

Statement of Teaching Philosophy

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"Education is not the filling of a pail, but the lighting of a fire!" Yeats

When I first began my teaching career 15 years ago, I decided to put this quote on the signature line of all of my email correspondence to remind myself that the primary goal of teaching should be to inspire a thirst for learning. Occasionally, I'll catch myself feeling like I'm simply "filling the pail" of my student's brains with content in my classes. When I recognize these times, I try to step back and refocus my efforts on "lighting a fire" both within myself and my students. Like most newly minted Ph.Ds in synthetic organic chemistry, I did not receive much formal training on the "theory" of learning or of teaching. However, I was fortunate to have several educational mentors that brought about a transformation in my own way of learning. In addition, during the course of 15 years of teaching undergraduates, studying alternative teaching methods, and experiencing both success and failure in the classroom, I have developed several strategies that work well with most students. The following is a short list of approaches that I believe are crucial for successful learning at the undergraduate level.

Approaches I Use to Enhance Student Learning

1. Start with the Ending.
2. Establish and maintain consistently high expectations.
3. Provide an organized framework for learning.
4. Encourage the physical act of writing/drawing, it paves the way to learning.
5. Provide laboratory experiences that correlate with and enhance lecture material.
6. Provide a solid foundation of knowledge so that critical thinking can occur.
7. Utilize advanced instrumentation with students to encourage critical thinking.
8. Provide positive and encouraging feedback when students get things wrong.
9. Provide opportunities for students to organize information and teach it to others.
10. Recognize that learning and mentoring go hand-in-hand.

(**Note:** my own learning on these topics is not yet complete, and I'm eager to apply new approaches that are effective!)

I typically apply the above approaches to the methods I use for actual classroom or laboratory instruction. **However, there are numerous additional interactions that occur outside the classroom. In many ways, these interactions are just as important.** For example, it is important to recognize that every student is different and may require alternate accommodations, approaches, methods, or instruction. In

addition to my class notes, I typically offer several ways for students to access and learn material outside the classroom. These include, scanned copies of my notes on request, summary Power Point lectures posted online, additional homework problems posted online (with answers if requested), and of course, my expertise both in and out of normally scheduled office hours. In addition, I often work with tutors or SI/SLA instructors that are helping students to give them additional guidance when needed. I'm always willing to work with students that have unique situations such as learning disabilities, approved schedule conflicts, and emergencies. I have come to recognize that most students really want to learn and making small adjustments or accommodations often increases their level of trust in me and brings about improvements in learning.

In order to “light a fire” within my students, I need to model for them the behaviors and actions that are important both inside and outside the classroom.

I firmly believe that being a good learner also equates to being a good research investigator and that these compliment each other. After all, good research (like good learning) simply boils down to asking great questions and figuring out how to best answer them. I feel it is important to discuss the latest research breakthroughs in the discipline of chemistry with my students and show how investigators are making these discoveries. I feel it is important to model this behavior to students by being actively involved in new and innovative research myself. Collaboration is another behavior that should be encouraged and modeled for students. Demonstrating this through my own collaborations with other investigators goes hand-in-hand with providing collaborative opportunities between students. Having done this for the last 15 years, I know for certain that effective teaching, research, and collaboration are NOT mutually exclusive, but rather self-complimentary.