

Colloquium

Educational applications of Web 2.0: Using blogs to support teaching and learning

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Introduction

Over the last couple of years I have been advocating and exploring educational uses of Web 2.0 applications at a university in Hong Kong. This culminated in a concerted research effort under the umbrella project 'Pioneering Web 2.0 in education' which includes smaller projects exploring applications of Wikies, blogs, social networking and social book-marking. This paper briefly reports outcomes of a small inquiry exploring the use of blogs with a class of post-graduate students.

Recently, blogs begun to emerge as a useful type of educational technology. The literature discusses a number of interesting possibilities for the use of blogs (eg, Flatley, 2005; Huffaker, 2006; Perschbach, 2006; Quible, 2005; Richardson, 2006; Selingo, 2004). For example, it is suggested that students can use blogs to publish their own writings, discuss group assignments, peer review each other's work, collaborate on projects and manage their digital portfolios. However, to better understand such possibilities, more data from actual classroom implementation are needed. The exploration reported in this paper is an attempt to address this issue.

The study

The exploration of blog uses was conducted in the class of postgraduate students over the period of one semester. The following fundamental guiding question was at the centre of this inquiry: in what ways does a blog environment supplement classroom teaching and lead to an improved learning experience? The class under study was attending a course of the 'Master in Information Technology in Education' programme. I organized an experimental blog-based environment in which students were accessing course material, posting reflections, featuring artefacts created through the learning tasks, commenting on each other's contributions and otherwise participating on a regular basis throughout the semester. Data was collected through: observations and analysis of blog activities and artefacts, continuous teacher-reflection, interviews with

selected students and a questionnaire. Multiple sources of data were essential to triangulate key understandings articulated in the study.

Results

Through the semester, I regularly monitored and reviewed blogs in order to observe activities that were taking place. The activities were recorded in field notes and often casually discussed with students. This resulted in a collection of identified activities that were taking place in this particular blogosphere throughout the course (see Table 1 for the list of identified blog-related activities).

Student blogs, their posts, comments and learning artefacts presented also provided useful data contributing to an understanding of issues and activities. Towards the end of the course, interviews with selected students were conducted. These informed the development of a questionnaire at the end of the semester. The participating students were required to assess items on the 5-point scale (1 [*strongly disagree*], 2 [*disagree*], 3 [*unsure*], 4 [*agree*] and 5 [*strongly agree*]). Results are presented in Table 2.

Table 1: *Blog-related activities that were taking place in the class*

<i>Relationship</i>	<i>Activity</i>
Facilitator and his/her blog	<ul style="list-style-type: none"> • Provide course home page • Link student blogs in the home page • Post 'after class' reflections and summaries of major issues for students to read and comment on • Post announcements to the class • Address any emerging issues and learning needs • Invite and encourage students to provide comments • Monitor comments and provide responses • Distribute notes, slides and other material used in the class • Provide any additional resources • Negotiate issues such as what students want to learn and assessment criteria for their assignments • Set datelines and describe tasks for students
Facilitator and student blogs	<ul style="list-style-type: none"> • Regularly monitor student blogs • Provide feedback on student work • Encourage students to contribute • Provide individual students with resources
Students and their blogs	<ul style="list-style-type: none"> • Present completed tasks • Reflect on learning • Share ideas • Provide information and resources that they find interesting • Monitor comments and respond to them
Students and blogs of others	<ul style="list-style-type: none"> • Visit blogs of other students • Provide comments and recommend resources
Students and blog of the facilitator	<ul style="list-style-type: none"> • Read and reflect on posts provided by the facilitator • Access resources • Provide and monitor comments on the facilitator's posts

Table 2: Data on selected items from the questionnaire completed by the students

Items from the questionnaire	n = 24 ^a	
	Agree % (n) ^b	Disagree % (n)
1. Learning in this course		
1.1. Comparing to other courses, in this course I am learning much more	79 (19)	4 (1)
1.2. In this course I believe I will get a higher final grade than in other courses	54 (13)	13 (3)
1.3. Overall in this course, blogging facilitated and contributed to my learning	83 (20)	8 (2)
1.4. Due to class blogs, I felt an important part of our classroom community	88 (21)	4 (1)
1.5. With blogs it appears that other students were supportive of my learning	71 (17)	13 (3)
1.6. Due to the blogging component in this course the facilitator was involved in supporting my learning more than facilitators in other courses	92 (22)	4 (1)
2. The following from blogging contributed to my learning		
2.1. Accessing and reading blogs of other class members	88 (21)	0 (0)
2.2. Accessing and reading the facilitator's blog	92 (22)	0 (0)
2.3. Receiving comments from other class members about my postings and work	83 (20)	4 (1)
2.4. Receiving comments from the facilitator in relation to my postings and work	92 (22)	0 (0)
2.5. Previewing completed tasks of students and reading feedback they received	79 (19)	0 (0)
3. Reasons for blogging		
3.1. I was blogging because of assessment requirements	92 (22)	8 (2)
3.2. I was blogging because tasks set through the course required the use of blogs	79 (19)	4 (1)
3.3. I was blogging because the facilitator was blogging as well	92 (22)	0 (0)
3.4. I was blogging because it contributed to my learning	88 (21)	4 (1)
4. Willingness to blog in the future		
4.1. In future I will continue blogging on my own to support my learning	54 (13)	17 (4)
4.2. In future I will blog if it is required by a facilitator	83 (20)	8 (2)
4.3. In future I will blog if it is a part of course assessment	79 (19)	4 (1)

^a24 students completed questionnaire

^b'Agree' and 'Strongly Agree' choices are collapsed into 'Agree'. Similarly, 'Disagree' and 'Strongly Disagree' have been collapsed into 'Disagree'. 'Unsure' responses are not included in the table as they are self evident from the presentation.

Briefly, data from the questionnaire suggests that the participating students from the group under study agreed that blogging facilitated and contributed to their learning (Item 1.3) and that due to the use of blogs the facilitator appeared to be more involved in their learning (Item 1.6). Further, the students appeared to agree that the facilitator's blogging activity encouraged them to blog (Item 3.3). Aspects of blogging that

contributed most to the students' learning were accessing and reading blogs of others, both those of other students and the facilitator (Item 2.1), receiving comments (Item 2.3 and Item 2.4) and previewing completed tasks of students, and reading personal feedback (Item 2.5). When asked during the interviews to indicate what they liked most about blogging, the participating students specified viewing the work of others (eg, in students' terms to 'learn new things from others' perspectives' or 'see progress of others') and receiving comments on their work. In relation to reasons for blogging, it appeared that tasks that required them to use blogs to present final outcomes were of key importance.

Assessment was an important factor motivating the students to engage in the blogging component of the course (Item 3.1 and Item 4.3). The students indicated their willingness to blog in the future if required to do so by a facilitator (Item 4.2). However, they appeared less willing to continue blogging in future on their own to support their learning without being required to do so by the course or a facilitator (Item 4.1).

Teacher reflection

Overall, from my perspective as a teacher, I believe that the blogs added a new dimension to my teaching effectiveness by enabling me to do things that were not possible otherwise, either with or without other technology. Initially, I saw blogging as a means by which I could provide my reflections to address emerging issues relevant to students' learning. Blog technology allows students as readers of my reflections to post their comments. Blog can also be used as a resource distribution medium. I understood that it is appropriate for students to also maintain their own blogs, where they could reflect upon learning that took place in class sessions, present their work and express ideas and concerns. Once I began reading and reviewing students' blogs, it became obvious that this activity is time-consuming due to having to follow up all blogs individually and to keep track of new posts and comments soon after they had been added. I discovered that Really Simple Syndication (RSS) was one effective tool in this context. RSS allows one to subscribe to information and access the latest posts from students' blogs in one place.

In blogs, students can present their completed learning tasks and invite others to comment. I regularly designed learning tasks for students to complete and present in their blogs. Others and I were able to comment on these and provide suggestions. In this way, students received some feedback that they could use to revise the project, while also learning from others by reviewing their work and the feedback received. I regularly monitored all students' blogs and whenever appropriate attempted to leave some 'trace' of my presence by providing some comments. In addition I sought to develop weekly summaries of what had been taking place in students' blogs and discussed this in class. In this way, students were able to recognize that issues from their blogs were given attention.

Conclusion

This study demonstrated that blogs can be effective educational technology and useful blog-based activities for learning are: (1) reading blogs of others, (2) receiving

comments and (3) previewing tasks of others and reading feedback received in relation to these. Encouragement for students to blog were: (1) regular learning tasks which require students to present outcomes in their blogs, (2) blogs being an assessment requirement and (3) regular blogging of a teacher. Through blogs, a teacher can create an ambience in which students feel themselves to be important parts of the classroom community and that their needs and opinions are recognized and addressed.

In order to maximize opportunities, a blog system can be expanded through other Web 2.0 applications (see Churchill, 2007). RSS technology might be useful in helping teachers and students to manage access to information. Folksonomy or user tagging can also be useful. Students and teachers can tag their own posts and posts of others and these tags could provide meta-information about the content of the posts. Web 2.0 digital repositories (such as Youtube, Flickr or Slideshare) can also be useful additions to the blogosphere. Teachers and students can deposit resources in these repositories and display them in their blogs. Developers of new generations of learning managing systems are beginning to explore ways of integrating Web 2.0 ideas in order to provide systems that leverage technological developments.

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