

Preface

I have been a teacher for more than four decades. In all these years of teaching, mentoring, administering, and collaborating with very smart educators, I have come to believe that although teachers may appear to be separated by grade levels or subject matter, they are not separated when it comes to wanting classrooms teeming with actively engaged learners.

This book began, and continues, as an inquiry into engaged learning. All my teaching life, I've tried to get students deeply invested in learning. Many times, they seem engaged and motivated—even show it—and many times they do not. Most often, their level of engagement seems to be somewhere in between. I always wondered what makes a class go well or not so well. I also wondered what happens to students cognitively and emotionally when they get genuinely involved in learning. Mainly, I wondered, How can I be a better teacher?

Then something happened that started me thinking more deeply and systematically about the nature of engaged learning. The University of Colorado Denver, where I teach English, had a faculty teaching-mentoring program, and I mentored an assistant professor of psychology who was in his second year. I visited John's statistics class many times that semester as an observer and coach, and we debriefed after each visit. I wanted to know more about statistics anyway, and so I looked forward to learning more through the mentoring experience. His class met in a small amphitheatre-style classroom: professor in front, 30 students sitting at tables that swooped around the room in a semicircle, with each row on a riser.

On one particular day, John lectured on standard error of measurement. I sat in the back row, toward the left side of the room; about six or seven students filled the other seats in my row. I had a good view of most students in the room. John spoke from notes, frequently using the whiteboard and the overhead projector to illustrate points. About halfway through the class, I noticed that many of the students were barely paying attention to John's lecture; it was pretty dry stuff. In my row, a few students were doodling. The woman in front of me was either taking notes

in iambic trimeter or actually writing a poem. From John's vantage point, he could only see that they were writing in their notebooks, so to him, they appeared to be paying attention.

Then, the unusual happened. John paused in midlecture, gazed out the window as if in a reverie, turned to the class, and said, "You know, this point about error reminds me of last weekend. I was in Ohio attending my high school class reunion and the funniest thing took place. . . ." He then told an entertaining anecdote that illustrated the lecture point he had been presenting. The story involved some latent interpersonal rivalry that had never been resolved: a date gone awry, with two guys still holding strong feelings about who did what. What captured my attention were the students in my row. As John told his story, they abandoned their doodles and they listened. They chuckled at the humor in the story and, I'm guessing, probably remembered that story and how it connected with the lecture. I was sure, however, that John's spontaneous narrative engaged the entire class, even the statistics poet sitting in front of me. There was physical evidence that he had captured their attention: I could see it right before my eyes. Sadly, however, after John told his story and returned to the lecture, students in the back row went back to doodling.

After class, John and I went for coffee. When I told him how the level of attention took a dramatic turn when he told the story, he was surprised. "I didn't plan that," he said. "The reunion was just last weekend and still in the back of my mind. Somehow it seemed relevant to my lecture and so I threw it in. I don't do that sort of thing very often. You know, tell stories."

I said, "You ought to."

"What? Tell stories?"

"You bet. That was a good one. And if what I saw today is any indication, when you tell stories *and* lecture, your students pay more attention.

John laughed. "I do statistics. I don't do stories. I'm not a storyteller."

I said, "Storytellers are people who tell stories. Looks like you're a storyteller. That's what you did and look what happened. If I were you, especially when teaching something like statistics, I'd tell a lot of stories. I would plan stories to go with lessons, just as you did today."

John sat back, his eyes narrowed. "I didn't plan it," he said. "It just sort of came out. Besides, I haven't had any experiences that would fit other lessons."

"So what?" I said. "Make them up. Make up characters, events, mysteries, anything that would serve to illustrate the lecture points!"

So he did. In fact, he had one ready for the very next class. Then he made up a host of stories to go along with his other lectures. As he integrated more narratives, he watched the students' reactions. He told me that he thought more students paid more attention when he told stories, and he

thought teaching that particular class was becoming more interesting too. I suspect students learned more, but the class wasn't a controlled research study so we couldn't be sure (though common sense, brain research, and years of teaching tell me that when people pay better attention, they learn more). Something happened in those students' brains. Something happened in John's too. And something happened in mine.

This event got me thinking—and wondering—about the power of brain-based teaching. *Before* he began telling stories, John's lectures were based on a mode of thought and speaking that Jerome Bruner (1986) calls *paradigmatic*, that is, a “formal . . . system of description and explanation” that employs “categorization or conceptualization” (p. 14). Such expository ways of teaching are most common in all levels of schooling, where teachers need to “cover the material.” But when he told his story, he appealed to another mode of thought, what Bruner calls *narrative*, or story. In brain research terms, John switched “memory pathways,” from *semantic* (i.e., word based) pathways to *episodic* (e.g., vignette) pathways. Using two modes of thought rather than one appealed to two memory pathways—and to his students as they became more engaged learners. I'll have more to say about memory pathways later.

Besides thinking more about brains and learning, I also began wondering if *humanistic theory* about learning might complement brain science. When John connected his “little story” (the reunion) to the “big story” concept (standard error of measurement), he helped students think deeper about how the real lives of real people and a statistical measurement are related. In *humanizing* the subject matter, he connected with his students, as all good teachers do at times, in a way that seemed so natural: As he said, the story “just sort of came out.” As a literacy researcher, I had observed that brain science and humanistic theory were seldom linked with one another. There were those who expressed much excitement about what research on the brain would tell us about learning, and there were those theorists and thinkers whose excitement stemmed from their conviction that true learning springs from matters of the heart. In my mind, however, engaged learning is both brain *and* heart based. Many books about teaching consider *either* brain-based *or* humanistically based approaches to teaching but not both together. Such either-or thinking inhibits us from understanding the comprehensive way uniting both perspectives furthers learning. Separating brain and heart reminds me of the dissociation of the “two cultures” (science and the humanities) that C. P. Snow (1998) warns about: “It is dangerous to have two cultures that can't or don't communicate” (p. 98).

Mind- and heart-based engagement is a *way of thinking* about practice, a metaphorical lens I discuss as *wholesight*, a term employed by Parker

Palmer (1993) to unite mind and heart, just as Snow (1998) urges us to attend to *both* science *and* the humanities. When we look at teaching practices through this lens, we focus on what makes for compelling learning in our classrooms. I believe that if we can develop wholesight, our teaching will gain integrity, our decision making about practice will take on a heightened professionalism, and our students will learn better. To these ends, I hope the book will illuminate the following:

What makes students excited about learning and, conversely, what makes them disaffected or only marginally involved?

What do flow experiences have to teach us about the nature of engaged learning?

How can we plan our teaching based on a deep understanding of student minds and hearts when they're truly engaged in learning?

What do typical classroom activities such as reading and discussing look like when they are guided by mind- and heart-based engagement theory?

In this book, you will see examples taken primarily from English/language arts, science, math, social studies, and other subjects. You will read about elementary teachers and students as well as those in secondary and postsecondary schools. That breadth represents not only my background as a teacher and teacher educator but also my belief that engagement from brain- and heart-based perspectives encompasses learners of all ages and in all areas. I use fictitious names of teachers and students throughout the classroom vignettes presented here. These vignettes are either classes I've taught myself, classroom events I've witnessed or had described to me, or scenes and interviews that I have reconstructed through field notes. In Part II, I take some liberty by suggesting ways that a classroom could have been improved rather than what actually did happen or what may have happened.

In anticipation of the skeptical reader, a few things should be discussed up front. First, I do not explore the research on bodies in engaged states, though I know full well that engagement does include human bodies, especially in what is known as "mind-body states," as I discuss. Kinesthetic learning—the relation between body and brain—is vital to the ways many people learn, as it is one of the *multiple intelligences*. I do not ignore the body here; I just don't go into the detail that would be needed in order to present an intellectually respectable discussion of its role in engagement.

In addition, brain research indicates differences in brain structure and activity between males and females (Gurian, Henley, & Trueman, 2001; Gurian & Stevens, 2004). This research shows that many of the gender-based challenges we face in the classroom are, in fact, based on neurological differences between the sexes. Specific gender-based practices, while not the focus of this book, are nonetheless compatible with the broader applications I discuss. That is, here I identify brain- and heart-based practices as *natural* ways of learning; similarly, gender-based brain researchers recommend *nature-based* approaches “to call attention to the importance of basing . . . education strategies on a research-driven biological understanding of human learning” (Gurian & Stevens, 2004, p. 24).

I do not address the challenges of engagement for students with significant learning disabilities or who are English language learners. While there is no doubt in my mind that the principles of brain- and heart-based engagement apply directly to these two populations, building their special needs into this theory would distract from my main purpose, which is to paint the broad strokes of engaged learning. I leave that for another time.

It is important to note, too, that many concepts appearing here could be presented in much greater detail. Certainly that is true of the neurological issues, such as synaptic formation and development, electrochemical activity, and emotions and cognition. The same is true of the humanistic concepts. Take mindfulness, for example, where I discuss it in terms familiar to most people. If we consider that concept solely from the perspective of Eastern philosophy, we discover that it has many layers of complexity. As Thich Nhat Hahn (1998) writes, in order for one to truly understand and practice mindfulness, one must master the “Seven Miracles of Mindfulness,” the “Four Establishments of Mindfulness,” and the many ways to practice mindfulness (pp. 59–73). It is my hope that the interested reader will build on the overview in this book and pursue such scientific issues and humanistic concepts in greater depth for a richer understanding of engagement.

As a teacher and a teacher educator, I’ve always believed that science, theory, and empirical research ought to support classroom practice. This book attempts to put all four together—to give both scientific and humanistic integrity to instructional practice that is supported by educational research. Part I presents the scientific and humanistic perspectives that derive from an understanding of flow experiences. Part II presents engaging instructional practices that have been proven effective by empirical studies. I believe that we are more powerful and more confident teachers when wholesight drives our teaching and consequently our students’ learning. For the ultimate state of engagement, flow experiences unite

mind and spirit—thinking and feeling—into mind-body states, as Alan Shapiro (2006) writes about his own writing life:

We write . . . for the same reason we read or look at paintings or listen to music: for the total immersion of the experience, the narrowing and intensification of focus to the right here, right now, the deep joy of bringing the entire soul to bear upon a single act of concentration. It is self-forgetful even if you are writing about the self, because you yourself have disappeared into the pleasure of making: your identity—the incessant, transient, noisy New York Stock Exchange of desires and commitments, ambitions, hopes, hates, appetites, and interests—has been obliterated by the rapture of complete attentiveness. In that extended moment, opposites cohere: the mind feels and the heart thinks, and receptivity's a form of fierce activity. Quotidian distinctions between mind and body, self and other, space and time, dissolve. (p. 205)