THE USE OF WEB 2.0 IN E-LEARNING: EVIDENCE FROM A PUBLIC UNIVERSITY IN MALAYSIA

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Abstract

Web 2.0 is a web-based technology application that integrates the characteristics of information sharing and interoperability. It is also associated with aspects of collaboration in a web page that allows users to interact directly with web platform with other users. However, its application tools and their usage in e-learning platform at most of the public universities in Malaysia are still at infant stage. This paper reports some evidences of the use of Web 2.0 tools in teaching and learning via e-learning platform at University Malaysia Terengganu. Description of the use of the tools and a brief statistics of the usage were provided by the e-learning system manager. Facebook, Twitter, Chat and Youtube emerged as the top four Web 2.0 tools that actively used by students. Good acceptance of these tools among students allows rapid development of the Web 2.0 applications in the e-learning platform. The evidence from this study suggests that the use of Web 2.0 promises positive responses from e-learning users and hopefully will enhance pedagogical practices in the near future.

Keywords: Web 2.0, teaching and learning, emerging technologies, e-learning

1.0 Introduction

World Wide Web has been used by thousands of students in the world as an important means for providing learning resources. Students used World Wide Web as a platform to share and obtain information. Rapid development in World Wide Web applications provides the emergence of a new Web 2.0. The web based technology has been recognized as new potential applications to further improve learning activities and sharing information among students and teachers. Many researches suggest that Web 2.0 application tools possibly used to support teaching and learning. Ferdig (2007), for example, examines social networking webs as possible tools in teachers’ education. Hartshorne and Ajjan (2009) indicate that some Web 2.0 applications can be effective at increasing satisfaction with a course, improving their learning and their writing ability, and increasing student interaction with other students and faculty members. In another research, Maloney (2007) suggest that Web 2.0 technologies provide a platform to students to obtain information and share it with others. The facility of Web 2.0 technologies that enable to create and share ideas and information presents benefits for students and teachers at higher education.
There has been a growing trend in higher education to incorporate the Web 2.0 technologies into learning management system in order to fulfill some of the technological expectations of adolescent students. Students nowadays are considered digital natives or those that have grown up using technology such as computers, cell phones, and the Internet (Prensky, 2001). Today, these generations of digital natives use Web 2.0 applications such as wikis, social networks, social bookmarking, and blogs on a regular basis (Pence 2007; Lenhart and Madden; 2007). Regularity of using these digital applications may become an impetus to fully utilize the digital experience of adolescents to be extended as learning tools. So far, however, little research has been reported the extent of usage of Web 2.0 among students. The research reporting the use of these applications among higher education institutions particularly in Malaysia is limited and not fully matured. The purpose of this paper is to describe the use of Web 2.0 tools in the e-learning system at a public university in Malaysia. The rest of the paper is presented as follows. An overview of Web 2.0 and its usage in learning is provided in Section 2. The use of Web 2.0 tools at a university are described in Section 3. Finally, conclusion and future direction of Web 2.0 is given in Section 4.

Web 2.0 and its related research in teaching

A phrase coined by Tim O’Reiley Media in 2004, Web 2.0 refers to the second generation of web based services that emphasize online collaboration and sharing among users’ (O’Reilly, 2005). It is a web based activities which O’Reilly terms as an active ‘architecture of participation’ rather than site of passive consumption. The web can be seen as a vast network of interconnected services that allows users to move their content across and between a variety of applications and contexts. In other words, Web 2.0 is associated with a web application that designed to facilitate the users in sharing of information and to facilitate collaboration with other web users. Users are allowed collaborate and interact with other users in the Web 2.0 applications environment. It is also closely related to social networking that forms the basis for the emergence of Web 2.0. Among the applications that use concept of Web 2.0 are Wikis, blogs, Skype, social networking and video sharing sites. Web 2.0 provides online users with interactive services and control over their own data and information (Madden and Fox 2006; Maloney 2007). These new technologies change the way documents are created, used, shared, and distributed, and make sharing content among participants much easier than in the past (Dearstynne, 2007).

Web 2.0 applications are seen to allow users to participate directly in the creation, refinement and distribution of shared content. For instance, through the tagging of online content (i.e. the labeling of excerpts of text, images or other forms of code) users are able to sort and share content with each other whilst also appropriating and re-using existing content in the production of their
own content. Crucially, all of these activities are underpinned by a public domain approach to issues of intellectual property rights where concerns over propriety do not hinder the distribution and use of online content (Beer and Burrows 2007). Summarily, the Web 2.0 is a situation where web becomes a universal, standards-based integration platform. Based on the sharing information tools provided by the Web 2.0, many research have been geared up to implicate the power of information sharing to various human activities. Veljković et al. (2012), for example, investigate the development of e-government towards the e-government 2.0 concept under the influence of World Wide Web innovations. The Web 2.0 application tools were exploited in bringing government closer to citizens.

Sharing and collaborating of information can be equally extended to teaching and learning process. It was reported that students can easily improve their products with Web 2.0 tools according to the incoming critics and this supports students’ control over their own products (Franklin, & van Harmelen, 2007; Bonk, 2009). In classroom, students might favor adopting Web 2.0 applications to support their in-class learning given their comfort level with these applications (Prensky 2001). In another example, Maloney (2007) advocated that Web 2.0 was seen to mirror much of what we know to be good models of learning. The tools were seen as collaborative and encourage active participatory role among students. From teachers’ perspective, some research suggest that adopting Web 2.0 applications may improve student learning and their satisfaction with a course and, therefore, might encourage or require students to use these tools (Ajjan and Hartshorne 2008). The versatility of Web 2.0 undoubtedly could be used to assist teaching and learning. Perhaps the use of these web based education tools at a public university in Malaysia may offer insight to the possibility of using Web 2.0 as pedagogical tools.

3.0 A Case of the Use of Web 2.0

E-learning at University Malaysia Terengganu (UMT) began in year 1999 in which undergraduate courses have been offered in the form of blended mode. Most literature referred blended learning as the integrated combination of traditional face-to-face learning with online web-based approaches, the combination of media and tools deployed in an e-learning environment (Whitelock and JefTs (2003). In the early stages of the implementation, e-learning was considered as a platform that allows lecturers to upload teaching materials or course notes. The learning platform was also provides online quizzes as course assessment, and room of discussions. Students as e-learning users were allowed to download notes or course materials when needed. Students’ activity via e-learning was merely a refrigerator where lectures uploaded learning materials and students downloaded it at their convenience. However, the situation has slightly changed in tandem with the current development in information technology. Developments in current web based and
ubiquitous technology have enabled the e-learning platform integrated with Web 2.0 technology.

The use of Web 2.0 in teaching and learning in Malaysia may still be considered new and not yet fully matured. Various tools of Web 2.0 have not been fully utilized to support teaching and learning process in higher education institutions in Malaysia. However, popularity of Web 2.0 among public and students has sparked a new picture in the use of e-learning. As an institution of public higher learning, UMT also has started to integrate this technology into the teaching and learning process via e-Learning platform. E-learning at UMT is no longer regarded as the platform where uploading and downloading notes or course materials. The use of Web 2.0 such as forums and blogs are already in place and embedded to the e-learning platform. Each course has distinctive forum which allows students to interact among themselves and lecturers. Although Web 2.0 has been emerged for a long time, but the use of Web 2.0 in e-Learning system has not been extensively explored. Recently, with the Scorm compliance e-learning platform, UMT has initiated measures to introduce the use of Web 2.0 to the lecturers and students. This article describes how Web 2.0 is being integrated to the e-learning and reports the use of Web 2.0 among lecturers and students. It is noted that the e-learning platform at UMT is known as MyLearn and this term will be used in the proceeded text. Some examples of Web 2.0 applications and its popularity are reported as follows.

3.1 Use of Tweeter and Facebook

The use of Web 2.0 in UMT e-learning platform starts with twitter platform for MyLearn. Twitter in My Learn has enabled to lecturers and students know the latest information as well as interact with e-Learning manager if there are any problems with the system. The displayed twitter in MyLearn can be seen in Figure 1.
Students and lecturers could send and read text-based posted to the tweeter. Apart from twitter, other applications which became student’s selection were Facebook. The university’s e-Learning Unit took the initiative to integrate Facebook in MyLearn as a venue where all students are allowed to interact with one another. An example of Facebook in MyLearn can be seen in Figure 2.

![Figure 2 MyLearn UMT @ Facebook](image)

MyLearn users that using Facebook and tweeter are expected to rise. The rising pattern can be seen from the number of students’ visit. Statistics show that the rise in MyLearn usage after the system is integrated with Facebook and twitter. Figure 3 shows the trends which saw the number of visitors increased from 2721 to 3451.

![Figure 3 Number of Twitter and Facebook users in a week](image)

Facebook and twitter were also used to facilitate information dissemination pertaining workshops, seminars or training. Facebook also facilitates interaction among alumni. For example, one active alumnus uses Facebook as a platform to communicate with software engineering
undergraduates. Part of the alumni activities can be seen in Figure 4.

![Figure 4 Snapshot of Facebook Group Alumni Software Engineering UMT](image)

The social networking tool, Facebook is used to discuss common problems such as programming code faced by alumnus.

### 3.2 Use of Online Chat

Chat networks are used extensively as a platform of information sharing. In support of freedom of the accessibility of Web 2.0, UMT does not impose any restrictions on the use of chat tools like Yahoo messenger, skype or ICQ. Usage of chat in teaching is only come into practice after it being introduced as chat module that’s built into the platform of MyLearn. Figure 5 shows one of the examples of a course that use the chat module in MyLearn.

![Figure 5 MyLearn’s Main Display for Courses CSS4102](image)
Chat module is activated and monitored by the course respective lecturers. An example of a Chat session between lecturer and students is shown in Figure 6.

![Figure 6 Example of Chat](image)

Lecturer sets the topics for discussion at the very beginning of the chat session. The topics under discussion are initiated by the lecturer and then students will start giving responses and will continue until the lecturer concluded the discussion. After completing a chat session, students will be given an online test to assess the students’ understanding of what was discussed. Example of the online test can be seen in Figure 7.

![Figure 7 A sample of online test](image)
Use of chat has attracted many students to discuss actively and enhance the use of MyLearn. Figure 8 shows an increase of chat users from 70 to 221 for the period of a month.

![Figure 8 Number of visits when time chat module is activated](image)

### 3.3 Use of Youtube

Video is a very powerful medium to influence students' behavior and thus have an impact on teaching and learning in e-learning platform. Video is capable to present in a very interesting information and a controlled manner. Previously, video sharing is somewhat difficult to implement. With the emergence of MyLearn, video from Youtube has been used as a platform for video sharing. Lecturers upload videos that could provide teaching contents of the relevant topic with the aim to assist students in apprehending knowledge. The selected videos from Youtube are linked directly to the MyLearn. This measure is not only to ease accessibility to users but also can reduce storage and server bandwidth utilization. Students may watch video that was linked to the main page without going to Youtube. One example of video from Youtube that already linked to MyLearn is shown in Figure 9.
In short, Videos from Youtube that linked to MyLearn complement the teaching materials that already embedded in the system.
Conclusions

Web 2.0 technology has been widely used as one of the methods that used to assist teaching and learning particularly teaching materials. This paper has provided a brief explanation on the use of Web 2.0 in MyLearn e-learning platform. In particular, several examples of the use of Web 2.0 that have been practiced in e-learning system at University Malaysia Terengganu were presented. The statistics of the Web 2.0 usage was also furnished to provide evidence of the ever rising users of e-Learning. With the integration of Web 2.0 in the University Malaysia Terengganu e-learning, the system has managed to attract students to actively used MyLearn as a platform in sharing, collaborating and disseminating information. There are many other Web 2.0 applications need to be explored in future. Furthermore, there are more researches need to be undertaken especially to check the efficacy of the Web 2.0 application tools in formal and informal learning settings.
References


