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Statement of Teaching Philosophy

My opinions about what constitutes good teaching have been largely shaped by my graduate school teaching experiences, ranging anywhere from teaching Intermediate Algebra to College Algebra to Statistics to Engineering Calculus. I believe that one component (and possibly the most important component) of good teaching is awareness of the audience. It is never a bad thing to know who the audience is and what they are going to do with what they are taught. For instance, if I am teaching a Real Analysis course, and the audience consists primarily of students who have their eyes toward going on to a graduate program in mathematics it seems reasonable to say that this course should be tuned somewhat differently than if the class primarily consisted of prospective high school math teachers.

I have also come to strongly believe that when teaching freshman classes (particularly service courses) that the instructor has a certain responsibility to maintain morale. It has been my experience that often in these types of classes, there tends to be a very high variation in student interest and ability level, and thus some students may need to be convinced that what is happening in the course is at least tangentially related to their lives.

An issue that is somewhat related concerns the use of technology in the classroom. I believe that technology can be a very useful teaching tool if used properly and judiciously. It is probably not a good idea to reduce an entire course in mathematics to a set of keystroke manipulations. However, I have found that technology can provide a good hook and keep students involved in the course. While recently giving a Calculus lecture about arc lengths, I mentioned that I was going to use the graphing calculator to get a picture of a somewhat complicated parametric curve. I was slightly amazed to see that this announcement sent a visible spark of interest through the audience.

Another important point is that I believe it is very important to be straightforward with the students. What this means is that when there is a point made which is important, one should tell the students that 'this is important'. When there are techniques discussed which are really central to the course, the students need to know that those ideas are central to the course. And then, when all is said and done, they should be tested on the important ideas. That is not to say that the students should know the exact composition of the exam in advance; rather it means that the students should know what the important ideas are, and the exam should primarily reflect what the important ideas were. In this profession, I believe faculty should not deny students the benefit of their knowledge by making them guess as to what the central ideas in the class are.

If it is true that we learn from our mistakes, then during the course of my young career, it is safe to say that I have learned a lot. One mistake that I will freely admit to making early in my TA life was to believe that in all instances, every soul in a freshman class was a miniature version of myself, in terms of ability and interest. It probably goes without saying that this type of approach is ultimately not good for anyone in the classroom. This has instilled a certain pragmatism in me, in the sense that I now try to keep a very real awareness of who the class is, what they want to get from the class, and what they need to come away with from the class.

There is probably no universal standard for what constitutes good teaching. However, it does seem safe to say that good teaching tends to be generated when the instructor acts as an ambassador of mathematics. That is to say that the instructor understands the needs of the student while at the same time remaining faithful to the subject that is to be taught.