

Teaching Philosophy

I teach technical courses, such as IST 240 introduction to Computer Languages, and courses that address reflections on the impact of technology on society. I use different approaches in each type of course.

In order to learn something, you need to know that you don't know it. I use programming problems to raise this kind of awareness in the students. When they start working on a problem, they learn that they need something they don't know yet to solve it. Each problem is designed based on past materials but bringing something new. I see the problems as puzzles that need to be solved. The programming language is a toolbox with everything they need to solve the problem. Each problem then should raise the need for more and different tools that they can find and use in the programming language toolbox.

I also use an incremental approach that gives students a sense of achievement after each problem is solved. Each problem in the sequence is built on the previous one. So, each problem is one step towards a final solution. I like to show students on the first day of the class the result of the final problem. It is daunting to see such an elaborate application running. Then I tell them how we are going to approach it, one step at a time. Each problem addresses one topic in the course material and brings a new challenge. The last problem has all the previous steps in it. Instead of working on a problem for weeks without seeing any concrete solution, the incremental approach gives students a sense of achievement that empowers them to keep working on learning more techniques.

The discussion course is a large class. So, I see my challenge as getting the students to have an informed discussion on the texts. I called the solution I created a student-comment-driven course. The first step is how to engage the students in the reading. I thought of using the large number of students as a tool to collectively read and comment on a text. The comments on the text, created by the students and responded by the instructor, drive all other aspects of the class. We start by reading together the text during one class section. Students should make written comments using the Google Suite for Education (google.psu.edu) as they read the text. The instructor follows the comments while they are being posted and replies to the ones that are more compelling.

The result is a student-commented text. Based on that, students meet in groups in another section to create a question that will be answered by another group. In between classes the groups answer the question they have received from another group. In the next class session, they present their answers, and we have an interactive discussion with questions and answers about their presentation topic.

The key here is to use student comments first as a tool to encourage the reading-together of the text. These comments are used to drive the discussion and illustrate the question they will create. When they answer their given question, they also should use their comments and quotes from the text. The result is a discussion based on the readings and on their own take on the readings.