

Teaching Statement

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My goal as a teacher is to have the students learn the material in a manner that stirs their intellectual curiosity. As an oversimplified analogy, I imagine the beginning of a course as positioning the students at a fork in the road: One path leads to months of boredom and disinterest, while the other path leads to excitement and challenge. In my role as a teacher, I believe I am responsible for leading the students down the second path. I discuss some approaches I have used to work towards my goal.

To accomplish my teaching goals, it is important to create a friendly and engaging course environment. My approach is to be as interactive as possible. I both encourage students to ask questions, and ask them questions. I do call on students by name, though I explain to them that they are welcome to “pass” when called upon. Another valuable tool is the use of group work. Group work opens up dialog between students, allowing students to learn from students, not just from the teacher. Ultimately, a healthy course environment depends on having an approachable and patient teacher; student evaluations consistently say that I have these qualities.

I attempt to use every tool at my disposal to improve the learning in my classroom. In this vein, I have incorporated a variety of technologies into my courses: Using calculators, doing in-class labs with Maple, using the free on-line homework system WebWork, using Blackboard, projecting Java applets during class, and organizing my courses on a website devoted to my teaching (for my teaching website see: <https://sites.google.com/site/ojakiansite/>). Calculators, Maple, and Java applets can make the abstract more concrete via numerical examples and graphics. The on-line homework system WebWork allows students to repeatedly attempt problems on-line, getting immediate feedback from the software. Organizing my courses on a dedicated teaching website, posting all the homeworks and handouts, makes it easier for students to follow the course.

Other strategies I have used to enhance the learning in my courses are the following: Having consistent graded homeworks, setting aside time for in-class work, showing relevant applications of the material, and assigning reading/writing assignments. Students admit, grudgingly at times, that graded homework helps them learn the material better. While they do in-class problems, I get a chance to interact more directly with the students as I walk around the room answering questions and checking student work. By doing applications and a few short reading/writing assignments, I hope to make the math more relevant and interesting to students. The applications help students see the point of mathematics, while the reading/writing assignments (few and short) give some historical or philosophical background on the material.

I am a good teacher, yet I am on track to further improve my teaching. I have been incorporating new approaches and technologies into my teaching. At the core, I have a love of mathematics, which motivates both my teaching and my research. While my research does not usually enter directly into my teaching, the enthusiasm inspired by my research impacts my teaching positively, rather than detracting from my teaching. I look forward to continuing to appropriately combine the scholar and the teacher within me.