

## **Awareness and Use of Web 2.0 Tools By LIS Students In Delta State University, Abraka**

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### **Abstract**

The study aims to investigate the level of awareness and use of Web 2.0 tools by Library and Information Science (LIS) students of the Delta State University (Delsu), Abraka, Nigeria. The study adopted a descriptive survey method and questionnaire was used to collect data from 356 respondents. The results show that the Delsu LIS students are quite familiar with some Web 2.0 tools such as Social networking sites (Facebook, Skype, LinkedIn), Instant Messaging, wikis, and blogs. The most very frequently used Web 2.0 tools by the students are social networks like Facebook, LinkedIn, and Twitter, followed by Instant Messaging and YouTube. The results showed little use of tools such as Flickr, Podcast, RSS feeds, and Social bookmarks. Communicate with friends/family, acquaintances/meet people, and fun were the top reasons for the Delsu LIS students joining social networks. The majority of the Delsu LIS students indicated that they learnt the use of Web 2.0 tools through self-practice, followed by friends. Only a few indicated learning the skills through the library school.

**Keywords:** Web 2.0, undergraduate students, social networks, Nigeria.

### **Introduction**

Web 2.0 tools and social networking sites in recent years have become so dominant that now they dominate the everyday personal and professional life of millions of users (Garoufallou and Charitopoulou 2012). The rapid evolution of Web 2.0

applications is offering new possibilities and perspectives in business, government, health sectors, education and other public domains (Virkus, 2008). Higher education institutions in Europe and in the USA have explored the educational use of Web 2.0 and numerous advantages or potentials have been highlighted (Franklin and Van Harmelen, 2007; Grosseck, 2009). Web 2.0 tools and services can support much flexibility in the learning processes and allow for easy publication, sharing of ideas and re-use of the study content, add commentaries and links to relevant resources in information environments that are managed by the teachers and learners themselves (Guntram, 2007). According to Franklin and Van Harmelen (2007, p. 7) Web 2.0 is “allowing greater students independence and autonomy, greater collaboration, and increased pedagogic efficiency.”

On the other hand, Social Networking Sites (SNSs), have exploded over the past few years, resulting in increasing numbers of people using these sites for personal, professional and academic purposes (Park, 2010). This phenomenon has forced the library and information professional to think about and explore the use of the SNSs, especially for using these technologies within their libraries (Connell, 2009). In today’s ICT era, millions of people are turning to the Internet to keep in touch with their friends, family and colleagues. Social networking tools make staying involved quicker, easier and more fun than ever before (Park, 2010). There are many social networking tools available for people, such as Facebook, MySpace, LinkedIn, Flickr, and so on. These SNSs have millions of users, with ever increasing numbers of users every day.

Social networking Web sites are those that provide opportunities to interact.

There are a number of ways that libraries can use social networking tools (5 Minute Guide: SNSs, 2014) for strengthening their services so that they can make the users feel benefitted. Libraries can:

- use these social networking tools to mobilize their services;
- create fan clubs, so that the popularity of the library can be measured over time;
- facilitate access to librarians and the library’s resources;
- advertise special programs and events;
- highlight parts of the collection, such as new items, to a specific group;
- make users aware of activities relevant to them and the latest library developments so that users can feel excitement and want to visit the library; and
- prove that libraries are not afraid to use cutting-edge technology.

Web 2.0 refers to a group of technologies such as blogs, wikis, RSS feeds, podcasts, etc, where users are able to add, share and edit the content, creating a socially networked web environment (Anderson, 2007). According to Abram (2005, p.1)

Web 2.0 is ultimately about a social phenomena – not just about networked social experiences, but about the distribution and creation of web content itself, characterized by open communication, decentralization of authority, freedom to share and reuse, and the market as a conversation.

Web 2.0 is not restricted to these tools and services, some of the popular examples of Web 2.0 tools are:

- Wiki: Wiki is a collaborative web site which can be directly edited by anyone with access to it (Wikipedia.org).
- Blog: Blog is a web site, usually maintained by an individual, with regular entries of commentary, descriptions of events, or other material such as graphics or video (Wikipedia.org).
- Instant messaging (IM): IM is a live online communication synchronous channel which facilitates online interaction between two parties.
- Real simple syndication (RSS): RSS is lightweight XML format which is used for publishing frequently updated content such as blog entries, news headlines, and podcasts in a standardized format (Geoghegan and Klass, 2005).
- Social networking sites (SNS): Social networking sites are web-based services such as Facebook, Twitter, MySpace, etc. with hundreds of millions of users which allow subscribers to create web spaces where they can share their thoughts, music, videos and pictures (Geoghegan and Klass, 2005).
- Del.icio.us: Allows users to bookmark favorite sites and to share those bookmarks with others.
- Podcast /streaming video and content: Podcasts are audio contents available on the internet that can be automatically delivered to a personal computer or MP3 player (Geoghegan and Klass, 2005).
- YouTube: Allows members to upload videos for everybody to see and vote on their popularity (Downes, 2005).
- Flickr: Allows for photo collecting, tagging, and distribution services (Downes, 2005).

Adoption of Web 2.0 tools in higher education has also several challenges and many unresolved issues (Conole et al., 2006; Anderson, 2007; Franklin and Van Harmelen, 2007; JISC, 2009). Some of the challenges surrounding their use in higher education are highlighted as follows:

- How to identify the choice of Web 2.0 tools for effective deployment;
- How to implement Web 2.0 tools successfully into teaching and learning;
- How Web 2.0 tools can support students' different ways of learning;
- How to facilitate the development of required skills to use Web 2.0 tools;
- How to deal limit digital exclusion; and
- How to deal with intellectual property rights (Conole et al., 2006; Anderson, 2007; Franklin and Van Harmelen, 2007; JISC, 2009).

Some studies have found that many students lack the required skills to use Web 2.0 tools efficiently (Bawden, et al., 2007; JISC, 2009; Al-Daihani, 2010). Students' experiences and conceptions of the use of Web 2.0 tools have been given little attention in the research literature especially from Africa. Kennedy et al. (2007) underlined the need to have evidence of how various technologies and tools in higher education could improve students' learning outcomes prior to the incorporation of Web 2.0 tools.

In spite of the fact that Web 2.0 tools are increasingly attracting the attention and interest of academics and researchers in other parts of the world such as USA and Europe, there is little research done on students' awareness and use of Web 2.0 tools in Africa, especially in Nigeria. Therefore, to fill the gap, the present study aims to investigate the level of awareness and use of Web 2.0 tools by LIS students of the Delta State University, Abraka, Nigeria. To do this, the researchers set out the following research questions:

- RQ1. To what extent are the LIS students aware of the Web 2.0 tools?
- RQ2. To what extent do LIS students use the following Web 2.0 tools?
- RQ3. What are the reasons LIS students join a social network?
- RQ4. Through what means do the LIS students learn the skills to use Web 2.0 tools?

## **Literature Review**

### **Students Use of Web 2.0 Tools**

Several studies have been conducted in other parts of the world regarding the use of Web 2.0 tools by students. In Israel, the study by Aharony (2009a) on the influence of LIS students' personality characteristics on their perceptions towards Web 2.0 use shows that the most common use among LIS students is that of wikis, the next one is blogs, followed by social networks and ending with Flickr and RSS. Similarly, Virkus and Bamigbola (2011) studied Africa and Asia students of Erasmus Mundus Digital Library Learning (DILL) Master programme and found that Web 2.0 tools were perceived as means of chatting, talking and sending messages to family members, friends, colleagues and reading their profiles. The study also found that Web 2.0 tools were explored in many educational contexts. The contextual focus as experienced by DILL students was on presentation of lectures, personal assignments, group collaborations, e-learning courses and for doing their master thesis (Virkus and Bamigbola, 2011). In the same vein, some researchers have noted that blogging enhances comprehension, communication and literacy among students (Huffaker, 2004; Poling, 2005) and that it may serve as a platform that motivates students to reflect on their learning process (Clyde, 2005).

Regarding wiki use in an academic setting, Reman et al., (2005) have suggested that wikis can support collaborative knowledge creation and sharing in an academic environment. Furthermore, Aharony (2009b) found in her study that the wiki platform enables students in an academic setting to use profound levels of discussion and interaction. The study by Aharony (2009a) revealed a difference concerning patterns of Facebook use. The researcher found that, female students spend more time on Facebook. Similarly, Hargittai (2007) claimed that females were more likely to use MySpace. In another study, Haigittai and Hsieh (2010) concluded that females tend to be more intense users of social sites than males, and states that females who are good at communication spend more time than males on Facebook.

In Greece, Garoufallou and Charitopoulou (2012) studied Web 2.0 in library and information science education and found that the most popular Web 2.0 application is

Web games used by 78.5 per cent, digital maps 63.3 (per cent), blogs (60.7 per cent) and social media (59.6 per cent). The study also revealed that the Web 2.0 tools that students use least are social bookmarks (73 per cent), with RSS feeds (57.5 per cent) and wikis (47.6 per cent). In another study by Garoufallou and Charitopoulou (2011) on the use and awareness of Web 2.0 tools by Greek LIS students found that majority of Greek library science and information systems students of the LSIS Department at the Alexander Technological Educational Institute of Thessaloniki, Greece are familiar with, and do use Web 2.0 tools. The study also revealed that a very high percentage indicated not using tools such as RSS, social bookmarks and tagging.

Students and teachers use many web-based systems in order to exchange information and enrich their knowledge. The use of blogs, chatrooms and so on facilitated the exchange of information and knowledge with a wider audience (Dickson et al., 2008). For example, The University of Osnabruck carried out a research about the virt Presenter project and the users' behaviour. The results showed that 73 per cent of the students used the main interface to watch the recordings, 23 per cent used the embed-player from the University blogs and wikis and only 4 per cent used Facebook. Educators have created some Web 2.0 tools especially for educational purposes. "Moodle is that kind of tool, a free software e-learning platform designed to help educators create online courses with opportunities for rich interaction. Students can contribute entries to a database, comment on others' entries or collaborate in a wiki" (Redecker, 2009, p.38). In the same vein, Glass (2008, p.9) reviewed five Web 2.0 applications (Blogs, Wikis, Second Life, Facebook and Web 2.0 +) that have been used in the Department of Information Communications at Manchester Metropolitan University. He concluded that Web 2.0 technologies "offer really rich opportunities for network development and interactivity for both staff and students in higher education" and that "they have contributed greatly to an enhancement of the student experience and to creating a better sense of 'community' and involvement".

Similarly, Garoufallou and Charitopoulou (2011) found that the majority of Greek LIS students were motivated to join a social network by fun and curiosity but they have ignored the possible advantages that social networks could offer in terms of professional networking and exchange of knowledge. To encourage the use of Web 2.0 tools in their professional lives, Garoufallou and Charitopoulou recommended that introducing Web 2.0 into the LIS school curriculum would be the most effective way to teach LIS students the use of a variety of Web 2.0 tools. Virkus and Bamigbola (2011) concluded that DILL students' experiences of Web 2.0 varied and that resulted in the four different categories of descriptions: communication, educational, professional and multi-purpose. They added that it was apparent from these conceptions that DILL students had realized various potentials of the Web 2.0 tools. Ram *et al.* (2011) reported that the Learning Resource Centre in the study made a number of provisions to adopt some Web 2.0 applications in its library services to create information literacy, but that the users of the Jaypee University of Information Technology library still lack awareness about various Web 2.0 applications necessary for teaching and learning.

**Students Use of Social Networking Sites (SNS)**

In recent times, social networking sites (SNS) have become so popular among students and young population. SNS allow individuals to be visible to others and established or maintain connections with others. Farkas (2007) explained how the social web has led to the birth of what is known as the “read/write web” or Web 2.0. The author also introduced the term “social software”, which refers to any software that lets people have a two-way conversation. She explained that many users spend almost all their time online to visit SNS due to the advantages of those sites, which include:

- allowing people to communicate and build community online;
- facilitating syndication by sharing and reusing; and
- capitalizing the knowledge of others and helping people learn easily.

Ellison et al. (2007) identified the benefits of Facebook for college students. They used Facebook as a research context in order to determine whether offline social capital can be generated by online tools. The results of their study showed that Facebook use among college-age respondents was significantly associated with measures of social capital. Park (2010) studied the differences among university students and faculties in their perception and use of social networking in South Korea. He found that most undergraduate students regard SNS as an entertainment feature, and most faculty members were not active users of this technology. Kanagavel and Velayutham (2010) studied the impacts of social networking on college students in India and The Netherlands. The study revealed that Indian students spend more time in these sites than Dutch students but they were mostly passive. Dutch students, on the other hand, participate more actively than Indian students by posting to these sites. Also, Kumar (2012) in India investigated the perception and use of SNS among Sikkim University students. The study showed that a good number of university students use SNS for academic purposes in addition to entertainment. Facebook was the most used social networking site followed by Orkut and Twitter.

Furthermore, Hamade (2013) studied the perception and use of social networking sites among university students in the state of Kuwait, and found Twitter as the most popular site among students with 89 percent; Facebook was second with 62 percent and Flickr was third with only 7 percent. The survey also showed the majority of students had more than one social network account, 156 students (52 percent) had both Twitter and Facebook accounts. Aharony (2013) compared Facebook use by level of education and found that BA students of LIS in Israel perceive Facebook as more beneficial than other students, find it easier to use, and are more aware than the MA/PhD students of its cost. They stated further that those LIS students who consider both the benefits and the cost of Facebook, along with Facebook’s ease of use, decide in the end to make greater use of the network. These students balance various aspects of Facebook, and only after getting a comprehensive perspective make more extensive use of Facebook. Bhatt and Kumar (2014) found in their study that the majority of the students (78.8 percent) have an account on SNSs and only 21.2 percent of the respondents do not have an account on any SNS platform. The study also revealed that the most popular sites are Facebook (98.5 percent), Twitter (80.6 percent) and

Google + (79.1 percent). Although students know about the other SNSs, they use them less in comparison to Facebook, Twitter and Google +.

Regarding the gender issue in the involvement of SNS, the study by Hamade (2013) showed that female students in Kuwait appeared to favour the use of Facebook more than other sites, while male students tend to use Twitter more frequently than any other site. The study further revealed that the great majority of students (70 percent) used SNS for entertainment purposes. Garoufallou and Charitopoulou (2012) concluded in their study that social media and Web 2.0 are part of LIS students' everyday life in Greece.

Connell (2009) found through a survey that most respondents are using SNSs and users indicated that they would be accepting library contact through such Web sites. Further, he recommended that librarians proceed with caution when implementing online social network profiles. In the same manner, Dickson and Holley (2010) noted that social networking can be an effective method of student outreach in academic libraries if libraries take care to respect student privacy and to provide equal coverage for all subject area.

## **Methodology**

This study aimed at investigating the level of awareness and use of Web 2.0 tools by LIS students of Delta State University (Delsu), Abraka. The population of the study is 1100 (source: department office) being the total population of undergraduate students of library and information science (LIS) from 100-400 levels 2012/2013 academic session. The sample size of 366 was generated being 30 percent of the total population using systematic sampling technique to avoid drawing a biased sample. Fraenkel and Norman (2000) stated that the larger the sample, the more likely it is to represent the population.

A questionnaire was designed to collect data from the respondents. Using convenient sampling technique, the questionnaires were distributed to students in their respective classrooms in the department of library and information science. In total, 356 completed and returned copies of the questionnaire were used for the analysis. The descriptive statistics were analyzed using frequency counts and percentages. The results are present in tables and bar charts.

## **Findings and Discussions**

Out of the 365 participants, 67.7 percent of the respondents were females and 32.3 percent males. Most of the participants are in their first year of their studies (29.6 per cent). Students were asked to indicate the extent to which they are aware of the Web 2.0 tools (see Table I). Social networking sites were the most popular application (97 per cent), followed by 84 percent of the respondents who indicated that they are familiar with Instant Messaging (IM). While, students indicated that they are not familiar with Web 2.0 tools such as RSS feeds, Podcast and social bookmark with 47, 42 and 36 percents respectively. On the other hand, 25 percent of the students indicated that they have only heard of Web 2.0 tools such as RSS feeds, followed by

26 percent who indicated that they have only heard of Web 2.0 tools like Podcasts. The results show that the LIS students of the Delta State University are quite familiar with some Web 2.0 tools such as Social networking sites, Instant Messaging, wikis, and blogs. They are not familiar with Web 2.0 tools such as RSS feeds, Podcasts, and social bookmarks. For this reason, the LIS students should be exposed to additional applications. The present research examined Delsu LIS students and not the whole LIS schools in Nigeria, but one can infer that the situation in Nigerian LIS schools is not very different from each other. One can assume that if Nigerian LIS schools offer more courses on Web 2.0 concepts, the students would know, use and appreciate the benefits and advantages of this platform.

**Table 1:** Awareness of Web 2.0 tools by LIS

<b>Web 2.0 tools</b>	<b>I know</b>	<b>(%)</b>	<b>I don't know</b>	<b>(%)</b>	<b>Only heard</b>	<b>(%)</b>
Blogs	249	68	49	14	67	18
Wikis	261	71	47	13	57	16
RSS feeds	103	28	174	47	88	25
Social bookmark	178	49	131	36	56	15
Instant messaging (IM)	309	84	27	8	29	8
Pod casts	117	32	152	42	96	26
Social networks (Facebook, Twitter, LinkedIn etc).	352	97	4	1	9	2

n=365

Students were asked to indicate the extent to which they use the Web 2.0 tools with a scale from 1 to 5, where 1 indicated no use and 5 very frequent use. The most very frequently used Web 2.0 tools were social networks. The results show that Facebook, LinkedIn and Twitter were used very frequently by 73, 55.1, 51.8 percents respectively, followed by Instant Messaging with 50.7 percent and YouTube with 40 percent. It is expected that social networking sites like Facebook, LinkedIn and Twitter will be the most visited social network sites. Statistics of internet and Facebook usage show that as of December 31, 2013 there were about 6.630.200 million Facebook users in Nigeria (Internet World Stats, 2014). The present finding is consistent with the findings of Peluchette and Karl (2010) that social networking web sites like Facebook and MySpace rank just behind search engines as the most visited sites on the internet. While it contrast with earlier findings by Aharony (2009a) that the most common used Web 2.0 tools among LIS students is that of wikis, followed by blog and social networks. This might be as a result of their exposition to those Web 2.0 technologies. The present results showed little use of tools such as Flickr (68 percent), Podcast (64 percent), RSS feeds (63 percent), and Social bookmarks (52 percent) (Details can be seen in Table II). This indicates that the students only use social networking sites like Facebook, Instant messaging and YouTube to



communicate and share pictures with friends. The Web 2.0 tools such as RSS feeds, Podcasts, social bookmarks, and tagging which the Delsu LIS students are not familiar with were least used by the students. The Delsu LIS department should be ready to accept the use of Web 2.0 technologies and expose students to the various Web 2.0 technologies considering their educational benefits students can derive from using them.

**Table 2:** The extent to which you use the following Web 2.0 tools

Note: 1 indicate no use - 5 very frequently used.

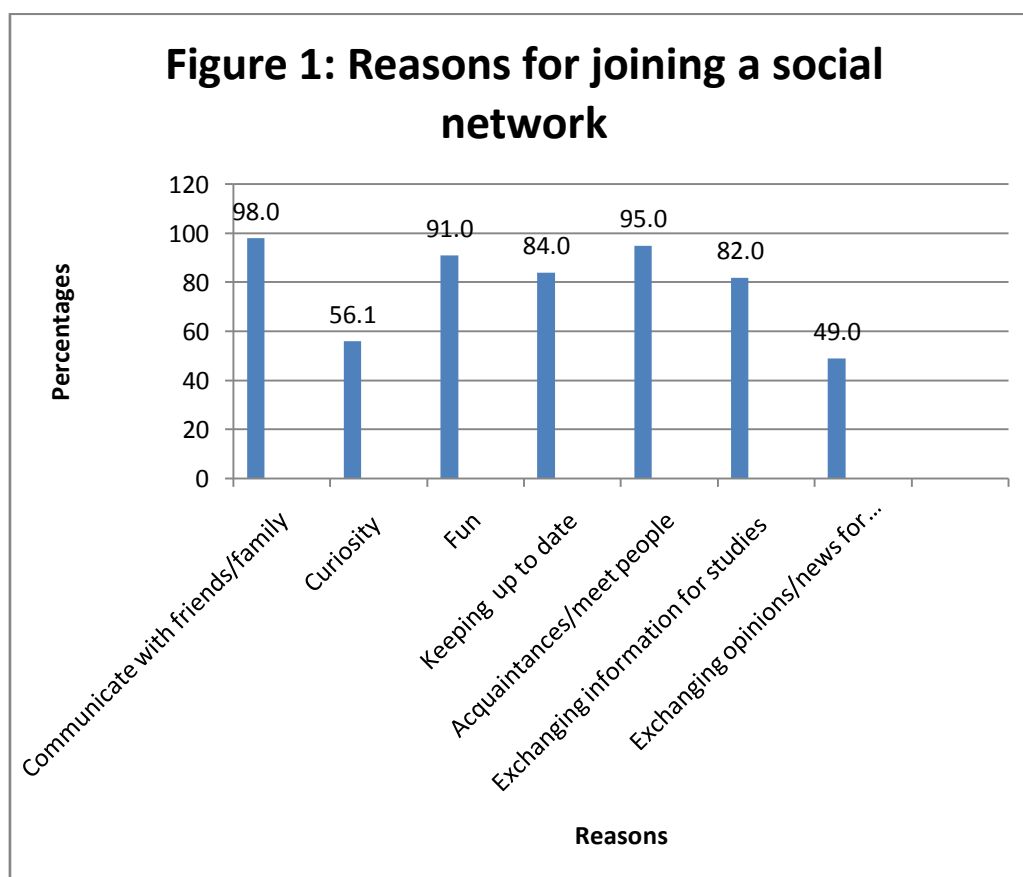
Web 2.0 tools	1	(%)	2	(%)	3	(%)	4	(%)	5	(%)
Facebook	53	15	11	3	19	5	14	4	268	73
Flickr	248	68	36	10	18	5	16	4	47	13
You Tube	97	27	46	13	43	12	30	8	149	40
Instant Messaging (IM)	75	21	28	8	41	11	36	9.9	185	50.7
Blogs	196	53	40	11	31	8	29	8	69	19
Wikis	175	48	51	14	40	11	29	8	70	19
RSS feeds	229	63	39	11	27	7	25	7	45	12
Podcasts	235	64	32	9	39	11	19	5	40	11
Social bookmark	191	52	28	8	41	11	27	7	78	22
LinkedIn	50	13.7	26	7	33	9	55	15.1	201	55.1
Twitter	24	6.6	20	5.5	60	16.4	72	19.7	189	51.8

n=356

The next question explored the reasons why LIS students join social networks (see Figure 1). Communicate with friends/family, acquaintances/meet people, and fun were the top reasons for joining social networks with 98.0 percent, 95.0 percent and 91.0 percent respectively. Also, 84.0 percent used them to keep up to date, followed by 82.0 percent who use them to exchanging information for their studies. Undergraduates are technology-friendly, learn new technology easily, and further enjoy such activities. They closely watch new trends related to information technologies. They function as the trend-setters, closely watching for new gadgets and quickly incorporating them into their lives. Librarians should seize this opportunity to adopt and use SNSs to render library services to patrons. For example, Bhatt and Kumar (2014) found that the majority of the students (94.1 per cent) expect that chatting or messaging with the librarian is the most useful service that can be provided to them through SNSs. Other activities desired by students according to Bhatt and Kumar's study include being informed about new arrivals, collection information and new events at the library.

In the present study, only few students indicated using the social networking sites for exchanging opinions/news for their personal life. This finding contrast with earlier

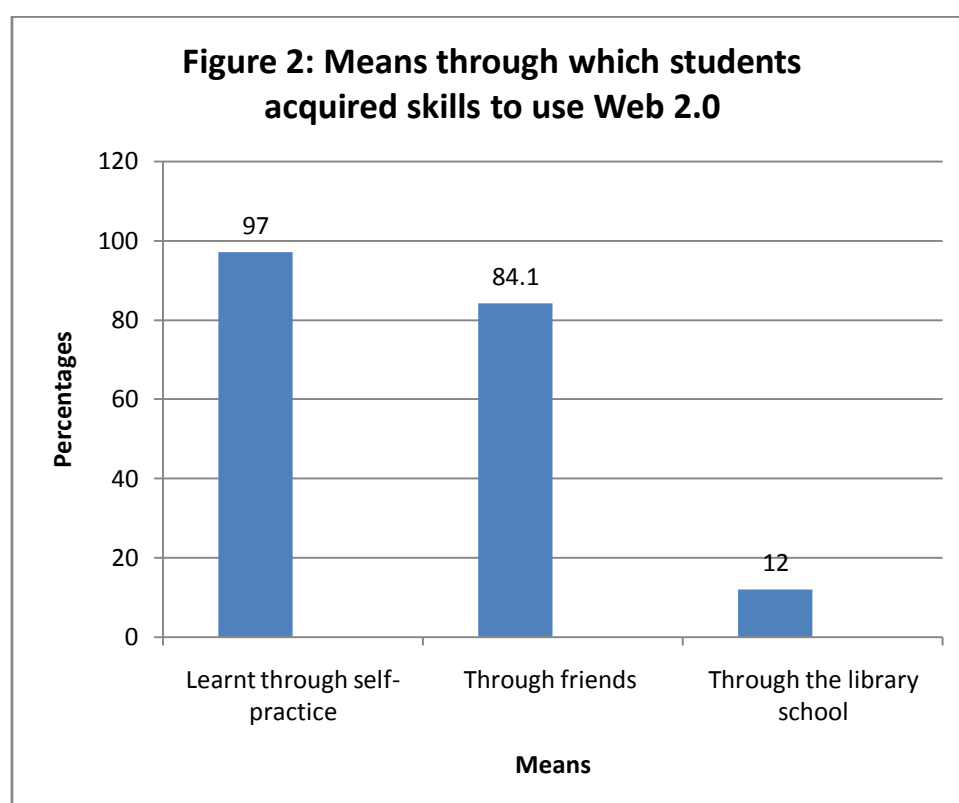
finding by Garoufallou and Charitopoulou (2011) who found that fun and curiosity were the top motives by the Greek LIS students for joining social networks. LIS students in Delsu should be more exposed to the educational benefits of using social networks. They can be used for promoting ideas, requesting for materials, connect with other professional colleagues and exchange knowledge. For example, through the use of LinkedIn, LIS students can see what other librarians have done in regard to research and request for or download any material of interest that librarians up-loaded in their LinkedIn page. Web 2.0 technologies like Twitter and Skype can provide the opportunity to quick feedback and exchange of ideas, while being geographically separated. They can also allow collaboration with LIS educators globally.



In an attempt to further tap into their skills, students were asked the means through which they learnt the skills to use Web 2.0 tools (see Figure 2). The majority (97 per cent) indicated that they learnt the use of Web 2.0 tools through self-practice, followed by 84.1 percent who indicated learning the skills through friends. Only 12 percent indicated learning the skills through the library school. The study revealed that students of LIS in Delta State University acquire the skills to use Web 2.0 tools mainly through self-practice and through friends. Acquiring the skills from library schools was the least indicated by the students. This finding is consistent with earlier

finding by Baro, Idiodi, and Godfrey (2013) that librarians in university libraries in Nigeria acquire the skills for the use of Web 2.0 tools mainly through self-practice, friends/colleagues, and attendance at workshops.

This calls for inclusion of a separate course or a unit on Web 2.0 tools in the library schools curricula. Emphasizing on the need for incorporating “Web 2.0” course in library schools, Rehman and Shafique (2011) stated that “it is necessary to get formal trainings from experts”. The teaching of Web 2.0 tools in Nigerian library schools will prepare the next generation library staff for the challenges ahead. As new ICT applications like Web 2.0 emerge, LIS curriculum needs to be revised to fit up-to-date ICT courses, otherwise, LIS schools will fail to provide students with the appropriate skills.



**Figure 2:** The means through which students learnt the skills to use Web 2.0 tools

## Conclusions

This research provided valuable information on LIS students' knowledge and use of Web 2.0 tools. The results show that the LIS students of the Delta State University are quite familiar with some Web 2.0 tools such as Social networking sites, Instant Messaging, wikis, and blogs. While, they are not familiar with tools such as RSS feeds, Podcasts, and social bookmarks. The study revealed that the most very frequently used Web 2.0 tools are social networking sites like Facebook, LinkedIn

and Twitter, followed by Instant Messaging and YouTube. On the other hand, the results showed little use of tools such as Flickr, Podcast, RSS feeds, and Social bookmarks. The Delsu LIS students indicated communicating with friends/family, acquaintances/meet people, and fun as the top reasons for joining social networks. The study also revealed that Delsu students learnt the use of Web 2.0 tools through self-practice, followed by through friends. While only a few students indicated learning the skills through the library school.

It is recommended that students should be exposed to use these technologies in assignments and understand the value of networking with teachers and librarians using these technologies.

LIS schools need to incorporate units about Web 2.0 tools into their curricula this will prepare future information professionals by developing their skills for future challenges of using such tools.

Several studies have reported that LIS programmes in Africa (most especially Nigeria) witness scarcity of teaching staff with ICT skills (Kavulya, 2007; Ocholla and Bothma, 2007; Baro, 2010; Baro, Idiodi, and Godfrey, 2013). As a result LIS schools lacked academics who can support and develop Web 2.0 courses. For this reason, Al-Suqri (2010) suggested that regional LIS departments should consider establishing associations concerned with LIS education and linked with international organizations such as IFLA. This would help to develop the field in correspondence with the international developments, such as technological advancements.

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