



INFORMATION AND COMMUNICATION TECHNOLOGY FACILITIES FOR USE BY LIBRARY AND INFORMATION SCIENCE EDUCATORS IN UNIVERSITY LIBRARIES IN ABIA STATE, NIGERIA

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Abstract

Purpose: *The study assessed the provision of Information and Communication Technology facilities for use by Library and Information Science educators in public University Libraries in Abia State, Nigeria.*

Design/Methodology/Approach: *Descriptive survey research design was adopted for the study. Three research questions guided the study while three null hypotheses were tested at 0.05 level of significance. The population of the study was 30 Library and Information Science (LIS) educators drawn from Abia State University, Uturu (ABSU) and Michael Okpara University of Agriculture, Umudike (MOUAU). The entire 31 LIS educators were used as respondents for the study. Data for the study were collected with a well-structured 25-item questionnaire. Data collected were analyzed using mean and standard deviation to answer the research questions while the hypotheses were tested using t-test statistics.]*

Findings: *From the data collected and analyzed, the study identified 9 rationale for providing Information and Communication Technology facilities, 9 factors that militate against the provision of Information and Communication Technology facilities in public university libraries and 7 strategies for enhancing the provision of Information and Communication Technology facilities for use by Library and Information Science educators in public university libraries.*

Originality/Value: *Based on the findings, the study recommended that there should be capacity building training for both staff in effective utilization of ICT facilities for quality research and skills in Nigerian universities and that the identified problems hindering effective provision of ICT facilities in public universities libraries should be properly addressed by the government and school authorities.*

Keywords: *Information, Communication, Technology, Library educator, Public Universities, Abia State, Nigeria.*

Paper type: *Empirical research*

Introduction

In the new information and digital environment, the importance of Information and Communication Technologies (ICTs) can therefore not be overemphasized. Ofodu (2007) described

ICTs as electronic or computerized devices, assisted by human and interactive materials that can be used for a wide range of teaching and learning as well as for personal use. In the opinion of Aina(2004), ICTs are omnibus terms that encompass computers and telecommunication

technology; it is concerned with the technology used in handling, acquiring, processing, storing and disseminating information. The emergence of ICT has really revolutionized the processes of providing information and educational services. With regard to the management and functions of the library, ICT has opened up new ways for fast and reliable information services. This is a practical demonstration of the fact that several aspects of library activities and services are amenable to the application of Information and Communication Technology (Oketunji, 2001). The use of ICT falls into four major categories which include: constructing knowledge and problem solving (through the Internet, email, CD-ROMs, databases, video conferencing); using process skills; aiding explanation of concepts; and communicating ideas (PowerPoint, desktop publishing) (Aladejana, 2007). ICT facilitates communication, increase access to learning for students, stimulate a wide range of scientific phenomenon and generally motivate both teachers and students to develop problem solving capabilities and aid deeper understanding (Selinger, 2014).

The rapid development in the field of Information and Communication Technology (ICT) has had many positive effects on almost all facets of human activities, including the home, education and training, health, defense and security, finance and commerce, the industry, offices as well as and in library information system. Academic librarians are regarded as Library and Information Science educators who are charged with the responsibilities of teaching students the theory and principles of Library and Information Science. According to Isah, Ango and Abu (2016), Librarianship is the discipline and profession that is concerned with helping individuals obtain reliable information to increase their knowledge in all spheres of their lives from the cumulated information store of mankind. It is a profession that deals with implementation of Library and Information Science curriculum to learners in colleges and universities. Hence, Library and

Information Science educators like other academics are at the centre of information sharing for personal growth and the overall progress of education system using information technologies. The so-called information revolution has made libraries around the world to adopt new philosophies and technologies for service delivery and also reduce the cost of information. For instance, the report of Kent State University (2019) showed that academic libraries support college or university by providing 24/7 online access to resources, reference help and research consultations, assistance finding materials, research instruction classes and workshops, interlibrary loan, course reserves and copiers.

In the advanced nations of the world, the impact of ICT on libraries, especially academic libraries is enormous. This is not so with developing or under-developed countries, Nigeria inclusive. Aguolu and Aguolu (2002) affirmed that available research evidence points to the fact that the age of total electronic libraries is yet to materialize in the less-developed communities. A situation of this nature denies library users the benefit of quality information services owing to the fact that ICT is applied on activities concerned with such housekeeping routines of the library as acquisition, cataloguing, serials control, circulation of library materials and the collection of management statistics. For instance, when properly applied, the computer accomplishes such repetitive and tedious tasks as books ordering, loans and recalls much faster, more accurately, more efficiently and untiringly than any human can. This clearly underlines the relevance of ICT in the management of libraries and delivery of information services. It is quite obvious that ICTs and their application in library and information services have continued to change the scope and patterns of library services (Anaeme, 2008). The aforementioned significance of ICTs suggests that the field of Library and Information Science is deeply affected by the Information and Communication Technology

revolution. Hence, the provision of ICTs is at present, the greatest gift of technology for the overall improvement of library operations and services and academics in general.

Universities are learning institutions and libraries are to provide effective and efficient services with adequate provisions of ICT facilities for use by educators, learners and users. This is because, the provision and utilization of ICT have brought about unprecedented transformation of academic libraries as documented in literature. However, ICTs facilities when provided and skillfully used can influence information service provision and utilization by making them more meaningful. Unfortunately, the personal observation, as well as interactions with some academic librarians in public universities in Abia State (Abia State University Uturu (ABSU) and Michael Okpara University of Agriculture, Umudike (MOUUAU) showed that some of the staff do not have access to ICT facilities due to gross inadequate provision of the required ICTs for teaching, learning and their personal professional advancement. It is based on this background that this study was carried out to investigate the provision of Information and Communication Technology facilities for use by Library and Information Science educators in public University libraries in Abia State, Nigeria.

Purpose of the Study

The broad purpose of this study was to assess the provision of Information and Communication Technologies for use by Library and Information Science educators in public university libraries in Abia State, Nigeria. Specifically, the study:

1. Determined the rationale for providing Information and Communication Technology facilities in public university libraries in Abia State,
2. Identified factors that militate against the provision of Information and Communication Technology facilities in public university libraries in Abia State;

3. Identified strategies for enhancing the provision of Information and Communication Technology facilities for use by Library and Information Science educators in public university libraries in Abia State, Nigeria.

Research Questions

Based on the specific purposes of the study, the following research questions were answered:

1. What are the rationale for providing Information and Communication Technology facilities in public university libraries in Abia State?
2. What are the factors that militate against the provision of Information and Communication Technology facilities in public university libraries in Abia State?
3. What are the strategies for enhancing the provision of Information and Communication Technology facilities for use by Library and Information Science educators in public university libraries in Abia State, Nigeria?

Research Hypotheses

The study tested the following null hypotheses at 0.05 level of significance:

- H₀₁:** There is no significant difference in the mean ratings of Library and Information Science educators from ABSU and MOUUAU on the rationale for providing Information and Communication Technology facilities in public university libraries in Abia State.
- H₀₂:** There is no significant difference in the mean ratings of Library and Information Science educators from ABSU and MOUUAU on the factors that militate against the provision of Information and Communication Technology facilities in public university libraries in Abia State.
- H₀₃:** There is no significant difference in the mean ratings of Library and Information Science

educators from ABSU and MOUUAU on the strategies for enhancing the provision of Information and Communication Technology facilities for use by Library and Information Science educators in public university libraries in Abia State, Nigeria.

Methodology

Descriptive survey research design was adopted in carrying out the study. Three research questions were answered while three null hypotheses were tested at 0.05 level of significance. The population of the study was 30 Library and Information Science (LIS) educators drawn from Abia State University, Uturu (ABSU) and Michael Okpara university of Agriculture, Umudike (MOUUAU). This was made up of 16 LIS educators from Abia State University and 14 LIS educators from Michael Okpara University of Agriculture, Umudike. Due to the manageable size of the population, the 30 LIS educators from the two public universities in the state were used as sample for the study, hence, there was no sampling.

Data for the study were collected with a well structured 25-item questionnaire. The instrument was subjected to face and content validation through thorough vetting by three LIS experts. The comments and suggestions of the experts were duly incorporated into the final draft of the questionnaire used for data collection. To ascertain the reliability of the instruments, Cronbach Alpha reliability technique was used which yielded a reliability coefficient of 0.84. Data for the study were collected by the researchers

with the help of two research assistants through face-to-face administration. Through adequate monitoring, the entire 31 copies of questionnaire administered to the staff were retrieved representing 100% rate of return.

The data collected were analyzed using descriptive statistics such as mean and standard deviation to answer the research questions while the hypotheses were tested using t-test statistics at 0.05 level of significance. The criterion reference (cut-off) point for answering the research question was as 2.50. Hence, any item with mean value of 2.50 and above was interpreted as "Agree" while those less than 2.50 were interpreted as "Disagree". On the other hand, the hypothesis of no significant difference was accepted for items with p-values were greater than 0.05 level of probability while hypothesis of no significant difference was rejected when the p-values were less than 0.05 level of probability.

Results and Interpretation

Research Question One

What are the rationale for providing Information and Communication Technology facilities in public university libraries in Abia State?

Hypothesis One

H₀₁: What are the rationale for providing Information and Communication Technology facilities in public university libraries in Abia State?

Table 1: Mean Ratings and t-test Statistics of Library and Information Science Educators on the Rationale for Providing Information and Communication Technology Facilities in University Libraries in Abia State (n = 30).

SN	Items	\bar{X}_A	\bar{X}_M	\bar{X}_G	SD	t-cal	p-value	Remarks	
								RQ	H0
1	To obtain current research findings	3.82	3.64	3.73	0.63	1.42	0.15	A	NS
2	To enhance quick access to e-resources in the library	3.62	3.61	3.61	0.48	0.09	0.99	A	NS
3	To facilities searching and retrieval of information	3.86	3.63	3.74	0.48	2.29	0.02	A	S*
4	To facilitate interconnectivity of information resources among libraries	3.44	3.43	3.43	0.57	0.09	0.92	A	NS
5	For power point presentation during lectures/workshops	3.31	3.33	3.32	0.47	0.26	0.79	A	NS
6	Storage of information in CD-ROM, flash drives and floppy diskettes.	3.48	3.47	3.47	0.50	0.03	0.97	A	NS
7	ICTs are provided for recreational purposes	3.80	3.60	3.70	0.48	1.98	0.04	A	S*
8	ICT are for in-depth research work	3.55	3.43	3.49	0.49	1.04	0.30	A	NS
9	ICTs give access to current Journals	3.75	3.70	3.72	0.45	0.54	0.58	A	NS

Note: \bar{X}_A = Mean of ABSU; \bar{X}_M = Mean of MOUAU; \bar{X}_G = Grand Mean; SD = Standard Deviation; A = Agree; S* = Significant; NS = Not Significant; Level of Sig. 0.05

The data presented in Table 1 showed that the grand mean ratings of the responses of LIS educators on the 9 items in the table ranged from 3.32 to 3.73 which are all greater than the criterion reference (cut-off) point value of 2.50. This indicates that the 9 identified items in the table were regarded by the LIS educators as rationale for providing Information and Communication Technology facilities in public university libraries in Abia State.

The results of the t-test analysis presented shows that the p-value of 7 out of the 9 items in the table ranged from 0.15 to 0.99 which are all greater than 0.05 level of significance. This indicates that there were no significant (p<0.05) differences between the mean ratings of the responses of LIS educators in ABSU and MOUAU on the 7 rationales for provision of ICTs facilities in public universities in Abia State. Hence, the null hypothesis of no significant difference is accepted on the 7 items in the table. The p-values of the remaining 2 items in the table, specifically items 3

and 7 were 0.02 and 0.04 respectively which are in each case less than 0.05 level of significance. This indicated that there were significant (p<0.05) differences between the mean ratings of the responses of staff of ABSU and MOUAU on the remaining 2 rationales for provision of ICTs facilities in public universities in Abia State. Therefore, the null hypothesis of no significant difference is rejected on the remaining 2 items in the table.

Research Question Two

What are the factors that militate against the provision of Information and Communication Technology facilities in public university libraries in Abia State?

Hypothesis Two

H0₂: What are the factors that militate against the provision of Information and Communication Technology facilities in public university libraries in Abia State?

Table 2: Mean Ratings and t-test Statistics of Library and Information Science Educators on the Factors Militating against the Provision of Information and Communication Technology Facilities in University Libraries in Abia State.

SN	Items	\bar{X}_A	\bar{X}_M	\bar{X}_G	SD	t-cal	p-value	Remarks	
								RQ	H0
1	Non-challant attitude of the policy makers	3.75	3.64	3.69	0.50	1.02	0.30	A	NS
2	Inadequate funding of library services	3.68	3.64	3.66	0.48	0.39	0.69	A	NS
3	Poor electric power supply	3.55	3.52	3.53	0.60	0.23	0.81	A	NS
4	High cost of importation of ICT equipment	3.55	3.54	3.54	0.58	0.02	0.98	A	NS
5	Lack of maintenance culture on part of the ICT manager	3.51	3.40	3.45	0.49	0.98	0.32	A	NS
6	Poor technological know-how in installation of ICT facilities.	3.48	3.50	3.49	0.50	-0.21	0.82	A	NS
7	Inadequate ICT facilities in university libraries.	3.48	3.53	3.50	0.50	-0.47	0.63	A	NS
8	Poor infrastructural facilities	3.72	3.59	3.65	0.49	1.24	0.21	A	NS
9	Unfavorable national ICT policy.	3.51	3.53	3.52	0.60	-0.12	0.89	A	NS

Note: \bar{X}_A = Mean of ABSU; \bar{X}_M = Mean of MOUAU; \bar{X}_G = Grand Mean; **SD** = Standard Deviation; **A** = Agree; **S*** = Significant; **NS** = Not Significant; Level of Sig. **0.05**

The data presented in Table 2 reveals that the grand mean ratings of the responses of LIS educators on the 9 items in the table ranged from 3.45 to 3.69 which are all greater than the criterion reference (cut-off) point value of 2.50. This indicates that the 9 identified items in the table were regarded by the LIS educators as factors that militate against the provision of Information and Communication Technology facilities in public university libraries in Abia State.

The t-test statistics presented in Table 2 showed that the p-values of the 9 items in the table ranged from 0.21 to 0.98 were in each case greater than 0.05 level of significance. This indicates that there were no significant ($p < 0.05$) differences between the mean ratings of the responses of LIS educators from ABSU and MOUAU on the 9 factors militating against the provision of ICT facilities in public universities libraries in Abia

State. Hence, the null hypothesis of no significant difference was accepted on the nine items of hypothesis 2.

Research Question Three

What are the strategies for enhancing the provision of Information and Communication Technology facilities for use by Library and Information Science educators in public university libraries in Abia State, Nigeria?

Hypothesis Three

H0₃: What are the strategies for enhancing the provision of Information and Communication Technology facilities for use by Library and Information Science educators in public university libraries in Abia State, Nigeria?

Table 3: Mean Ratings and t-test Statistics of Library and Information Science Educators on the Strategies for Enhancing the Provision of Information and Communication Technology Facilities in University Libraries in Abia State.

SN	Items	\bar{X}_A	\bar{X}_M	\bar{X}_G	SD	t-cal	p-value	Remarks	RQ	H0
1	Provision of stable power supply	3.58	3.43	3.50	0.63	1.17	0.24	A	NS	
2	Comprehensive national and international ICT policy.	3.44	3.45	3.44	0.60	-0.02	0.98	A	NS	
3	Advocacy for government and institutional funding of ICTs & training	3.44	3.39	3.41	0.64	0.39	0.69	A	NS	
4	Making teaching via ICTs compulsory	3.41	3.42	3.43	0.57	-0.06	0.94	A	NS	
5	Providing ICTs facilities to the academic staff	3.58	3.45	3.52	0.60	1.06	0.28	A	NS	
6	Encouraging self-learning	3.58	3.52	3.55	0.58	0.52	0.59	A	NS	
7	Creating more training programmes	3.55	3.40	3.47	0.59	1.13	0.26	A	NS	

Note: \bar{X}_A = Mean of ABSU; \bar{X}_M = Mean of MOUAU; \bar{X}_G = Grand Mean; SD = Standard Deviation; A = Agree; S* = Significant; NS = Not Significant; Level of Sig. 0.05

The data presented in table 3 above reveals that the grand mean ratings of the responses of LIS educators on the 7 items in the table ranged from 3.41 to 3.55 which are all greater than the criterion reference (cut-off) point value of 2.50. This indicates that the 7 identified items in the table were regarded by the LIS educators as strategies for enhancing the provision of Information and Communication Technology facilities for use by Library and Information Science educators in public university libraries in Abia State, Nigeria.

The t-test statistics presented in Table 3 reveals that the p-values of the 7 items in the table ranged from 0.24 to 0.98 were in each case greater than 0.05 level of significance. This indicates that there were no significant ($p < 0.05$) differences between the mean ratings of the responses of LIS educators from ABSU and MOUAU on the 7 strategies for enhancing the provision of ICT facilities in public universities libraries in Abia State. Therefore, the null hypothesis of no significant difference was accepted on the 7 items of hypothesis 3.

Discussion of Findings of the Study

The findings of this study on research question identified the rationale for providing Information and Communication Technology facilities in public university libraries to include: to obtain current research findings, enhance quick access to e-resources in the library, avail facilities searching and retrieval of information, facilitate interconnectivity of information resources among libraries, for power point presentation during lectures/workshops and that ICTs are provided for recreational purposes in universities to enhance learning among others. The findings of this study supported that of Yusuf, Afolabi and Loto (2013) who appraised the role of information communication technology (ICT) as a change agent for higher education in Nigeria and found that undoubtedly, ICT has imparted on the quality and quantity of teaching, learning and research in tertiary educational institutions in Nigeria. Similarly, the findings of this study affirmed the report of Yusuf (2018) who studied the use of Information and Communication Technology in Northern Nigeria Colleges of education and found that the need for ICT in Nigerian schools cannot be overemphasized in this technology-driven age

that everyone requires ICT competence to survive.

The findings of this study identified the factors that militate against the provision of Information and Communication Technology facilities in public university libraries to include: non-challant attitude of the policy makers, inadequate funding of library services, poor electric power supply, high cost of importation of ICT equipment, lack of maintenance culture on part of the ICT manager, poor technological know-how in installation of ICT facilities and inadequate ICT facilities in university libraries among others. The result of this study also conformed with the result of Lawal, Bassey and Ani (2008) who found that the constraints and hindrances such as insufficiency of resources to be shared, inadequate funds, communication bottlenecks, absence of relevant ICT facilities, epileptic power supply, lack of union catalogue and absence of a national policy on resource sharing were identified as obstacles in the use of ICT facilities for efficient and effective information sharing. Ukachi (2010) found that there are some impediments in the use of provision and ICTs such as management's insensitivity to the relevance of the software, fear of service support problem, and non-availability of internet access in the libraries to enhance downloading of software.

This study on research question three identified strategies for enhancing the provision of Information and Communication Technology facilities for use by Library and Information Science educators in public university libraries to include: provision of stable power supply, comprehensive national and international ICT policy, advocacy for government and institutional funding of ICTs and training, making teaching via ICTs compulsory, providing ICTs facilities to the academic staff, encouraging self-learning and creating more training programmes. Damkor, Irinyangand Haruna(2015) reported that government should ensure that ICT policy statements and advocacy for improved provision of ICT facilities in Nigerian schools and libraries. An ICT policy implementation commission should be created. In addition, the Lawal, Bassey and Ani

(2008) identified measures for increased provision and utilization of ICT facilities to include: increased awareness of the need for resource sharing,, increased funding, provision of relevant ICT facilities, provision of union catalogue and a national policy on resource sharing for enhanced resource sharing in libraries in Nigeria.

Conclusion

The study assessed the provision of Information and Communication Technology facilities for use by Library and Information Science educators in public university libraries in Abia State, Nigeria. The study identified 9 rationale for providing Information and Communication Technology facilities, 9 factors that militate against the provision of Information and Communication Technology facilities in public university libraries and 7 strategies for enhancing the provision of Information and Communication Technology facilities for use by Library and Information Science educators in public university libraries.

Recommendations

Based on the findings and the conclusions of this study, it is therefore recommended that:

1. That the government and the managements of the universities concerned should ensure effective connectivity of public universities libraries to network for efficient use of adequate provision for ICT facilities in public universities libraries for sustainable information sharing and research purposes.
2. There should be capacity building training for both staff in effective utilization of ICT facilities for quality research and skill in Nigerian universities.
3. The identified problems hindering effective provision of ICT facilities in public universities libraries should be properly addressed by the government and school authorities.
4. The government and the managements of the universities should ensure constant supply of power for maximum connection and reliable network speed for achievement of the desired result in the research and ICT usage.

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