The Need for Effective Information Resources Provision and Utilization in Nigerian University Libraries: A Case Study of Two Nigerian Premier Universities

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Abstract. Effectiveness of a library and worthiness of its services in the present digital age depends largely upon the adequacy and accessibility of its services and resources. The study assessed the level of automation projects of Ahmadu Bello University, Zaria and University of Ibadan libraries using the sample drawn from the two university libraries. The study discovered that none of the two universities has finished automation of its services; Ahmadu Bello University adopted ALICE for WINDOWS library automation Software package and is yet to complete any of the five modules of the software, while the University of Ibadan adopted VIRTUA (VTLS) library automation Software and has finished only a module (cataloging) out of six modules possessed by the software. The findings also revealed that the level of users' satisfaction, utilization and progress of the projects were very low in the two universities due to amalgam of problems such as electricity problem, inadequate fund, lack of technical expertise, frequent changes of the software adopted, small size Bandwidth etc. It concludes by proffering solutions to the observed problems like the provision of reliable source of electricity, increase in the budgetary allocation to the libraries, staff training and retraining on software design and network engineering and management, fostering synergy with some units of the universities such as Centre for Information Technology (C. I. T.) and Management Information Systems (M. I. S.) for the purpose of strengthening the systems, technology and expertise transfer.

Keywords: ICT, Library Automation, University Libraries, Library Services

1. Introduction

Libraries exist for people, and not the reverse. Libraries primarily exist for the purpose of preserving records of human knowledge and civilization. Without libraries, human ideas would not have been successfully transmitted across generations. The university library is a very important academic sector of the university and a university is as good as its library. It is well known fact that a nation cannot develop in isolation of her human resources. Universities are important agents in the development of the human resources of any nation. This major role of universities in a national development is achieved through their program of teaching, learning and research. However, Libraries in Africa have difficulties satisfying the information needs of their users. This is because the amount of information created these days is so huge that using the traditional method of locating and retrieving information leaves much to be desired. Locating access to the collections with the card catalogue is time-consuming, frustrating and unattractive to users. As such, the collections in the libraries are under-utilized, Arkorful (2007).

As the world becomes global village due to advances in information and communication technologies (ICTs), so also the profession and practice of library and librarianship. This shift has resulted in coining various terms and nomenclatures for the practitioners and services provided by the practitioners. Services such as Selective Dissemination of Information (SDI); Current Awareness Services (CAS); Information and Knowledge Management (I&KM) etc. were common, introduced and further enhanced using ICTs by the practitioners in the profession who are often called digital librarians, system librarians or information managers. These unprecedented changes had impacted positively on the quality and quantity of services provided by libraries and also transformed their environment in to "borderless" and completely "inter accessible" thereby creating high level of utilization and maximizes their (libraries) potentials for

development and increase in information resources to cater for the dynamic information need of their clientele.

The term library automation is used to refer to the extensive use of mechanical, electronic or micro-electronic equipment to perform the basic functions and activities associated with the libraries. The computers are of great significance with the advancement of telecommunication and reprography technologies in the library automation. They offer adversative tool for organization and retrieval of information. According to Bhardwaj and Shukla (2002: 2) library automation is a generic term used to denote:

The various activities related to the location, acquisition, storage, update, manipulation, processing, repackaging or reproducing, disseminating or transmitting or communication, and improving the quality of products and services of library and information centers. It enhances the speed, productivity, adequacy and efficiency of the library professional staff and save the manpower to avoid some routine, repetitive and clerical tasks such as filling, storing, typing, duplication checking etc. on which we can conserver costly professional manpower for technical service and readers services.

Trends in library automation have focused on off-the-shelf packages which are made to run on hardware available locally, or hardware purchased from different sources. They are usually commercially inclined, have proven track record, developed and tested over a long period of time. They are somewhat cheaper since the cost of the development is shared among many users. There is also the Turnkey Package approach where both software and hardware are bought from the same source. These packages are usually simple and open to new developments, affordable, user–friendly and easy to maintain. There are several software packages for library automation systems required for organization of knowledge which are available in market nowadays. These software packages are efficiently capable of acquiring, storing, sorting, retrieving and disseminating information to library patrons on stand-alone computers, local area networks and via Internet.

In Nigeria, quite a number of library automation software packages had found their way into the country's library market. It is interesting to note the various reasons behind the adoption of these library packages. Most of the Federal Universities have one version of TINLIB software or another. While some never activated the package, some departed to other packages, others have attained high level of usage. In 1993, the National Universities Commission (NUC) which is the university institutions' supervisory body in Nigeria, recommended the TINLIB to all the Federal University Libraries. Many of these libraries purchased the package despite the fact that some didn't have any computer system to install it (Okebukola, 2002).

However, some of the library automation software packages available in Nigeria are: TINLIB/TINMAN; GLAS; Micro CDS/ISIS; IDAMS; X-LIB; NLAS; VTLS; ALICE for WINDOWS etc.

The choice of the two universities was informed by the fact that both are first generation universities in Nigeria (established between 1948 to 1970s), hence, whatever the levels of automation reached could be a replica of the Nigerian universities automation programs for the obvious reason that the two universities are the oldest in the country. The choice of the study locations i.e. Ibadan and Zaria was predicated on the fact that they are in different regions of the country (North – West and South–West).The objectives of the study are:

1. To investigate the types of automation software adopted by the Ahmadu Bello University and University of Ibadan libraries.
2. To determine the number of sections of the libraries have been automated and the level of automation in each section.
3. To compare the functionality of the software packages in terms of number of modules.
4. To identify the clear picture of the problems associated with the automation project in the university libraries under consideration.

2. Methodology

The study is a comparative study, hence, the use of survey methods in investigating the stated problem. The use of survey method was to permit the collection of empirical data through the use of questionnaire, interview and direct observation. However, according to Babbie, (2001:238) one additional merit of survey

research method is flexibility, which enabled the researcher to collect data through the use of various instruments, including: a- Structured questionnaires; b- Direct observation and participation and c- Interview

3. Results and Discussions

Software Packages Adopted by Ahmadu Bello University and University of Ibadan Libraries

1- Ahmadu Bello University Library as at the time of the study adopted ALICE for WINDOWS software for its automation program. This adoption/decision was due to numerous reasons enumerated which will be seen in the subsequent headings. However, the researcher acknowledged the plans by the library (ABU) to migrate to another software in no distant future.

2- The University of Ibadan Library as at the time of this study was using VTLS software package which according to the management is due to its numerous advantages/features. This includes possession of almost all the relevant modules by the software, web-interfaceability, etc,

4. Level of Automation in the Two University Libraries

Table 4.1 Level of Implementation of the Modules in the Two University Libraries

Modules	A.B.U. (ALICE)		U.I. (VIRTUA)	
	Implemented	Not Implemented	Implemented	Not Implemented
Acquisition Module				
Selection module		-	√	
Report generation	√			-
Ordering		-	√	
Print identification label	√			-
Data loading	√		√	
Invoicing		-	√	
Cataloguing Module				
OPAC/inquiry system parameter	√		√	
MARC file		-	√	
Rapid retrospective	√		√	
Authority file	√		√	
Circulation Module		-		
Loans	√			-
Renewing loan	√			-
Returns	√			-
Reservations		-		-
Barcode		-		-
Overdue notice	√			-
Serials Module				
Serials management	√		√	
Subscription		-	√	
Invoicing		-		-
Reference Module				
Open access resource		-		-
Ask an expert		-		-
Virtual reference		-		-
Question point viz	√			-
question and answers				
Quotations				
parliamentary procedure				
scientific reference				
style guides				
Thesauri				
Time				
world records				
Bibliography				
Biography				
Books				
dictionaries, encyclopaedia etc				

Key:

√ = Implemented

─ = Not Implemented

Table 4.1 shows the level of implementation of the automated systems in the two university libraries. The data indicates the parameters/sub-modules that was currently in operation under each module.

Acquisition Module

In ABU, parameters/sub-modules like selection, ordering and invoicing were not implemented and information service delivery in the library. However, all other sub-modules i.e report generation, print identification label, and data loading were implemented and were currently in operation.

The above scenario was largely attributed by the researcher to the fact that the software adopted by the library (Alice for Windows) was not web-based, hence, sub-modules like selection, ordering, and invoicing could not be useful in non web based software or non online transaction. While in the UI, acquisition module was also automated partially. As it could be seen from the table, four sub-modules have been implemented and were used for information processing and delivery in the library. These include selection, ordering, data loading and invoicing. While other operations were still not implemented by the library. These are report generation, and print identification label.

The researcher learnt that the situation in UI was different from what is obtainable in ABU because the software adopted by UI library (Virtua) was web-based, while that of ABU was not.

Cataloguing Module

In ABU, cataloguing module was automated partially. As it could be seen from the table 4.4, three parameters were implemented and used for library's information processing activities. These include OPAC/inquiry system parameter, rapid retrospective and authority file folder. This situation in ABU was very visible because during the data collection, the researcher found many users using the OPAC for their information searching activities, staff were also busy conversion the records of the library in to machine readable format.In UI, however cataloguing module was automated to the fullest. This means that all the sub-modules were in operation and used to perform functions required by the section.

Circulation Module

In ABU, circulation module was automated partially. The data revealed that sub-modules such as loan, renewing loan, return, and overdue notice were implemented and used for information service in the library. However, the remaining parameters were not implemented. While in UI, none of the sub-modules were implemented or used for information services. In fact, when contacted by the researcher, the person in charge of the section (a lady) revealed that they are not using computer for anything in their section.

Serials Module

In ABU, serials module was automated partially. The data revealed that only one sub-module i.e serials management was automated. It was learnt that serials management parameter was used for administrative activities of the serials librarian especially in identifying the title or available publication in their custody.While in UI, two sub-modules of the Serials module were automated. Apart from using Serials management parameter for identification purposes as in ABU, the subscription of journals was also enabled.

Reference Module

In ABU, reference module was also automated partially. As it could be seen from the table above, only one parameter i.e question point was implemented and used for reference services. However , the inability to implement other parameters such as open access, ask an expert and virtual reference may not be unconnected to the fact that all the three sub-modules need Internet service to function, and the software adopted by the library was not web-based. While in UI, none of the sub-modules has been implemented in reference module.

5. Functionality of the Software Packages Adopted

Table 4.2 – Number of Modules in the Software

Modules	ALICE(A.B.U.)	VIRTUA(U.I.)
Acquisition	√	√
Cataloguing	√	√
OPAC	√	√
Circulation	√	√
Reference	√	√
Serials Control	√	√
Barcode	-	√

Key: √ = Yes   ─ = No

Table 4.2 shows the number of modules possessed by each of the two software packages which by implication determine the effectiveness of the software or advantage of one over the other.

As it could be seen in the table, the software package adopted by Ahmadu Bello University Library has only six modules while that of University of Ibadan has seven modules. The result revealed that software package adopted by University of Ibadan Library has more advantages over that of Ahmadu Bello University Library considering the number of modules. Barcode Module is not available in ALICE for WINDOWS software adopted by Ahmadu Bello University Library. This means that the software is defective since there is no Barcode module which is very useful especially in charging and discharging of library materials via reading of striped code.

6. Speed of the Systems

The researcher sought to know from the management of the two university libraries the size of Bandwidth they are using, as this could determine the speed with which the systems deliver information. The findings revealed the sizes of Bandwidth as follows;

i- Ahmadu Bello University   4MB   (4 Megabytes)
ii- University of Ibadan   4MB   (4 Megabytes)

These data shows that both ABU and UI were using Bandwidth with the same size (i.e 4MB). This means that the speed with which the two systems deliver information could be the same if not for some structural and infrastructural problems.

Problems Militating Against the Successful Implementation and Utilization of the Automated Systems in the Two University Libraries

Table 4.3 – Problems of Automation in the Two Institutions

Problems	ABU		UI		Total
	Frequency	Percentage	Frequency	Percentage	
Power Failure	97	32.3	90	39.9	187
Information not Relevant	40	13	21	9.2	61
Inadequate Staff Expertise	45	15	32	14.1	77
Software/interface too Difficult to Operate	33	11	20	8.9	53
System Failure	85	28.3	63	27.9	148

Table 4.3 shows the range of problems militating against the successful implementation and utilization of automated systems of the two university libraries. The data shows that in ABU 97(32.3%) respondents felt that power/electricity was the major problem of automation in the university, while 40(13.3%) respondents associated the problem to lack of relevant information in the system. 45(15%) respondents acknowledged that lack of staff expertise and technical knowhow as the major problem of automation in their library, and 33(11%) respondents claimed that the software was not friendly, while 85(28.3%) respondents associated the problem to frequent system failure.

In UI, 90 (39.9%) respondents associated the problem of the automated system to power/electricity failure, while 21(9.2%) respondents were of the opinion that lack of relevant information was the major problem of the system. However, 32(14%) respondents blamed the lack of well trained staff in the area of ICT as the major stumbling block to automated system, 20(8.9%) respondents that the software adopted by the library was not friendly, while 63(27.9%) respondents considered system failure as the major problem of the automated system.

Based on the findings, power failure was the major problem of automation in the two university libraries. It is evident that majority of the respondents in ABU 97(32.3%) described power failure as the major problem, followed by system failure with 85(28.3%) responses. While in UI also majority of the respondents 90(39.9%) associated the problem of automation in their library to power failure, followed by system failure with 63(27.9%) responses.

The findings also shows the negative impact of power failure on socio-economic (education inclusive) life of our nation where adoption of ICT to facilitate teaching, learning and research in universities through enhanced access and utilization of information resources was constrained.

System failure was also another major problem identified. This is largely due to the perennial use of out dated equipments and facilities for the automation project such as old computers.

This implies that the two universities experienced problems almost with similar intensity. An inspection of the data revealed that "power failure" followed by "system failure" are the major problems in the two universities as far as automation is concerned.

The findings have corroborated with claims made by Ehikhemanor (1990:54) that automation efforts in Nigeria and Africa in general have been persistently frustrated by lack of manpower, fund and computing facilities as well as poor maintenance of equipment. Missen, et al (2007:27) have described the scenario thus:There are many infrastructural impediments to Internet connectivity and general ICT adoption that are unique to the African context – power failures, equipment failures, expensive or unreliable technologies and low local content. However, Ani (2007:115) has further concretized the above situation by stating that Nigerian universities are severely strangled financially by their proprietors which resulted in poor ICT infrastructures in the university libraries.

7. Conclusion and Recommendations

If all barriers of information technology illiteracy, budget, software technology, training, electricity and other obstacles are not removed, the two libraries and other academic libraries and librarians in Nigeria will not be able to meet the challenges of technology in the information age. The present conditions in Nigeria are hurting the progress of information access and utilization. In this modern age of library and information "if we don't try to create an infrastructure which technically and electronically available to everyone, we will have missed an important opportunity to change our society" (British Law, 2003:3). It has been rightly said that "information poverty is closely allied to economic poverty: the poorest nations have the least access to information" (Lum, 2007).

Based on the findings of the study, the following recommendations are offered;

1- The Federal Government of Nigeria (who is the owner of the institutions) should focus its attention on attaining full automation in all Nigerian University Libraries through increase in the budgetary allocation/subvention to universities and earmark huge amount for library development.

2- That the management of the two institutions(Ahmadu Bello University, Zaria and University of Ibadan) should embark on rigorous training and retraining of the library staff in order to make them capable and up and doing so that they will appreciate automation as a panacea to information access and utilization problems.

3- That there should be a deliberate effort by the government of Nigeria to procure and improve upon the country's ICT and other infrastructures. Continuous power outages have hampered all efforts as the cost of maintaining generating sets as an alternative source of electricity has risen to unaffordable situation.

4- That reliable software package needs to be devised as constant changes from one package to another will not guaranty the speedy completion of the program/project in the two university libraries.

5- That there should be coordination, cooperation and collaboration between the libraries and other units of the institutions such as Centre for Information Technology (CIT) and Management Information System (MIS). This will go a long way in augmenting efforts being made by the libraries to improve and consolidate on the gains of automation so far achieved.

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