

Exploring the Readiness of Undergraduates for Web 2.0 Integration in the Information Skills Course

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Abstract

GXEX1401 is a compulsory university course designed to equip students with skills that will enable them to find information independently using IT system in the library. This study explores the readiness of students for Web 2.0 integration in information skills course. A questionnaire was designed and then distributed to 400 local students of GXEX1401 from randomly selected sessions in Semester 1 year 2009/2010. The outcome shows that the outlook is promising and the majority of the students have given positive feedback with the exception of a few who could be encouraged and motivated further in specific outreach activities. By deploying Web 2.0 tools and using active learning methods in future, it is hoped that more students will be engaged as provision for learning becomes more enriched and enjoyable. There are other factors though that should be given due consideration and be further explored to ensure the objectives of the course are met.

Abstrak

GXEX1401 merupakan satu kursus wajib universiti bertujuan untuk melengkapkan para pelajar dengan kemahiran yang membolehkan mereka mencari maklumat secara berdikari menggunakan sistem IT di perpustakaan. Kajian ini dijalankan dengan tujuan untuk menilai kesediaan pelajar dalam menerima penggunaan aplikasi Web 2.0 dalam pembelajaran kemahiran maklumat. Satu soalselidik telah diedarkan kepada 400 orang pelajar tempatan GXEX1401 secara rawak pada Semester 1 tahun 2009/2010. Hasil kajian menunjukkan maklumbalas yang positif daripada majoriti pelajar, walaupun terdapat segelintir pelajar yang boleh diberi galakan dan motivasi melalui pelbagai aktiviti sampingan. Dengan penggunaan aplikasi Web 2.0 ini, adalah menjadi harapan pembelajaran GXEX1401 akan dapat memupuk minat dan perhatian pelajar apabila pendekatan pembelajaran berubah menjadi lebih menarik dan menyeronokkan. Terdapat juga isu lain yang harus diberi perhatian dan dikaji dengan lebih lanjut lagi agar objektif kursus ini dapat dicapai dengan jayanya.

Introduction

Information Skills Course (GXEX1401) is a compulsory course at the University of Malaya designed to equip undergraduate students with skills that will enable them to find information independently using IT system in the Library. The course is facilitated by librarians and taught for an hour weekly in 14 consecutive weeks. Students are shown various ways of searching for information using online catalogue, online databases, the internet, effective search strategies and the right method of providing citations of work from other authors.

Since its inception in 1999, GXEX1401 has undergone various transitional processes over the years. Traditionally taught in classroom setting and face-to-face with librarians using over-head transparencies, the

course has evolved to include elements of blended learning to cater for students' needs for self-paced learning. Blended learning is defined as the combination of face-to-face interaction and electronic learning opportunities (Dziuban, Hartman, & Moskal, 2004). It is an all encompassing term to describe learning supported by the use of information communications technology. Successful learning in this technologically enhanced environment is enabled by new structures and media for reflection, communication and facilitation of modeling and visualization. At present, the course is taught using a mixture of Moodle as well as instruction and supervision in classroom setting. Moodle is a Virtual Learning Environment (VLE) operating on a free and open source e-learning software platform.

It is designed to help educators create online courses with opportunities for rich interaction. Its open source license and modular design signify its continuity of functional development. Usage of Moodle in GXEX1401, though, has not been explored to its full range of potentials and capabilities. Its function currently is to store course contents in the form of slides, tests, short quizzes and short messages to alert students on anything that they need to be aware of. What seems to be missing however is its collaboration component which is a crucial element in Web 2.0.

A study conducted by Smith (2007) has shown that Web 2.0 can be very effective for teaching students information literacy since it allows them to explore research through methods they are already familiar with and because it also allows them to learn more through collaboration. By shifting to a more collaborative, student content controlled approach, the program noticed that the overall class participation and projects improved tremendously.

With the emergence of Web 2.0, today's students have access to social bookmarks, RSS feeds, blogs, wikis, photo editing and photo sharing. McManus (2009) suggest that libraries and librarians will need to leverage every aspect of the Web 2.0 technologies in order to remain a vital service to their researchers and patrons. If information literacy programs are to be relevant to today's students, these digital tools should be investigated and usage be taught to students effectively (Baumbach, 2009). The user-focused participatory approach enabled by Web 2.0 allows users to share and collaborate on their work besides promoting open learning. It will help us to remain effective, relevant, productive and competitive in this time of change; to reach beyond the walls of the library and to interact with students and teachers providing them with new ways of accessing, exploring and creating information besides opening new opportunities where learners are the focus.

Integrating Web 2.0 in Information Literacy

The pedagogies of using Web 2.0 for learning are only beginning to emerge, with a consensus that the new technologies offers many opportunities for sharing, social learning as well as creativity (Adolphus, 2009). Learning in Web 2.0 environment involves teachers as the facilitators of the learning process and students learn through collaborative and active methods to attain new learning objectives.

The social nature of most Web 2.0 tools provides new ways to interact with and share data and information. Web tools can help students work in teams whether they are classmates in the same room, or partners with students across the country or on the other side of the globe. These tools allow multiple authors and editors to work on a project, synchronously or asynchronously during class time or after hours from many locations.

Blogs

Blogging can provide a useful opportunity for assessment as it encourages reflection and, therefore, deep learning. It also provides an excellent way for librarians to keep in touch with their students and "top up" on limited contact time.

A study by Chan (2009) on the effectiveness of blogs in developing information literacy skills, found that students did a better job in sharing what they had learned with their peers. The students also made use of the learning tool beyond the minimum requirement set by the faculty member. Those who consulted the blog when researching their term papers believed that the blog was useful in the development of their information literacy skills. Other benefits include higher quality final papers, improved bibliographies in terms of relevance, variety and quality of sources provided.

Wikis

Wikis are collaborative web sites that represent the ongoing, collective work of many authors. Similar to a blog in structure and logic, a wiki allows anyone to edit, delete, or modify content that has been placed on a site, including the work of previous authors using only a browser interface. The most popular and well-known of these sites is Wikipedia, an online encyclopedia that allows anyone to post a new entry or edit a previously existing one (Riddell, 2006).

Rinnovati (2009) has suggested that student participation in wiki development can also provide the opportunity for the type of "deep learning" that requires learning activities to be social, active, contextual, engaging and student oriented.

Social Networking

Godwin (2009) discovered that the use of Social Networking such as Facebook has encouraged students to actively engaged in reflection and talking about real issues that affect their lives. Facebook also provides an opportunity for students to communicate with the facilitators and "top up" on limited contact time.

RSS (Really Simple Syndication)

This tool allows users to view updates of subscribed websites, blogs or podcasts from one location using an aggregator. By including this in information literacy class, the younger generation will be introduced to databases in a controlled manner and given a taste of the kind of information available beyond typical web searching while saving valuable time.

Slideshare

Slideshare enables users to upload, view and share presentation files. Designed as an online presentation platform for workshop, seminar or any other presentation in powerpoint, this tool enables users to be content curator and find presentations on any topic and aggregate them together. This aggregation can be highly useful for people in the target audience and encourage students to sift through a flood of information available online and identify the most useful.

YouTube

Another important online collaborative tool that could engage students is YouTube. This can be done by creating in house library instructional videos and uploading them in YouTube to facilitate centralized and easy access. Some of the examples are :

1. Cornell University Library Channel by Kaila Bursett and her fellow librarians at <http://www.youtube.com/user/olinlibrary>
2. UCLA library instructions at <http://www.youtube.com/watch?v=VJcEndEv4Q0>
3. Bob Baker's Info Literacy Channel at <http://www.youtube.com/user/bbaker48>
4. Paul Robeson Library Channel at <http://www.youtube.com/user/paulrobesonlibrary>
5. University of South Florida Libraries at <http://www.youtube.com/user/USFLibraries>

Skills that come with Web 2.0 competence such as access, interpret, synthesize, manipulate, report, express verbally and visually, will indirectly teach life skills for the future to some extent. Clearly Web 2.0 is the current significant tool for self-expression in various modes. Providing access and instruction in a wide variety of web-based software can increase student achievement, help meet state and national standards and capitalize on existing investments yielding and excellent return on technology investment whether measured by use or products or learner outcomes.

Since learning in Web 2.0 operates under the umbrella of e-learning, this study will consider similar strategies in the course integration. Several issues need to be addressed before the implementation is realized. Sheiladevi (2008) has suggested that e-learners have to be at ease when using computers and internet because otherwise it is not possible for the students to be successful in e-learning. Disparities in terms of access could also hinder the successful implementation of the course. Therefore, one of the research questions to be investigated is the following : What is the percentage of PC ownership among the students and do they feel that the number of PCs available in campus are sufficient for their needs?

Knowing the correlates of access disparity is not sufficient in itself, there is also a need to know more about whether students have used Web 2.0 prior to course enrolment. Students without any knowledge of Web 2.0 might feel confused, lost or overwhelmed by the abundant of information made available by these tools. Hence the next research question posed in this study is : What is the current level of knowledge and usage of Web 2.0 among the students?

To reap the full benefits of e-Learning, one must commit time, attention and careful planning prior to implementation of the course. Even the most common development process can be an arduous task that takes months if it is not executed properly. Various media-sharing services should be explored to empower students and create exciting new learning opportunities.

Preliminary views of Web 2.0 among students are equally critical. This factor should be taken into consideration because it will influence the level of acceptance or resistance to the course integration. As such, there is a need to take a closer look at what students perceive as the best method of teaching.

This study will thus concentrate efforts on the following issues : 1. What are the best method of teaching as perceived by the students ? 2. What are the advantages of Web 2.0 and e-Learning? 3. Application and tools that they think should be incorporated into the course.

Objectives

The main objective of this study is to explore the readiness of students before integrating Web 2.0 into the Information Skills Course. The research questions are as follows :

1. What is the percentage of PC/Laptop ownership and internet usage? Is the university providing adequate PCs/Laptops?
2. What is the current level of knowledge and usage of Web 2.0 among students?
3. What is the preferred format of teaching and application?
4. What are the barriers in using Web 2.0 and other e-learning tools as perceived by the students?

Methodology

In this study, a survey was conducted to answer the research questions. The survey population was identified as full time first year undergraduates studying at Faculty of Arts and Social Sciences, Academy of Islamic Studies, Faculty of Economics & Administration, Faculty of Engineering, Faculty of the Built Environment, Faculty of Education, Faculty of Science, Faculty of Computer Science and Information Technology as well as Cultural Centre. The total number of students enrolled in GXEX1401 for semester 1 year 2009/2010 is 2,260. The questionnaires collected information on students’ gender, faculties, computer ownership, frequency of accessing the internet, knowledge and actual usage of Web 2.0, preferred method of teaching and suitable Web 2.0 applications to be integrated into the course. The survey involved 400 students in randomly selected sessions. The data collected were analysed using SPSS and presented in the form of tables and figures. The survey was conducted among local students where classes were held in Malay Language.

Results and Discussion

Table 1 shows the demography of the respondents. Female accounted more than male at 64.5% and 35.5% accordingly. Students from Faculty of Arts & Social Sciences formed the largest component at 25.3%.

Table 1: Demography of respondents

Gender	% of Respondents
Male	35.5
Female	64.5
Faculty/Academy/Centre	% of Respondents
Faculty of Arts & Social Sciences	25.3
Academy of Islamic Studies	19.9
Faculty of Economics & Administration	15.2
Faculty of Engineering	11.9
Faculty of the Built Environment	9.1
Faculty of Education	6.8
Faculty of Science	4.3
Faculty of Business & Accountancy	3.8
Faculty of Computer Science and Information Technology	2.0
Cultural Centre	1.8

It was found that PC ownership among students is 81.9% and those who do not own either PCs or Laptops are only 18% (Figure 1). Out of those who are missing out in PCs and Laptops ownership, 10% claimed that PCs provided by the university fulfilled their needs while 8% are not satisfied with the facilities. Those who are not satisfied with the facilities suggested that more PCs should be placed at residential colleges (6.1%), faculty (1.3%) and library (0.6%).

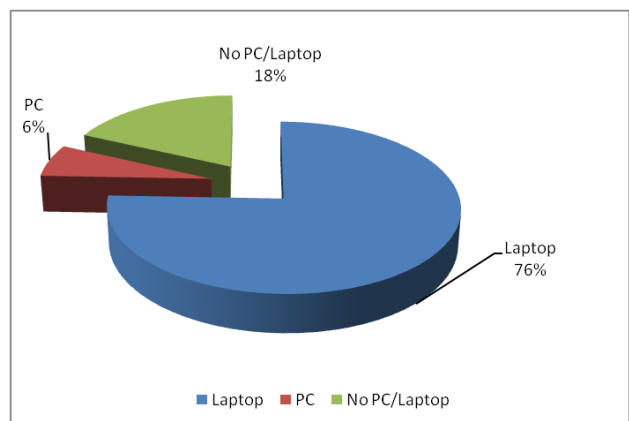


Figure 1 : Percentage of PC/Laptop ownership

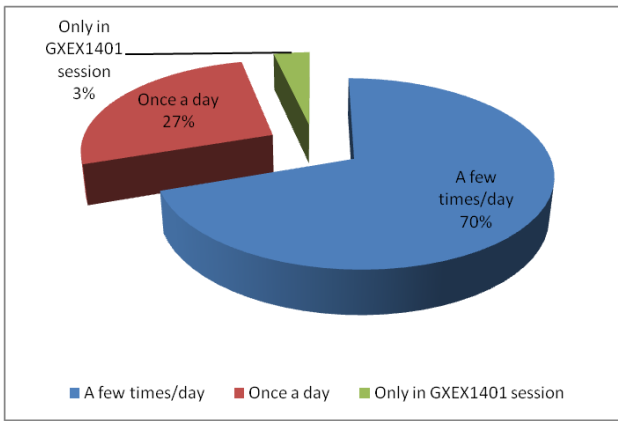


Figure 2: Frequency of Internet Usage

In answer to a question about Internet usage, Figure 2 shows that 70% used it a few times a day, 27% once a day and 3% only in GXEX1401 session. Out of the 3%, 1.37% were from Faculty of the Built Environment, 0.86% from Faculty of Arts and Social Sciences, 0.51% from Faculty of Education and Academy of Islamic Studies and 0.25% from Faculty of Science and Faculty of Economics & Administration.

Students were then asked whether they have used Web 2.0 applications prior to GXEX1401. 85.8% claimed they have used the tools before while 14.2% have not used it. Majority of those who do not have prior experience came from Faculty of Arts and Social Sciences at 7.61% and Academy of Islamic Studies at 3.05%.

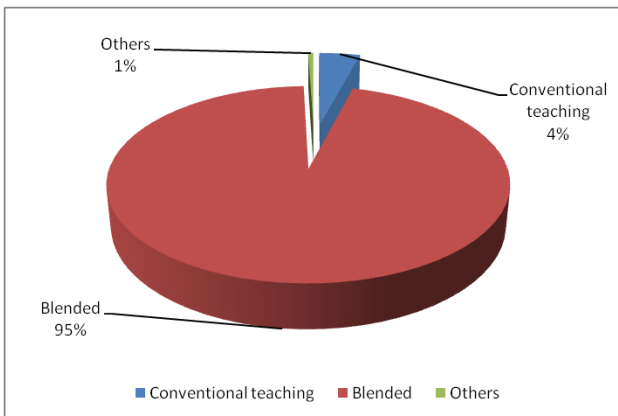
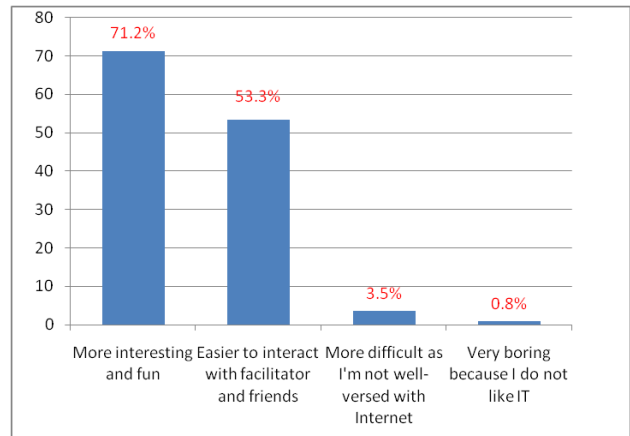


Figure 3 : Preferred method of teaching

Figure 3 displays the preferred method of teaching where majority preferred the blended module ie. a mixture of e-learning, Web 2.0 and conventional teaching, 4% have chosen conventional teaching and others at 1%.

Table 2 shows that Web 2.0 and other IT Tools were perceived positively ('more interesting and fun' or/and 'easier to interact with facilitator and friends') at 96% while 4% of the students have responded negatively ('more difficult as I'm not well-versed with internet' and/or 'very boring because I do not like IT').

Table 2: Respondents' perception of Web 2.0 and other IT tools



When asked what are the barriers perceived in using Web 2.0 and e-Learning for the course, the feedbacks are as follows :

Feedbacks	%
No barrier what so ever - I like and enjoy using Web 2.0	56.1
Difficulty in accessing	22.5
Limited time	12.9
Do not know how to use	9.1
Not interested	3.8

More than half of the students felt that they liked and enjoyed using Web 2.0 while others commented on the difficulty in accessing at 22.5% and limited time at 12.9%. The students suggested that these barriers can be overcome by providing a step by step instruction, improving wifi connections which can be rather slow at times, allocating more time for the sessions ie. changing the classroom period from one hour a week to two hours instead and giving more exercises to familiarize students who are new and not accustomed to the tools.

Table 3 shows the mean score of each application arranged from the highest mean score to the lowest mean score. It can be seen that students perceived their knowledge to be higher than their actual usage. Students' knowledge of YouTube, Facebook, MySpace and Blog are higher than average while above average usage is Facebook and YouTube. RSS, Slideshare and SocialBookmark occupied bottom three in the rank.

Table 3: Knowledge and usage of Web 2.0 applications

Knowledge	Mean	Usage	Mean
YouTube	3.49	Facebook	3.40
Facebook	3.43	YouTube	3.38
MySpace	2.82	Blog	2.44
Blog	2.78	MySpace	2.41
Wikis	2.18	Wikis	2.04
Flickr	2.11	Flickr	1.88
RSS	2.04	Slideshare	1.84
Slideshare	2.02	RSS	1.82
Social Bookmark	1.95	Social Bookmark	1.79

When asked about the application which they thought could complement the existing modules in GXEX1401, students suggested the following tools which have been sorted in terms of rank from highest to lowest (Table 4).

Table 4: Suitable integration of Web 2.0 application in GXEX1401 as perceived by students

Tools	%
Using Facebook as a media of interaction between students and facilitators	64.1
Google Site/e-learning usage	62.1
Slides with images and interesting animation	42.9
Simple instruction on information searching in YouTube	41.4
Blog/Wordpress usage to reflect what has been taught	33.8
RSS usage	18.2

From the above table, it seems that social networking such as Facebook is favoured by the majority of the students. Usage of RSS, however, appeared to be the least popular among the applications. Since RSS can be an invaluable tool for research, perhaps more effort should be placed in engaging the students and providing greater understanding of the tool.

Conclusion

Although there are other factors that should be taken into consideration before integrating Web 2.0 into an information literacy module, this study however, is only limited to matters surrounding digital disparities' and perception of students on the topic at hand. Further studies on other issues such web page accessibility, application content, facilitators' skills in Web 2.0 and web securities should also be given due consideration. All the same, data gathered in this study shows that

majority of the students are ready to embrace Web 2.0 and most favoured "blended" as the preferred method of teaching.

Based on the computer ownership, the results showed that digital divide is not really apparent among the students. Most students also stated that PCs provided by the university are adequate and those who are not satisfied (8%) have suggested that additional PCs be allocated at the residential colleges, faculties and library.

Internet usage is also fairly high with 97% claiming that they are using the internet at least once a day. If Web 2.0 is to be integrated into the information skills module, students that are less enthusiastic with IT tools should be encouraged to spend more time on the web by specific outreach activities. Concerted efforts should also be focused on students who are less familiar with Web 2.0 applications.

The result also shows that Slideshare, RSS and Social Bookmark are the least popular application despite its significance as a research and collaboration tool. Content of program emphasizing the importance of these tools should be given serious attention to ensure the objectives are met.

In conclusion, despite the positive outlook surrounding the integration of Web 2.0 in the information skills course, adequate planning and strategies must be considered before deployment of the tools. This is to ensure the effectiveness of the program in anticipation of the new breed of users as well as new technologies in the learning environment.

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