

Exploring the Awareness and Use of Web 2.0 Tools by the First Year Information Science Students, Walailak University, Thailand

Suthanya Doung-In

Abstract—The purpose of this paper was to explore the awareness and use of Web 2.0 tools by the first year Information Science (IS) students at Walailak University (WU), Thailand. The first year IS students at WU, who enrolled an Information Literacy course in the first semester, 2013 academic year, were identified as the population of this study. Two hundred and six undergraduates completed a questionnaire of this study. The results, therefore, showed that the first year IS students of WU were quite familiar with some of Web 2.0 tools, such as YouTube, Blogs, Wikis, Instant messaging and Social Networking sites comparing to other Web 2.0 tools, such as RSS feeds, Flickr, and Podcast. Walailak University should take advantage of Web 2.0 technologies to enhance learning of the Net generation or digital natives. Based on these findings, the study recommended the integrating a unit of Web 2.0 tools in curricula, providing a unit of Web 2.0 tools in Print and incorporating a unit of Web 2.0 tools in Social Network to improve the Information Science student skills for future information professionals.

Index Terms—Information science students, internet, software tools, web 2.0 tools.

I. INTRODUCTION

A number of technological developments have come together to create new ways of using Web. Instead of providing static information on web pages, Web 2.0 technologies have provided more participatory experience of internet use. Users are encouraged to create, contribute their contents, as well as interact with others. The term of “Web 2.0” was coined by Tim O’Reilly of O’Reilly Media in 2004. T. O’Reilly (2005) [1] defined Web 2.0 as:

[...] a network platform, spanning all connected devices. Web 2.0 applications are those that make the most of the intrinsic advantages of that platform: delivering software as a continually-updated service that gets better the more people use it, consuming and remixing data from multiple sources, including individual users, while providing their own data and services in a form that allows remixing by others, creating network effects through an “architecture of participation,” and going beyond the page metaphor of Web 1.0 to deliver rich user experience.

In Thailand, the use of the Internet is increasing day-by-day. According to the statistics of December 2012, in Thailand, 20 million of the population is internet users (30 percent of population), out of which 8 million are Facebook

users. With the advantages of social media and Web 2.0 technologies, people can create, share, and exchange ideas and information easily. 74.7 percent of all internet users in Thailand were under the age of 35. Playing game online with their friends in Facebook are quite popular, such as Farmville, Café World, and Restaurant City. Additionally, they like to share many aspects of their lives, for example, pictures of foods, places, and cultures in Thailand. Twitter, Instagram, media sharing, such as pictures and video are also used by individuals, organizations, and institutions for different purposes [2].

For social interaction and educational purposes, many organizations and institutions are employing Web 2.0 tools and communication resources, such as YouTube in growing numbers. Some of Web 2.0 tools are Blogs, Wikis, RSS feeds, Social bookmarking, Instant Messaging, YouTube, Flickr, RSS feeds, Podcast, Social networking, and so on.

Universities such as University of Edinburgh have been using Blogs, RSS feeds, Social bookmarking, and Podcasts for knowledge sharing in a collaborative way [3].

Libraries and academic health science libraries have been using Facebook mainly for marketing the libraries, for example, delivering announcements to library users, posting photos, and providing chat reference [4]. The Ohio University library has been using RSS feeds to promote news and events, such as arrivals of new books, new items in the collection etc. (<http://www.osu.edu/rss.php>). Also, most of state university libraries in Thailand have used Blogs and Wikis to promote of library news and activities, announcement in their organization and knowledge management. Additionally, Instant messaging can be used in reference services in order to communicate with library patrons [5].

But little has been done on the students’ awareness and use of Web 2.0 tools in universities in Thailand. Many of these studies focus on one particular Web 2.0 application in teaching and learning, for example, the application of Facebook, such as [6]-[12]; Blogs, such as [13]. Arising from this realization, this study attempted to investigate the awareness and use of most Web 2.0 tools by the first year IS students in WU, Thailand. To do this, the following research objectives were raised:

- 1) to investigate the awareness and use Of Web 2.0 tools by the first year IS students in WU;
- 2) to identify the reasons of the first year IS students in WU using Web 2.0 tools;
- 3) to determine the means through which students learnt the skills to use Web 2.0 tools.

Research questions

- 1) to what do the first year IS students in WU use and aware of Web 2.0 tools?
- 2) What are the reasons the first year IS students in WU use Web 2.0 tools?
- 3) Through what means do the first year IS students in WU learn the skills to use the Web 2.0 tools?

II. LITERATURE REVIEWS

A. Web 2.0

The easiness of Web 2.0 technologies allows users to express their ideas and knowledge with others in online community without knowing technical expertise.

The main types of Web 2.0 tools are described:

- 1) **Podcasting** is a set of audio and video that can be played with both PC and portable media player without limited time and places. Users can download updated content automatically, including request for the real-time media service from podcast providers. Podcast also have the potential of offering shared resources for teaching and learning.
- 2) **Instant Messaging** is synchronous communication that allows users to communicate with others by sending real-time messages, such as MSN Messenger, Yahoo Messenger, and ICQ etc.
- 3) **Blogs** enables web users or Blog owners to create and distribute their contents in order to share their knowledge and experiences in online societies. Additionally, it enables users to access other Blogs that gather related information. Blogs also give the opportunity for users to discuss among experts in the particular topic. This tool is necessary in supporting learning communities [14].
- 4) **Wikis** allows writers to create their contents. This information can be shared and edited by others. Wikis can be used to promote knowledge sharing and a collaboration community, for example Wikipedia (www.wikipedia.org), PB wiki (www.pbwiki.com), and so on.
- 5) **Social bookmarking**, an online bookmarking service that allows users to bookmark, organize, search, and share with communities. Additionally, it allows users to tag web resources by keywords in order to describe web pages. It also gives users the opportunity to organize their bookmarks with informal tags. This facilitates users to find information they want quickly. Examples include del.icio.us (<http://del.icio.us>) and digg (www.digg.com).
- 6) **RSS Feeds** (Really Simple Syndication): RSS is an effective way for users to receive news and information in real time. It permits continuous instant alerting users to the latest idea on the Internet, such as Blogs, Wiki, Social bookmarks, or other websites.
- 7) **Media sharing**: It allows users to upload Social media, covering images and videos, share, and tag an image by keywords, such as Flickr (www.flickr.com) for images, and YouTube (www.youtube.com) for videos.
- 8) **Social networking sites**, web-based services that allow users to share their personalized profiles and activities,

such as documents, photographs, videos etc. to a list of friends or social interest groups. Examples include My Space (www.myspace.com), and Facebook (www.facebook.com).

B. Information Literacy

T. W. Goad (2002, pp. 13 & 21) [15] purposed a brief definition of Information Literacy as “the ability to search for, find, evaluate, and use of information from a variety of sources”. R. J. Todd (1992, pp.1) [16] defined IL as “a holistic, interactive learning process encompassing the skills of defining, locating, selecting, organizing, presenting, and evaluating information.”

Information literacy is essential skills for studying in higher education. The undergraduate students are required to locate, access, search, evaluate, and use information effectively in various contexts [17]. Moreover, information literacy has been a major role for lifelong learning [18].

The potential of Web 2.0 tools has been recognized to implement in education, especially for an Information Literacy course. Web 2.0 tools encourage students to publish, share, comment the learning materials, and give them a chance to access and manage relevant resources by themselves [19]. Web 2.0 applications and services facilitate more collaborative ways of working. These tools can support knowledge construction and dissemination [20], for example, Blogs can be used in information instruction for content organization, information evaluation and delivery. One of the benefits of Blogs is to facilitate reflective learning on information collection for assignments in higher education courses [21] since Blogs allow many contributors to write and share information, or to exchange other people’ feedback about their work, as well as to include hyperlinks, images, audio and video files. This tool can promote student critical thinking.

Moreover, students can learn the concept of controlled vocabulary by using the tagging feature of Social bookmarking tools. Flickr offers work under a Creative Commons license, which is used to teach copyrights. This tool helps students to gain a deeper understanding of how to use information on the web appropriately in their own work [22].

III. RESEARCH METHODOLOGY

The study aimed at examining the awareness and use of Web 2.0 tools by the first year IS students at WU. The population of the study is 288 (source departmental office), who enrolled in the information literacy course, 2013 academic session. The questionnaires were distributed to students in the first week of the class. In total, 206 responses were collected (which is 71.53 percent) and the findings of the study are based on these responses.

A. Instrument

A questionnaire, containing in three sections was designed in order to collect data from the respondents. The first section had a number of questions about demographic data, such as gender, major of study, favorite resources, frequency of the use of the Internet, and purposes of ICT use by the first year

IS students. In the second section Web 2.0 tools were listed and the participants were asked to select the reasons of use of each of them. The third section had questions about students' suggestions about the Information Literacy Instruction module.

B. Instrument Pre-testing

The questionnaire was pilot-tested primarily to assess the appropriateness of questions and scales and to ensure the validity and reliability of the instrument. The testing was conducted with five IS students for their reviews and comments. Many useful comments were made and the questionnaire was revised in light of their input.

C. Data Analysis

Descriptive statistics were conducted to describe the sample and find the means and standard deviations. Descriptive quantitative data were analyzed by SPSS.

IV. RESULTS

A. Demographic Data of Respondents

Out of 206 participants, 42.7 percent of respondents were male and 57.3 percent female.

84 (40.8 percent) of the respondents were studying in Multimedia Technology and Animation, 24 (11.7 percent) in Information Technology, 12 (5.8 percent) in Software Engineering, 45 (21.8 percent) in Communication, and 41 (19.9 percent) in Digital Information Management.

The results indicated that 182 students (88.3 percent) used the Internet every day. Only 24 students (11.7 percent) used the Internet sometime a week.

A self-report assessment of levels of internet skills was explored on the next question. The majority 119 (57.8 percent) reported that they had fairly sufficient internet skills, and 50 (24 percent) considered they were high skilled users. Only 37 (18 percent) thought of themselves as "lower skilled users".

B. Favorite Resources by the First Year IS Students

The students were asked about the favorite resources. The majority of students preferred the Internet. It was used by 23.8 percent, followed by books with 21.1 percent and periodicals with 13.7 percent (see Fig. 1).

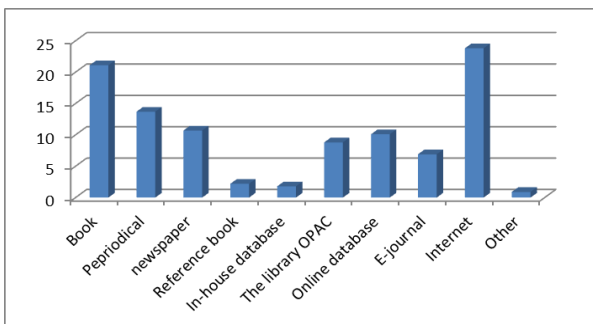


Fig. 1. Favorite resources used by the first year IS students.

C. Frequency of the Use of the Internet

The students were asked about the frequency of use of the Internet. The majority of students (88.3 percent) indicated

that they visited the site on a daily basis, followed by 11.7 percent who indicated they used almost every day.

D. Purposes of Information Computer Technology (ICT) Use by the First Year IS Students

The first year IS students were asked about their reasons for using Information Computer Technology (see Fig. 2). For "searching information" was the top motives with 21.1, followed by "game and entertainment" with 17.3 percent and "for chatting" with 16.1 percent, respectively.

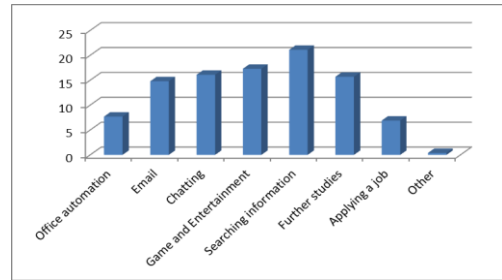


Fig. 2. Reasons for using ICT.

E. Awareness and Use of Web 2.0 Tools by the First Year IS Students

The first objective was to investigate the awareness of the respondents of the use of social software.

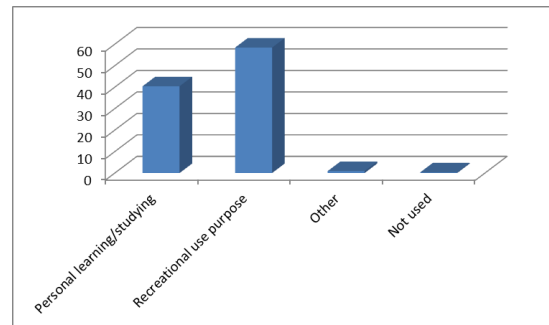


Fig. 3. Reasons for using YouTube.

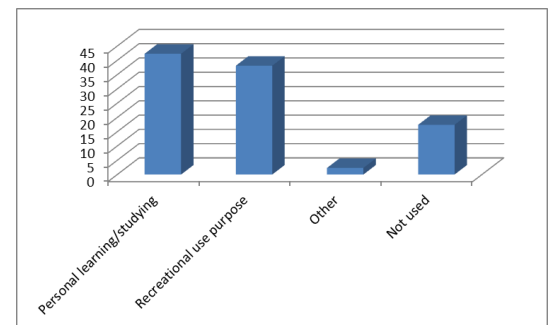


Fig. 4. Reasons for using blogs.

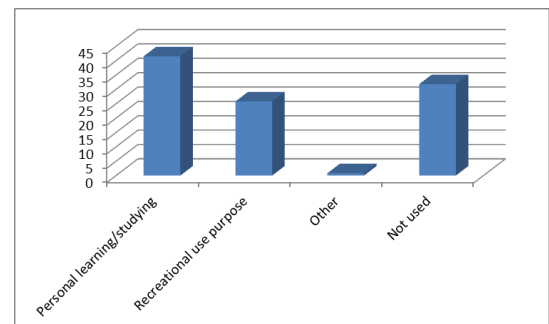


Fig. 5. Reasons for using RSS feeds.

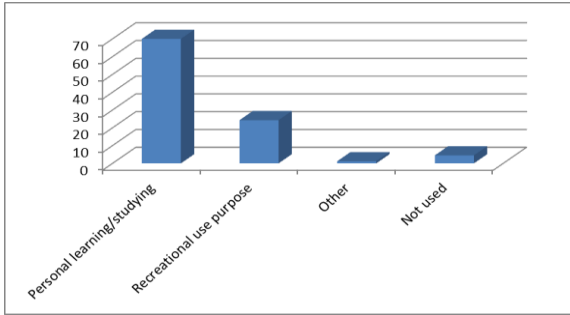


Fig. 6. Reasons for using Wikis.

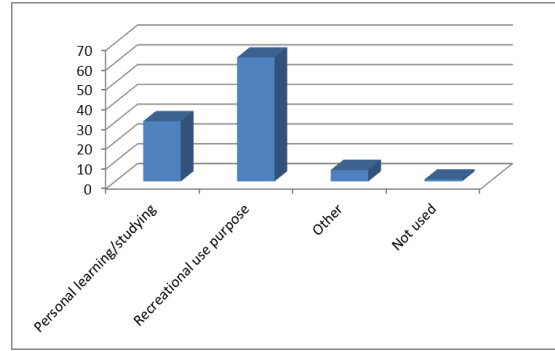


Fig. 11. Reasons for using social media web, such as Facebook.

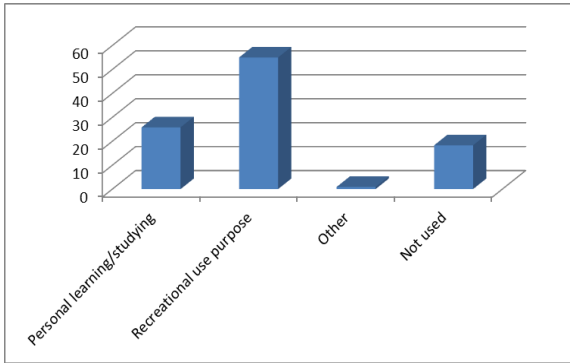


Fig. 7. Reasons for using podcast.

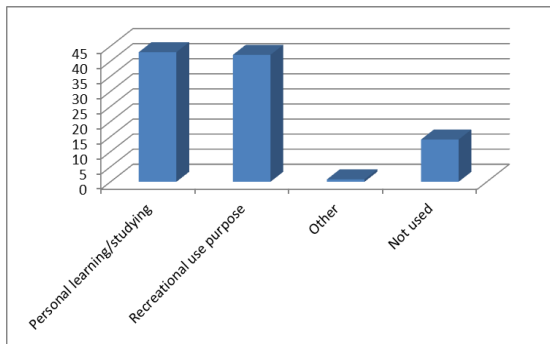


Fig. 8. Reasons for using social bookmarking.

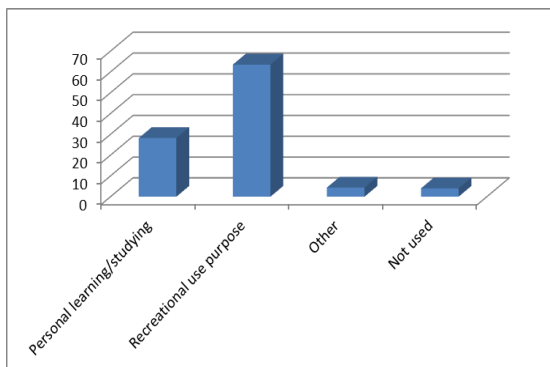


Fig. 9. Reasons for using instant messaging.

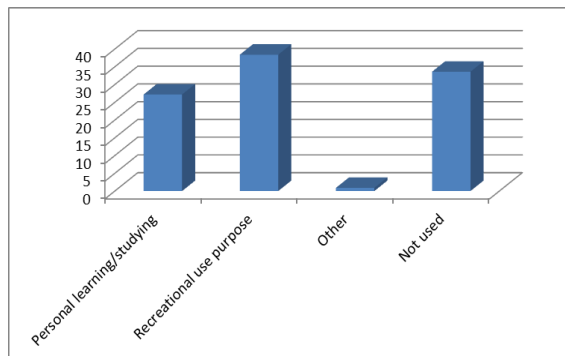


Fig. 10. Reasons for using Flickr.

The first year IS students were asked to indicate the purposes for which they used Web 2.0 tools. As Fig.3 shows, the main reasons for the students to use YouTube were: recreation use purposes (58.4 percent) and learning and studying (40.4 percent). Results on the individual items furthermore showed that the students mainly used Blogs to learn and study (42.3 percent; see Fig. 4), and to recreate their life (38.1 percent). Moreover, the main reasons for the students to use RSS feeds were: learning and studying (41.5 percent; see Fig. 5), while 31.8 percent indicated they had never used RSS feeds. Results on the individual item (Fig. 6) showed that the main reasons to use Wikis were to learn and study (70 percent), and to recreate their life (24.3 percent). As shown in Fig. 7, the main reasons for the students to use Podcast were: to recreate their life (55 percent), to learn and study (25.8 percent) and did not use (18.3 percent). 43 percent of the students indicated that they used Social Bookmarks for learning and studying, followed by 42.1 percent who indicated that they used Social bookmark for their recreation purpose (see Fig. 8).

Recreational use purpose was the top reason for using Instant messaging with 63.5 percent, followed by 28.2 percent who indicated that they used Instant messaging for their learning and studying (see Fig.9). Additionally, 38.4 percent of the students used Flickr for learning and studying, followed by 33.6 percent who indicated that they did not use Flickr (see Fig. 10). Fig. 11 demonstrates that the majority, around 62.7 percent of the students who indicated that they used Facebook for the recreational purpose and 30.5 percent indicated learning and studying.

The results therefore showed that the first year IS students of WU were quite familiar with some of Web 2.0 tools, such as YouTube, Blogs, Wikis, Instant messaging and Social Networking sites. They were not familiar with Web 2.0 tools, such as RSS feeds, Flickr, and Podcast. For this reason, the first year IS students should be exposed to additional applications. One can assume that if School of Informatics, WU offers courses on Web 2.0 concepts, the students would know, use and appreciate the benefits and advantages of this platform.

F. The Means though Which Students Learnt the Skills to Use Web 2.0 Tools

A follow up question attempted to further tab into their skills of using Web 2.0 tools, the students were asked the means though which students learnt the skills to use Web 2.0 tools of the first year IS students (see Fig. 12).

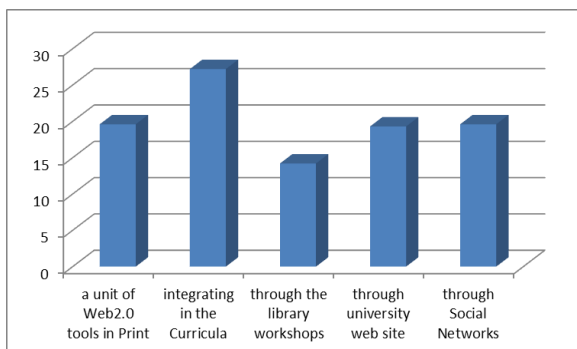


Fig. 12. The means through which students learnt the skills to use web 2.0 tools.

The results revealed that 27.2 percent of the students indicated that integrating a unit of Web 2.0 tools in curricula, followed by providing a unit of Web 2.0 tools in Print and learning a unit of Web 2.0 tools through Social Networking sites, such as Facebook with the same score, 19.6 percent. As new ICT applications like Web 2.0 emerge, curriculum needs to be redesigned to update ICT courses, otherwise, IS schools will fail to provide students with the appropriate skills.

V. DISCUSSION

This study investigated the awareness and use of Web 2.0 tools by the first year IS students in WU. Consistent with recent studies advocating the awareness and use of Web 2.0 tools by students in different fields e.g. [23], [24]. The findings indicated that majority of the first year IS students in WU were aware of Web 2.0 tools and they made moderate use of YouTube, Blogs, Wikis, Social Bookmarks, Instant messaging, and Facebook. The present finding was consistent with the findings of E. M. Eze (2016) [25].

The findings also found that the majority of the first year IS students used Blogs, RSS feeds, and Wikis for academic purposes. This might be as a result of their exposition of those Web 2.0 technologies. This finding contrasted with the finding by E. M. Eze (2016) [25] who found that communicating with friends, exchanging opinions/news for their personal life, and meeting with people were the top reasons for joining social networks.

On the other hand, the results found that the majority of the first year IS students used Podcast, YouTube, Instant messaging, Flickr, and Facebook for fun and recreational purposes. This finding was consistent with the finding of J. Sandars and S. Schroter (2007) [24] who found that most respondents had not used Podcast in professional development.

Interestingly, they knew very little about RSS feeds, Flickr and Podcast and they lacked of knowledge and skills in how to use these technologies. This may be related to their lack of exposure to, lack of motivation in and/or lack of interest in these applications.

Furthermore, the study revealed that the first year IS students preferred to integrate a unit of Web 2.0 tools in curricula, a unit of Web 2.0 tools in Print and integrate a unit of Web 2.0 tools in Social Network. This finding was consistent with the earlier finding by E. Garoufallou and V. Charitopoulou (2011) [26] suggested that incorporating the knowledge of Web 2.0 into LIS schools is important for

preparing students to become information professionals.

VI. CONCLUSION

The research has shown that the majority of the first year IS students of the School of Informatics at Walailak University, Thailand were familiar with, and did use Web 2.0 tools, especially YouTube, Blogs, Wikis, Social Bookmarks, Instant messaging, and Facebook. A very high percentage indicated no use at all of tools, such as Podcast, RSS feeds and Flickr.

The results of the study indicated that the majority of the first year IS students were motivated to use Podcast, YouTube, Instant messaging, Flickr, and Facebook by fun and recreational purposes but they ignored the possible advantages that these tools could offer in terms of professional networking and exchange of knowledge. It was clear that the importance of these tools to their studies and their professional lives was not recognized by the students. It was very important for students to appreciate the power that tools like these can have in the professional education. Based on these findings, the study recommended the integration a unit of Web 2.0 tools in the Information Science curricula. This will encourage students to explore the possibilities and advantages of Web 2.0 have to offer, which will eventually benefit their future career.

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Suthanya Doung-In was born in Suratthani, Thailand. She graduated with B.B.A in business computer from Prince of Songkla University, Thailand, the M.S. in information technology from King Mongkut's Institute of Technology Ladkrabang, Thailand, and the Ph.D. in computer & information sciences from University of Strathclyde, the United Kingdom. She started her career as a lecturer in Walailak University, Thailand. She is currently an assistant professor at the School of Informatics, Walailak University, Thailand.

She won an excellent paper award from her research entitles "The usability testing on initial user interface design of Nakhon Si Thammarat National Museum Web Site" from International Conference on Cultural Technology (ICCT 2017), Chiang Mai, Thailand.