Experiences of Adopting In-class Blogs in the Teaching of Hands-on Computer Laboratory Courses

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Abstract

One of the teaching challenges in computer-based laboratory is tracking student progress and giving assistance on an individual basis in the lab classroom. When finishing a lab, students are asked to submit their results at their own blogs and make a notice by placing a link at the instructor's blog. Pursuing the links and checking out students' blogs, the instructor can grasp immediate status of student progress and make informed judgments on which students to walk towards and initiate further interactions with. We also use blogs as tools of social learning. By browsing the selected peer works and the comments made by instructors on students’ blogs, students are empowered to stimulate new ideas different from each other. Survey results shows that students who took the lab courses are satisfied with turning in lab results through blog posting, getting instructor's in-class interactions, piracy reduction, and social learning.

1. Methodology

Blogs have found their use in education. In [1], it contends that students have long learned as much from each other as they have from an instructor or a textbook - it's just a question of finding an appropriate vehicle for facilitating this learning. It further concludes that blogging has the potential to be a transformational technology for teaching and learning. A number of universities round the world have commenced with the use of blogging tools. However, it is found that few of the blogs in education are used in-class.

As a solution to the teaching challenge that the author has been wrestling with for years, blogs have been used in a novel fashion for four consecutive semesters at two hands-on computer lab classes, namely Java Programming and Programming for Internet Applications, respectively.

First of all, the instructor creates a blog for the lab class at the outset. Every student of the class is required to create a blog for the lab when the semester begins. Instructor blogs are for posting lab materials in the curriculum, categorizing descriptions of resources and making announcements to the class. In other words, they serve to deliver lab sheets and hand-outs in electronic version. Students are encouraged to read the instructor blog before class meets so that they can get themselves prepared. Unlike situations where students make comments based on literature readings, review course-related materials, or simply do their homework after the class meets, the blog is used in a real-time manner. When finishing a lab in class, students are asked to submit their results at their own blogs immediately and make a notice by placing a link at the instructor's blog where the lab is made public. Pursuing the links at the “dropbox” and checking out students' blogs, the instructor can grasp immediate understanding of student progress such as how many have finished labs, how good the quality of the results is and what problems may have occurred. The blog is so responsive that instructors can make quick and informed judgments on which students to walk to and initiate further interactions with. Through blogs, this can be done without students leaving their seats or even raising their hands, reducing interferences to others who may be still busy working on the lab. Reading the student blogs, the instructors have themselves better prepared before interacting with the students.

We closely examine the important features of blogs in the classroom use.

Dialogue-Based

We started to take on blogs partly because the existing LMS platform functions in a one-way “publishing” mindset rather than a two-way “engaging” one. Getting student feedback in a lab
setting helps engage with students and creates a real dialogue.

Status Tracking

Blogs are a versatile administrative tool to track the status of the computer-based lab students conduct. Blog posts replace the paper sheets for students to turn in their lab works. So the instructor knows in real time who finished what and when. This makes it easier for the student to get noticed, supported, and heard.

Social Learning

The intrinsic structure of blogs enables social learning. We have asked students to check into their classmates' blogs to see what other people have written. In the traditional grading, it is the job of the instructor to read students' works; students are not empowered to take a look at how the works are done by their classmates. In this sense, blogs have the potentials to upgrade personal learning to social learning. For the purpose of promoting critical and analytical thinking, after a student has read another's posting, she is asked to leave comment to that posting. We call it the creation of “dialogue links” that are different from the trackback links. By doing so, the instructor has a way to know if the student has done his homework to read others' postings. To avoid overwhelming the students in a large class with a work to make comments on all the postings except her own, usually only a couple of comments are actually asked, although the students are encouraged to read everyone’s work if possible. To create deeper dialogues and further the opportunities of social learning, the students who receive comments from their classmates are asked to do two things next. For one thing, they are asked to say thanks, by leaving a comment below the received ones, to the people who have made the comments to their works. For the other, further comments about the subjects commented by their peers are asked in response.

2. Survey Results

In the fall semester of 2006, students of two undergraduate classes, namely Java Programming Language and Programming for Internet Applications, were used as subjects to solicit feedback to the use of blog. The former class has 38 students enrolled while the latter has 35.

48% respondents agree that the blog helps interactions among students enrolled in the same class while 18% don’t agree and 34% have no opinions. 79% respondents agree that the use of in-class blogs helps keep the students interested and motivated in learning, while the remaining 21% have no opinions. As to the impact of in-class blogging on learning effectiveness, 86% respondents think it is positive while 1% think it is negative and 13% have no opinions.

When asked whether you will read classmates’ blogs when a take-home assignment problem is hard, 84% respondents answer positively while 3% answer no and the remaining 13% have no opinions. We found that most students will try to get some ideas from classmates when there are no sufficient clues to a problem. The concern of duplicating was first serious. However, when asked whether you uphold the principles of respecting intellectual property and refuse to duplicate, 79% responds positively while 6% confess they do duplicate at least some of others’ ideas that are posted on their classmates’ blogs and the remaining 15% have no opinions.

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4. References