University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

May 2019

Application of Web 2.0 Technology in Library and Information Centres in Developing Countries: Challenges and Way Forward

Jerome Idiegbeyan-ose
idiegbeyan-ose.jerome@lmu.edu.ng

Foluke Okocha
Landmark University, dada.foluke@lmu.edu.ng

Ayooluwa Aregbesola
Landmark University, aregbesola.ayooluwa@lmu.edu.ng

Sola Owolabi
Landmark University, owolabi.sola@lmu.edu.ng

Toluwani Eyiolorunshe
Landmark University, botu.toluwani@lmu.edu.ng

See next page for additional authors

Follow this and additional works at: https://digitalcommons.unl.edu/libphilprac

    Part of the Library and Information Science Commons

Authors

Jerome Idiegbeyan-ose, Foluke Okocha, Ayooluwa Aregbesola, Sola Owolabi, Toluwani Eyiolorunshe, and Felicia Yusuf

Application of Web 2.0 Technology in Library and Information Centres in Developing Countries: Challenges and Way Forward

By

[1]Idiegbeyan-ose Jerome, [1]Okocha Foluke, [1]Aregbesola Ayooluwa, [1]Owolabi Sola, [1]Eyiolorunshe Toluwani and [2]Yusuf Felicia

[1]Centre for Learning Resources, Landmark University, Nigeria

[2]Centre for Learning Resources, Covenant University, Nigeria

Abstract

This paper discussed application of web 2.0 technology in library and information centres in developing countries. It started with the introduction that enable libraries to serve patrons efficiently, it also enhances collaborations, engenders participation, promotes interaction and creates an environment for openness in libraries. It further discussed some of the web 2.0 technology in library and information centres such as blogs, Rich Site Summary (RSS), instant massager, social networking sites, among others. The paper also highlighted challenges faced by developing countries libraries in application of web 2.0 technology such as digital divide, Inadequate ICT infrastructure, lack of policies to support Web 2.0, inadequate staff capacity, lack of maintenance culture, among others. Based on this discussions, the paper concluded and recommended policies of web 2.0 should be formulated and implemented, the government should provide adequate ICT infrastructures for libraries in developing countries, government and other institutions should try as much as possible to bridge the digital gap. This will enable developing countries libraries to take the full benefits of web 2.0 in library and information centres.

Keywords: Web 2.0, Information Technology, Library and Information Centres, Developing Countries,

Introduction: Library and information centres have experienced a change in how services are rendered overcoming barriers and enabling communication between library and users. Web 2.0 has affected libraries positively enabling libraries to serve patrons efficiently; these technologies have been used as information acquisition, dissemination, organization and sharing tools (Chua & Goh, 2010). Libraries are no longer more concerned about housing information but most especially meeting the information needs of patrons. Web 2.0 enables collaborations, engenders participation, promotes interaction and creates an environment for openness in libraries (Ouyang &Chu, 2009). However for libraries to maintain relevance as information providers there is need to adopt these technologies to bridge the knowledge gap. Even with all the benefits of these technologies, cases of applications of these technologies in most developing countries are still at infancy stage even were they available. (Idiegbeyan-ose, Idahosa, Adewole-Odeshi, 2014. Idiegbeyan-ose, Nkiko, Idahosa, & Nwokocha, 2016)

Some Web 2.0 Technologies in Library and Information Centres

Blogs: A blog is a website of entries of user opinion or information appearing in a chronological order. Blogs have been seen to provide a leading role in web 2.0 development. Blogs have been seen to promote interaction among patrons by encouraging user feedback, they also serve as a tool for communicating information, marketing library services, promoting information literacy, providing reference services, dissemination tool for newly acquired items, providing book reviews to patrons, publicizing new books, book discussions, advertising the library. Ezeani & Igwesi (2012) propose the need for the provision of subject related blogs that promote scholarly articles, fosters research & collaboration.

Chua & Goh (2010) conducted a study of 120 websites in Asia, Europe and North America, findings showed that blogs were the most adopted web 2.0 technology in academic libraries across continents at 56.6% adoption rate. These findings differed from Kim & Abbas (2010) on the adoption of web 2.0 technologies by 230 websites. Findings showed RSS having an adoption rate of 73% followed closely by blogs at 65%. These findings draw conclusions to the fact that blogs have become an integral part of libraries internationally.

Rich Site Summary (RSS): This is an extensive markup language which summarizes website content and enables subscribers receive up-to-date contents of other sites without logging in to multiple sites (Kim & Abbass, 2010). RSS provides benefits of timeliness and convenience. RSS saves time required for logging on to each of these sites and provides current information at convenience of the user (Si et al, 2011). This implies that when website is updated the RSS feed also gets updated implying that any registered user will also get updated.

In Libraries, RSS has been seen to provide up-to date information on article articles, new books, current affairs and library events. This helps to keep users inform on library activities. (Li, 2013).

A Study by Walia & Gupta (2012) in India shows that most national libraries use RSS feed to communicate library news while 36% use RSS as a log feed. Similarly In China, Si Shi & Chen (2009) in a study on the use of web 2.0 found that RSS feeds and instant messengers were the highest used web 2.0 tool, these findings were different in Africa were Social Networking was the most highly used web 2.0 technology (Baro, Ebiagbe & Godfrey,2013).

Instant Messenger: This is a synchronous messaging system that provides real-time communication. Libraries are currently utilizing this tool to provide reference-chat services which enables librarians to ask and answer queries from patrons (Gibbons, 2007). It provides benefits of

instantly resolving patrons challenges.. It is currently implemented in library websites which provides interactive features. This services is highly ranked by users as it saves time and proffers instant answers to queries (Walia & Gupta, 2012). Most developing countries libraries are yet to take this advantage.

Social Networking Sites: Social Networks are web based services that foster communication and encourages interaction between libraries and patrons. In librarians   social networks have been used to broaden the visibility of libraries. It serves as a knowledge sharing services between library and patrons and a means for library to increase its impact in the information age. Social Networks serve users globally and these include Facebook, LinkedIn, Twitter amongst others. SNS have been used to foster publishing of library newsletters (Muruli et al. (2013), social network sites are useful in creating awareness of library services, new acquisitions among others. (Idiegbeyan-ose, Ifijeh, Segun-Adeniran, Fagbohun & Esse, 2016)

Social Bookmarking and Tagging: Social Bookmarking is adding bookmarks to a library websites and adding tags. Tags are keywords assigned to a information source to effectively provide description to items, this is essential to east the search process. It is utilized majorly in the organization of an information source. Tripathi & Kumar (2010) have stated the need to make websites in libraries more interactive by bookmarking, tagging, reviews and ratings. Tags are built into the Library Management System where provision is made for users to create labels, invariably the future of Library Management Systems and Online Public Catalogues are dependent on how users can connect to the libraries socially via comments, reviews, tags. These technology is lacking in most developing countries libraries.

Podcast: This is a digital medium that consist of series of audio and video files that can be streamed online or downloaded. In academic libraries its benefits are enormous; it has been used to inform patrons on library resources, trainings, research opportunities and events. Podcast have shown great results in the training of patrons on the use of library services (Tripathi & Kumar, 2010).

Despite the benefits of these technologies discussed in libraries, most developing countries are yet to take full advantages of them as a result of some issues.

Challenges of Web 2.0 in Library and Information Science

1. **Digital divide**: Most developing countries are still lacking behind interm of ICT adoption. Most of these countries lack internet facilities that are required for web.20 to function. Idiegbeyan-ose, Nkiko, Idahosa and Nwokocha (2016), cited International Telecommunication Union (ITU) and reported that the disparities in internet usage between developed and developing countries is still very large as presented in the figure 1 and 2 below

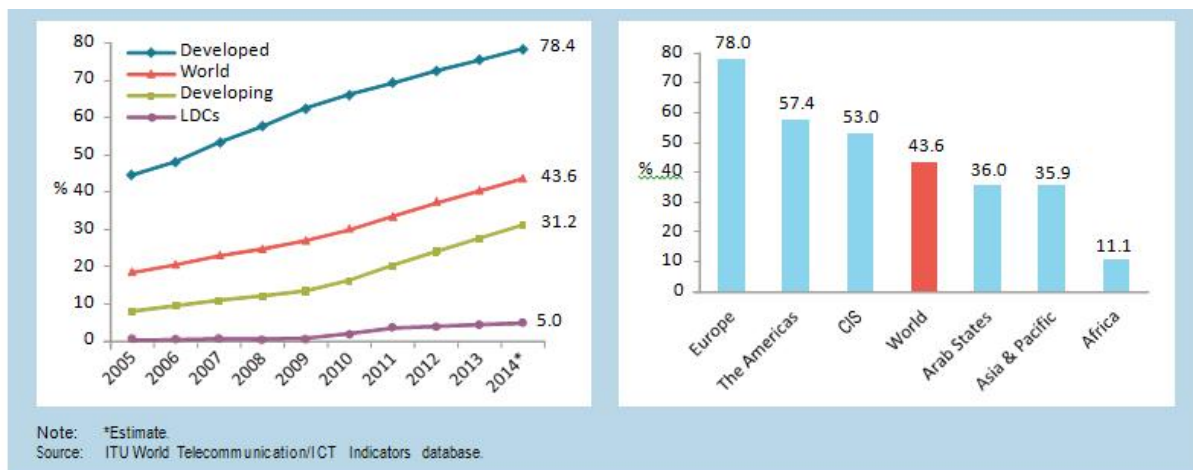Figure 1 (Internet Access by Deployment 2005-2014 and by Region

Note: *Estimate.
Source: ITU World Telecommunication/ICT Indicators database.
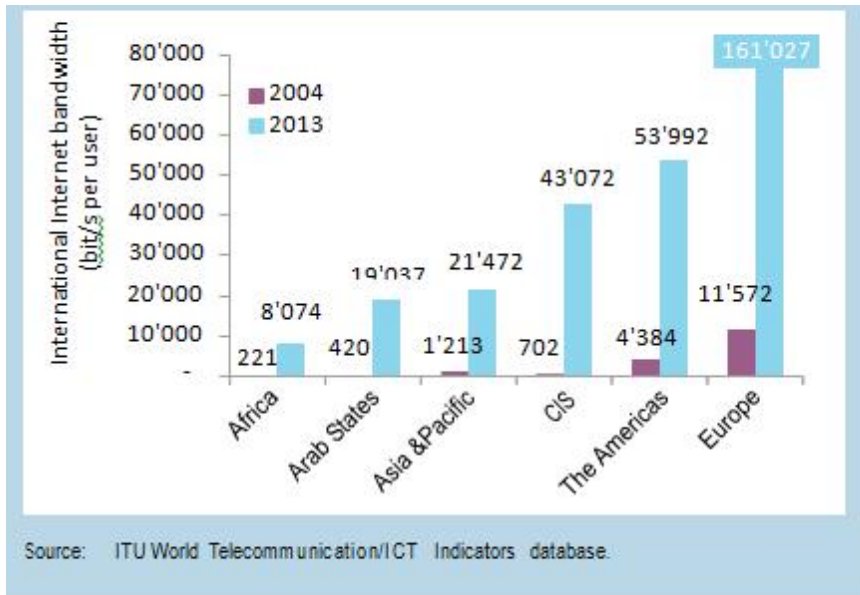
Figure 1: Source (ITU, 2015)

Figure 2. Source (ITU, 2015)

2. **Inadequate ICT infrastructure**: Previous studies has revealed lack of reliable power, internet facilities and computers which mitigate the adoption of web 2.0 in Africa (Muneja & Abungu 2012, Baro et al. 2013) . However with the proliferation of Smartphones in Africa, such limitations can be reduced (Okocha, 2017)

3. **Lack of Policies to Support Web 2.0:** There is an urgent need for the formulation of policies on web 2.0 and continuous monitoring of these policies. Academic libraries in Africa have been plagued with lack of policies in the implementation of web 2.0 (Muneja & Abungu, 2012)

4. **Inadequate Staff Capacity:** The implementation of web 2.0 is time consuming and requires adequate human capacity dedicated solely to this task (Baro et al, 2013)

5. **Lack of Adequate Skills in the use of Web 2.0:** Library professional require an urgent update to the required knowledge in the implementation of web 2.0. Research shows that in

developed countries Blogs, RSS, IM are most adopted while in Africa social networks are most adopted. This is majorly due to a lack of skills

6. **Lack of maintenance culture:** Most developing countries lack maintenance culture. They fail to maintain the infrastructure and this lead to infrastructural challenge in so many developing countries.

7. **Corruption Issues:** Corruption is one major issue in developing countries, some of the government officials and heads of organisations are corrupt, fund that are supposed to be used for the development of infrastructures are sometimes embezzle by these officials.

8. **Resistance to Change**: Some professional librarians that are supposed to implement this policies in libraries in developing countries have continued to resist change, this majorly due to fear of losing careers to IT professionals. Urgency is required in the change of this ideology in Africa.

Recommendations and Conclusion

Government of developing countries should formulate policies of web 2.0, they should provide adequate ICT infrastructures for libraries in developing countries, and government and other institutions should try as much as possible to bridge the digital gap. This will enable developing countries libraries to take the full benefits of web 2.0 in library and information centres and at the same time remain relevant in this present day.

References

Baro, E. E., E. J. Ebiagbe and V. Z. Godfrey. 2013. Web 2.0 tools usage: a comparative study of librarians in university libraries in Nigeria and South Africa. *Library Hi Tech News* 5: 10-20.

Chua, A., & Goh, D. (2010). A study of Web 2.0 applications in library websites. *Library and Information Science Research*, *32*(3), 203–11.

Ezeani, C. N., & Igwesi, U. (2012). Using social media for dynamic library service delivery: the Nigeria experience. *Library Philosophy and Practice*, *Paper 814*

Idiegbeyan-ose, J, Idahosa,M & Adewole-Odeshi, E. (2014) Adoption and use of information and communication technologies (ICTs) in library and information centres: Implications on teaching and learning process in Adeoye, B. F and Tomei. L. (Ed). Effect of Information Capitalism and Globalization on Teaching and Learning. Hershey, PA, IGI-Global Pp.78-87 DOI: 10.4018/978-1-4666-6162-2.ch006

Idiegbeyan-ose, J, Ifijeh,G, Segun-Adeniran,C, Fagbohun,M, & Esse, U. (2016). Library Professionals and Social Network Sites: Evidence Of Use, Relevance and Challenges From University Libraries In Ogun State, Nigeria. *DESIDOC, Journal of Library and Information Technology.*36 (6), retrieved from https://publications.drdo.gov.in/ojs/index.php/djlit/article/view/10406

Idiegbeyan-ose, J, Nkiko, C, Idahosa,M & Nwokocha, N. (2016). Digital Divide: Issues and Strategies for Intervention in Nigerian Libraries*, Journal of Cases on Information Technology* 18, (3) pp. 29-39. DOI: 10.4018/JCIT.2016070103

International Telecommunication Union (2015).Measuring the Information Society Report. Available at https://www.itu.int/en/ITU-D/Statistics/Documents/publications/misr2015/MISR2015-w5.pdf

Kwanya, T., C. Stilwell and P. G. Underwood. 2012b. Intelligent libraries and apomediators: distinguishing between Library 3.0 and Library 2.0. *Journal of Librarianship and Information Science* 45(3): 187–197.

Li, D. (2013). Study on the Web 2.0-based Internet applications in the university libraries. In *2nd International Symposium on Instrumentation and Measurement, Sensor Network and Automation (IMSNA)* (pp. 1007–1009).

Lwoga, E. T. 2012. Making Web 2.0 technologies work for higher learning institutions in Africa. *Campus-Wide Information Systems* 29(2): 90–107.

Muruli, N., & Gireesh Kumar, T. K. (2013). Marketing of library services and products through 223

Okocha F.O. (2017). User Centered Libraries in Africa: The role of Library 2.0 tools *Journal of Applied Information Science and Technology, 10 (1)* 85-90

Si, L., Shi, R., & Chen, B. (2011). An investigation and analysis of the application of Web 2.0 in Chinese university libraries. *The Electronic Library*, *29*(5), 651–668.

Social Media: an evaluation. In *Proceeding of paper presented in National Conference on Inspiring Library Services (NCILS-2013). Sree Siddhartha Pre University College, 12-13 July*. Tumkur, Karnataka.

Walia, P. K., & Gupta, M. (2012). Application of web 2.0 tools by national libraries. *Webology*, *9*(2).