

I. My Teaching Philosophy, Beliefs and Practices

A. Teaching Philosophy

When I first started this career in 2009, I admittedly had a very simplistic view of the meaning of teaching and learning. Good teachers provided content to learners, ideally in an organized, well thought out way. Learners absorbed the content and were then able to abstract and apply the content to new scenarios. So as a new teacher, I focused intensely on organizing my lectures well, providing the most relevant examples, and working hard to expose the clearest path for students to understand the content. The completion of two semesters teaching statistics to biology students, however, left me wondering why things “I had said in lecture” did not stick with the students. I began to think more deeply about how learning works, questioning why some students were missing concepts foundational to the material.

I now believe a good teacher is one who creates the conditions, provides the resources and sparks the motivation students need to learn. Learning requires students be actively engaged in constructing knowledge and developing skills through practice and application. The responsibility for learning is shared by both teacher and student; however, as I become more confident in my teaching, I feel increasingly comfortable shifting more responsibility to students for their learning. I now tend to think of my role as consciously and carefully setting the stage for learning to occur through good course design, providing excellent resources, and creating opportunities for practice and feedback. Given this conceptualization of teacher and learner, here are three things I strive for in my teaching.

It's got to be fair. Nothing is more demoralizing to students than getting a poor grade because they did not understand expectations, didn't know what was going to be on the exam, or are evaluated inconsistently from assignment to assignment. For students to learn, they must feel that, with effort, success is possible. This can only occur when students are confident the course, the instructor, the expectations and the grading are consistent and fair. I aim for transparency in my courses, whereby the students are aware of the objectives of each lecture and lab and know that these objectives will form the basis of my assessment of their learning. Beyond this use of fair summative assessment, I believe in on-going practice and feedback in the classroom (through Top Hat, Case Studies, small assignments), which, to be meaningful, must be an iterative process, whereby the content of each lecture is gauged and modified to promote understanding by the students. For example, in the labs for my Introductory Ecology course, we use the same rubric throughout the term to lay out consistent expectations. The rubric itself provides clear feedback and identifies ways and areas in which students can improve. I scaffold the lab reports so students get practice with each of the sections of a scientific paper before they write a term paper. Through all these efforts, I believe students get sufficient *practice and feedback*, in a consistent way, so that success is achievable and students are *motivated to learn*.

It's got to be relevant. To be engaged and motivated to learn, students also need to be clear about how the material is relevant and important to them in their degree and careers. For all the classes I teach, I think about the relevance of the course content to the students with respect to the development of critical *scientific skills*, such as scientific writing and quantitative literacy. Such

skills are transferrable to all disciplines of biology and science and target the attributes we want our science graduates to have. I also try to make the material relevant by showing the students its *application* in professional or practical settings. I use case studies that draw on current examples from the literature or current events and issues. In my courses, I believe students acquire valuable skills, make connections to the 'real' world and engage with current issues in a way that allows them to appreciate the relevance of course material.

It's got to be engaging. The best teaching experiences for me come when I look out at 200 hundred students at the start of class and I see smiles slowly creep across their faces as I am describing what we are going to do that day. There is something wonderful about finding an activity or working on a problem where both the students and I are genuinely enjoying the process. To me, engagement happens when students are diving right in to a task, working with the material, solving problems with their peers and, ideally, teaching and learning from each other. When this occurs it makes my job joyful and – well simply, fun. Although not all teaching can be fun, judging by the number of students who comment on my enthusiasm, I think they see my love for teaching and I believe this transfers to a love of learning and a genuine engagement with the course.

Teaching is the most rewarding and challenging profession I could have. Being an instructor at the post-secondary level allows me to interact with students during some of the most formative points in their adult lives. It is during this important time that I hope to inspire, encourage, and spark a love of science and learning. I aim to foster each student's confidence in his or her own ability to learn through a relationship built on trust and mutual respect, and to develop students who are capable, confident, independent, lifelong learners.