



INFORMATION SYSTEMS IN THE 21ST CENTURY: OPPORTUNITIES AND CHALLENGES FOR FACULTY MEMBERS IN FEDERAL UNIVERSITIES OF NORTH-EASTERN STATES, NIGERIA

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Abstract

This research investigated the Information Systems in the 21st Century: Opportunities and Challenges for Faculty Members in Federal Universities of North-Eastern States of Nigeria. Two research objectives were raised and data gathered were analyzed using Statistical Package for Social Sciences (SPSS). The research objectives were; To examine how Library and Information Science faculty members in North-Eastern States Nigeria critically judge and evaluate credible Digital Information sources. To ascertain the challenges Library and Information faculty members in the North- Eastern states Nigeria encounter in using Digital Technology when teaching. Quantitative research method was applied in the study using random sampling technique to draw the sample. Forty-four copies of the questionnaires were administered while thirty-seven copies were completed and returned and were used in the study which represented 84% of the response rate. The finding of the study reveals that Faculty members in the Department of Library and Information Science in the Federal Universities of North-eastern states of Nigeria do not have the ability to critically judge and evaluate credible digital Information and lack of access to the infrastructure always are the challenges encountered in using digital technology. The study recommended some steps to turn around the situations that the faculty members in the Department of Library and Information science in the North-Eastern States of Nigeria should be taught on how to identify the depth or comprehensiveness and purpose of digital information resource and Emphasis should be given to digital technology components by the institutions so as to equip the faculty members in the Department of Library and Information science in the North- Eastern States of Nigeria with the requisite expertise to fully harness the potentials of Information and Communication Technology in teaching learning and research. Also, there is urgent need for the increase in the budgetary allocation to the universities by the government in

order to raise their ICT affordability status.

Keywords: Information, Information Systems, Faculty members

Introduction

Library and Information Science Education in Nigeria today cannot be relevant without effective preparation of new generation of librarians to effectively use the new information and communication technology in their professional practices. The education and training of LIS professionals has to be such that it empowers them to unleash their potential as they endeavor to offer relevant and efficient services within the current levels of technological sophistication (Minishi, 2007). Library and information science (LIS) academic department have witness not only this increasing globalization of higher education but also that of the LIS work place including the consequent extension of competition beyond traditional, institutional, National and regional boundaries (Minishi, 2007).

Digital technologies with their interactive and increasingly individualized digital services change people's habits and behavior, building new value models and vital clues. They are becoming an irreplaceable source of education and the development of new literacy. Digital technology enable immense amount of information to be compressed on small storage devices that can be easily preserved and transported. Digitization also quickens data transmission speeds. Digital technology has transformed how people communicate, learn, and work in the digital world. (Erstad, 2010).

Statement of the Problem

Faculty members interpret and implement the curriculum in academic programmes. Over the past few years library schools have reviewed the Library and Information Science Curriculum to reflect the developments and adoption of information technology in library and information services. Studies however have revealed that Library and Information Science curriculum for many library schools has components of digital information system and Information and Communication. Muhammad, (2000) stated that for Nigeria to meet in the Digital age Library and Information Science schools whose principles are to produce the right caliber of professionals must be revisited. Masters, (2012) also indicated that; for the Nigerian Library Schools to face the challenge of the 21st century, the information studies programme in the various Nigerian Library Schools should emphasize information technology both in the theory and practice. The new breed information worker needs to be well informed about the tools for practicing his or her profession. Bala, (2014) also stated that digital literacy skills

are the factor to relevance in the scheme of things in the 21st century. This implies that faculty members of library school must be digital literate to effectively interpret and implement the curriculum.

Despite the importance of digital literacy skills in teaching and research, preliminary study conducted by the researcher observed that majority of faculty members in Department Library and Information Science in Federal Universities of North-Eastern States of Nigeria are not using digital technologies in their teachings; and student without the skills to use digital tools risk an inferior process at best and they are being behind in pursue of a job. Hence this study accessed the level of Information Systems in the 21st Century of faculty members in the Department of Library and Information Science in the Federal Universities of North-eastern states, Nigeria.

Research Question

The following research questions are:

- How do Library and Information Science faculty members in North-Eastern States Nigeria critically judge and evaluate credible digital Information sources?
- What are the challenges Library and Information Science faculty members in the North-Eastern States of Nigeria encounter in using digital technology?

Objectives of the Study

The following Objectives are:

- To examine how Library and Information Science faculty members in North-Eastern States Nigeria critically judge and evaluate credible Digital Information sources.
- To ascertain the challenges Library and Information faculty members in the North-Eastern states Nigeria encounter in using Digital Technology when teaching.

Literature Review

Literatures were reviewed under the following subheading: Critically judge and evaluate credible Digital Information sources by the faculty members and Challenges encounter in using Digital Technology when teaching.

Ability to Critically Judge and Evaluate Digital Information by Faculty Members Evaluation implies the process of obtaining and providing useful information for decision making. It is a process of making value judgment as to the possession of desirable attributes (Gesinde, Adejumo and Komolafe, 2007).

Flanagin and Metzger, (2011), explain that the main purpose of evaluation is for decision making supported this assertion and stressed that evaluation is a process of gathering information for decision making. It helps to determine the effectiveness or otherwise of a new programme (e-resources). In the same way Ugodulunwa (2008) posited that evaluation is the process of making value judgment about the worth of a thing. It includes obtaining information for use in judging the worth of a programme, product, procedure or objective in education.

Challenges Encountered in Using Digital Technology in teaching

Access to digital infrastructure and resources in schools is a necessary condition to the integration of digital skills in education (Plomp, Anderson, Law, & Quale, 2009). Effective adoption and integration of digital technology into teaching in schools depend mainly on the availability and accessibility of digital resources such as hardware, software, etc. Obviously, if teachers cannot access digital resources, then they will not use them. Therefore, access to computers, updated software and hardware are key elements to successful adoption and integration of technology.

To successfully initiate and implement educational technology in school program depend strongly on the teachers' support and attitudes. It is believed that if teachers perceived technology programs as neither fulfilling their needs nor their students' needs, it is likely that they will not integrate the technology into their teaching and learning. Among the factors that influence successful integration of ICT into teaching are teachers' attitudes and beliefs towards technology (Keengwe and Onchwari, 2008). If teachers' attitudes are positive toward the use of educational technology then they can easily provide useful insight about the adoption and integration of ICT into teaching and learning processes.

Methodology

A Quantitative research methodology was employed for the study. The population of the study comprised of 44 faculty members in the three (3) Departments of Library and Information Science in the Federal University of North-Eastern States of Nigeria, specifically, Abubakar Tafawa Balewa University Bauchi, ModibboAdama University, Yola and University of Maiduguri, Borno State. The table below showed the population of the study for both institutions that are offering Library and Information Science in North-eastern states Nigeria

Table 1: Population of the Study

S/No	Names	No. of Faculty Members
1.	Abubakar Tafawa Balewa University, Bauchi	12
2.	Modibbo Adama University, Yola.	17
3.	University of Maiduguri, Borno State.	15
Total		44

The researcher used the whole population because it was manageable. Hence, no sampling technique was required. Questionnaire was used as the instrument for data collection.

Critically Judge and Evaluate Credible Digital information

ITEMS	ATBU			MAUTECH			UNIMAID			TOTAL			Mean
	1	2	3	1	2	3	1	2	3	1	2	3	
I can identify the depth of the information provided on the site	1(0%)	3(30%)	6(60%)	3(21%)	6(42%)	5(37%)	2(16%)	5(38%)	6(46%)	6(16%)	14(38%)	17(46%)	2.6
I can assess whether an online resource (e.g. web page, blog, wiki, video, podcast, academic journal, article) or person is credible and trustworthy.	4(40%)	4(40%)	2(20%)	3(21%)	6(42%)	5(37%)	3(21%)	3(23%)	7(55%)	10(27%)	13(35%)	14(38%)	2.6
I can identify the purpose of the site and whether the information provided are facts or opinions.	3(30%)	4(40%)	3(30%)	3(21%)	5(37%)	6(21%)	4(30%)	4(30%)	5(38%)	10(27%)	12(32%)	15(41%)	2.7
I can identify whether the information is up-to-date or not	2(20%)	4(40%)	2(20%)	4(29%)	7(50%)	4(29%)	3(23%)	6(46%)	6(46%)	8(22%)	17(46%)	12(32%)	2.7

Key: 1 = Very Confident 2 = Quite Confident 3 = Not Confident

Table 2: Critically Judge and Evaluate Digital Information

It was evidence from table 2 that I can identify the depth of the information provided on the site, I can access whether an online resources (e.g. web page, blog, wiki, video, podcast and online journal article) or person is credible and trustworthy, I can identify the purpose of the site and whether the Information provided are fact of opinions have average mean scores of over 3.00 for all the faculty members in the three institutions studied. This showed that they have high significant influence on the respondents on critically judge and evaluate credible digital Information source because they all recorded above 3.00 mean scores. On the other hand, responses on I can identify whether the Information is up to-date or not have less significant influence on the respondent's web information searching and retrieval because they all recorded above 2.00 mean scores.

The Implication of this finding is that faculty members in the three Universities critically judge and evaluate credible digital information sources are alike this go in line with Miriam, Metzger, Andrew & Flanagan, (2013), understood that the credibility of a source or message is a receiver-based

judgment which involves both objective judgments of information quality or accuracy as well as subjective perceptions of the sources' trustworthiness, expertise, and attractiveness.

Challenges encountered in using digital technology

ITEMS	ATBU			MAUTECH			UNIMAID			TOTAL			
	1	2	3	1	2	3	1	2	3	1	2	3	Mean
Lack of access to the infrastructure always	5(50%)	3(30%)	2(20%)	6(42%)	4(29%)	4(29%)	7(54%)	5(38%)	1(8%)	18(48%)	12(32%)	7(19%)	2.7
Lack of adequate ongoing professional development.	6(60%)	2(20%)	2(20%)	6(42%)	5(37%)	3(21%)	6(47%)	4(30%)	3(23%)	18(48%)	11(29%)	8(20%)	2.6
Personal characteristics such as: age, level, etc	5(50%)	3(30%)	2(20%)	7(50%)	6(42%)	1(7%)	5(38%)	6(47%)	2(15%)	17(46%)	15(40%)	5(14%)	2.7
Lack of technical assistance	4(40%)	3(30%)	3(30%)	6(42%)	7(50%)	1(7%)	7(54%)	4(30%)	2(15%)	17(46%)	14(38%)	6(16%)	2.6

Table 3 indicated that 48% of the respondents were very sure that lack of access to the infrastructure always, Lack of adequate ongoing professional development., Personal characteristics such as: age, level, et and Lack of technical assistance have the average of 3.00 for all the faculty members in the North-Eastern states of Nigeria. These can be said to have high significant influence on the respondent's on challenges encountered using digital technology. The implication of this study is that these are the factors hindering the use of digital technology it goes in line with Plomp, Anderson, Law, & Quale, (2009), confirmed that effective adoption and integration of digital technology into teaching in schools depend mainly on the availability and accessibility of digital technology such as hardware, software, etc. Obviously, if lectures cannot access digital resources, then they cannot use it. Therefore, access to computers, updated software and hardware are key elements to successful adoption and integration of technology.

Conclusion

Based on the findings of the study, the researcher concluded that faculty members in the Department of Library and Information Science North-eastern States of Nigeria have average level of skills in accessing digital information generally. However, it is very important to have adequate skills in the use of these technologies.

Recommendation

Based on the findings of the research study, the following recommendations are suggested by the researcher:

- The faculty members in the Department of Library and Information science in the North- Eastern States of Nigeria should be taught on how to

identify the depth or comprehensiveness and purpose of digital information resources.

- Emphasis should be given to digital technology components by the institutions so as to equip the faculty members in the Department of Library and Information science in the North- Eastern States of Nigeria with the requisite expertise to fully harness the potentials of Information and Communication Technology in teaching learning and research. Also, there is urgent need for the increase in the budgetary allocation to the universities by the government in order to raise their ICT affordability status.

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