Challenges to Effective Deployment of Information and Communication Technologies (ICTs) In Academic Libraries in Benue State, Nigeria

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Abstract

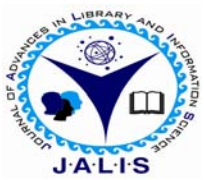
This study looks at some of the challenges inhibiting the deployment of ICTs in academic libraries in Benue state. A sample of 195 from total enumeration of 248 library staff of eight tertiary institutions in Benue State responded to the questionnaire. Findings were alalysed using percentages and mean scores. Findings indicate that, most of the ICT facilities were deployed in the libraries and skills were said to be available among the library staff. Problems of the deployment of ICTs and skills as well as strategies suggested for the problems were uncovered. It was recommended that, the strategies be adopted.

Keywords

Information and Communication Technologies (ICTs), Challenges, Academic libraries, Benue state, ICT skills

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INTRODUCTION

Academic libraries in Nigeria are currently facing their greatest challenge since the explosion of tertiary education and academic publishing. The global digital revolution is affecting both the traditional forms of creation, organization and dissemination of information and the world of tertiary education itself. Cullen (2001) maintained that, the alliance of business and universities to create new paradigm of tertiary education and emergence of the virtual university, supported by virtual library, has redefined and reshaped the way academic libraries deliver services to their users. Basically, the role of library service, including academic library is to facilitate access to document information and there is now a steady growth of documents in electronic forms and access has to be provided to them electronically. In response to this trend, academic libraries have resulted to the deployment of emerging technologies such as information and communication technology (ICT) to provide access to these electronic documents in order to meet information needs of their users (Buckland, 1997). It is defined as science-based innovations that have the potential to create a new industry or transform an existing one (Myers, 2006).

ICTs have been deployed in the library for two major reasons. First, libraries need to meet the continuous demand for better services from their users (Moore, 2006) and second, the libraries see the use of innovative technologies as a better option in meeting these demands (Kathryne, 2004). Emuhohwo and Abdulhamid (2006) spelt out some gains of ICTs deployment in academic libraries as ease of use, low cost and multimedia capabilities which can be used to create interactive applications and provide services and products. However, few libraries, including academic libraries in Nigeria and Benue State in particular have deployed ICTs successfully for services delivery (Ebunuwale and Yaya, 2008). The lack of success in effective deployment of ICTs in academic libraries in Benue state could be attributed to a number of reasons: ICTs pose new ethical issues such as the privacy of the patrons' data. In addition, library workers need to learn new roles such as shifting from the role of handling basic library transactions to serving the information needs of the patrons. There is also uncertainty about the return from the investment on the ICTs (Goetsch, 2007). The skepticism of these technologies will be even greater during current economic recession (Daniels, 2009).

Despite these problems, libraries have continuously been deploying emerging technologies, including ICTs for effective delivery of library and information services to their clientele. However, it is not clear why academic libraries in Benue state are not successfully deploying ICTs for service delivery. It is in view of this that, this study sought to find out the ICT facilities deployed by academic institutions, Skills possessed by the library staff, challenges of deployment of the facilities and skills in Benue State as well as strategies for enhancing ICT deployment in the institutions.

RESEARCH OBJECTIVES

The study aimed at identifying the challenges to effective deployment of Information and Communication Technologies (ICTs) in academic libraries in Benue state, Nigeria. Elsewhere in Nigeria and other parts of the world, ICTs have been used as an instrument to boost service delivery in library institutions especially in institutions of higher learning which are ivory towers of knowledge. The situation seems not to be encouraging in Benue state, Nigeria. To address the fundamental problem of why the situation in the state seems so, the following questions were formulated:

- What are the ICT facilities deployed in academic libraries in Benue state?
- What ICT skills are possessed by library staff of academic libraries in Benue State?
- What are the challenges confronting the deployment of ICT facilities in academic libraries in Benue State?
- What are the challenges facing effective acquisition of ICT skills by staff of academic libraries in Benue State?
- What are the strategies for enhancing the deployment of ICTs among academic library staff in Benue state?

METHODOLOGY

The study used the descriptive survey design. Furthermore, comparison was attempted between universities and other tertiary institutions. 195 out of the survey population of 248 library staff of the tertiary institutions responded correctly to the questionnaire instrument employed for data collection which was administered within the period of two weeks. The population included all staff that handles library professional schedules including librarians, library officers and library attendants. A survey of the entire population of 248 staff of the institutions was used. Data was collected through the use of structured questionnaire which the researchers administered in the institutions themselves with the assistance of trained research assistants that were drawn from each institution visited. Institutions involved were University of Agriculture, Makurdi (Federal); Benue state University, Makurdi (State); University of Mkar, Gboko (Private); College of Education, Katsina-Ala and College of Education, Oju. Others were Benue state Polytechnic, Ugbokolo; Fidei Polytechnic, Gboko and Akperan orshi College of Agriculture, Yandev (a monotechnic). All the polytechnics and Colleges of Education are state owned institutions except Fidei polytechnic which is privately owned. Frequency tables, percentages and mean scores were used to analyse the data. A criterion percentage of 50% and mean value of 2.5 were used as benchmarks for accepting or rejecting a response to an item.

PRESENTATION OF DATA AND DISCUSSION

Research Question 1: What are the ICT facilities deployed in academic libraries in Benue state?

Table 1: Staff responses on deployment of ICT facilities. N=195

S/N	ICT Facilities	Universities	olys/ COEs	Total	%	Rank
i	Computers	134	46	180	92.31	1st
ii	Printers	131	40	171	87.70	2nd
iii	Scanners	105	11	116	59.50	10th
iv	Photocopiers	126	45	171	87.70	2nd
v	Fax machines	49	05	54	27.70	16th
vi	CD-ROMs	113	32	145	74.36	5th
vii	Flash drives	111	15	126	64.62	7th
viii	External hard disc	95	11	106	54.36	12th
ix	Projector	96	03	99	50.77	13th
x	Intercom	90	06	96	49.23	14th
xi	Internet	133	20	153	78.46	4th
xii	Institutional website	109	22	131	67.18	6th
xiii	Digital camera	66	06	72	36.92	15th
xiv	Television	96	23	119	61.03	8th
xv	Telephone line(s)	91	16	107	54.87	11th
xvi	Library software	104	14	118	60.51	9th

Table 1 above indicates staff responses on ICT facilities deployed in academic libraries in Benue state. Based on the benchmark percentage of 50% set for the acceptance of a response as positive, all the facilities are said to be available in the libraries under study. The responses are represented here as follows: Computers (92.31%), Printers and Photocopiers (87.70%), Internet (78.46%), CD-ROMs (74.36%) in that order and others. Fax machines with percentage response of 27.70% were below the criterion percentage of 50% and are considered not available.

All the ICT facilities except one (fax machine) were available in the libraries under study. That is, almost all the facilities listed were available in academic libraries in Benue state. This finding is in agreement with the earlier study of Jegede, Monu and Olumide (2011). In their study on availability and utilization of ICTs for teaching and learning found that, some of the facilities needed for learning are available including e-mail, magnetic board, Internet, telephone, VCD. Some like powerpoint, teleconferencing, fax machine are however not available. The low level of response in favour of fax machines could be because its use has almost been overtaken by the Internet and e-mail where documents are easily sent and received in attached files. Power point and teleconferencing are however modern and should be used extensively by these category of academics. The challenges presented by the research could be a setback to their utilization.

Research Question 2: What ICT skills are possessed by library staff of academic libraries in Benue State?

Table 2: ICT skills level of academic library staff in Benue state.

S/N	ICT Skills	Univer-Sities X^1	olys/ COEs X^2	Total $\frac{(X1 + X2)}{2}$	Decision
I	Typesetting using word processing package e.g. Ms word	3.25	2.64	2.95	A
Ii	Saving information or data in "my documents or desktop" (internal hard disc)	3.14	2.57	2.85	A
Iii	Saving/storing data on storage device (CD-ROM, flash drive etc).	2.91	2.20	2.55	A
Iv	Scanning and uploading images	2.89	2.00	2.45	R
V	Retrieving information saved in the computer & other (secondary) storage devices	3.01	2.43	2.72	A
Vi	Printing data	3.00	3.36	3.18	A
Vii	Use of PowerPoint package for presentation	2.72	2.02	2.37	R
Viii	Searching information on the internet	3.11	2.16	2.64	A
Ix	Saving internet files in storage devices	3.00	2.00	2.50	A
X	Accessing databases on CD-ROMS, DVDs	2.81	1.92	2.37	R
Xi	Sending ordinary & attached e-mails	2.98	2.05	2.52	A
Xii	Downloading information from the Internet	3.02	2.28	2.65	A

Table 2 above shows the ICT skills capabilities of library staff of academic libraries in Benue State. Staff responses show that, majority of the skills including typesetting skills with the use of MS word package (2.95% response); saving information or data in "my documents or desktop" (internal hard disc) (2.85); searching information on the Internet (2.64%) and others are possessed by the staff. The overall percentage scores of responses representing university ICT skills acquisition is 35.84 while that of the polytechnics and colleges of education is 27.63. This is an indication that, staff of universities possessed ICT skills more than that of the polytechnics and colleges of education combined. ICT skills level of library staff of academic libraries in Benue state is fairly adequate as they possess majority of the skills listed. Library staff of universities however, demonstrates better mastery of the ICT skills than those of the other tertiary institutions having obtained a total mean response rate of 35.84% over that of the polytechnic and colleges of education whose mean response was 27.63. This is in agreement with the findings of Shidi and Ape (2011) that, staff of University of Agriculture, Makurdi (UAM) possess more of the ICT skills (12/12) followed by Benue State University (BSU) library staff (10/12) with University of Mkar (UMM) possessing only 5/12.

Polytechnics and colleges of education show the paucity of these resources and skills. Attama (2005) gave a far cry on the position of ICT facilities in colleges of education. He asserted that, notwithstanding the apparent need for computers in library operations, virtually none of the polytechnic libraries in Nigeria apply computers in their library operations.

The apparent demonstration of better mastery of the ICT skills by staff of university libraries over those of the other tertiary institutions could not be unconnected with level of funding of the institutions. First, parent institutions are likely give greater attention to university funding than that of polytechnics/colleges of education. Secondly, all the other tertiary institutions studied are state owned while among the Universities, there is a federal government owned which is the largest. Federal institutions in Nigeria usually enjoy better funding than state owned institutions. Also staff in university libraries which are expected to face more challenges are likely to develop themselves better to brace up to these challenges of information provision.

Research Question 3: What are the challenges confronting the deployment of ICT facilities in academic libraries in Benue State?

Table 3: Challenges confronting the deployment of ICT facilities in academic libraries in Benue State
N=195

S/N	Challenges	SA	A	D	SD	Mean (x)	Rank	Decision
i	Inadequate funds	105	79	8	4	3.47	1st	A
ii	Poor planning and implementation of policies	44	119	16	15	3.00	5th	A
iii	Inadequate infrastructure	65	102	12	16	3.11	3rd	A
iv	Inadequate power supply	94	75	17	9	3.30	2nd	A
v	Poor attitude of library staff towards ICTs	32	85	35	43	2.54	10	A
vi	Lack of sustained budget to keep the ICTs going	59	99	21	16	3.03	4th	A
vii	Lack of appropriate technically skilled staff	46	90	29	30	2.78	6th	A
viii	Political changes in government	42	93	20	40	2.70	8th	A
ix	Lack of partnership with ICT assisted donors	36	108	29	22	2.81	6th	A
x	Difficulty of getting genuine ones in the local market	40	98	20	37	2.72	9th	A

Table 3 above shows the challenges confronting the deployment of ICT facilities in academic libraries in Benue State. Responses indicate that, all the challenges listed militate against the deployment of ICTs in tertiary institutions in Benue state. However, the ranking shows that, inadequate funds rank first with mean rate of 3.47, followed by inadequate power supply (3.30). Inadequate infrastructure comes third with 3.11 mean response and lack of budget sustainability to keep the ICTs going as the fourth item with 3.03. The least challenge was that of difficulty of getting genuine ones in the local market and political changes in government with mean response of 2.72 and 2.70 respectively. Ogunsola (2004) lamented the challenges of ICT deployment in Nigerian universities and enumerated erratic power supply, low level of electricity supply, the shortage of manpower and lack of spare parts, as well as shortage of both personnel and equipment as some of the challenges facing ICT deployment in academic libraries in Nigeria. Similarly, findings from Mc Arthur foundation research discovered that, efforts towards the deployment of ICTs are hampered by a variety of factors including lack of government funding, limited and expensive Internet bandwidth, unstable power sources, and insufficient staff development (Mortenson Center for International Library, 2005). All the top ranking challenges border on funding and in fact poor management of inadequate funds. This explains why universities in Nigeria are continuously crying for increased funding.

Research Question 4: What are the challenges of effective acquisition of ICT skills by staff of academic libraries in Benue State?

Table 4: Challenges facing the acquisition of ICT skills by staff of academic libraries in Benue State

N=195

S/N	Challenges	SA	A	D	SD	Mean (x)	Rank	Decision
i	Inadequate financial support	97	87	7	4	3.42	1st	A
ii	Inadequate support infrastructure e.g. power supply, air conditioners	85	101	5	4	3.37	2nd	A
iii	I have not been selected for training courses on ICTs	67	86	31	11	3.07	5th	A
iv	Lack of ICT facilities in the library to support in house training & sustain skills acquired	56	86	39	14	2.94	8th	
v	Time constraint due to office schedule	45	95	46	9	2.90	9th	A
vi	High cost of training (self sponsor to workshops and to ICT/Computer institutes	71	95	18	11	3.16	3rd	A
vii	Inadequate ICT skills by management staff	58	96	29	12	3.04	6th	A
viii	Poor maintenance culture	56	101	26	12	3.03	7th	A
ix	High cost of ICT	73	85	26	11	3.13	4th	A
x	ICT phobia (Fear)	36	78	58	23	2.65	10th	A

Key: SA- Strongly Agree, **A**- Agree **D**- Disagree, **SD**-Strongly Disagree, **S/N**- Serial Number

Table 4 above indicates the challenges of ICT skills acquisition by staff of academic libraries in Benue State. The result of the analysis shows that, the challenges ranked from inadequate financial support (3.42) to inadequate support infrastructure e.g. power supply, air conditioners (3.37); high cost of training (self sponsor to workshops and to ICT/Computer institutes (3.16%). The least are lack of ICT facilities in the library to support in house training & sustain skills acquired (2.94%) and time constraint due to office schedule (2.90%). The available ones may be dedicated to office schedules in different locations so that, organising them for training becomes tasking.

Ekwelem, Okafor and Ukwoma (2009) collaborated others on the challenges facing the deployment of academic libraries in their findings on the constraints to the use of electronic information sources (EIS). They recorded a 52% response in favour of finance, 23.8% in favour of inadequate skills while 16.8 % response was recorded in favour of epileptic power supply. They also listed inadequate bandwidth also as one of the major constraints. Armah (2009) in her findings listed inadequate number of computers, inadequate training and difficulty in assessing some online databases as some of the challenges. The recurrence of finance as a major challenge to effective deployment of ICT facilities and skills is an indication that, the issue of provision and effective management of financial resources has not been given adequate attention it deserves.

Research Question 5: What are the strategies for enhancing the deployment of ICTs among academic library staff in Benue state?

Table 5: Strategies for enhancing the deployment of ICTs among academic library staff in Benue state. N=195

S/N	Strategies	SA	A	D	SD	Mean (x)	Rank	Decision
i	More attention should be given to funding of ICT programmes	126	66	1	2	3.62	1st	SA
ii	There should be adequate training for librarians on the use of ICTs	116	74	4	1	3.56	2nd	SA
iii	More attention to be given to ICT support facilities	96	90	7	2	3.44	4th	A
iv	Adjustment of office schedules to accommodate training in ICTs	70	11	6	6	3.25	8th	A
v	Library staff to invest in self training	61	10	20	13	3.08	9th	A
vi	ICT facilities to be made available in the library for	98	84	12	1	3.43	5th	A

	training purposes							
vii	ICT training to be subsidised by government and institutions.	89	89	13	4	3.35	6th	A
viii	Technical staff should be contracted to train library staff.	86	88	8	13	3.27	7th	A
ix	Government should improve power supply	123	61	7	4	3.55	3rd	SA

Key: SA- Strongly Agree, **A**- Agree **D**- Disagree, **SD**-Strongly Disagree.

Table 5 above presents the strategies for enhancing the acquisition of ICT skills by staff of academic libraries in Benue state. It shows that staff agreed that all the strategies can be employed to enhance proper acquisition of ICT skills. They are ranked as follows: More attention should be given to funding of ICT programmes ranked first with the mean value of 3.62; government to improve power supply ranked second with 3.56% and Government should improve power supply (3.55%). The least strategies were that of Libraries should source funds internally for ICT projects (3.00%) and library staff to invest in self training (3.08%). The findings that emanate from this study indicated that, all the strategies ranging from increased attention to funding of ICT programmes, adequate training for librarians on the use of ICTs, sourcing of funds internally for ICT projects can be employed in order to enhance proper acquisition of ICT skills. This finding is in agreement with Drisu (2009) who recommend that provision of funds for the procurement of ICT facilities; training and retraining of staff in ICTs and provision of broadband Internet access in libraries.

RECOMMENDATIONS

The following recommendations were made in line with the findings of the study.

- ✓ The institutions may allocate more funds for the library in order to acquire the facilities that are not available and increase the number of the available ones as well as maintain them.
- ✓ Staff should be encouraged to acquire more ICT skills to add to the existing skills. They can even enroll on their own to acquire the skills without waiting for government so as to improve themselves and meet the current trends in information profession.
- ✓ Government, institutions, management of libraries and public spirited organizations may come to the aid of libraries in giving greater attention in terms of finances and time in order to handle the challenges associated with the deployment of ICT facilities and acquisition of skills.
- ✓ Strategies that are obtained in the findings of the study may be adopted.

CONCLUSION

The paper traced the development of libraries through the ages and how ICT has brought a major transformation in the operations of the library in recent times. Benefits accrued to libraries with the introduction of ICTs are also discussed. The paper dwelled on the ICT facilities, ICT skills possessed by the staff of these tertiary institutions as well as the challenges inhibiting the deployment of the facilities and the acquisition of the skills. Strategies to be adopted in solving these problems were also considered.

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