

***Teaching and Learning When We Least Expect It:
The Role of Critical Moments in Student Development***

Peter J. Giordano
Belmont University

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The old-time teaching tradition places teachers at the front of the class, disseminating their knowledge to students who later, with delight, restate the same knowledge to demonstrate their understanding. I picture Wilhelm Wundt flexing his intellectual muscles in this way, though I may be wrong. Ideas of how teachers should behave, however, have been altered by our contemporary understanding of how people learn (Bransford, Brown, & Cocking, 1999). We should give Professor Wundt his due respect, but then fast forward to the 21st century.

Along with changing our behavior as teachers, our current conceptions of teaching and learning have modified the metaphors we use to describe our craft. We now see students as actively constructing their own knowledge, rather than passively receiving ours (Baxter Magolda, 1992, 2001). Instead of picturing teachers as giant mainframes who download their knowledge, we now envision teachers as midwives helping students give birth to their understanding (Belenky, Clinchy, Goldberger, & Tarule, 1997). The midwife metaphor emphasizes the centrality of dialogue, communication, connection, and relationship in the learning process.

I have always liked the midwife metaphor, but it still neglects important dimensions of the learning process. We know, for example, that important learning takes place outside the classroom when students talk to each other in residence halls, the cafeteria, or the local pub (Light, 2001). By speaking to each other, engaging in friendly or heated debates, students construct and reconstruct what they know, and the “teacher” is nowhere in sight. Significant learning takes place in these out-of-classroom contexts, and we should not underestimate their importance. Thus, the midwife metaphor, though good, is still incomplete.

In fact, no metaphor can fully capture the range of what we as teachers do. The computer mainframe metaphor is applicable, for example, to one dimension of teaching—lecturing. Thus far, I have implied that lecturing is not an effective teaching approach and, in so doing, I have been guilty of oversimplification. To be fair, considerable research has examined the efficacy of lecture-based instruction (Lowman, 1995), and it would be silly to dismiss the lecture as an unsound pedagogical practice. Wundt may have done a fair share of lecturing, and it did not seem to harm students like G. Stanley Hall. Similarly, many of us were lectured to a good deal during our educational experiences, and we were not ruined for life. When carefully organized and used in moderation, lectures can present up-to-date content not in the text; help students organize complex material; motivate students to seek more information; and model problem solving, critical thinking, intellectual curiosity, and enthusiasm (McKeachie, 2002). At the same time, lectures alone are not adequate to facilitate deep understanding (Halpern & Hakel, 2003). We still need a healthy dose of midwifery. Taken

together, both metaphors—mainframe and midwife—convey the complexity of teaching and learning.

Taking into account these teaching metaphors and the research on effective teaching, I am still perplexed, however. Here's why: When I pause and reflect on my most profound educational experiences, I do not recall riveting lectures, spellbinding group work, or exhilarating discussions in my dorm. As an undergraduate student, I recall instances like these:

1. Dr. Donald Searing, a political science professor, encouraged me to consider a graduate program at Yale University. Whether I could have actually gained admission to this program is debatable. The point is that he (a superhero in my view) thought I should consider it. That remark stuck with me and altered how I saw myself as a student. Neither of my parents completed a 4-year college, and one of my brothers had flunked out by the time I got there. So when I arrived on campus, I was intimidated by the academic game. When Dr. Searing made this comment, it caught my attention in a big way.
2. Dr. Edward Johnson, my cognitive psychology professor, shared with the class a story of how Koko, the famous gorilla who used American Sign Language in inter-species communication, lied when asked whether she broke something. Koko broke it, but blamed it on someone else. This story powerfully affected me and made me re-think how I understood myself as a human and my place among other animals.
3. The moment I clearly understood the logic of hypothesis testing and p-values in my undergraduate statistics course is another such experience. I do not remember her name, but I am eternally indebted to the graduate teaching assistant in quantitative psychology who was my midwife during that difficult labor.

I have come to call experiences like these “critical moments in learning” (Giordano, 2003a). They are specific, identifiable moments that typically are transformative. These moments tend to possess one or more of the following characteristics: (a) they are rare (in the sense that people report few), (b) they are related to personal issues, (c) they have an emotional dimension, (d) it takes time for the student to realize the significance of the moment, (e) they are difficult to predict, and (f) teachers likely do not know when they occur.

I am particularly intrigued by this last characteristic. It is humbling (and perhaps troubling) to think this characteristic may be true, but the more I hear teaching colleagues share their experiences, the more convinced I am that it is. Consider the following example, which a colleague at another university shared with me. Several years after graduation, a former student who had gone on to earn his MBA came by to visit her. During the conversation, he said to her, “I owe it all to you. I was going to stop school after the BA and just get a job. But when you—a PhD and a professor—told me you thought I was bright, I began to rethink everything about myself.” My colleague's response: “I barely recalled the incident, and it amazed me that a 5-second remark would change a life.” I have heard other, similar stories from colleagues.

The connection between this story and the personal account I shared about Professor Searing is obvious. Let me make the stories even more similar. About 4 years after I completed my undergraduate degree, I enrolled in graduate school at the same institution. During my second year, I saw Dr. Searing at a local restaurant and decided to walk over and tell him the impact his remark had on me. I wanted to thank him and tell him that this one statement had an important influence on my confidence to pursue graduate studies. As I talked to him, it was clear that he did not recall the remark. It was also obvious that he probably did not remember me either. Gracious and kind, he pretended he did, but I was not convinced.

As it turns out, these types of experiences—these critical moments—are reported by many people. I have been collecting data, narratives that students have been independently coding, that reflect the frequency of these experiences in a sample of psychology professors from a variety of universities, and from alumni at my university (Giordano, 2003b). A detailed summary of these findings is not appropriate here, but the narratives have been revealing. Consider, for example, that the stories I have shared in this essay have all been positive. As you might suspect, however, not all those who have written narratives tell positive stories—the majority do, but not all of them. Some have related quite unpleasant experiences. The typical scenario is one in which a professor made a careless negative remark that reverberated in the person's memory for many years. Sometimes the negative comment motivated the person into an "I'll show you" reaction, which culminated in a positive outcome; other times, the outcome remained negative.

Taken together, the narratives have some important implications. The most significant one is that our students' beliefs about themselves and about their academic disciplines have an impact on their learning (Halpern & Hakel, 2003). If a student believes she is not capable of meeting the demands of graduate study, she may never even apply. In a different vein, the sense of accomplishment from a cognitive breakthrough might suddenly give a student the self-efficacy to set goals even higher. Or, the intellectual reorientation that results from learning something profoundly novel (e.g., Koko telling a fib) might shift a student's academic focus to a new area that he has never considered. Interestingly, most of the narratives have focused on personal learning (i.e., a change in self-perception) rather than on cognitive learning (i.e., a change in intellectual understanding).

Therefore, one question we might ask is: "Do we always know when we are teaching?" I do not think we do. The single most important thing I learned as an undergraduate may have been that I was capable of graduate study. I learned this from a professor who had no idea he taught it to me. Brief remarks that seem innocuous to us may have a lasting impact on our students. Hopefully, the influence is positive. I do not mean to give us more importance or power as teachers than we actually possess. However, a different but equally significant error may be to ignore the potential impact we can have at moments when we are least aware of what we are saying.

Let's return to teaching metaphors. Lately, I've enjoyed an image offered by Baxter Magolda (2002). She believes that to be effective teachers and mentors, we need to be "good company" to our students. Good company means that we are supportive of our students, guiding but not micro-managing them in their development of more complex intellectual

abilities and in their growing confidence in directing their own lives. If we are good company, then we challenge students personally and intellectually, all the while supporting them as they navigate the complexities and ambiguities of deep learning. By being judicious with our critical remarks and appropriately generous (but not overindulgent) with our praise, we may maximize the likelihood of positive critical moments in the lives of our students. Such moments are evidence of being good company.

After reading these narratives during the last year or so, I pay much more attention to my idle words to students. For sure, I pay more attention to the quiet students who seem awkward in navigating the academic waters. I do not know all their personal stories and will likely know very little about most of them when they exit my classroom at the end of the semester. But now when I am grading a paper or an exam, I more frequently comment when their writing is compelling or their thinking lucid. I do not know if I am actually teaching at those moments. I hope that I am.

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