

The State of ICT in University Libraries in South Eastern Nigeria

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Abstract

The work surveyed eight university libraries in southeastern Nigeria to determine their state of ICT application including the availability of the hardware, software, e-resources and their challenges. A ten-item questionnaire was designed and distributed to the surveyed libraries. Most of the libraries have above average ICT literate professional staff but very low ICT literate non professional. The first computers acquired were used for document processing and till date most of the libraries have not advanced into other uses. Many of the Libraries especially the state funded have no Internet, or LAN workstation but each of the library can boast of standalone computers. Library software, network operating systems and LAN are conspicuously absent in most of the libraries. Though a few of the libraries subscribe to online electronic resources such as EBSCOhost, Access to Global Online Research in Agriculture (AGORA), Health Internetwork Access to Research Initiative (HINARI), Online Access to Research in the Environment and The Essential Electronic Agricultural Library (TEEAL), most of their electronic resources are predominately on CD-ROM. They face series of challenges including poor funding; unskilled manpower; ignorance of the location / availability of ICT and its application; ICT avert of library and university management and infrastructural problems. Recommendations were made based on the findings.

Introduction

The world of information today is dominated by the Siamese technologies; Information and Communication Technology (ICT) delivered by the desire to capture, process and disseminate information in real time. ICT development brought a new package format which not only made information more portable but also transcend the world to a global communication village. University community which is founded on teaching, learning and research embraced the new information packaging format and tend to bypass its engine house "the university Library" where it is not ICT compliant. Therefore the university library becomes a very important unit in the development of ICT in the university. Hence Liverpool (2001) noted that one of the ways ICT is evolving in Nigeria University system is through the library information services. Cochrane (1992), Henderson (1992) and Barsman (1997) indicated the advantages and reasons for ICT use in library and to users. Chisenga (2004) noted that ICT has changed the outlook of the library.

Since the University library is poised to give effective service to its community as a justification of its position, it cannot but use the State-of-the Art information providing tools. In

the African setting, Chisenga (2004) informed that the use of ICT in university libraries can be traced to 1970s, successful implementation began in 1980s and accelerated in the 1990s, though a lot of disparity occurred with respect to its adoption in various regions. South Africa is leading in the Southern Africa. He noted that the use of CD Rom is wide spread in university libraries. Millennium (fomer INNOPAC), ALEPH, DYNIX, URICA, Erudite, Public Access Library System (PALS), TINLIB, INMagic, ITS, ADLIB are some of the software he found to be in use. He also noted that the use of Internet is predominant in university and corporate libraries than other libraries in African. In his own study Adeniran (1997) found that six out of the nine libraries he studied at Botswana were computerized. Chuene (2001) reported that OPAC is used to search library database in the University of North South Africa while URICA Integrated Library System was used for its automation. Literature is also replete on the use of ICT in Nigerian university libraries. In the late 70's, Ifebuzor et al (1977) found the availability of the following models of computers in Nigerian university library, IBM 360 – University of Benin while Ibadan, Ife, Lagos and Nsukka had IBM 370 respectively. They were applying Batch, On-line and off-line

methods in data processing. He however identified a great disparity in the use of ICT among the university libraries. Alabi (1993) at the time of his study found out that ICT was used for word-processing and other document processing only. Anunobi (2005) also discovered in her work in Southern Nigerian university libraries that South Western university libraries are leading in the use of ICT. In compiling ICT facilities in 19 Nigerian library, Asamoan Hassan (2002) noted that there are 5 scanners, 20 telephone lines, 51 printers, 152 personal computers, 105 CD-ROMs and 25 Photocopiers in the libraries. There are 12, 4, and 3 libraries providing email, Internet and LAN connectivity respectively. There is paucity of library operations with ICT as 6, 5, 2 and 1 libraries perform cataloging and classification, serials operations with ICT respectively. Idowu and Mabawonku (1999) also found in their study that research and university libraries are at the fore front of the use of ICT in Nigeria.

During the Anniversary Conference of NLA, Oketunji, Daniel and Okojie (2002) studied ICT in national, academic and special libraries in Nigerian and found that more library professionals (58.8%) than paraprofessional staff (33.5%) are computer literate; an average of 5 computers are located in each of the libraries studies. Their major operating system in use was windows 98 while the most available hardware were the photocopiers. In a recent study, Anunobi (2004) found that of the 19 University libraries studied, 84.21% had at least a personal computer, 72.68% use CD-ROM, 57.89% use LAN, internet and e-mail facilities. She also noted paucity of ICT facilities in 3rd generation universities and gross absence of the facilities in the State funded university libraries. The use of ICT facilities for cataloging and classification, acquisition, evaluation and serials is lower than administrative use.

Though these and other research work abound on ICT use in libraries, no such work has been done specifically in university libraries in Eastern Nigeria and most of the generalized work did not sample most of the university libraries in the Eastern Nigeria. Again no work has been done on the available electronic resources and the challenges of acquiring, processing and

providing for use of the resources. The work sought to fill that gap. Specifically the survey intends to

1. Identify the ICT hardware used in Eastern Nigeria university libraries;
2. Ascertain the software used in these libraries ;
3. Find out the e-resources used; and
4. Determine the challenges faced in the acquisition, processing and use of these resources.

Research Method

This is a survey research which obtained information from Eastern Nigeria University libraries namely Abia State University Uturu (ABSU), Ebonyi State University Abakiliki, (ESUA), Enugu State University of Science and Technology (ESUT) and Imo State University Owerri (IMSU). Others are Federal University of Technology Owerri (FUTO), Nnamdi Azikwe University Awka, Nnamdi Azikwe Library University of Nigeria Nsukka (UNN) and Michael Okpara University of Agriculture Umudike (MOUA). A ten item questionnaire was designed and sent to the eight University libraries aimed at eliciting information on the ICT hardware and software, e-resources available and the challenges faced in managing these facilities in the various libraries. Nine (90%) of the questionnaires were returned. Nnamdi Azikiwe University library questionnaire was not returned. The responses were collated and analyzed using tables and percentages.

Presentation and Analysis of Result

The results of the survey are presented to reflect the objectives of the survey.

The university libraries were required to indicate the number of staff in their libraries and their computer literacy status since this is considered an important factor in library ICT status. The result is presented in Table 1. The Table shows that only ABSU and MOUA have literate professional staff below 50%. However all the university libraries have very low percent of non professional staff with computer literacy capacity. It is noteworthy that all the professional staff at FUTO library are computer literate.

Table 1: The Number and Computer Literacy Capacity of Staff of the University Libraries

University Libraries	Total No. Staff	Professional Staff		Non- Professional Staff	
		Total	No. Computer Literate (%)	Total	No.(%) Computer Literate
UNN	118	28	14 (50)	90	40 (44.44)
MOUA	43	4	3 (37.5)	35	5 (14.28)
FUTO	105	11	11 (100)	94	25(26.59)
IMSU	15	5	3 (60)	10	2 (20)
ABSU	52	6	2 (33.33)	46	4 (8.69)
ESUT	66	6	3 (50)	60	4 (6.66)
ESUA	73	7	4 (57.14)	66	5 (7.57)

Table 2 : Name and Year ICT was Introduced in the University Libraries in Southeastern Nigeria and their uses

S/N	University Libraries	1 st ICT acquired	Year of acquisition	Operations applied
1	UNN	Computers	1994	Documents processing
2	MOUA	Computers, Internet, CD-ROM and LAN	2003	CD-Rom search services, Internet search , and E-mail services
3	FUTO	Computers	1995	Document processing
4	IMSU	Computers	2003	Document processing
5	ABSU	Computer	2001	Document processing
6	ESUT	Computers	2005	Document processing
7	ESUA	Computers	2001	Document processing

Considering the period the first ICT was acquired in each of the libraries, Table 2 indicates that UNN pioneered the acquisition of ICT (computer) in the Southeastern Nigeria university libraries. However, all the libraries utilized theirs for document processing. Only MOUA used its computer for CD-ROM and internet services on acquisition.

ICT Hardware

The Universities libraries were required to indicate the functional ICT hardware available in their libraries. The result is presented in Table3. It reveals that all the libraries have standalone computers while the number (48) is more in federal government funded libraries than their state counterparts (30). However there is an average of 11 standalone computers for the

libraries. Two of the federal funded libraries have LAN workstation which is found in MOUA and FUTO. That is explained further by the 2.71 average number of LAN workstation. Though photocopiers are also available in all the libraries, they are more in number in state owned university libraries. Scanners are available in only three libraries while Internet workstations are available in only two of the libraries hence the below 1 average . None of the libraries has fax machine or digital camera.

Software

The Libraries’ responses on the various software in use in the libraries are presented in Table 4. It shows that above 50% of the libraries have windows XP operating. New versions are used by below 50% of the libraries . However FUTO library uses the latest network operating

system- Server 2003. All the libraries have Microsoft office as their major application .14.28% of the libraries have X-lib and Alice

for Windows, while 28.52% have CDSISIS and TINLIB as their library software.

Table 3: Number of Functional ICT Hardware available in the niversity libraries in the Southeastern Nigeria.

S/ N	University &Year established	Funding body	Stand alone Computer	LAN work station	Photocopiers	Fax machines	Scanners	Digital Camera	Printers	Internet work station
1	UNN 1964	Federal Govt.	11	0	2	0	1	0	2	1
2	MOUA 1993			3	1	0	0	0	1	3
3	FUTO 1982		5	16	3	0	1	0	6	0
	SUBTOTAL		48	19	6	0	2	0	9	4
4	ABSU 1981	State Govt.	1	0	1	0	0	0	1	0
5	IMSU 1993		20	0	2	0	0	0	20	0
6	ESUT 1981		4	0	1	0	1	0	1	0
7	EBSU 1996		5	0	4	0	0	0	5	0
	SUBTOTAL		30	0	8	0	1	0	27	1
	GRAND TOTAL	7	78	19	14	0	3	0	36	4
	Average No per Library		11.14	2.71	2	0	0.42	0	5.14	0.57

Table 4: Computer Software Available in the University Libraries in Southeastern Nigeria.

S/N	University Library.	OPERATING SYETEMS					GENERAL APPLICATION			Library Software				
		Win95	Win 98	Win me	Win2000	Server 2003	Micro Office	Corel Draw	Pager maker	X-Lib	CDSISI	Alice	TIN-LIB	GIASS
1	UNN	0	*	0	0	0	*	0	0	*	0	0	*	0
2	MOUA	0	*	0	*	0	*	0	0	0	*	0	0	0
3	FUTO	*	*	0	*	*	*	*	*	0	*	*	*	0
4	ABSU	0	0	*	0	0	*	0	0	0	0	0	0	0
5	IMSU	*	0	0	0	0	*	*	0	0	0	0	0	0
6	ESUT	*	0	0	0	0	*	0	0	0	0	0	0	0
7	ESUA	*	0	0	*	0	*	0	0	0	0	0	0	0
No. of Libraries		4(57.14)	3(42.85)	1(14.28)	3(42.85)	1(14.28)	7(100)	2(28.52)	1(14.28)	1(14.28)	2(28.52)	1(14.28)	2(28.52)	0

Note : * = Available; 0 =Not Available

Library Operations with ICT.

The various operations in the library performed with ICT are presented in Table 5. From the Table, the standalone computers, photocopiers and printers are used primarily for administrative and word-processing purposes. Only 42.85% and 14.28% of the libraries use standalone computers for public services and digitization purposes respectively. 28.57% use the standalone for acquisition and catalogue/ classification. Scanners are used for digitizing by only 44.28% of the libraries while LAN is applied by 28.57% for public services,; and by 14.28% for cataloging / classification and digitizing.

Table5: Libraries Using ICT Facilities for Various Library Operations

S/N	ICT facilities	Administra-tion		Word-processing		Acquisition		Cat/ Class		Public Services		Digitizing	
		No.	%	NO.	%	NO	%	NO	%	No.	%	No.	%
1	Standalone computer	7	100	6	85.71	2	28.57	2	28.57	3	42.85	1	14.28
2	LAN	2	28.57	2	28.57	0	0	1	14.28	2	28.57	1	14.28
3	Photocopie s	7	100	7	100	0	0	0	0	4	57.14	0	0
4	Fax machines	0	0	0	0	0	0	0	0	0	0	0	0
5	Scanners	1	14.28	0	0	0	0	0	0	0	0	2.	28.57
6	Digital Camera	0	0	0	0	0	0	0	0	0	0	0	0
7	Printers	7	100	7	100	0	0	4	57.14	3	42.85	0	0
8	Internet	2	28.57	0	0	1	14.28	1	14.28	1	14,28	0	0

E-Resources.

The surveyed libraries were required to list the e-resources in their libraries. Table 6 shows that the entire libraries have CD-ROM, 57.14% have EBSCOhost, and 28.57% have e-Granary, AGORA, Medline and TEEAL respectively. Only one library has HINARI. Each of the Federal Government funded libraries has 50% and above of the e-resources contrary to the state funded university libraries. However, FUTO library is outstanding in the availability of the e-resources with up to 75%.

Table 6: E-Resources Available in the University Libraries of Southeastern Nigeria

S/N	Library	Funding body	CD-ROM	CAB	EBSCOhost	e-Granary	AGOR A	HINARI	Medline	TEAL	Total
1	UNN	Federal Govt.	*	0	*	0	*	0	*	0	4(50%)
2	MOUA	''	*	*	*	0	0	0	0	*	4(50%)
3	FUTO	''	*	0	*	*	*	*	0	*	6(75%)
4	ABSU	State Govt.	*	0	0	0	0	0	0	0	1(12.56 %)
5	IMSU	''	*	0	*	*	0	0	0	0	3(37.5%)
6	ESUT	''	*	0	0	0	0	0	0	0	1(12.5%)
7	EBSUA	''	*	0	0	0	0	0	*	0	2(25%)
Total			7(100%)	14.28%	57.14%	2(28.57%)	28.57%	14.28%	28.57%	28.57	

Note : * = Available ; 0 = Not Available

Challenges of ICT

i. Acquisition

The university libraries indicated the challenges faced in the acquisition of ICT. They include:

- a) Inadequate funding for the purchase of the cost intensive ICT hardware, software and for maintenance;
- b) Lack of knowledge of the availability and source of acquiring ICT;
- c) Lack of consortium to help create awareness and offset the cost of ICT; and
- d) Lack of technical skills to advice library/university management on the hardware, software and manpower needed in the acquisition of library ICT.

ii. Processing

The challenges faced in the processing of ICT as indicated by the respondents include:

- (a) Lack of skill to understand the nature and requirements of ICT facilities;
- (b) Lack of knowledge and availability of standard ICT processing tools in the library;
- (c.) Unavailability of infrastructure, furniture/storage facilities that provide a conducive environment for the processing of ICT; and
- (d) The fragile nature of ICT that calls for special handling techniques.

iii. Use

This poses challenges to both the librarians and the users. The following were indicated by the respondents

- a. Environmental problems including power failure and poor communication facilities.
- b. Libraries and users inadequate expose on the availability, accessibility and use of ICT.
- c. Inadequate number of ICT in comparison with the available number of users.

Benefits

The respondents noted the following benefits in the use of ICT:

- (a) Economy of space and time in information processing and retrieval;
- (b) Enhanced speed and accuracy in library operation;
- (c) Improved visibility and accessibility of information resources; and
- (d) Enhanced remote access which ensures exhaustively in information search and retrieval.

Discussion of Findings

The result in Table 1 which revealed a low ICT literate professional staff for ABSU and MOUA implies that these Libraries may not be able to apply ICT successfully as the professionals are the stronghold of every university library. The use of computers for CD – ROM and Internet services by MOUA in Table 2 implies that the first computer was put

into the library operation immediately. The absence of Internet workstation and LAN in many of the libraries (Table 3) implies that most of the libraries are not providing online or integrated library services. Furthermore limited scanners and absence of digital camera means that majority of the libraries are not involved in digitalization of their print resources. However, each of the libraries can boast of standalone computer though there are few in state funded university libraries.

The absence of network operating systems in some of the libraries implies that such libraries have no LAN. FUTO seems to be championing the use of modern operating system (Server 2003) unfortunately, library software, a prerequisite to library automation is grossly absent in all the state funded university libraries, an indication of un-readiness to automate their libraries (Table 4).

The use of standalone computers for document processing which was the predominant use to which the first ICT was put to prevailed till date. This implies a low progress in ICT use in the libraries. Also the low use of LAN for, public services, cataloguing and classification or acquisition indicate the absence of OPAC and low use of integrated library system.

Surprisingly, most of the libraries especially the state funded could not have access to most of the databases. This is a negative development since these libraries may or may not have the print alternative. Therefore they may deny their users the privilege of using the e-resources most of which are free. The availability of most of the e-resources in FUTO library implies that FUTO is taking a lead in the e-resources provision.

Conclusion and Recommendation

The survey shows the following conclusive evidences:

- a. Most of the libraries have above average ICT literate professional staff

but very low ICT literate non-professional staff.

- b. The first computers acquired were used for document processing and till date most of the libraries have not advanced into other uses a pointer to slow application of ICT in southeastern Nigeria university libraries
- c. Many of the libraries especially the state funded have no Internet, or LAN workstation but each of the library can boast of standalone computers.
- d. Library software, network operating systems and LAN are conspicuously absent in most of the libraries.
- e. Outside CD-ROM which is available in all the libraries , most online electronic resources are not found in most of the libraries in southeastern Nigerian libraries;
- f. The libraries face series of challenges in the event acquisition, processing and use of ICT facilities. They include those of poor funding; unskilled manpower; ignorance of the location / availability of ICT and its application; ICT avert of university and library management and infrastructural problems.

From the forgoing therefore it is recommended that

- a. Library management should make effort to create ICT unit to coordinate ICT activities in the libraries ;
- b. Computer literacy should be made an essential requirement in the qualifications for recruitment of librarians while old staff should be given in-service training on ICT; and
- c. Library consortia should be formed and budgets set aside for ICT development in libraries.

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