

Self Evaluation for Benjamin V. Holt Fall 2016

Courses Taught: Math 101 (Beginning Algebra), Math 2 (Statistics).

Of the many things I would like to accomplish in my courses, first and foremost is to provide motivation for students to practice the skills which are necessary for success. I try to make clear from the very beginning the standard to which the student will be held. To these ends, I have implemented, and am still creating, a course website (<http://holt.blue>) which puts the means of homework and exam creation in the hands of students. These web-based tools, which I have developed from scratch using HTML, Javascript, and MathJax/LaTeX, have enabled me to take an approach which is non-punitive in how students meet learning goals in the class. Automating the homework and exam creation process has enabled me to take a practice-until-you-get-it approach.

Secondly, I strive toward having my students take responsibility for their learning by requiring full engagement from them. Lecture is the smaller part of what I envision for a successful course. The completion of what I try to accomplish in lecture is only completed when my students are assigned to groups and begin to learn from each other. Using practice materials generated by my the website mentioned above, students get to practice the standard presented to them immediately. Moreover, the many details which I am unable to cover in lecture get taken care of as either I help groups with their problems, or the stronger students in each group learn by teaching other students. Such personalized interaction is where the real magic happens in my opinion. What is more, each group is responsible for presenting a particular problem assigned to them. When students see others' approach to problem solving, as well as well-prepared solutions, the individual student may then proceed much more confidently to practicing these skills on their own.

The above vision has worked well for me this semester. In fact, it has worked better than I anticipated. When designing courses which are driven more by student participation than lecturing, I must confess that I was somewhat reluctant, and even prepared to change the structure entirely if it showed signs of not working out. But the many hours of work and thought which I put into my courses (months before the semester even began) seem to have paid off. For the flexibility my web-based tools provide, my students seem to be more relaxed, and because we do so much work presenting problems in class, they produce written work of quality far superior than any other class I have had. Comparing my present methods (which embraces technology and is student-participation driven) to my past methods (lecture-based), I have cannot imagine returning to a purely lecture-based format ever again.

Of course, shifting from a mostly lecture format to one in which students do at least half of the talking requires an environment in which students feel comfortable with one another and with presenting ideas to one another. My first order of business was, therefore, to create an environment where students feel comfortable with each other, but also where it is okay to make mistakes. I have attempted to undo an academic culture where one must be correct. Perhaps I simply have great students this semester, but I feel that so far students have participated with all vigour, and mistakes (both theirs and my own) have been embraced and learned from.

This is not to say that it has been completely smooth sailing. The tech-heavy, student-centered methods are challenging for some students who are used to more traditional methods. However, the group-centered approach does enable me to work more directly with such students in more of a tutorial capacity, and this seems so far to partially bridge this gap. Additionally, there will inevitably be bugs in the system in the initial stages of any web development project, and my students have been quick to

point out problems when they arise. However, I am pleasantly surprised that my students have been very patient with these problems, and have actually helped to make the course website better by offering suggestions for improvement. This is particularly true of the younger, more “digitally native” contingent of my students.

In summary, changing the format of my classes from those which are lecture-based to those which are group-based and student-driven has proven to be the best professional decision I have made. It has improved my students' quality of work as well as their attitude toward the subjects which they are learning. Moreover, the individual attention I have been able to provide in class has brought me closer to my students and has improved the overall morale of my classes.