

By Moamen Elmassry

What I learned from teaching

When I started my Ph.D. program, 3 years ago, I was excited to conduct cutting-edge research. But I wasn't so sure about the teaching that I would have to do every semester to fund my education. I saw it as a waste of time and energy that I could otherwise spend in the lab. The stereotype of the teaching assistant (TA) rushing between classes and spending weekends grading while guzzling coffee did not help. I had no experience teaching, and the idea of being in front of a class made me anxious. But if you ask me now, I would say that teaching has been one of the most rewarding parts of my Ph.D. experience.

My first semester was tough. In addition to getting my research going, I was adjusting to living in a new country—I had just moved to the United States from my home country of Egypt. Adding teaching on top of that, with just a brief training workshop to prepare me, was not a recipe for success. I tried my best to help my students learn, but my inexperience was apparent.

I could have carried on as a mediocre teacher. But I recalled how some of my own teachers had inspired me over the years. I felt I owed my students the same—which, I realized, would require time and training. It was my responsibility to make that happen, even if it meant taking a little more time and focus away from my research.

I started with the online Science Teaching Fellows Program from the American Society for Microbiology. I also began attending workshops and training sessions at my university's Teaching, Learning, and Professional Development Center (TLPDC). I loved being part of a supportive community and learned some valuable teaching strategies, which I experimented with in my second semester of teaching. For example, I introduced my students to epidemiology by asking them to write short stories about an epidemic spreading on campus, hoping to incorporate more creativity into their learning. This unconventional assignment surprised the students at first. But some of them got so into it that they wrote much more than the half page I had assigned. I loved seeing my students so engaged with an activity I had designed. In my end-of-semester evaluations, some students said that I was their favorite TA, and others asked me to write recommendation letters for them, which was both humbling and rewarding.

I was eager to continue my teacher training. I enthusiastically proposed to my adviser that I apply for a TLPDC pro-



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gram that requires 30 to 40 hours over the course of a semester. I was disappointed when he said I hadn't made enough progress on my dissertation research, but I also acknowledged that he was probably right. I found an alternate program that would still help me grow as an educator without taking as much of my time. And I later made enough progress on my research to participate in the original program—with my adviser's approval—the following year.

I am now focused on establishing a balance between my primary job—teaching, which is what I am paid for—and my primary goal: completing my doctoral degree and pursuing a career in academia. As I work to find this balance, I also remind myself—and my adviser and thesis committee members—that teaching has provided me with some unexpected benefits. Knowing that I have teaching commitments pushes me to conduct efficient, well-designed experiments. Answering undergraduate students' fundamental “why” questions helps keep me intellectually stimulated and forces me to think about science in new ways, which was useful during my Ph.D. candidacy exam. I also realized recently that my occasional bouts of near depression, triggered by failed experiments, hit only during summer and winter breaks, when I do not teach. If my research goes badly while I am teaching, at least I can see that my work is paying off for my students.

If you're viewing your teaching assignments with dread, I encourage you instead to approach them with an open mind and a willingness to learn. Maybe, like me, you'll find that teaching is full of unexpected rewards. ■

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