There is No Book: Using Online Resources in Place of a Required Text

Final Report

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Overview

My goal was to replace a physical textbook with a collection of online sources in CSCI 120 Computer Science I. Although finding high-quality sources was harder than anticipated, I was able to put together a usable collection of courses for my course this fall. What I had not planned for was the extra effort necessary to disseminate this material with the students. In the end, I created a WordPress blog where I was able to list the sources by date for the students.

Resource Survey

While considering potential sources, I discovered two significant roadblocks. First, the programming language we use in CSCI 120 has two major versions which are not compatible. I found many wonderful sites that used the wrong version. This dramatically reduced the pool of possible websites and videos.

Secondly, I found that many sources had dependencies to other portions of the site. As a result, these sources became an “all or nothing” resource. The most dramatic example of this phenomenon was with MOOCs, where users were required to register for the class. Further, many of the courses had a starting date and ending date for when the material was available.

In spite of these challenges, I was able to identify enough sources to use for the course. Two sites in particular offered a nice combination of video lectures, material to read (with interactive examples), and practice problems where students could test their understanding.

Content Delivery

As I began to prepare for the fall semester, I realized that I needed a way to share the multitude of links with the students. After considering a variety of ways to create an online presence, I settled on using a WordPress blog. This web-based software allows users to customize a website with a variety of plugins. I used a calendar plug-in that allowed me to specify the day-by-day syllabus for the semester. I also used the blog to disseminate my entire syllabus electronically rather than on paper, and I now use it to post class announcements.

WordPress also contains plugins for pushing announcements about to your readers (in my case students). I added the ability for students to sign up for email or Twitter announcements. Interestingly, the vast majority of the students choose email.

Conclusions

I am pleased with the results of this project. Although it is more work to prepare a course using online sources, so far this semester I have found it more effective than using a textbook. I plan to use a similar technique next semester when I teach the capstone course in computer science. I am optimistic that my experience with this course will help me as I prepare.

I want to thank the CAT committee for the opportunity to explore teaching without a physical textbook.