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Summer 1-6-2016

# Awareness and use of Web 2.0 tools by LIS Students at University of Nigeria, Nsukka, Enugu State, Nigeria.

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Eze, Eberechukwu Monica, "Awareness and use of Web 2.0 tools by LIS Students at University of Nigeria, Nsukka, Enugu State, Nigeria." (2016). *Library Philosophy and Practice (e-journal)*. 1355.

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# **Awareness and use of Web 2.0 tools by LIS Students at University of Nigeria, Nsukka, Enugu State, Nigeria.**

## **Abstract**

The study aims to investigate the level of awareness and use of Web 2.0 tools by Library and Information Science (LIS) students at the University of Nigeria, Nsukka. The study adopted a descriptive survey method and questionnaire was used to collect data from 220 respondents. The results show that the LIS students of UNN are quite familiar with some Web 2.0 tools such as Social networking sites, Instant Messaging, blogs and Wikis, while, they are not familiar with tools such as RSS feeds, Podcasts, and social bookmarks. The study revealed that the most frequently used Web 2.0 tools are Facebook, followed by YouTube and Wikis. The UNN LIS students indicated communicating with friends/family, exchanging opinions/news for their personal life, and acquaintances/meet people as the top reasons for joining social networks. The study also revealed that UNN students learnt the use of Web 2.0 tools through friends, followed by through self-practice, While only a few students indicated learning the skills through the library school. It is recommended that LIS schools incorporate units about Web 2.0 tools into their curricula to prepare future information professionals by developing their skills for future challenges of using such tools.

## **Introduction**

Web 2.0 applications have mushroomed and social media have attracted considerable attention from students. Students' use of Web 2.0 applications requires educators to explore the educative potential of these mediums (Greenhow et al., 2009). The new wave of web experiences and social networking has led to the use of some interchangeable terms. These terms include: Web 2.0, virtual communities, online communities, collaborative software, e-communities, and social network services (Rosen, 2007; Boyd and Ellison, 2007). Using Web 2.0 technologies with respect to the provision of library services is yet another opportunity for integrating the library into the students' learning environment.

Web 2.0 technologies are so popular that they now dominate the everyday personal and professional life of millions of users. This popularity is affecting the way that libraries, museums, archives and other cultural heritage organizations operate. As librarianship evolves and adapts to the needs of the internet generation, using Web 2.0 has become an indispensable tool in the work of the professional. Some of the Web 2.0 applications and services are blogs, Wikis, RSS feeds, tagging, social networking, social bookmarking, multimedia sharing, podcasts, and so on.

S/N	Web 2.0	Definitions
1	Wiki	Wiki is a collaborative web site which can be directly edited by anyone with access to it (Wikipedia.org)
2.	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)
3.	Instant messaging (IM)	IM is a live online communication synchronous channel which facilitates online interaction between two parties
4.	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)
5.	Social networking sites (SNS)	Social networking sites are web-based services such as Facebook, Twitter, MySpace, Skype, 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)
6.	Del.icio.us	Allows users to bookmark favorite sites and to share those bookmarks with others
7.	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)
8.	YouTube	Allows members to upload videos for everybody to see and vote on their popularity (Downes, 2005).
9.	Flickr	Allows for photo collecting, tagging, and distribution services (Downes, 2005).

According to Lwoga (2011, p. 2):

[. . .] the use of Web 2.0 in Africa is still at infancy stage. In order to improve the quality of education, African universities should take advantage of innovative and emerging technologies and consider the learning preferences of the Net generation or digital natives.

In many cases, the terms “Web 2.0” and “social media” are interchangeable and are widely used to describe the same concepts related to online communities and sharing online information and resources (Rogers, 2009). While the term Web 2.0 refers to the actual applications available to internet users, the term social media refers more broadly to the concepts of how these applications are used and the communities built online. These 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, p.23). According to Franklin and Van Harmelen (2007, p.1) Web 2.0 is “allowing greater student independence and autonomy, greater collaboration, and increased pedagogic efficiency”. 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 students realized that Web 2.0 tools could be used not only as communication and educational tools, but also as professional tools and multi-purpose tools. They added that it was apparent from these conceptions that DILL students had realized various potentials of the Web 2.0 tools.

### **Statement of the problem**

Some studies have found that many students lack the required skills to use Web 2.0 tools efficiently (Bawden et al., 2007 and Al-Daihani, 2010). Anderson (2007) notes that there is a need for critical understanding of students' ideas and experiences with Web 2.0 in order to implement these tools successfully into teaching and learning in higher education sector. He also warns that lack of understanding of students' expectations of Web 2.0 tools might cause serious consequences. Students' experiences and conceptions of the use of Web 2.0 tools have been given little attention in Nigeria. Anderson (2007) highlighted the need for further exploration, research and analysis of the uses, benefits and limitation of Web 2.0 in higher education. 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. Therefore, this study aims at investigating the level of awareness and use of Web 2.0 tools by LIS students of UNN.

### **Objectives of the study**

1. To know level of awareness of Web 2.0 tools by LIS students of UNN.
2. To know the extent of use of Web 2.0 tools by the LIS students of UNN.
3. To know the reasons the students of LIS in UNN join social network.
4. To know the means through which the students of LIS in UNN acquire the skills to use Web 2.0 tools.

### **Research Questions**

1. To what level are the students of LIS in UNN aware of Web.2.0 tools?

2. To what extent do the students of LIS in UNN use Web 2.0 tools?
3. What are the reasons the students of LIS in UNN join social network?
4. Through what means do the students learn the skills to use the Web 2.0 tools?

## **Literature Review**

### **Students use of Web 2.0 tools**

The study by Kelly (2008) revealed that the most popular tool-application areas associated with Web 2.0 include, blogs, wikis, RSS, podcast, vidcasts, social sharing services, communication tools, social networks, folksomies and tagging, and virtual worlds. Rehman and Shafique (2011) state that “Web 2.0 technologies are blessings for library professionals as libraries can design attractive services using Web 2.0 applications without spending huge budgets for online hosting and storage.” Maness (2006, p. 4) observed that:

Web 2.0 will have substantial implications for libraries and recognize that while these implications keep very close to the history and mission of libraries, they still necessitate a new paradigm for librarianship.

Web 2.0 technologies (. . .) might create changes in how libraries provide access to their collections and provide user support to their clients.

Needleman (2007, p. 1) presented five Web 2.0 principles that in this article are looked at from a faculty-student perspective:

(1) “The user as contributor – some examples of this include the ability of the user to write reviews on amazon.com or rank the reputation of sellers on eBay”. Students can act as contributors to unit materials. For example, if a course is online and uses Web 2.0 and social media applications, the students can add an annotated bibliography, post links, web sites and other content, and write reviews in the unit’s blog.

(2) “Participation not publishing – blogs are a good example of this. (Web 2.0 heralds) the end of the software release schedule – software is in perpetual beta and the end user is a co-developer”. Students can participate easily using such tools.

(3) “Lightweight programming models - loosely coupled systems, services that can be bundled together rather than heavyweight applications, syndicating data outward not controlling what

happens to it when it gets to the other end of the connection”. Web 2.0 programming models are based on easy to develop-implement-use-reuse-revamp and move to another system. This mobility from one system to another gives freedom to users to experiment with a vast variety of easy-to-use software but at the same time, it allows the flexibility to abandon work that students build together.

(4) “Trust and collaboration. Any user can add an entry and any other user can edit it”. Web 2.0 and social media tools stretch the trust and collaboration between students and librarians.

(5) “A rich user experience”. This is the quintessential philosophy of the Web 2.0 and social media applications, that of giving the opportunity both to students and librarians to have rich experiences by getting on board with these tools.

Students can contribute entries to a database, comment on others’ entries or collaborate in a wiki” (Redecker, 2009, p. 38). Glass (2008, p. 9) reviewed five Web 2.0 applications (Blogs, Wikis, Second Life, Facebook) that have been used in the Department of Information and 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”.

The study by Garoufallou and Charitopoulou (2012) in Greece revealed that the Web 2.0 tools that students use least are social bookmarks (73.8 per cent), with RSS feeds (57.5 per cent) and wikis (47.6 per cent). While, 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). According to Wylie and Marri (2010) Upon witnessing an apparent injustice committed by the school’s administration at Kennedy High School in New York, USA against one of their fellow classmates, students actively used the tools of democracy to voice their displeasure via Web 2.0.

## **Social networking**

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. 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. There are many social networking tools available for people, such as Facebook, MySpace, LinkedIn, Flickr, and so forth. These SNSs have millions of users, with ever increasing numbers of users every day. Social network sites are web-based services that allow individuals to: construct a public or semi-public profile within a bounded system; articulate a list of other users with whom they share a connection; and view and traverse their list of connections and those made by others within the system (Boyd and Ellison, 2007). The most popular among social networking sites are Facebook, MySpace, and Twitter. SNS allow individuals to be visible to others and establish or maintain connections with others. These sites can be used for work-related issues, personal issues, romantic relationships, and shared interests such as music, arts, sports, or politics.

In Nigeria, the use of the internet is increasing day-by-day. According to the statistics of December 2013, in Nigeria, 67 million of the population are internet users, out of which 6.6 million are Facebook users (Internet World Stats, 2014). Social networking is becoming increasingly popular with all ages (Kornblum, 2007), online teenagers are particularly active users, 73 percent of whom use social networking sites (Rainie, 2009). 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
- capitalising the knowledge of others and helping people learn easily.

Social networkings 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.

Once profiles are created, students use them to keep in touch with friends (Lampe et al., 2006), portray a public image (Peluchette and Karl, 2010), and to observe their peers (Joinson, 2008). Yet, these profiles serve an educational purpose as well. Nearly two-thirds of students report using social networking to discuss education-related topics such as politics, religion, and morals (National School Boards Association, 2007).

Park (2010) studied the differences among university students and faculties in their perception and use of social networking. He found that most undergraduate students regard SNS as an entertainment feature, and most faculty members were not active users of this technology. He suggested making social networking site-based services tailored to them and the benefits emphasized to them in order to attract them to get involved in these activities. Similarly, Kanagavel and Velayutham (2010) studied the impacts of social networking on college students in India and The Netherlands. They found 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.

Another study in India was conducted by Kumar (2012), who 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.

In Kuwait, Al-Daihani (2010) explored the use of social software by master of library and information science students at Kuwait University as compared to those at the University of Wisconsin-Milwaukee in the USA. He found that the majority of students from the two schools were aware of social software applications and their use.

In another study by Hamade (2013) students were asked in Kuwait to identify the social network accounts they had. The results revealed 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 showed the majority of students had more than one social network account; 156 students (52 percent) had both Twitter and Facebook accounts. 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 areas. Similarly, 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 include being informed about new arrivals, collection information and new events at the library.

## **Methodology**

This study aimed at investigating the level of awareness and use of Web 2.0 tools by LIS students at the University of Nigeria, Nsukka. The population of the study is 250 (source: departmental office) being the total population of undergraduate students of library and information science (LIS) from 100-400 levels, 2013/2014 academic session. The sample size of 230 was generated, using random sampling technique.

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, 220 completed and returned copies of the

questionnaire that were used for the analysis. The descriptive statistics were analyzed using frequency counts and percentages. The results are presented in tables and bar charts.

### Findings and discussions

Out of the 220 participants, 51.8 percent of the respondents were females and 48.2 percent males. 55 (25 percent) of the respondents are in their 100 level, 54 (24.5 percent) in 200 level, 59 (26.8 percent) in 300 level, and 52 (23.6 percent) in 400 level. Students were asked to indicate the level to which they are aware of the Web 2.0 tools (see Table I).

- Social networking sites were the most popular application (97.3 per cent), followed by 75.5 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 62.3, 58.6 and 54.1 percents respectively.
- 19.5 percent of the students indicated that they have only heard of Web 2.0 tools such as wikis, followed by 18.2 percent who indicated that they have only heard of Podcasts.
- The results therefore shows that the LIS students of the University of Nigeria, Nsukka are quite familiar with some Web 2.0 tools such as Social networking sites, Instant Messaging, blogs and Wikis. 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. One can assume that if Nigerian LIS schools offer courses on Web 2.0 concepts, the students would know, use and appreciate the benefits and advantages of this platform.

**Table I: 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	141	64.1	55	25	24	10.9
Wikis	109	49.5	68	31	43	19.5
RSS feeds	69	31.3	137	62.3	14	6.4

Social bookmark	87	39.5	119	54.1	14	6.4
Instant messaging (IM)	166	75.5	38	17.3	16	7.2
Pod casts	51	23.2	129	58.6	40	18.2
Social networks (Facebook, Twitter, Skype, LinkedIn etc).	214	97.3	4	1.8	2	0.9

n=220

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 frequently used (see Table II).

- The most frequently used Web 2.0 tool was Facebook. It was used by 73.2 percent, followed by Youtube with 42.3 percent and Wikis with 37.7 percent. It is expected that social networking sites like Facebook will be the most visited sites. 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 (2009) that the most commonly 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, YouTube and Wikis to communicate and share pictures with friends. The Web 2.0 tools such as RSS feeds, Podcasts, social bookmarks, and tagging which the UNN LIS students are not familiar with were least used by the students. The UNN 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 II: The extent to which you use the following Web 2.0 tools**

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

<b>Web 2.0 tools</b>	<b>1</b>	<b>(%)</b>	<b>2</b>	<b>(%)</b>	<b>3</b>	<b>(%)</b>	<b>4</b>	<b>(%)</b>	<b>5</b>	<b>(%)</b>
Facebook	8	3.6	31	14.1	8	3.6	11	5	161	73.2
Flickr	109	49.5	33	15	35	15.9	18	8.2	25	11.4
You Tube	25	11.4	30	13.6	20	9.1	52	23.6	93	42.3
Instant Messaging (IM)	78	35.5	26	11.8	26	11.8	25	11.4	65	29.5
Blogs	83	37.7	27	12.3	36	16.4	26	11.8	48	21.8
Wikis	35	15.9	19	8.6	39	17.7	44	20	83	37.7
RSS feeds	43	19.5	29	13.2	53	24.1	66	30	29	13.2
Podcasts	96	43.6	56	25.5	34	15.5	28	12.7	6	2.7
Social bookmark	81	36.8	73	33.2	37	16.8	22	10	7	3.2
Tagging	110	50	43	19.5	21	9.5	33	15	13	5.9

n=220

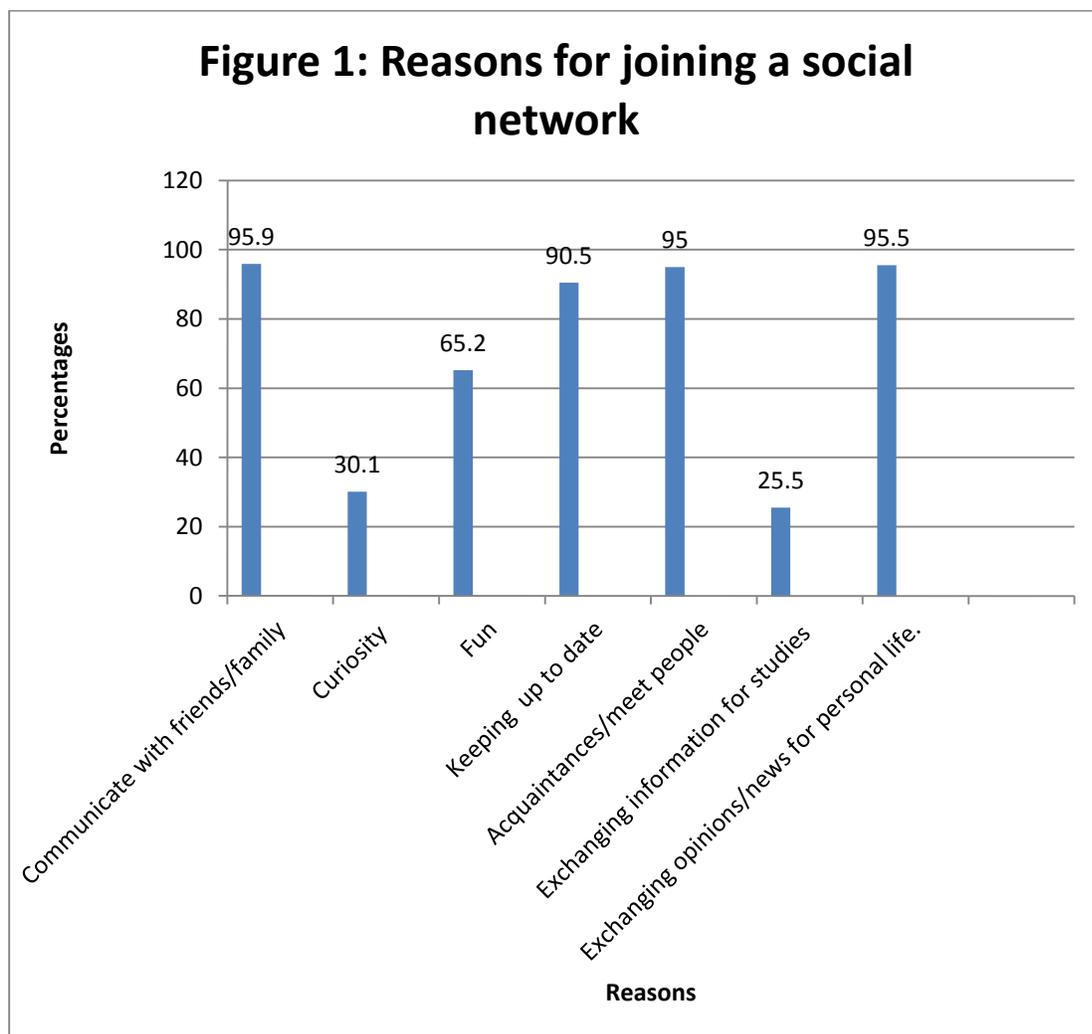
**aqqq**

The next question explored the reasons why LIS students join social networks (see Figure 1).

- Communicate with friends/family, exchanging opinions/news for their personal life, and acquaintances/meet people were the top reasons for joining social networks with 95.9 percent, 95.5 percent and 95 percent respectively.
- Also, 90 percent used them to keep up to date, followed by 65.2 percent who use them for fun.
- Only a few students indicated using the social networking sites for exchanging information for studies and curiosity with 25.5 and 30 percents respectively. 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. The findings suggest that the UNN LIS students do not use the web 2.0 tools for academic purposes. This could be as a result of their ignorance about 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.

**Figure 1: Reasons for joining social networks**

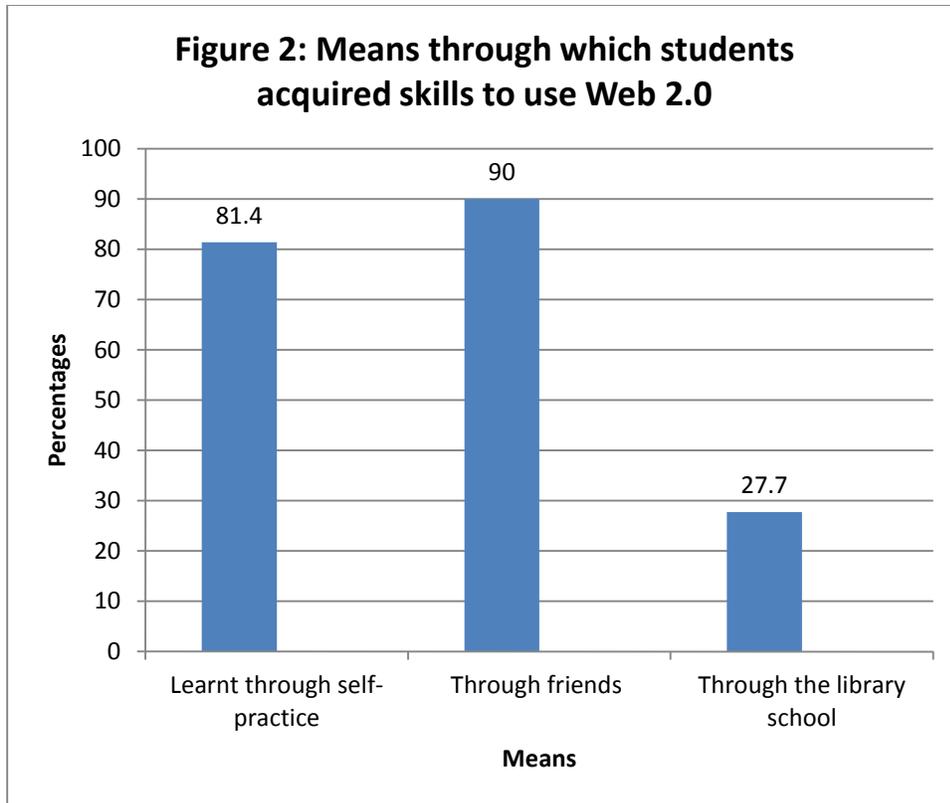


In an attempt to further tap into their skills of using Web 2.0 tools, students were asked the means through which they learnt the skills to use Web 2.0 tools (see Figure 2).

- The majority (90 percent) indicated that they learnt the use of Web 2.0 tools skills through friends, followed by 81.4 percent who indicated learning the skills through self-practice.
- Only 27.7 percent indicated learning the skills through the library school.

The study revealed that students of LIS in UNN acquire the skills to use Web 2.0 tools mainly through friends and through self-practice. 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**



## Conclusion

This research provided valuable information on LIS students' knowledge and use of Web 2.0 tools. The results show that the LIS students of UNN are quite familiar with some Web 2.0 tools such as Social networking sites, Instant Messaging, blogs and Wikis, While, they are not familiar with tools such as RSS feeds, Podcasts, and social bookmarks. The study revealed that the most frequently used Web 2.0 tool was Facebook, followed by YouTube and Wikis. On the other hand, the results showed little use of tools such as Flickr, Podcast, RSS feeds, and Social bookmarks. The UNN 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 UNN students learnt the use of Web 2.0 tools through friends, followed by through self-practice, While only a few students indicated learning the skills through the library school.

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. In the beginning of the boom, they are likely to master the new information technology very quickly. This is the more reason why librarians should cease this opportunity to render library services to users like the undergraduate students in this platform.

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