

Knowledge and Use of Web 2.0 by Librarians in Anambra State, Nigeria

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Abstract

Web 2.0 is a new concept that represents change in the ways that the Web can be used to search for, contribute to and share information. Web 2.0 is facilitated by such Web tools and services as Chats, Blogs, Wikis, RSS feeds and social network sites. Web 2.0 also provides opportunities and challenges for libraries and librarians in their mission to provide information services to their clientele, and many librarians in developed countries and some in developing ones are already harnessing its potentials for library and information service delivery. This paper surveys the knowledge and use of Web 2.0 by librarians in Anambra State, in South-East Nigeria. A questionnaire was used to collect data from 57 librarians, representing 78.1 per cent of the librarians who were sampled. Findings show low knowledge and use of Web 2.0 tools by the librarians, which could be attributed partly to the absence or inadequate Internet connectivity in most of the libraries and library schools from where the librarians were sampled. The findings highlight the need for these institutions to address the current inadequate Internet connectivity situation, as well as the for librarians themselves to explore and use Web-based innovations for information service delivery and management in

their constituencies. They should also lobby and spearhead efforts to develop and improve the Internet connectivity facilities in their work places.

Keywords

Web 2.0, Librarians, Web knowledge, Web use, Information literacy, Information technology literacy.

Introduction

The world is in an age of rapid change propelled by developments in Information and Communication Technologies (ICT). While the traditional medium of information dissemination and access was predominantly print-based, the modern medium is electronic-based. The Internet and the Web epitomise this new medium. Rapid change means that the time lag between technological inventions and innovations is reduced and the rate of technological obsolescence is high. All professions now need to be dynamic in adopting these technological innovations in order to keep abreast and achieve and sustain excellence. Librarians clearly feel the challenging impact of these technological evolutions, as they see more and more of their services and clientele that were traditionally print- and library-oriented becoming electronic- and market-oriented. The Internet has continued to change over the years leading to new skills and competency requirements. Olomojobi (2006) states that with the explosive growth of the Internet, library services must also develop in tandem or risk becoming obsolete, and that the required changes in the services depend upon the capabilities and motivations of librarians to change and adapt to new methods.

The Internet was initially a static structure like a printed material that allowed read only access to information. The creation of web pages was a highly professional activity undertaken mainly by website development experts, known as webmasters. Moreover, users of the information on the web pages were expected to be passive consumers, and were provided with no or minimal opportunities to contribute

feedback or original information. However, with continuous innovations, the Internet has evolved into a platform that enables users to also be both users and creators of information. This empowerment of users has turned the Internet into a collaborative and interactive network supporting active interaction and information sharing among users. Tim O'Reilly (2005) coined the term Web 2.0 to describe the development.

Librarianship researchers and practitioners have since recognised the potential opportunities and challenges of Web 2.0 and its likely impact on libraries and librarians. Singh (2001) points out that the Internet is playing an important role in transforming libraries and the ways in which library resources and services are viewed. Maness (2006) posits that altogether the use of these Web 2.0 technologies and applications will constitute a meaningful and substantive change in the evolutionary history of libraries. Among various potential impacts of Web 2.0 technologies, the library's collection will change, becoming more interactive and fully accessible; and the library's services will change, focusing more on the facilitation of information transfer and information literacy rather than providing controlled access to it.

The Scottish Library and Information Council (SLIC) and the Chartered Institute of Library and Information Professionals in Scotland (CILIPS) (nd.) believe that social media websites have great potential to enhance the delivery of library services and to contribute to the professional development of library staff. They also note that Web 2.0 technologies present new opportunities for large-scale professional collaboration and cooperation. Maness (2006) states that social networking could enable librarians and patrons not only to interact, but also to share and exchange resources dynamically in an electronic medium.

INFLIBNET (2004) posit that library profession needs to remain flexible and open to the opportunities that the Internet can have for the profession and for library users. Internet access should therefore be seen as a means to augment information access for users, and that library professionals who embrace this new environment of collaboration will be better able to provide customised service to their clients.

Accordingly, the acquisition of skills needed to harness effectively the various components of Web

2.0 for modern library services is therefore a critical and imperative challenge that libraries in both developed and developing countries must address in order to sustain their relevance in the digital age.

Literature Review

Nations (2011) notes that "Web 2.0 is the move toward a more social, collaborative, interactive and responsive web. It is a change in the philosophy of web companies and web developers, but more than that, Web 2.0 is a change in the philosophy of society as a whole. In the early days of the web, we used it as a tool. Today, we aren't just using the Internet as a tool; we are becoming a part of it." Farkers (2007) identifies some characteristics that distinguish social software tools from other technologies as easy content creation and content sharing, online collaboration, conversations distributed and in real time, capitalising on the wisdom of crowds, personalisation and transparency. Some current Web 2.0 tools and services include:

- *Blogs* (a shortened version of Weblogs) are online journals or diaries that can be used for sharing information and ideas, including video and pictures. Most blogs incorporate links to other commentary, which can be a longer exposition written by the blogger, someone else's blog entry or another type of source document.
- *Wikis*: These are web pages that allow users to add, remove or edit their content. The most popular wiki is the online encyclopedia, Wikipedia.
- *RSS Feeds*: (RSS means either Really Simple Syndication or Rich Site Summary). RSS is a web feed that constantly scans the Web and provides links to content in which one has indicated an interest or requested a periodic update (Liesegang, 2007).
- *Social Networking Websites*: Examples of these are Facebook, MySpace and Twitter. These are online group-forming websites that connect people through shared information interests. They allow users to locate links with people through mutual friends or acquaintances, build profiles, and update address books (Kamel-Boulos, and Wheeler, 2007).

Web 2.0 social technologies provide opportunities and challenges for the more effective and efficient delivery library services. It is pertinent to note that awareness and knowledge are a prelude to the use of new technologies. In an age where social media is highly shaping information access and dissemination, not being adequately aware and knowledgeable of these new media and the potential they offer in enriching library services will affect librarians' ability to adopt and harness them. Many librarians especially in developed countries are already well informed on Web 2.0 and its potentials. Consequently, some are already harnessing the tools in their work: blogs to share information and market library resources and RSS to provide selective dissemination of information services. Many libraries have also established Facebook and Twitter accounts to enable their librarians to exchange information and ideas with their users. Ezeani and Eke (2010) have noted that blogs can be used to market available library resources. Chua and Goh (2010) wrote that in libraries, blogs are commonly used to generate interest in specific topics; RSS is used to communicate news and events, and provide updates of resources or collections; social tagging is used to facilitate search and discovery; instant messaging is used to handle users' enquiries during predefined timeslots; and social networking services are used to forge personalised connections with users.

Related Empirical Research

Research reports from different parts of the globe show that librarians are not only aware of Web 2.0, but also are already harnessing its power and benefits for a more resourceful service to users. Rogers, (2010) surveyed libraries in the United States of American to determine how they are employing Web 2.0 and social networking tools to promote library programs and services. Result showed that "many libraries are using them voraciously, some still not at all." Social networks (78.6%) and blogs (51.9%) remained the two highest Web 2.0 applications used by the libraries to promote and market library services.

Xu, Ouyang and Chu (2009) explored the websites of the 81 academic libraries in New York State, USA to find out the extent of adoption and use of Web 2.0 tools. Thirty-four (42%) of the

institutions introduced Web 2.0 tool to their libraries, while 47 (58%) did not. Among the seven Web 2.0 tools adopted by the academic libraries instant messaging led in terms of adoption frequency, followed by blogs and RSS. Similarly, Tripathi and Kumar (2010) surveyed websites of 277 university libraries located in Australia, Canada, the United Kingdom and the United States. The purpose was to provide a reconnaissance report on major academic libraries located in these countries that had embraced Web 2.0 tools for enhancing library services. Findings showed that 76% of the libraries had adopted at least one of the Web 2.0 tools, whereas 24% of them had not used any. RSS, Instant Messaging (IM) and blogs were popular in the academic libraries.

Using a web-based questionnaire, Al-Daihani (2009) investigated the familiarity of library and information science (LIS) academics with Web 2.0 concepts, tools and services and applications as these relate to LIS education. Forty-four LIS academics in three LIS schools, two located in Kuwait and one in Wisconsin, US completed the survey. Result showed that the respondents had a low level of familiarity with and use of Web 2.0. Lack of training was found to be the most inhibiting barrier to the use of Web 2.0 applications. It was also found that institutional affiliation and Internet experience were significant factors in regard to a number of online activities and Web 2.0 barriers.

Aharony (2009) conducted a research among three main groups of Israeli librarians: school librarians, public librarians, and academic librarians. The study explored whether librarians are familiar with new technological changes and innovations, and whether they make use of different Web 2.0 applications. The study found out that Israeli librarians are quite exposed to these changes, and that the librarians understood that in order to survive, remain relevant, attract new patrons, and be professional, they should master the newest technological applications and apply them in their changing work environment.

Garoufallou and Charitopoulou, (2011) investigated Greek library science and information systems (LSIS) students' knowledge, understanding and use of Web 2.0 tools. Result shows that although most of the students had heard of the term Web 2.0

and its tools, further knowledge of the subject is limited. This lack of knowledge was apparent in the poor ways that students exploited Web 2.0 features. The researchers suggested that the knowledge and implementation of Web 2.0 should begin in the library and information science schools to prepare future library staff for the new challenges ahead.

Luo (2009) examined the adoption of the Web 2.0 technology in information literacy (IL) instruction. Respondents were selected from the Information Literacy Instruction Discussion List (listserv) of the Association of College and Research Libraries based in USA. According to the findings, the surveyed librarians had actively used Web 2.0 technology in teaching IL courses. Their adoption of Web 2.0 tools is manifested in a three-level hierarchy. At the first level, the librarians only used Web 2.0 tools for their own purposes without engaging students. At the second level, librarians used Web 2.0 tools to facilitate the delivery of content to students. They did this by either using the tools to publish content for students to access and interact with, or by involving students in using the tools to complete coursework collaboratively or enhance interaction. At the third level, the librarians drew upon certain features of various Web 2.0 technologies to illustrate IL concepts.

Recent research reports from Nigeria show divergent findings on the awareness and use of Web 2.0 components by librarians. Ezeani (2009) studied the social network literacy skills of academic librarians in the University of Nigeria Nsukka library system. The findings showed that the librarians were generally aware and participated in several social networks. However, Atulomah (2010) reported insufficient awareness and understanding of what constitutes Library 2.0 by librarians in South Western Nigeria.

Research Problem and Objectives

Progress in all human endeavours and professional practices is tied to innovation and change. Librarians should be relevant providers of information and experts in the use of technology, including the use of Web 2.0 products. If librarians do not have these characteristics, their users will find other more responsive and relevant sources of information, even if the quality of information might be inferior (Miller,

2006). Given these trends, and the contradictory and inconclusive findings reported by Ezeani (2009) and Atulomah (2010) noted above, there is a clear need for further research to collate evidence on and recommend appropriate strategies for awareness, skills and use of Web 2.0 tools and services among libraries and librarians in different other areas and institutions in Nigeria. This is the rationale for this study which assessed how adequately the librarians in Anambra State of Nigeria had been adopting and using technological innovations to enhance the performance of their professional duties. Are the librarians aware of developments of Web 2.0 and their benefits to information services? Have they been harnessing Web 2.0 tools in their work?

This study sought to find out the levels of knowledge and use of web 2.0 for personal and professional development and work by librarians in Nigeria, using the librarians in Anambra State as a case study. Specifically, the study set out to:

- (a) Ascertain the level of awareness of Web 2.0 and its tools by the librarians;
- (b) Find out the level of use of Web 2.0 tools by the librarians;
- (c) Find out the ease of access by the librarians to Internet connectivity facilities in the libraries and library schools in the state.

Methods

Anambra State, one of the 36 states of the Federal Republic of Nigeria, is located in the Southeastern part of the country. The state has eight academic libraries, three library schools and a statewide public library system with branches in the eleven local government areas of the state. The population of practising librarians in the state at the time of the study was 73 (*Source*: Nigerian Library Association, Anambra State Chapter Register), which formed the population of this study. A 13-item questionnaire was developed and used to collect data. Seventy-three copies of the questionnaire were distributed to all the librarians, out of which 64 copies were retrieved, and data from 57 copies (representing 78.1%) were considered usable for the analyses. The distribution of respondents according to institution is shown in table 1.

Table 1: Institutional Distribution of the Respondents

S/N	Institutions	Frequency	%
1	Nnamdi Azikiwe University	18	31.5
2	Federal Polytechnic Oko	6	10.5
3	Anambra State University	4	7.0
4	Nwafor-Orizu College of Education	8	14.0
5	Anambra State Library Board	13	22.8
6	Paul University Awka Library	1	1.8
7	Madonna University Okija Library	1	1.8
8	Judicial Central Library	1	1.8
9	Metrological Institute of Tech. Library Onitsha	1	1.8
10	Secondary School Libraries	3	5.2
11	JOPC Onitsha Library	1	1.8
	Total	57	100

Findings and Discussion

Characteristics of the Respondents

Nineteen (33.3%) of the respondents were males, while 38 (66.7%) were females. In terms of highest academic qualifications, 25 (43.9%) of the respondents had bachelor's degrees or higher national diplomas, 22 (38.6%) had master's degrees; 6 (10.5%) had postgraduate diplomas; while 4 (7.0%) had doctorate degrees. The occupational distribution of the respondents shows that the majority, i.e. 42 (73.7%) worked in a library; 11 (19.3%) were full time lecturers in the three library schools, and 4 (7%) of them combined lecturing and library work.

Awareness and Knowledge of Web 2.0

As many as half 29 or (50.9 %) of the librarians indicated that they were not aware of the concept of Web 2.0. A simple test of knowledge question was used to gauge the level of understanding of Web 2.0 among the 28 (49.1%) librarians who indicated that they were aware of the concept (Table 2). The table shows that only 57% of those who indicated awareness were able to describe Web 2.0 in terms

of the options provided, and that only 57 % of all the surveyed librarians indicated awareness and also had a correct understanding of the concept. These results are similar to those of Atulomah (2010) who, in a study of awareness of the related concept of Library 2.0 by librarians in South Western Nigeria, reported that as many as 67.7 per cent of the librarians were hearing of Library 2.0 for the first time during the survey.

Table 2: Respondents' Accurate Description of Web 2.0

Description	No	Per cent of Aware
Interactive and collaborative web	16	57.1
Millennium Web development	11	39.3
Web development for professionals	1	3.6
Static Web	0	0.0
Total	28	100.00

Exploring further the nature of knowledge of Web 2.0 that the librarians had, table 3 shows that different Web 2.0 tools were each identified correctly as such by very small percentages of the respondents: 14 (24.6%) of the respondents correctly identified Wiki as a Web 2.0 tool; 9 (15.8%) identified MySpace; 12 (21.1%) identified blog; 18 (31.6%) identified Facebook and 6 (10.5%) identified RSS Feed. These results are similar to the findings of Atulomah (2010). In that study, only seven respondents, out of the 31 were able to identify RSS feed and Podcast as Web 2.0 tools.

Table 3: Identification of Web 2.0 tools by Respondents

Web 2.0 Tool	No.	%
Facebook	18	31.6
Wiki	14	24.6
Blog	12	21.1
MySpace	9	15.8
RSS Feed	6	21.4

N = 57

Use of Web 2.0 Tools

To find out the level of use of social media tools by the respondents who indicated awareness of Web 2.0 tools, they were asked to indicate the tools that they used personally. The results show very low use of Web 2.0 tools and the only two features indicated were used by less than half of the respondents who indicated awareness of Web 2.0 tools - Facebook (46.4 %) and Blog (28.6%). None of the respondents had used MySpace or Twitter. This is in contrast to the result of Ezeani (2009) where librarians in the study were generally aware of social network and belonged to several of them. In that study, 60% had Facebook accounts, and 90% belonged to My Space, 82% to Hi5 and 66% to Library thing.

Table 4: Respondents' Use of Social Media

	Yes	%
Facebook	13	46.4
Blog	8	28.6
My space	0	0
Twitter	0	0

N = 28

A Wiki allows users to freely create and edit the content of Web pages. Mak and Coniam (2008) notes that Wikis have been found useful in promoting collaborative writing and sharing of information and exchange of ideas. On making personal contributions to Wiki pages on the Internet, table 5 shows that 43 (75.3 %) of the respondents had never contributed to Wikis, 12 (21.1%) contributed occasionally; while only one each (1.8%) contributed often and very often to Wiki, respectively.

Table 5: Contribution to Wiki Pages on the Internet by Respondents

Responses	Frequency	%
Very often	1	1.8
Often	1	1.8
Occasionally	12	21.1
Never	43	75.3

On social networking, only 16 (28.1%) of the respondents indicated they had participated in the discussion groups on the Internet, while only 14 (24.6%) had participated in the NLA forum, the online discussion group of the Nigerian Library Association (NLA). Members share ideas and disseminate information and news. The implication is that majority 43 (75.4%) may not be participating in this online community that may impact positively on their professional development.

Ease of Access to Internet Connectivity

Web 2.0 tools are Internet-based. So, the study tried to find out the availability of Internet connectivity facilities in the various libraries and library schools in the state, as easy access to the Internet in the work place is expected to support development of both Internet and Web 2.0 use skills among the librarians. As many as 40 (70.2%) of the respondents in this study had no access to Internet connections in their libraries or departments. This finding is similar to that of Igben and Akobo (2007) in their study of state of information and communication technology in Rivers State of Nigeria, which showed that only nine (56%) libraries out of 16 studied had Internet access in their libraries. However, Fagbami and Ogunjobi (2009), in a study of the availability and use of information and communication technologies in four agricultural research institutes in Ibadan, South Western Nigeria, found out that 140 (84.8%) out of 165 surveyed members of these institutes indicated having access to the Internet in their institute libraries.

Further analysis of the data of this study revealed that, in the absence of ready access to the Internet to most of the surveyed librarians (56.1%) accessed the Internet mainly through the cybercafés, 21.1% had personal subscriptions to Internet connectivity, while only 10.5% used Internet facilities of their institutions. Adetimirin (2009), in a study of practising academic information professionals in Oyo and Ogun States of Nigeria, also observed very high use of cybercafés by the respondents.

Table 6: Respondents Major Internet Access Point

Access points	No.	%
Cybercafé	32	56.1
Personal Internet connectivity	12	21.1
Institutional facility	6	10.5
No response	7	12.3
Total	57	100.0

Discussion

Singh (2001) had noted that the library profession is one that has been most intensely affected by the challenges created of the Internet and the Web, with resultant shifts in paradigms of library service from collection management to information management, from ownership to access, and changes in nature, boundaries and structure of information. As noted by Sreekumar (nd), the Internet skills of information professionals need to improve drastically in order to be able to grapple with the opportunities and challenges created by the new technologies. The findings of the study show clearly that the level of awareness, knowledge and use of Web 2.0 by librarians in Anambra State is very low. Improvement on this state of affair is certainly imperative, in order that library services and library professionals and users in the state can benefit from the opportunities provided by Internet and Web 2.0 tools.

One of the benefits of Web 2.0 is social networking. Miranda, Gualtieri and Paolo (2010) have noted that social networking tools enable communities of users who share the same interests, to build their own online social networks for communicating or sharing resources. Users, librarians, and information services professionals can interact more efficiently, thereby creating additional information and content and generating knowledge. This study found out that librarians in Anambra State exhibited very low use of the social networking tools. They were also not participating adequately in even their local professional online social networks like the NLA forum. Only 28.1% of them belonged to an online social network, and only 24.6% of them had contributed to the online forum of the Nigerian Library Association. The implication of this very

low participation in the forum by the librarians in the state is that as many as 75 per cent of them miss valuable information, news and latest development relating to the practice of their profession in the country. This is surely a disservice to existing and potential users of library services in the state.

It is nevertheless also important to stress that practising librarians need adequate tools to enable them access and use Internet and Web 2.0 tools in their work. This study observed that most practising librarians in the state lacked access to the Internet at their work places. The consequence is that most of them use personal resources to access the Internet from commercial cybercafés. This cost them money, which means that they are most likely to use such mode of Internet access for personal purposes than to deliver library services. Time spent in cybercafés often also mean time spent away from their desks harms effective delivery of library technical or user services.

Conclusion and Recommendations

Web 2.0 is a new web concept that represents change. Librarians should have enough exposure in order to play their expected roles. The paper has demonstrated low knowledge and use of Web 2.0 tools by librarians in Anambra State. To build this knowledge, increase use and participation in social media, it is important to have facilities on ground that supports acquisition of information skills. It is therefore very imperative that librarians are provided access to the Internet in their work places. This study therefore makes the following recommendations:

- Library administrators in the state should make concerted efforts to acquire, as a matter of urgency, information technology structures that support information and technology skills acquisition. Internet is a basic information necessity, it should be provided for both users and workers in the library either free or at subsidised rate. This will improve productivity, as well as increase job satisfaction.
- Librarians should develop the zeal to discover and explore innovations. This is an important way for them to keep up with the wheels of development.
- NLA Anambra State chapter should endeavour to acquaint librarians on every development in

the national level. If this is done, many librarians in the state will be aware and participate actually in national events. On the individual level, every librarian should endeavour to 'pass on the information' for the benefit of others.

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