Statement of My Teaching Philosophy

The core about which my teaching philosophy revolves is perspective. By perspective I really mean a versatility on my part to entertain different perspectives, with the aim that my students gain a well-rounded education because of it. A discussion of teaching strategies is, for me, a discussion of perspectives.

The word “educate” comes from the Latin verb educare, meaning “to lead out.” My grandfather was fond of this etymological gem; he fancied that the ancient Romans intended for it to mean “to lead out of the darkness of ignorance, into the light of understanding.” One perspective I insist on exercising is that of world history. “Who came up with calculus?” “When and why?” “How did Leibniz figure out that the product rule is \( f'(x)g(x) + f(x)g'(x) \) and not just \( f'(x)g'(x) \)?” These are the types of questions I like to ask my classes for a quick side-chat once in a while. Like every science, mathematics is a human endeavor: It’s discovered and developed by people, people who live and breathe (or did at one time). Without discourses like these we can easily forget the humanity of the figures in the great story of mathematics, thereby losing a valuable connection that would otherwise a student’s experience.

And we, too, figure into that great story! We take part in it when we inquire, when we seek the meaning behind the abstract theorems handed down to us from the inscrutable high priests of textbook publication, when we reason, especially together in groups. I try to bring a positive energy to every classroom session, hoping it becomes just as contagious as a lack of positive energy unfortunately is. I force the students to think for themselves a moment about each of the mathematical questions I pose to them, before I allow anyone, including myself, to start hashing out the answer. The most invigorating, productive lectures I have, for both teacher and students, are invariably the ones in which the every student is presented with many different opportunities to get involved.

Meanwhile, in the mathematics curriculum, the student is constantly faced with new concepts that often seem daunting or just incomprehensible. To counter this, I take time to focus on the student’s perspective, that is, to gain insight into the variety of ways that we as students approach, get introduced to, and become familiar with mathematical ideas. My experiences as a student, past and present, must somehow be reflected in my growth as an instructor; indeed, my career is a continual search for new ways of interpreting ideas in mathematics for the first time, for different ways of simplifying complex topics. To that end, I take care to transition my classroom sessions from lecture to discussion and group work as often as possible within reason, and to refine (and then practice!) my lectures beforehand by anticipating learning obstacles when possible.

Refinement has its limits, however. I find that a critical part of preparing to teach is dispensing with the attitude that my lecture is perfectly complete in all its aspects. Such a mentality on my part can rob the classroom of its spontaneity, a desirable and underrated aspect of a fun, exciting session. In short, I take my work as an educator very seriously, but only to the extent that I feel my students will benefit from it.

The perspectives of world history, of the questioning thinker, and of students in their first encounters with mathematical ideas: three of the viewpoints I feel obliged to assume many times over in the span of a class meeting. In doing so I merely aspire to succeed where those teachers who most inspired me succeeded.