

As the saying goes, teaching people to fish will provide them sustenance for a lifetime. But if you *teach them to teach themselves*, then you’ve done much more. You’ve helped them learn to fish but also to learn courage, or curiosity, or arc-welding.

In several 300-level undergraduate courses I’ve taught, I’ve told the students that they don’t need to attend lectures. They can teach themselves; I’m only a facilitator. Most students still attend, but a few will show up only for exams. All the students report feeling empowered.

Of course, not all math classes are ready for this independence. But there is a place in every teaching environment for my philosophy: the teacher is a facilitator, whose role is to empower and inspire. Whether in my one-on-one tutoring, or this summers’ day-long intensives with middle-schoolers, or even the usual calculus TA quiz sections, my philosophy translates to a discovery-based atmosphere where the teacher motivates questions and guides explorations. There is no learning without curiosity, internalization, and ownership.

To adapt to each unique class and its students, my teaching style is responsive and constantly evolving. Whenever I teach my own course, I require students to complete quick weekly online surveys with two questions. Briefly: what didn’t you understand this week? How could I improve? The feedback allows me to adjust in real time to the needs of my students, and improves overall communication and participation in class.

Outside the classroom setting, I’ve also spear-headed two projects that integrated teaching and facilitation.

For two years, I organized and led a seminar on “The Mathematical Experience.” The weekly meetings brought together undergraduates, graduate students, faculty, and even some staff. We based our discussions on writings by cognitive scientists, anthropologists, philosophers, and practicing mathematicians who have written about the community of mathematicians. We coupled that with discussions on the experience of learning, understanding, creating/discovering, and communicating mathematics.

Also, this summer I was lead organizer for a three-day algebraic topology summer school at the University of Washington, with about 30 participants. All the talks were given and attended by graduate students from across the US and Canada, and we used a cooperative organizational scheme to figure out who should talk about what, and at what level. Several people predicted

to me that I couldn't rely on graduate students to self-organize in such a way, but I did, and it worked.

Lately I've been getting involved in the contemplative education movement. There is now a solid body of scientific evidence showing that contemplative practice (for example, mindfulness meditation) yields consistent and quantifiable positive results such as increased focus and creativity, balance of mind, and improved interpersonal communication. Now some teachers are working together to develop contemplative pedagogical tools, including quick meditations or “one-minute papers,” to harness these benefits in the classroom. As a practicing Buddhist and Gandhian, I feel a resonance with the idea of contemplative education.

Furthermore, I feel a strong ethical imperative to teach, and to teach nobly. Even in a calculus class, the teacher is demonstrating how to live. Every moment is an opportunity to teach empowerment, curiosity, imagination, and freedom. As much as is appropriate, while teaching I wear my heart on my sleeve (well, on my left forearm actually).

My teaching philosophy was formed as an undergraduate at Swarthmore College, where all upper-level courses are taught in a student-led seminar style. Once, after teaching a calculus quiz section at the University of Washington, a student approached me saying, “Wow, this class is unlike any I've taken at the UW. It's so interesting and exciting.” My response, “Thanks. It's called liberal arts education.”

Recently I was awarded the UW math department's Teaching Excellence Award, “in light of your outstanding student and faculty evaluations, as well as other educationally-related activities such as the AMS graduate student blog.” But my favorite feedback comes directly from students. I'll conclude with the following unsolicited email comment I received from a group of my linear algebra students last year:

“Today at our math study squash for the final, five of us were talking about the class and how we felt about it overall. And I just wanted you to know that all of us really look up to you, not only for your ability to actually verbalize and teach higher level math- which is exceedingly rare in college these days, but because of your enthusiasm and genuine love for the subject matter. We especially admired the trip you took where you hiked the Appalachian Trail and contemplated and integrated all that you had learned during your own college experience. So I guess we just wanted to thank you for being such a great teacher and inspiring individual!”