The Status of Web 2.0 in Iran's LIS Education

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ABSTRACT

The present paper discusses results of a study which aimed to explore the knowledge and use of Web 2.0 technologies by LIS academics in Iran and to explore the challenges they face for using these technologies. More specifically, the study was to find answers to the following questions: 1. How do Iran's LIS educators rate their awareness of Web 2.0 tools? 2. How and in what ways Iran's LIS educators use Web 2.0 tools and services for academic purposes? 3. What are the problems that inhibit Iran's LIS educators from using Library 2.0 applications? The research method was explorative and empirical. Data was collected through a web-based survey questionnaire containing both open and close ended questions. The results show that LIS academics in Iran had good level of familiarity with some Web 2.0 tools such as blog, wiki, YouTube and Facebook. However, their familiarity with some other Web 2.0 tools such as RSS feeds, Twitter, Flickr, Delicious and podcast was limited. Blog, discussion groups, chat tools, file sharing tools, Wikis and SMS, video sharing tools and forum were used respectively by LIS academics in their teaching. Internet filtering was identified as the most inhibiting barrier to the use of Web 2.0 tools. Lack of access to high speed internet and lack of training were pointed as the other identified barriers. Authors suggest that to reap the benefits of Web 2.0, LIS academics need to find alternative non filtered Web 2.0 tools to employ in their teaching and research.

Keywords: LIS education; Iran; education 2.0; Library 2.0; Web 2.0 technologies

INTRODUCTION

The need for Library and Information Science (LIS) students to get familiar with Web 2.0 technologies has been reinforced in recent years. Preparing LIS graduates for the emerging Library 2.0 environment; reaping the educational benefits that Web 2.0 tools offer and meeting the needs of net generation are some reasons for supporting the idea of using Web 2.0 tools in LIS education and incorporating its related themes into the LIS curricula . Ways of integrating Web 2.0 tools in LIS education have been proposed in the literature but there remains the question that whether LIS academics themselves have acquired Web 2.0 knowledge and skills, and whether their work environment is ready for employing these technologies. Personal interest in Web 2.0 tools and being an Iranian LIS academic motivated the first author of the present paper to explore the status of Web 2.0 in LIS education in Iran with regard to the familiarity and actual use of these new technologies among LIS academics and to explore the barriers to this end.

LITERATURE REVIEW

What is Web 2.0?

The phrase web 2.0 is introduced in a conference brainstorming session between O'Reilly and MediaLive International in 2004 (O'Reilly, 2005). The first generation of web technologies, known as read-only web, appeared as a platform for one way communication between information publishers and information consumers. However, the next generation of web technologies, called web 2.0; also known as read-write web, developed to provide the possibility of customers' contribution to the creation of web content (Madden and Fox, 2006; Maloney, 2007). While, for some people web 2.0 means only technology, for many it offers a new attitude.

It led to the emergence of new user-centered paradigms in many areas where customer's participation is crucial.

Education 2.0

The development of web 2.0 technologies has presented new opportunities and challenges to education and educational systems of different disciplines. In fact, lots of higher education institutions have a history of using ICT in their teaching and learning. It is of course, worth noting that technology alone does not mean success in any context. "It only becomes valuable in education if learners and teachers can do something useful with it (Virkus, 2008). The term e-learing 2.0 coined by Downes (2005) is a representation of this shift. The term reflects very much the idea of "a community of practice" as suggested by Wenger (1998) and promotes an active community of learners. Web 2.0 has implications for distance education, in site education and education in different levels and different forms. It facilitates both of the learning and teaching processes and is helpful for both teachers and learners (Selwyn, 2010 ;Ferdig, 2007; Simoes and e Gouveia, 2008). These tools and technologies "allow for easy publication, sharing of ideas and re-use of study content, commentaries and links to relevant resources in information environments that are managed by the teachers and learners themselves" (Guntram, 2007. P. 23). By the introduction of web 2.0 technologies new models of learning and teaching is emerging (Alexander, 2006; Bartolomoe, 2008). Web 2.0 is a tool for collaborative teaching and promotes the benefits of working cooperatively for instructors. It enhances the learning outcome by combining the contribution of many individuals with different talents. Allowing students to reflect their ideas in their publications, the usage of web2.0 assist a more reflective learning environment. It also allows students' interaction with their classmates, teachers, and even experts from outside their educational system.   Besides, by students' active participation in the learning process they learn how to learn. This helps nurture some practical skills among students that is essential for writing, doing research and for life long learning in the age of electronic communication. It is also worth considering that the needs of today students, who are grown up with the technology and are known as digital immigrants, digital natives or Net generation, is different from the past (Prensky, 2001). The familiarity and preference of these people in the employment of new technologies have been demonstrated in several researches (Hartshorne and Ajjan, 2009; Tysome, 2007). With the application of these technologies, education will also become more user- centered and it will be more responsive to the needs of students, as it allows students to adjust and perform the educational programs as they need to (Virkus, 2008).   Hence, it is logical to propose that the application of web2.0 technologies will lead to an increasing satisfaction of students with their educational system (Hartshorne and Ajjan, 2009).

Web 2.0 for LIS education

The employment of Web 2.0 technologies is even more beneficial for LIS education. Today's society is built on digital environment of work. This especially is happening to libraries. In the field of library and information science, the term library 2.0 is first coined by Casey (2005) on his weblog called LibraryCrunch. Web 2.0 technologies have been adopted by librarians to facilitate access to information, to help information transfer, and to promote knowledge sharing among library staff and clients.

For LIS people however, web 2.0 is not only about technology, it also means significant attitudinal shift in the profession (Partridge, Lee and Munro, 2010). Consequently, with the influence of Web 2.0 on all aspects of librarians' professional life, new roles have been considered for librarians that are reflected in the studies of new market demands (Partridge, Lee and Munro, 2010; Al-Daihani, 2009). The need for a holistic approach to embed web 2.0 applications in LIS education is then ascertained in the literature (Srivastava, 2009). Along with these developments, on the other hand, new concepts such as Information and knowledge management are also emerging. These concepts are considered as part of constituent elements of the LIS and have been integrated into its curriculum content (Hazeri, Martin and Sarrafzadeh, 2009; Rehman and Marouf,2008). These new concepts are also dependant on new technologies and benefit web 2.0 for personalization and participation.

Hence, web 2.0 is not only required to be an integral part of the LIS curricula, but it should be applied in the structure of the educational context to support both LIS teaching and learning. As a result, it is a real need for LIS education system to foster the actual engagement of learners with this new environment in the learning process. The integration of web 2.0 technologies with LIS teaching and learning environment also offers a great chance for LIS students to get prepared for life long learning. Indeed, the equipment of LIS students with information literacy skills has two fold advantages and it is more vital for these people than any other groups of students, because these professionals not only need to have the right skills to be able to add on their knowledge for their own sake, but also to be able to teach others how to find, evaluate, interpret and use information to create new information and to expand their knowledge. The application of these technologies in the educational environment of their school will certainly help LIS schools to get better understanding and skills of how to use these new technologies later on their work. Furthermore, as library and information science is about information and/or knowledge creation by using these tools, LIS students practice collaborative knowledge building. LIS is a multidisciplinary field and no doubt that its education can be richer with collaboration of people from different disciplines. This might happen more easily by using Web 2.0.

While the above statements strongly suggest the necessity of changes both in the educational methods and content of the LIS , evidences show that schools and educators have been slow in responding to the needs of web2.0 education (Aharony, 2008; Virkus,2008 ; Coutinho and Bottientuit Jr.,2008 ; Foo and Ng.,2008).

IT courses in Iran's LIS education

LIS education in Iran is mostly in face to face mode but there are some programs in distance education mode provided by Payame Noor University as well. There is no e-learning system for LIS programs. LIS curriculum is more or less the same in all universities in Iran
Before curriculum renewal there was only one course allocated to IT in the undergraduate LIS program in Iran. In the new curriculum issued by the Ministry of Science, Technology and research in effect since 2009 there are four IT related courses in the LIS curriculum including: Word processing, Basics of IT, Designing website for library and information centers and Information and Communication technologies. None of these courses are directly related to Web 2.0 tools. It depends on LIS academic themselves to incorporate teaching knowledge and working skills of Web 2.0 tools in those IT related courses or other non-IT courses.

Internet filtering in Iran

The most popular social networking tools such as Facebook, Youtube, Flickr and Twitter are blocked in Iran by the government and using them even for teaching and research is prohibited. Therefore LIS academics and students are not able to take educational advantages of these technologies. The Iranian government justifies Internet content filtering by appealing to a constructed Islamic "moral majority" and claiming to uphold the moral values of their society. In particular, filtering is justified as sustaining Islamic values by protecting citizens from sites contain pornography and other "depravities." (Shirazi 2008). Ghashghai and Lewis (2002) state that many Middle Eastern governments fear the Internet will facilitate communication among "subversive" individuals and other organizations such as special interest groups that have political agendas that challenge the legitimacy of their governments.

Research method

The study was an empirical exploratory in nature. Exploratory research usually occurs when a researcher studies a new topic of interest or where the subject of inquiry is relatively new. The data collection instrument was a web-based survey questionnaire. The web-based questionnaire was designed using Google forms.

An email and a reminder containing the link of web-based survey questionnaire and a brief description of the research were sent to 175 LIS academics working in public and private universities during July to August 2010. The questionnaire contained both close and open ended questions including questions on personal information, and on determining the level of

familiarity with the most popular web 2.0 tools such as: blogs, wikis, Twitter, Facebook, Youtube, Flickr, Delicious, file sharing tools (e.g. Google Docs), RSS feeds, podcasting, voice and text messaging tools (e.g. Skype). Questions were also included in the questionnaire to reveal whether LIS academics use these tools in teaching and research and to identify the possible barriers to the adoption of these technologies.

RESEARCH QUESTIONS

The research goal was to explore whether Iranian LIS academics were familiar with Web 2.0 tools and whether they made use of the different Web 2.0 applications in their teaching and research. Research questions are listed in below:

1. How do Iran's LIS educators rate their awareness of Web 2.0 tools?
2. How and in what ways they use Web 2.0 tools and services for academic purposes?
3. What are the problems that inhibit Iran's LIS educators from using Library 2.0 applications?

THE SAMPLE

LIS programs in Iran are offered by public, private (Islamic Azad) and distance education (Payame Noor) universities. LIS academics employed by all of these universities were considered as research population. Email address of these LIS academics were collected through directories of librarians and LIS academics produced by LIS association of Iran and browsing university websites. In total 175 LIS educators were listed.

FINDINGS

All in all 44 out of 175 individuals filled in the questionnaire. So the response rate of the present research is 25.14%.

Demographic data

Demographic data (Gender, Age, Qualifications, Teaching experience) of respondents have been summarized in Table 1. Nearly 60% of respondents are male which is surprising given the female dominated profession of LIS. This can be interpreted that the topic of the questionnaire was more interesting to male members of the research population. Also, based on the experience of authors as both Iranian LIS students and academics, although LIS programs absorb small number of male students, the number of male LIS academics is not fewer than female LIS academics. As for the age of respondents, most of respondents are in the age group of 36-40 and over 45. 65% of respondents are under the age of 40. Nearly half of the respondents have PhD degree. 42% of respondents have Masters degree. A very small portion of respondents (9%) have Bachelor degree.

Table 1: Demographic data

Demographic data		N	%
Gender	Female	18	42
	Male	25	58
Age	Under 31	10	23
	31-35	7	16
	36-40	11	26
	41-45	4	9
	More than 45	11	26
Qualifications	Bachelor	4	9
	Master	18	42
	PhD	21	49

	Less than 5 years	19	44
	5- 10 years	9	21
Teaching experience	11-15 years	8	19
	16-20 years	3	7
	More than 20 years	4	9

As for the teaching experience, 44% of respondents have less than 5 years teaching experience. Only 16% of respondents have over 16 years teaching experience. Given that 65% of respondents are under the age of 40, this result is not surprising.

Familiarity with Web 2.0 tools

The first question in the survey addressed the awareness and familiarity of participants with Web 2.0. In particular they were asked to indicate their level of familiarity with most popular Web 2.0 tools in 5 scales of *do not know*, *heard about it*, *view*, *make comment* and *have an account*. Findings for this section have been summarized in Figure 1.
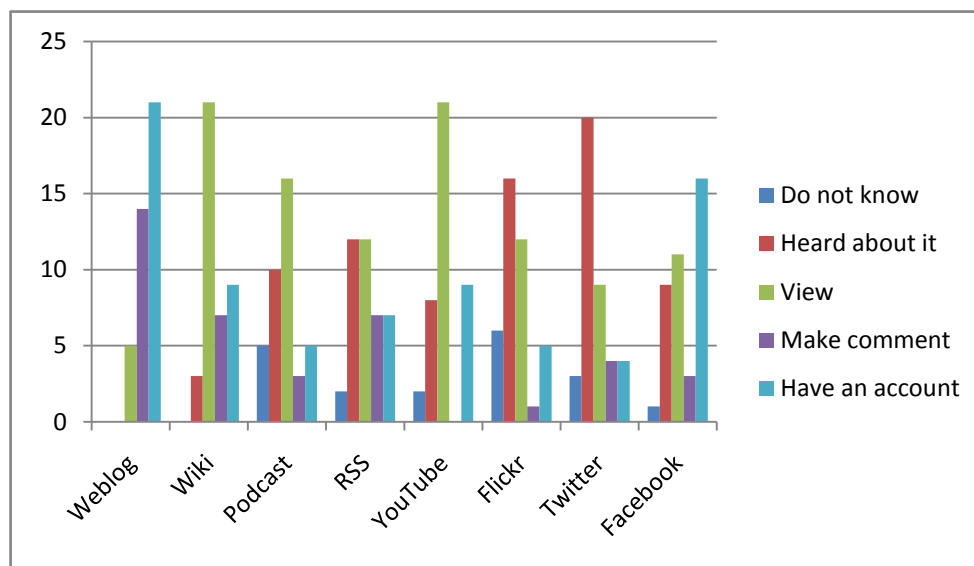

Figure 1: Familiarity with Web 2.0 tools

As shown in Figure 1, blog was the tool that respondents had most familiarity with it. Nearly half of the respondents had a blog. Facebook was the second most familiar Web 2.0 tools for respondents. 36% of respondents had a page in Facebook. Wiki and YouTube were the third most familiar tools with 25% of respondents had an account in them. On the other hand, respondents had least involvement with Twitter and Flickr with only 11% of respondents had an account on them. Nearly half of respondents were totally unfamiliar with those two tools or just heard about it.

Use of Web 2.0 tools by Iranian LIS academics

The second question concerned the use of Web 2.0 tools by LIS academics in their teaching and research. In this question the collaborative and communication Web 2.0 tools such as social networking tools, bookmarking tools, photo sharing tools, video sharing tools, file sharing tools, forum, SMS, text, voice and video chat tools, discussion groups, blog, wiki, podcast and LibraryThing were listed and respondents were asked to choose the tools that they use in their academic work. An open-ended option of "others" was listed at the end for the tools that LIS academics might use and were not listed. Answers for this question have been summarized in Figure 2. The figure shows that again blog is in the top of the list with 66% of respondents using it for academic purposes. After blog, discussion groups, chat tools, file sharing tools, Wikis and

SMS, video sharing tools and forum are in used respectively by respondents. Using social networking/bookmarking tools, photo sharing tools, podcasts and LibraryThing was less than 11%. The tools listed by respondents under the "others" option were portals and websites which are not considered as Web 2.0 tools.
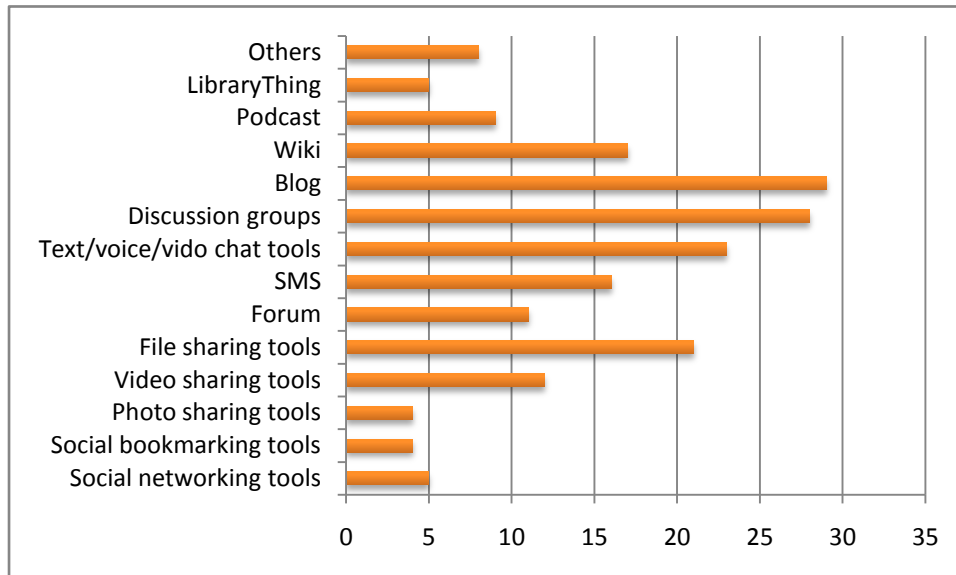

Figure 2: Use of Web 2.0 tools in teaching and research

Analysis of qualitative data

There were two open ended questions in the questionnaire. The first one examined the advantages that respondents see in using Web 2.0 tools and the second one on how they use (if any) these tools in their teaching and research. These questions absorbed comments from most of respondents.

The advantages of incorporating Web 2.0 in LIS education

The first open ended question addressed the benefits of using Web 2.0 tools in LIS education. Some Comments from respondents addressed educational benefits of using Web 2.0 and some comments targeted specifically their benefits for the LIS profession and LIS graduates. Comments to this question have been summarized and categorized in below:

Educational benefits

- Facilitating communication and interaction
Some respondents believed that using Web 2.0 tools can facilitate communication and interaction among students themselves and students and their instructors. Receiving quick feedback from instructors, enhancing the role of students as knowledge creators not just knowledge consumers, discussing challenging issues in a convenient time and extending students' informal network were some of the benefits stated by respondents.
- Promoting team working skills among students
Group work can be facilitated through Web 2.0 tools. Group work enhances team working skill which is one of the frequently asked requirements in job advertisements.
- Presenting study materials in different formats
- Improving writing skills of students: students will get quick feedback on their works not only from their instructors but also from their classmates. This will enhance their writing skills.

Specific benefits for LIS profession

- Preparing students for Library 2.0

LIS graduates may expect to work with Web 2.0 tools in their workplaces. Therefore, to increase employability of LIS students, teaching how to use these tools is necessary.

- Increasing information literacy skills

Since Web 2.0 tools are considered as source of information and knowledge, teaching them to LIS students will increase their information literacy skills.

- Improving the image of LIS profession

Incorporating Web 2.0 tools in LIS education can give LIS a better image and absorb more students to LIS programs. Students will have a better feeling about their course with using these tools. There was a warning comment from one of respondents stating that not using these tools can make the LIS profession isolated.

How Web 2.0 tools are used

The second open ended question asked how Web 2.0 tools are in used (if any) by LIS academics. There was a range of different ways that participants used Web 2.0 tools along with various purposes provided for doing this. Comments have been summarized based on the different tools in below:

- Google Docs: For file storage and sharing with students
- Chat, SMS: for quick communication, questions and answers' sessions, for practicing virtual reference services with student
- Forum: for class discussions
- YouTube: Using YouTube videos as learning materials and to improve level of English among students
- Group blog: for students group assignments
- LibraryThing: for teaching cataloguing and classification
- Wiki: for students' assignments
- LIS discussion groups: for keeping update and for communicating with other scholars.

Challenges of using Web 2.0 tools

Another goal of the present research was to get the opinion of the respondents about the problems and obstacles related to using Web 2.0 applications in teaching and research. Several potential barriers were listed under the question and respondents were asked to choose all that applies to them. There was an open-ended option of others for not-listed barriers. As shown in Figure 3, the biggest barrier in using Web 2.0 tools was Internet filtering. After that slow internet, lack of training and lack of access to the Internet in the students' part were other inhibited problems respectively. Lack of technical support and lack of time were not significant issues in using Web 2.0 as only 9-10% of respondents chose them as barriers.
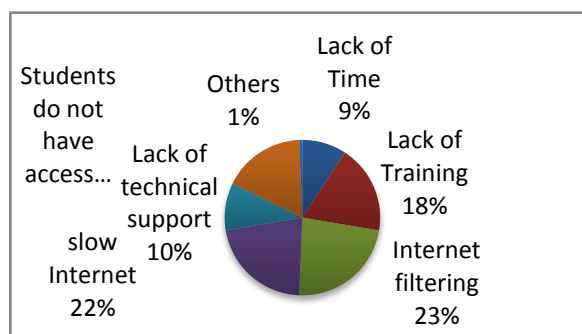

Figure 3: Barriers of using Web 2.0 tool

DISCUSSION

The results of present study indicates that while LIS academics have good level of familiarity with some Web 2.0 tools such as blog, wiki, YouTube and Facebook; their familiarity with some other Web 2.0 tools such as Twitter and Flickr is limited.

The issue of Internet filtering has affected the use and familiarity of Web 2.0 tools by LIS academics. Twitter and Flickr are both blocked sites in Iran and familiarity of respondents with them was limited. Although the use of blocked websites is illegal, some people employ anti-filter softwares to overcome filtering. However this is for home use (although illegal) and in public (especially in universities) it is not allowed.

Because of filtering LIS academics do not use all the Web 2.0 tools that they master for their academic purposes. For example while the results showed that 36% of academics had an account in Facebook, very few of them used it for academic purposes. But for a video sharing tool like YouTube which is again a blocked website, respondents who have good level of familiarity use it in teaching and research as well. This can be interpreted that Facebook is a site that must be used online but YouTube videos can be downloaded at home and be used offline in class.

Respondents were aware of advantages of using Web 2.0 tools in LIS programs. In open-ended questions they commented on some educational advantages and specific advantages for the LIS profession with employing Web 2.0 tools.

For Iranian LIS academics, the most inhibiting barrier in using Web 2.0 tools was Internet filtering. Two relevant comments from respondents are in below:

"Most of the listed Web 2.0 tools are blocked and accessing them is illegal. How can I use them even for academic purposes?"

"It shouldn't be expected from academics to use an anti-filter to teach blocked websites to students illegally"

Slow Internet is another barrier in using some Web 2.0 tools. Especially for podcasts and videos it is very time consuming to download them with a slow Internet. High-speed Internet is banned by the Iranian government (Shirazi 2008).

Lack of training was the third biggest barrier in using Web 2.0 tools. This barrier is relevant to Internet filtering. Teaching blocked websites is not allowed.

CONCLUSION

The result of present study cannot be generalized due to the low response rate of 25%. However the results are subject to several interpretations for the respondents' group of Iran's LIS academics.

There is a good potential and interest in academics to employ Web 2.0 tools. Despite the inhibiting barriers such as filtering and low speed of the Internet, LIS academics make use of some Web 2.0 tools and are aware of their implications in teaching. As mentioned in the literature review of the present paper, Web 2.0 tools have proved to be very beneficial for education in general and for LIS programs specifically. Employing Web 2.0 tools in LIS education is an opportunity that cannot be dismissed by academics.

To reap advantages of Web 2.0 tools in education, academics need to find ways to convince the government unblocking them or at least find alternative (not very popular ones such as Facebook, YouTube, Flickr and Twitter that are blocked) non blocked websites to employ in their teaching. There are thousands of Web 2.0 tools in today's world with similar functions. The important thing is to teach students how to use them and what are their applications.

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