

Teaching is a passion of mine. To me, making a positive effect in somebody else's life is one of the biggest joys in life. During my time in UW-Madison, I had the wonderful opportunity to feel this joy through teaching mathematics and sharing my love for it. My professional goal is to become a university professor. It will be a very exciting and challenging journey.

The way I see it, there is a technical and nontechnical side to teaching. The technical side is about issues like the logistics/content of the class and the presentation/explanation of the material. The non-technical side is about matters like the connection between the instructor and the students and the atmosphere in the classroom. Throughout my years in UW-Madison, I taught many math classes from calculus to beginning algebra, with many different student populations from seniors to incoming freshmen, from art majors to engineers. This gave me the chance to gain experience and improve my skills on both sides of teaching. In what follows, I will describe some of my goals and practices in the classroom. You will see that they are mostly on the nontechnical issues as I believe they play a more important role.

I try to create a sense of **community** in which both my students and I feel comfortable and safe. In such an environment, the students feel free to ask or answer questions, correct me if I make a mistake, speak their mind about how the class is going or what they think about the last test. I devote the first class to breaking the ice and getting to know each other. For example, I put my name on the board and ask a few students to try to pronounce it. This makes the start of an improvised introduction where we talk about ourselves, languages, history, geography, music, movies, sports etc. I continue this dialogue throughout the semester by going to the classroom a few minutes early and chatting with the students.

The sense of community that I try to install helps me bring **interaction** to the classroom. While working examples on the board, I often pause and ask the students to declare the next step in the solution. In many classes, I give the students a few minutes to work on a problem. While they work, I walk around and check how each one is doing, sometimes giving hints. Then I ask for a volunteer to explain the solution on the board. This builds confidence for the volunteers and adds to the community feeling. While the volunteer is at the board, I discuss issues like how to use the board or how to communicate mathematics with the volunteer and the class. Again, the comfortable and safe environment is what makes this practice successful.

Encouragement and support make a big difference on students' performances. Especially in lower level classes, students come with a fear of math. One of the biggest goals of my teaching is to build confidence. I always tell my students that the real ingredient of success in math is hard work, not genius as people think. While I encourage my students to work hard believing in themselves, I support their efforts in many ways. For example, I

prepare hand outs focusing on particular topics that I feel the students need more practice on, many times I arrange extra meetings to go over these hand outs. I make myself available all semester through office hours and mostly appointments. I try to monitor the progress of students that need extra attention through weekly meetings.

As a student, I benefited the most from professors who shared their insight on the subject and helped me build intuition. I try to do the same with my students. There are beautiful and mostly simple ideas behind mathematics and I try to communicate this to the class. I enjoy explaining math in a very **down to earth and simple** way. I also use a fair dose of humor. Especially with lower level classes, I try to avoid the technical jargon. For example, in a recent trigonometry class, before I introduced the formal definition of complex numbers, I illustrated the insufficiency of the real numbers with the equation $x^2 + 1 = 0$. Then I *created* the imaginary unit i as a solution to the equation, joking that a mathematician has the power to create from nothing just like gods. Then I illustrated how this *new guy* i has to interact with the already existing real folk in order to be accepted as a number, giving rise to lots of other new guys $a + bi$. Finally, I gave the formal definition.

For the last two summers, I had the opportunity to teach groups of incoming freshmen under PEOPLE (Pre-College Enrichment Opportunity Program for Learning Excellence), a program at UW-Madison aiming to make college accessible to more students of color and/or those from low-income families. I met my students four days a week for seventy five minutes and also I set up weekly study sessions at their dorm. It was a challenging experience for me as the dynamics of the class were very different than of the other math classes I taught at UW-Madison. I was very happy to be able to motivate the class and see them perform well on the math placement test. In the future, I want to continue getting involved and/or initiate education programs aiming to help students who do not have much access to college education.

In my last two years at UW-Madison, I was given the responsibility of coordinating the Intermediate Algebra class, a class for which I was only an instructor before. I prepared the syllabus and the exams of the class and supervised the other graduate students teaching it. It was a challenging experience that I enjoyed a lot. When I taught this class the year before, many times I felt that the students did not really master the fundamental parts well enough yet I had to go ahead and talk about more advanced topics. To avoid this, I modified the syllabus so that it focused on more fundamental topics. I also extended the exam durations as I believe mathematics is not a race against time. Moreover, I was happy to not use a normal curve grading system because it correlates one's success to the failure of others and I find this mentality very unhealthy.