

Teaching Philosophy
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“A teacher is one who progressively makes himself unnecessary”

-Thomas Carruthers

I love to teach. Since my first experience as an undergraduate TA, I have enjoyed every opportunity to be involved in a student's learning process. I relish the challenge of convincing a discouraged student that he or she is capable of understanding chemistry and that it can be fun. This discouraged attitude is oftentimes a staple of first-time organic students. Before even beginning the class, they will have an arsenal of complaints about how hard the class is going to be and how it's all about memorization. This “organo-folklore”, as I like to call it, needs to be defused. I have found that taking a little time to discuss these anxieties makes an immense difference in their attitude towards the material and they become more open-minded with regard to the subject matter. Being upfront with my students is important in my teaching style. I want the students to know what I expect of them and I in turn want to know what they expect of me.

In addition to disarming the students of their chemistry fears, it is also my goal to introduce myself not as a lecturer but as their guide through the wonderful world of chemistry. It is within this role that the students may become more independently minded, better communicators and more comfortable in collaborative efforts.

Meeting the Learning Needs of My Students

It's inevitable that a teacher needs to do some lecturing. It's impossible to relay knowledge without getting up and writing on the board. However, I do not intend to just use chalkboard techniques to teach the material. It is believed that everyone learns differently whether it is by writing, listening, seeing or doing. As such, I try and use various techniques to reiterate major points in the curriculum. If a student can remember limiting reagent concepts better because they ran out of marshmallows first when following my recipe for making smores, then I've accomplished my goal. With students reading the text, taking notes from chalkboard lectures, building a model, or watching a computer-simulated molecular movie, the only thing left for them to experience is “doing” the chemistry.

Labs are a wonderful way to showcase reactions and techniques discussed in class. I prefer an integrated lab and lecture so that the lab follows nicely with the lecture notes. I also would encourage students to participate in independent research and discover the experimental science of chemistry. Being in the lab is really what chemistry is all about and is thus an integral component in their chemical education. However, labs are not the only way to showoff the material. While at the University of Rochester, I was introduced to the workshop concept pioneered by Dr. Jack Kampmeier. The workshop's goal is to

instigate small groups of students (usually 2-3 students) to work together on figuring out more compounded and complex problems. A workbook containing such problems is handed out at the start of the semester. The students are asked not to work on the workbook problems prior to attending the workshop. This process challenges the student to probe deeper into the material, and helps them to develop the ability to “talk chemistry” thereby improving their communication skills. I strongly believe that when you can teach something to someone else then you truly own the material. Providing an opportunity for students to work with others and help explain certain concepts to their peers helps them to solidify their knowledge of the material. Suddenly it’s not just a learning experience for the person being taught.

What should students expect from me?

Having attended a small liberal arts college, I was not only inspired to become an educator, I was also moved by the enriching education I received through the relationships developed with professors. These experiences impacted not only my teaching philosophy but also my thoughts on the role professors can play in the liberal arts community. It is important that I be very generous with my time when it comes to helping students. Workshops should not replace scheduled review sessions, office hours or spontaneous visits with me for help. I firmly believe in practicing an open door policy. Office hours are only postings of my definitive presence in my office but are not the only time to come by and ask questions.

In the classroom, students should expect an interactive environment where I am not hiding behind the invisible barrier between the seats and the chalkboard. They should also expect that I will be open-minded about my teaching methods and that they will frequently be asked to comment and make suggestions to improve the way I run a classroom.

In order to give students the best education in chemistry, it is also my responsibility to lead interesting and novel research and to present research opportunities in my lab to any willing students.

Getting involved in other aspects of the college community are also great ways to connect with your students and break down any barriers of intimidation. Helping with the operations of a successful chemistry club, sponsoring chemistry BBQ’s, or having lunch with chemistry majors in the dining halls all contribute to a student’s healthy attitude towards chemistry, the department and its caring professors.

What I have learned about my own teaching:

When I caught the bug to teach chemistry, it was very easy for me to relate to the students that I taught. As I get older and further away from being in their shoes the more I realize the need to be patient.

I'm aware that my techniques are not perfect and that teaching is a skill that I will forever try to improve. I need to remain flexible and willing to change my style a bit in order to meet the needs and learning styles of my students. Above all, I have learned that students respond to enthusiastic people and a subject made interesting and challenging. Students are keen on learning something if someone else shows such a passion for it.

As I continually strive for improvement in my career, I look forward to experiencing not only the developments in the education of my students but of my own growth as an instructor. While my teaching practices evolve as I gain more experience, I will forever stay true to my ultimate goal: To train students as both independent thinkers and independent learners, two of the greatest rewards from a quality education.