

# Enhancing Job Performance of Librarians in Academic Libraries through Technological Change

**Olatokunbo C. Okiki**

*University of Lagos Library, University of Lagos, Lagos State, Nigeria.  
cokiki@unilag.edu.ng*

*and*

**Oluwole O. Durodolu**

*University of Lagos Library, University of Lagos, Lagos State, Nigeria.  
woledurodolu@gmail.com*

## **ABSTRACT**

*This paper explores the correlation between technological change and productivity of academic librarians in three universities in Nigeria. The intension is to make comparisons among academic libraries in federal, state and private universities in Nigeria in a multiple case study research basis. The study adopted a positivist research paradigm, using quantitative research method., The study revealed that technological change has positive influence on academic libraries' operations and activities and certain indicators were identified as outcomes of technological change in academic libraries which are improvement in the quality, increase in the efficiency and productivity, reduction in the total errors, increasing job performance and efficient control of library work and process. The study recommended urgent review of LIS curriculum with a view to raising LIS graduates who will have competence in the use of new and emerging technologies and ICT infrastructures. Stakeholders in academic libraries should respond to technological requirements of the 21st century by exposing librarians to training, workshops and conferences both locally and internationally to enable them obtain cutting edge skills that will give them seamless ability to use modern technology.*

**Keywords:** *Technological change, job performance, academic libraries*

## **INTRODUCTION**

Application of new technology in academic libraries is without doubts a welcome development, but the constantly changing nature has posed a measure of challenges on librarians who are expected frequently to adjust its use to their professional delivery for enhance performance. The conventional responsibility of informational experts was to provide

unhindered access to information from various formats, in a contemporary library working environment is challenging as it is now technology driven, New technologies are being deployed and these are changing the services that libraries provide, for example, online reference, instruction, document delivery, user-initiated library loan, direct borrowing and self-checkout, hence the phrase “the mcdonaldization of libraries.”(Quinn, 2000). Al-Qallaf (2006) reiterated further on the changing role of librarians in an emerging technology world and how they need to adapt to new technology tasks and activities in a globally interconnected. Al-Qallaf put it succinctly “today, librarians provide access to eclectic e-collections, create and maintain digital content, support e-learning, provide real time e-reference, negotiate contracts and licensing agreements and struggle with the economics of electronic information”. With the introduction of Web portals, wikis, blogs and instant messaging, the methods of information and knowledge sharing have been changed, Therefore, Arif and Mahmood (2010) noted that emerging tools require new set of skills to manage and effectively use information, because to meet the rising demand of library patrons, libraries need to hire the skills professionals to provide expanded services to create and disseminate knowledge in the digital age.

The Yılmaz and Kılıçoğlu (2013) observed that the changing nature of technology has placed tremendous pressure on educational establishment to transform their structural and functional characteristics in line with global development, especially in areas concerning content and management of educational programs, educational technologies, learning-teaching method and the roles of teachers and students come forward. In view of this, educational institutions need to create effective learning environments in line with educational needs, generating knowledge, skills, right attitudes and developing organizational strategies to ensure improvement of the individual and sustainability of social life for getting individuals ready for change considering the needs from outside or inside the education system. The authors further stated that efforts to change can trigger diverse responses from organization members, part of which is resistance to the newly adopted technology, especially when adequate provision was not in place to ensure smooth adaptability of the workforce.

In addition, Yılmaz and Kılıçoğlu (2013) further noted that certain forces stand against change in work organisation in a manner that they disregard the needs and prospect of the organization members; provide inadequate information about the nature of change and not acknowledging the need for change, regardless of the fact that change is

necessary for positive reasons, the authors identified causes of resistance to change as fear and anxiety, interference with need fulfilment, job security, employment levels, loss of job satisfaction, habit, inconvenience or loss of freedom, different wage rates, selective perception, threats to power or influence, loss of individual control over work and changes to working conditions, this is the case because it has been established that people like status quo, and feel uncomfortable adapting to new ways of doing thing as this comes with uncertainty that might come with change.

In the same vein, Yılmaz and Kılıçoğlu (2013) identified methods of overcoming resistance to change in any organisation, as proper and interactive education and communication, user's participation and involvement, facilitation, encouragement and support, incentives, negotiation and agreement, manipulation and co-optation approach, and finally, explicit and implicit coercion, are method that can be employed to facilitate the use of new technology. Omosor (2014) carried out a study on effect of technology on Librarians in academic libraries in twelve (12) tertiary institutions libraries in Delta State, Nigeria. The revealed that respondents appreciate the use of technology in the workplace and affirmed that technology has added more responsibility to their jobs, with increase speed of accomplishment and accuracy.

Berna-Martinez and Macia-Perez (2012) noted that diverse cultural, technological, business and hierarchical levels can aid the adoption or rejection of new technology, but conclude that training can assist people in overcoming resistance to it. According to Rivard and Lapointe (2012), technology resistance has been viewed as an essential issue in IT implementation which, if not well managed, can lead to organizational problems. The two researchers suggested ways of positive response to resistance: inaction, acknowledgment, rectification, and dissuasion. It is in this discourse that this paper tends to evaluate job performance of librarians in academic libraries based on adaptation to technological change. The intension is to make comparisons among selected academic libraries in Nigeria.

## **SIGNIFICANCE OF THE STUDY**

The study is significant in the sense that it would assist stakeholders in LIS sector who would like to assess the impact of technological change on academic libraries' operations and activities particularly in a bid to deploying new and emerging technologies to libraries. The study will help in creating awareness on the impact of technological change on academic libraries' operations and activities. Similarly, the outcome of

the study would be useful in the development of a national policy framework on ICT use and application in Nigerian universities. The study finally contributes to knowledge by adding to the body of existing literature on ICT use and impact of information system on library operations/ job performance.

#### **AIM OF THE RESEARCH**

The aim of this research is to investigate factors that enhancing job performance of librarians in academic libraries through technological change.

#### **RESEARCH QUESTION**

1. What are the motivating factors of technological change in academic libraries in Nigeria?
2. What are the important key drivers to the technological change in academic libraries in Nigeria?
3. Does the technological change influence the academic libraries in Nigeria positively?
4. What are the indicators of the technological changes in academic libraries in Nigeria?

#### **METHODOLOGY**

The research adopted quantitative research methodologies mainly through multi case study research design. Data were gathered through questionnaires and an extensive content analysis that included a literature review. The sampling technique used for this study is purposive sampling known as criterion sampling in which the researchers specifically select the research environment suitable for the objectives of the study. Three academic libraries namely: University of Lagos Library (Federal government owned), Lagos State University (State government owned) and Babcock University Library (Private owned), were purposively selected based on proximity, technology and highly educated workforce. Federal, State and Private Universities were specifically selected to evaluate the extent of job performance as it bothers on technological changes.

#### **DATA ANALYSIS AND DISCUSSION OF FINDINGS**

This study examined job performance in Academic Libraries in UNILAG (University of Lagos), LASU (Lagos State University) and BABCOOK University. Fifty copies of the questionnaire designed for the

study were administered to respondents in the 3 selected Institutions. However, only 48 copies were duly filled and returned by the respondents giving 96.0% response rate. This study examined a comparative study of evaluating resistance to Technology change for enhanced Job Performance in Academic Libraries in UNILAG (University of Lagos), LASU (Lagos State University) and BABCOOK University. Fifty copies of the questionnaire designed for the study were administered to respondents in the 3 selected Institutions. However, only 48 copies were duly filled and returned by the respondents giving 96.0% response rate.

## PRESENTATION OF FINDINGS AND DISCUSSIONS

### Socio-Demographic Characteristic of Respondents

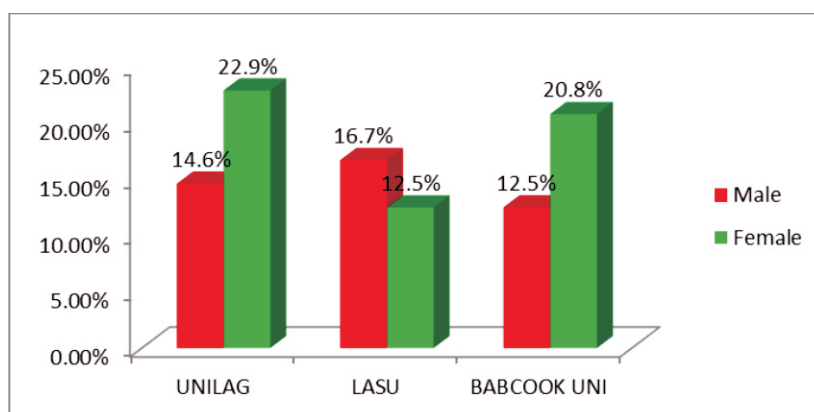


Figure 1: Bar Chart Showing Gender Distribution of Respondents in Selected Academic Libraries.

Fig. 1 shows the distribution of respondents based on gender and it reveals that majority of the total number of respondents from UNILAG and BABCOCK were female with response rates of 11 (22.9%) and 10 (20.8%) respectively while for LASU the results reveals that there are more male 8 (16.7%) than female among the respondents from the institution. Overall, the study reveals that there are more female than male among the respondents considered for the study. Consequently, it may be deduced that there are more female library staff than male in academic libraries in Nigeria.

#### Research question 1:

What are the motivating factors of technological change in academic libraries in Nigeria?

**Table 1:** Motivating factors of technological change in academic libraries

Variables	Res- ponses	Institution			Total
		UNILAG	LASU	BABCOCK	
Introduction of new equipment or new programme	Yes	18(37.5%)	14(29.2%)	16(33.3%)	48(100.0%)
	No	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)
	Total	18(37.5%)	14(29.2%)	16(33.3%)	48(100.0%)
Visibility of technological change to the librarians	Yes	10(20.8%)	7(14.6%)	8(16.7%)	25(52.1%)
	No	8(16.7%)	7(14.6%)	8(16.7%)	23(47.9%)
	Total	18(37.5%)	14(29.2%)	16(33.3%)	48(100.0%)

Table 1 presents information on the motivating factors of technological change in academic libraries surveyed. The results revealed majority of the respondents from UNILAG affirmed introduction of new equipment or new programme and visibility of technological change to the librarians as motivating factors of technological change in their library with response rates of 18 (37.5%) and 16 (33.3%) respectively. On the other hand, majority of respondents from LASU and BABCOCK attested to introduction of new equipment or new programme as the major motivating factors of technological change in their libraries while their response on the effect on visibility of technological change to the librarians as motivating factors indicates that they are not sure of the effect of such as motivating factors. It can, therefore, be deduced from the results of the analysis that introduction of new equipment or new programme is the only prevailing motivating factor for technological change in the academic libraries surveyed.

**Research question 2:**

What are the important key drivers to the technological change in academic libraries in Nigeria?



**Table 2:** Drivers to the technological change in academic libraries

Variables	Responses	Institution			Total
		UNILAG	LASU	BABCOCK	
Corporate evolution	Yes	18(37.5%)	14(29.2%)	16(33.3%)	48(100.0%)
	No	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)
	Total	18(37.5%)	14(29.2%)	16(33.3%)	48(100.0%)
Globalization	Yes	18(37.5%)	14(29.2%)	16(33.3%)	48(100.0%)
	No	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)
	Total	18(37.5%)	14(29.2%)	16(33.3%)	48(100.0%)
Technological Development	Yes	18(37.5%)	14(29.2%)	16(33.3%)	48(100.0%)
	No	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)
	Total	18(37.5%)	14(29.2%)	16(33.3%)	48(100.0%)
Following the Trend	Yes	18(37.5%)	14(29.2%)	16(33.3%)	48(100.0%)
	No	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)
	Total	18(37.5%)	14(29.2%)	16(33.3%)	48(100.0%)
Institutional Pride	Yes	18(37.5%)	14(29.2%)	16(33.3%)	48(100.0%)
	No	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)
	Total	18(37.5%)	14(29.2%)	16(33.3%)	48(100.0%)

The results in table 2 present information on the important key drivers to technological change in academic libraries. The result from the analysis reveals that all the respondents from the three academic libraries surveyed viz: UNILAG, LASU and BABCOCK affirmed that corporate evolution, globalization, and technological development, following the trend and institutional pride as key drivers to technological change in their libraries. It can therefore be deduced from the foregoing that corporate evolution, globalization, technological development, following the trend and institutional pride as key drivers of technological change in the academic libraries surveyed

### Research question 3:

Does the technological change influence the academic libraries in Nigeria positively?

**Table 3:** Influence of technological change one academic libraries in Nigeria

Variables	Res- ponses	Institution			Total
		UNILAG	LASU	BABCOOK	
Does the technological change influence the library positively?	Yes	17(35.4%)	13(27.1%)	16(33.3%)	46(95.8%)
	No	1(2.1%)	1(2.1%)	0(0.0%)	2(4.2%)
	Total	18(37.5%)	14(29.2%)	16(33.3%)	48(100.0%)

The results in Table 3 on the influence of technological change on library operations and activities and it shows that majority of the respondents across the three academic libraries surveyed viz: UNILAG, LASU and BABCOCK affirmed the positive influence of technological change on the operations and activities of their libraries with response rates of 17. 35.4%. 13, 27.1% and 16, 33.3% respectively. It can, thus, be inferred that technological changes have positive influence on academic libraries' operations and activities in Nigeria.

**Research question 4:**

What are the indicators of the technological changes in academic libraries in Nigeria?

**Table 4:** showing the indicators of the technological changes in the library

Variables	Respon- ses	Institution			Total
		UNILAG	LASU	BABCOOK	
Improvement in the quality of work in the library	Agree	15(31.2%)	14(29.2%)	16(33.3%)	45(93.7%)
	Disagree	3(6.3%)	0(0.0%)	0(0.0%)	3(6.3%)
	Total	18(37.5%)	14(29.2%)	16(33.3%)	48(100.0%)



Variables	Responses	Institution			Total
		UNILAG	LASU	BABCOOK	
Increase in the efficiency and productivity of the librarians	Agree	17(35.4%)	11(23.0%)	14(29.1%)	42(87.5%)
	Disagree	1(2.1%)	3(6.2%)	2(4.2%)	6(12.5%)
	Total	18(37.5%)	14(29.2%)	16(33.3%)	48(100.0%)
Reduction in the total errors	Agree	13(27.1%)	12(25.0%)	12(25.0%)	37(77.1%)
	Disagree	5(10.4%)	2(4.2%)	4(8.3%)	11(22.9%)
	Total	18(37.5%)	14(29.2%)	16(33.3%)	48(100.0%)
Increasing job performance after adopting new technologies	Agree	15(31.3%)	13(27.1%)	14(29.1%)	42(87.5%)
	Disagree	3(6.2%)	1(2.1%)	2(4.2%)	6(12.5%)
	Total	18(37.5%)	14(29.2%)	16(33.3%)	48(100.0%)
Efficient control of library work and process with new technologies	Agree	10(20.8%)	12(25.0%)	14(29.2%)	36(75.0%)
	Disagree	8(16.7%)	2(4.2%)	2(4.2%)	12(25.0%)
	Total	18(37.5%)	14(29.2%)	16(33.3%)	48(100.0%)
Accomplishment of work tasks more quickly with new technologies	Agree	16(33.3%)	11(23.0%)	14(29.1%)	41(85.3%)
	Disagree	2(4.2%)	3(6.3%)	2(4.2%)	7(14.7%)
	Total	18(37.5%)	14(29.2%)	16(33.3%)	48(100.0%)

The results on key indicators of technological change as presented in Table 4 reveals that majority of the respondents in the three academic libraries in the universities surveyed viz: UNILAG, LASU and BABCOCK affirmed all the indicators highlighted such as improvement

in the quality of work in the library, increase in the efficiency and productivity of the librarians, reduction in the total errors, increasing job performance after adopting new technologies, efficient control of library work and process with new technologies and accomplishment of work tasks more quickly with new technologies as key indicators of technological change in their libraries. Therefore, all the indicators can be described as crucial indicators of technological change in academic libraries in Nigeria.

### **Discussion of findings**

In the assessment of motivating factors of technological change in academic libraries, it was agreed that introduction of new equipment or new programme is a prevailing motivating factor for technological change in the academic libraries surveyed. This position was supported by Rebecca & Rolf (2009) that employees effortlessly adjust to the introduction of new technology when motivated and unmotivated employees resist change. Yusoff, Kian & Idris (2013) hereby cautioned that to help employees sustain the adaptability to introduction of new technology, management should guide, motivate and train the staff and familiarize them with the necessity for change and its effects on productivity. It can be inferred from the opinion of the respondents that corporate evolution, globalization, technological development, following the trend and institutional pride are key drivers of technological change in the academic libraries. Yılmaz and Kılıçođlu (2013) maintained a contrary view that technological changes can be a threat established arrangement of certain groups in controlling over decision, resources and information concepts. Specifically, intimidating changes may be threatening to specialized groups in the organization and could damage workplace relationship.

Researchers from various part of the world also agree with the outcome of this survey, for example AL -Ameri (2013) observed that reward policy should be given precedence because it has shown that of job performance effectiveness has led to enhancement in the quality of work, accomplishing task and elimination errors. Furthermore, reward system can send positive signals to co-employees that their efforts will attract appropriate reward if the establishment is helped to attain organisational milestone and goals. The study also affirmed positive impact of technological changes in all the three academic libraries surveyed, this response is however not remote to the libraries surveyed, many researchers have also reported similar outcome. Dhanavandan and Tamizhchelvan (2014) noted the positive impact of technology and

innovation in academic libraries especially how different information format is changing into digital application which comes with required skills among librarians.

It can furthermore be established through the response that technological changes have positive influence on academic libraries' operations and activities, This correspond with the view of AL -Ameri (2013: 31) that observed that technological change have manifold of positive input in a workplace and possess an important developmental element capable of increasing job performance when carefully planned in order to yield positive outcome. The author further emphasised the importance of convincing workers not to resist change, because it's only when they embrace change that positive development and outcome can manifest and bring about positive development.

The research also identifies certain indicators for technological changes in academic libraries which are improvement in the quality, increase in the efficiency and productivity, reduction in the total errors, increasing job performance and efficient control of library work and process.

## **CONCLUSIONS AND RECOMMENDATIONS**

The research shows that introduction of new equipment and programme is a motivating factor for technological change in the academic libraries surveyed. The study established positive correlation, constructive relationship in librarians' job performance in the three libraries surveyed. The study also discovered certain pointers leading to technological changes in academic libraries. This study is not without its own limitations, the study concentrated on limited academic libraries and populations, hence the result cannot be used to generalise about the subject matters among academic librarians in Nigeria. Despite the assurance of confidentiality some respondents beg to be excused from participating in the survey.

Based on the findings of this research, the following recommendations should be carefully considered in combating resistance to technological change for enhanced job performance in academic libraries. 1. There is need for urgent review of the LIS curriculum to accommodate new technology and integrated library software to facilitate and enhance the ability of student and familiarise them with skills needed for performance on the field of profession. 2. ICT infrastructure in the libraries should be enhanced to respond to contemporary requirement. 3. Librarians should be exposed to training, workshops and conferences both local and foreign to enable them

acquire cutting edge skills that will give them seamless ability to use modern library facilities without been technophobic, because acquiring facilities without appropriate training of staff is tantamount to wasting of resources. It is further recommended that further research should embark on allied variables relating to technological changes and its effects on librarians identify librarians' job satisfaction and their adaptability to new technology.

## REFERENCES

- Al-Qallaf C.L 2006. Librarians and technology in academic and research libraries in Kuwait: perceptions and effects. *Libri*, 56:168-179.
- Arif, M and Mahmood, K. 2010. The changing role of librarians in the digital world: Adoption of Web 2.0 technologies in Pakistani Libraries. *World library and information congress: 76th IFLA general conference and assembly 10-15, Gothenburg, Sweden*.
- Berna-Martinez, J. V and Macia-Perez, F. 2012. Overcoming resistance to change in business innovation processes. *International Journal of Engineering and Technology (IJET)*. 4.3: 15.
- Dhanavandan, S and Tamizhchelvan, M. 2014. Role of information technology in academic libraries: personal computer to cloud computing. *International Journal of Advanced Library and Information Science*, 2.1:62-71. Retrieved February 20,2017 from <http://scientific.cloud-journals.com/index.php/IJALIS/article/view/Sci-138>
- Omosor, U. A. 2014. Effect of technology on librarians in academic libraries in Nigeria. *Information Impact: Journal of Information and Knowledge Management*. 5.2:203-212.
- Rebecca and van Dick, R. 2009. Navigating organizational change: change leaders, employee resistance and work-based identities. *Journal of Change Management*. 9.2: 143-163.
- Quinn, B. 2000. The McDonaldization of academic libraries? *College & Research Libraries*. 61.3:248-261.
- Rivard, S. and Lapointe, L. 2012. Information technology implementers' responses to user resistance: nature and effects. *MIS Quarterly*. 36.3: 897.
- Yýlmaz, D and Kýlýçođlu, G 2013 Resistance to change and ways of reducing resistance in educational organizations. *European Journal of Research on Education*.1.1:14-21
- Yusoff W.F.W., Kian T.S. and Idris M.T. 2013. Herzberg's two factors theory on motivation: Does it work for today's environment? *Global Journal of Commerce and Management Perspective*, 2.5: 18-22.