of the school day, while the students did too little and were engaged too infrequently. The opposite is true in the classrooms of the happiest and most well-adjusted teachers whom I have observed over the years. In those classrooms, the kids do more work than the teachers. In those classrooms, the teachers are process facilitators, while the students are in perpetual motion (figuratively and literally) and engaged in every way imaginable. The kids do the work; the kids enjoy coming to school; the kids talk *freely* at home about "what happened at school today" (what a concept!)—and the kids learn.

In my first classroom (1970s), I gave my ninth-grade students the benefit of my vast knowledge of U.S. history (four years of college in the making) in the form of some stellar lectures, using a marvelous piece of electronic technology called an overhead projector. I uncovered the notes on my transparencies one at a time, so that my students could concentrate on each piece of information separately. I often turned out half the overhead lights (so the students could see the screen), and then I elucidated, illustrated, gesticulated, pontificated, and otherwise entertained them for the better part of 45 minutes while they took copious notes and hung on my every word and gesture. Thus enlightened, they took their notebooks home and spent time each evening processing the information I had so generously provided. I was a veritable font of wisdom at the age of 23, come to think of it, and to this day I suspect my former students still talk about the "Nash lectures" in their truly reflective and nostalgic moments at class reunions.

Perhaps not.

When I began my teaching career, lecture and other forms of teacher talk predominated, and we as teachers functioned as important information givers. Other sources of readily available information

came from print sources; the size of our school and community libraries limited the amount of resource materials available. Encyclopedias were rarely current, and interlibrary loan was the only way to get items not found in the school or local library. Print was *in,* and print was *it;* constantly keeping print resources up to date could get expensive. It might also take a reference librarian who knew how to conduct searches effectively to come up with what the erstwhile teacher or student needed for a term paper or thesis. Sources of information were relatively few compared to today, and teachers were critical contributors to the information pipeline.

By today's standards, the flow in that pipeline was a mere trickle. Today's students can get infinitely more information on George Washington with the click of a mouse than I could have provided *had I spent the entire school year teaching nothing but George Washington.* I Googled Ben Franklin recently and got almost seven million hits in .25 seconds. *Seven million hits.* Any teacher who believes his or her *primary* function is simply to deliver information on anything related to history or any other subject is in danger of missing the proverbial boat. Kids have more access to information about everything imaginable than anything dreamt of in our philosophy during the 1970s. Access is fast and free; it is *all* information *all* the time.

Teachers still deliver information, of course, because—let's face it—students don't necessarily spend much time Googling George Washington on their own. But a good deal of the modern teacher's task has shifted to helping students *make sense* of the information to which they have 24-hour access. Having discovered an article or entry on the Web, how can students then separate fact from fiction, opinion from fact, right from wrong, the correct from the incorrect . . . or the patently malicious? With all the words available in a cut-and-paste format, how do students learn how to arrange their own thoughts in ways that are fresh, original, and not plagiarized? Doing these things requires critical-thinking skills—and this is where teachers can be of immeasurable service.

In an age where many families struggle to survive, how can young people learn and master the skills necessary to make the right decisions and solve myriad life problems? At a time when communication skills are critical to global success in business, how do students learn to communicate effectively, orally and in writing? How do kids who have been weaned on staring at television and computer screens for hours on end learn to focus on another human being long enough to practice the art of active listening? How do children and adolescents who *don't* spend an hour at the dinner table having adult-facilitated conversations on many topics learn to explain, illustrate, summarize,

clarify, apply, infer, analyze, and synthesize? Absent any other venue for the purpose, these skills must be developed in the classroom.

A student who is expected to do more than find the correct answer on a multiple choice test has to move up the cognitive ladder under the direction of teachers committed to getting students to share and analyze their thinking, come to conclusions based on their thinking—and *defend* those conclusions. Classrooms have to be active, engaging, intriguing, emotionally safe, and contemplative places where kids can take risks and make mistakes on the way to becoming educated, thoughtful, and *involved* citizens in adulthood. Students need to discover, practice, and sharpen the skills necessary to think critically and make the right decisions in life. Our future as a nation requires that students arrive at an intellectual place where they can create the innovations, services, and products of tomorrow's ever-more-global economy. Teachers are the chief facilitators of this process.

The road to this future for our children and our nation lies in the classrooms of today; this means teachers need to be aware of how the brain learns. Teachers need to read everything they can find on this topic; by doing so, they can see how movement, conversation, reflection, and collaboration affect retention and understanding. Administrators need to take note of the latest research that shows the connection between exercise and cognition (not to mention healthy bodies). Districts can help by *increasing* the amount of exercise kids get every day. Too many schools are reducing the time devoted to physical education and recess in a counterproductive effort to get students to "hunker down" and "concentrate." Brain cells need a steady supply of neurotransmitters (think dopamine, serotonin, and norepinephrine) in order to communicate with each other, and exercise releases those neurotransmitters (Smith, 2005, p. 136). Kids who move, play, talk, and laugh are in a better position to learn than those who sit for a 90-minute block, listening to the teacher talk.

Twenty-first–century educators need to acknowledge the massive changes taking place *outside* the classroom by changing what we do *inside* the classroom. One brief example: A student sits passively in a high school block while the teacher talks—then goes home to a digital world where images on a television screen follow each other at breakneck speed. In her bedroom, the student sits at a computer screen with several Web sites open at once, listening to music. A cell phone is on the desk, and instant messaging is at the ready in the corner of the screen. The student, who has at her beck and call a remote and a mouse, controls every bit of this. This represents total control of the pictures and the sound; one image replaces another in the blink of an eye, and the student's brain shifts its focus perhaps thousands of

times in a typical evening at the computer. The next day, she will once again go to school and sit for 90 minutes at a desk, with one image—that of the teacher—in front of her. The contrast is stark, and the result is that the student may *prefer* home to school; she will most likely prefer rapidly shifting images to a single image; and she will appreciate the opportunity to get up and walk around when the spirit moves.

The purpose of this book is not to show teachers how to harness the power of electronic technology. Rather, it is an attempt to help teachers engage students through the use of inexpensive—but effective—brain-based strategies that encompass movement, collaboration, conversation, reflection, feedback, and the processing of information in order to accelerate a student's own continuous improvement journey. In the course of eight chapters, we'll explore these themes, and we'll add lessons, activities, and classroom vignettes contributed by the teachers listed in the Acknowledgments. The teachers whose classrooms we'll visit here have shifted their students from passive observers to active participants in their own learning.

## Chapter 1: Squeeze Play

When I was a kid in Pennsylvania, we spent tons of time outdoors, playing kick the can, red rover come over, tag, and hide and seek. Winter brought snow football, snowball fights, and the construction of (if I do say so myself) some pretty elaborate snow forts. Unbeknownst to us at the time, that exercise contributed to not only our general health; it also helped develop our social and problem-solving skills, as we'll see later. In this first chapter, we'll explore the uses and benefits of movement and exercise in schools and classrooms.

## Chapter 2: For Whom the (Dinner) Bell Tolls

As a Boomer growing up in the 1950s, dinner was an opportunity to talk and share ideas; it was a time to recap and analyze the day's events. The meal lasted almost an hour; it was billed in our neighborhood, at least, as a regularly scheduled—*and completely mandatory*—event. In this chapter, we'll talk about how this has changed and how that difference affects the teacher's role in developing the communication skills of students. We'll see that getting students to stand, pair, share, discuss, summarize, reflect, and otherwise process information goes a long way toward improving those important social skills.

## Chapter 3: Setting the Table for Success

Outstanding teachers know that the first week of school is critical to the ultimate success of their students, no matter the grade level. Procedures that are practiced *until they become routine* contribute to the smooth running of any classroom. In classrooms where teachers jump into content before establishing some basic norms and processes, behavior and discipline problems may well multiply over time. We'll go inside classrooms where teachers put the process horse in front of the content cart.

## Chapter 4: First One at the Bus Stop

Reflecting on hundreds of classroom visits over my time in education, I have come to the conclusion that when students enjoy coming to class, teachers will find the going easier than in cases where students are more or less dragged kicking and screaming into the classroom on a daily basis. One fifth grader contrasted her fourth-grade experience with what she was doing one year later; she told us she went from finding reasons to miss the school bus *to being the first one at the bus stop*. Same student. Different school environment. Different results. In this chapter, we'll explore the things kids love to do and experience in class.

## Chapter 5: Feedback Pure and Simple

Expanding on a point made in the previous chapter—and based on the assumption that students rely on clear, consistent feedback in order to make adjustments and course changes in their own continuous-improvement journeys—we'll highlight ways to provide that feedback. Students need to know where they are now, where they *want* to go, and how to get there.

## Chapter 6: When Teachers Tick and Classrooms Click

There may be many reasons why teachers love what they are doing, and teachers who love what they are doing give *students* one more reason to enjoy coming to school. Teachers whose students are successful as a result of their own efforts are happier in the profession . . . and more likely to stay in teaching. For some teachers, simply shifting

kids from passive observers to *active classroom participants* is a seminal event in their own continuous-improvement journeys. On our own journey through this chapter, we'll look at teachers who tick and classrooms that click.

## Chapter 7: Energize, Energize, Energize

I was in a classroom where the teacher played some upbeat music to transition the students from their seats to standing pairs; they "grooved" to their new locations, and she grooved right along with them. For the entire time I was in the classroom, I marveled at the energy she displayed in many ways; she modeled movement, humor, and storytelling; she demonstrated to them in every way that she loved what she did. This energy was highly infectious, and I spent my time in that classroom regretting I had to leave after 30 minutes. In this chapter, we'll visit classrooms that run an energy surplus.

## Chapter 8: Reflecting on Reflection

Teachers who take the time to reflect on experience, either alone or collaboratively, put themselves in a better position to improve their own classroom performance. By contrast, teachers who use the same lessons year after year, and are satisfied with the status quo in their classrooms, are less likely to see improvement for themselves or their students. As we'll see, students can be part of the reflective process during the school year; their insights and perspectives can be informative and invaluable. In this final chapter, we'll explore ways to take advantage of the power of individual and collaborative reflection.

In the course of my four decades in education, I have noticed that the most effective *teachers* are those dedicated to continuous improvement in the classroom. The best *administrators* are those committed to continuous improvement in the building through the active and intentional support of instructional and support staff. The happiest and most well-adjusted *students* are those who feel safe in taking the risks necessary for improvement—satisfied that the adults in the building actively seek out and employ the strategies, tools, and techniques essential for that success. School communities with that kind of *can-do* and *will-do* attitude create a perfect storm of energy, engagement, and activity calculated to make students an integral part of their own continuous-improvement process.