

# 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. Questionnaire was administered to elicit information from the two respondents group using random sampling technique. The analysis of data was based on the variables of the study such as; Level of automation in the two university libraries, automation Software packages adopted by the two libraries, level of user satisfaction, problems militating against the development and utilization of the two systems. 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 and utilization were very low in the two universities as the project is moving at a slow pace and none of the universities has completed or even reached reasonable level of automation 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:** ICTs, Information Utilization, University Libraries, Library Services

## 1. INTRODUCTION

Nigeria is the most populous country in Africa with estimated population of over 140 million people and accounts for 41 percent of West Africa's population. Nigeria is geographically located on the coast of western Africa. It covers an area of about 924,000 KM<sup>2</sup> and is bordered on the north by the Niger Republic, on the east by Chad and Cameroun, on the south by the Gulf of Guinea, and on the west by the Republic of Benin. Nigeria is also the second largest economy in sub sahara Africa and accounts for 41 percent of the region's GDP. Nigeria's economy depends heavily on the oil and gas sector, which contributes 99 percent of export revenues, 85 percent of government revenues, and about 52 percent of Gross Domestic Product (GDP). With its large reserves of human and natural resources, Nigeria has the potential to build a prosperous economy, reduce poverty significantly, and provide the health, education, and infrastructure services its population needs if the abundant resources are prudently utilized.

Libraries exist for people, and not the reverse. Libraries primarily exist for the purpose of preserving records of human knowledge and civilization. History has shown that libraries were the major custodians of culture of past and present civilizations. 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. Such programs provide the necessary high level manpower for the acceleration of social, economic and political progress of the nation. These and many more expectations are depended largely on how effective libraries are attached to such universities. According to Arkorful (2007) ;

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.

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 continuous adoption and adaption of sophisticated and High Definition (HD) equipment and facilities in libraries by developed nations of the world has made it possible and easier to create a highly responsive and virile library system and environment in order to supplement and complement their knowledge-based and information driven economy.

## 2. REVIEW OF THE RELATED LITERATURE

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 conserve costly professional manpower for technical service and readers services.

Libraries have undergone tremendous changes over the years, assuming new dimensions influenced by technology driven application. Information technologies have brought in sweeping changes in the traditional way libraries are functioning. Libraries are entrusted with a host of predetermined task like acquiring, organizing, preserving, retrieval and disseminating information to their users in whatever format available. That has been the trend, from ancient times to the present information age, with significant shift.

This paradigm shift is manifested in the way information technology has influenced the very nature of libraries. The conventional set up of storing information within a constrained physical space has given way to database that integrate data sources around the globe by the means of network and Internet connectivity. In the present ever changing information environment, libraries are confronted with both opportunities and challenges. Information technology has been the most important, for the fact that it has introduced many changes in the way information is identified, generated, processed, managed and disseminated to library clientele. Furthermore, information technology has created a sense of urgency among librarians. One of the important steps towards taking advantage of the benefits of information technology is the automation of library operations and services.

The development of information technology can be traced to ancient civilization from when writing system was invented and used in recording their traditions and cultures. The ancient civilization of Mesopotamia (Babylon) along the Banks of Rivers Tigris and Euphrates (present day Iraq), had knowledge and information recorded on burnt clay tablets, (Madu and Dirisu, 2000:88).

Information and communication technology (ICT) consists of hardware, software, networks and media for collection, storage, processing, transmission and presentation of information, (World Bank, 2002). It is made up two basic components: the information technology (IT) and the communications technology (which include internet and telecommunications technologies). Information technology (IT) refers to the creation, storage, processing of data through the use of computers and other microelectronic. Through convergence, the link between information technology and communication technology is what is now commonly referred to as information and communication technology (ICT).

Fundamentally, the purpose of library is to make relevant information available and accessible to its users for societal development. A library therefore is responsible for the collection, organization, storage and dissemination of information in whatever format, print, or electronic for education, research and development. Through ICT, and with electronic publishing, electronic collection development of library resources is now

possible. Electronic information sources (e.g. e-books/e-journals, online database etc) are being subscribed to by libraries in a more cost – effective manner than their print counter parts. Beside, relevant information resources are being digitized through scanning of original texts, and mounting of digitized texts on to the university.

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 South Africa, regional cooperation targeted at cost-effectiveness and improved efficiency is the major determinant of the library software package adopted in the various higher institutions. Basically, there are six higher education consortia in South Africa (Tsebe et al. 2001, 13) and each of these consortiums utilizes a common library software packages. The three major packages identified are INNOPAC, URICA and ALEPH systems.

In Kenya, a major international donor agency had been funding the purchase of equipment and software in the Moi University. A survey carried out in 14 institutions to assess IT use in Kenyan libraries revealed that librarians have not been involved in the selection of the library systems they were using. Rather, they were chosen by the IT department or the computer centre (Mutula, 1998) as reported by Fatoki (2002).

In the University of Dares Salam, Tanzania, the ADLIB software is used and it is no coincidence that ADLIB is designed by a computer software company in Netherlands and the funding of the library computerization is also from the Dutch Government, (Msuya, 2001).

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; VTLIS; ALICE for WINDOWS etc.

### **3. JUSTIFICATION FOR THE CHOICE OF THE STUDY AREA**

The choice of the two universities was informed by the fact that both are first generation universities in Nigeria, 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).

### **4. OBJECTIVES OF THE STUDY**

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 modules/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:
  - i. Number of modules
4. To determine the level of user satisfaction with the automated systems in terms of accessibility to information resources, accurate and timely information searching and research capability of the systems.
5. To identify the clear picture of the problems associated with the automation project in the university libraries under consideration.

### **5. 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

## 6. RESULTS AND DISCUSSION

### 6.1 Response Rate

Table 1 - Response Rate

University Library	Questionnaire Distributed			Returned(Usable)		
	Users	Univ. Librarians	Total	Users	Univ. Librarians	Total
University of Ibadan	164	1	165	152	1	153 (92%)
Ahmadu Bello University	214	1	215	207	1	208 (96%)
<b>TOTAL</b>	378	2	380	359	2	361 (95%)

Table 1 indicated that a total of 380 copies of the questionnaire were distributed to the two respondent groups. Out of this number, 361(95%) were returned which accounted for about 95%. Based on the respondents category, 164 copies of the questionnaires were distributed to users of the university of Ibadan Library, out of which 152 (92%) were returned. 1(one) questionnaire was given to the University Librarian and was retrieved accordingly.

However, it was indicated in table 4.1 that, a total of 215 copies of questionnaires were distributed to the respondents at Ahmadu Bello University, Zaria. Out of this number, 214 were distributed to users of the automated system and 207 (96%) were retrieved. One questionnaire was administered to the University Librarian and subsequently returned.

By and large, 92% return was achieved at the University of Ibadan Library, while 96% was recorded at the Ahmadu Bello University Library. The total return stood at 95% and this is sufficient to actualise the objectives of the study.

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

As a basis for comparison, the research sought to find out the software packages adopted by the two university libraries in their automation program. The investigation gathered that the two university libraries were using different software packages as follows:

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,

Table 2 – Reason(s) for Adopting the Software

Reason(s)	(ALICE)A.B.U.	(VIRTUA)U.I.
Knowledge of the software/expertise	√	-
Staff preparation, training, development opportunities	√	-
Facilities upgrade, renewal timeframe	√	-
Web-Interfaceability		√

Key:

√ = Yes

– = No

As it could be seen from table 2, the reasons for adopting the software packages by the two university libraries were varied. For Ahmadu Bello University Library, all the options given by the researcher were responded to in the affirmative while the University of Ibadan based the reason for adoption on web-interfaceability of the software.

Conclusively, it could be deduced that all the options given by the researcher were the factors that triggered the adoption of the software by the Ahmadu Bello University Library in order to enhance and achieve effective automation program of the library. The University of Ibadan Library associated the adoption of the software with only one feature possessed by the software. The researcher learnt that web-interfaceability of the software was the most important feature considered when acquiring the package since many other packages do not possess such feature.

### 6.3 Level of Automation in the Two University Libraries

Table 3 – Modules Automated by the Two University Libraries

Modules	A.B.U.			U.I.		
	Proposed	Partially	Completed	Proposed	Partially	Completed
Acquisition		√	-	-	√	
Cataloguing		√	-	-	-	√
Reference		√	-	√	-	
Circulation		√	-	√	-	
Serials		√	-	-	√	

Key:

√ = Yes

– = No

From table 3, it could be vividly seen that the level at which the two universities reached in automating their library services. It revealed that ABU has not completed any of the modules, while U.I. completed only one module (i.e. cataloguing). The data also shows that all the modules are partially implemented. This means that in each module not all the parameters/sub-modules were in operation.

While in the UI only one module (i.e cataloguing) was implemented to the fullest because all the parameters/sub-modules are currently in operation. Two modules (i.e acquisition and serials) were partially implemented and the remaining two (i.e reference and circulation) are still at proposal stage. This means that none of the parameters/sub-modules has been implemented or even uses for information services and delivery.

The data contradicted various literature reviewed by the researcher in the course of the research where most of the literature claimed that University of Ibadan has completed its automation programme since last two decades, while another literature claimed that ABU has completed automation of its serials module. According to Okore (2005:86):

Attempt by Nigerian libraries to automate their operations in the early 70s and 80s were unsuccessful. Only some foreign owned or sponsored libraries like IITA library, British Council Library, United States Information Services (USIS) library and few others recorded some success stories. However, from the early 1990s, many university libraries have been automated. For example, University of Ibadan Library has been fully automated. Others whose full computerisation are underway include University of Ilorin Library, Ladoke Akintola University of Technology (LAUTECH) Ogbomosho, University of Agriculture, Abeokuta; University of Nigeria, Nsukka; Tafawa Balewa, Bauchi; Bayero University, Kano; Ahmadu Bello University, Zaria; Federal University of Technology, Minna and Lagos State University (LASU) Lagos, etc.

However, according to Omoniwa (2001), in Nigeria, the first attempt to automate library operation was made in 1970s and a successful efforts of first, the automation of serials records in 1972 and secondly, circulation operations in 1976 at Ahmadu Bello University Library.

Table 4 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.

Table 4 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
<b>Acquisition</b>				
Selection module		-	√	
Report generation	√			-
Ordering		-	√	
Print identification label	√			-
Data loading	√		√	
Invoicing		-	√	
<b>Cataloguing</b>				
OPAC/inquiry system parameter	√		√	
MARC file		-	√	
Rapid retrospective	√		√	
Authority file	√		√	
<b>Circulation</b>		-		
Loans	√			-
Renewing loan	√			-
Returns	√			-
Reservations		-		-
Barcode		-		-
Overdue notice	√			-
<b>Serials</b>				
Serials management	√		√	
Subscription		-	√	
Invoicing		-		-
<b>Reference</b>				
Open access resource		-		-
Ask an expert		-		-
Virtual reference		-		-
<b>Question point viz</b>	√			-
question and answers				
Quotations				
parliamentary procedure				
scientific reference				
style guides				
Thesauri				
Time				
world records				
Bibliography				
Biography				
Books				
dictionaries, encyclopaedia etc				

Key:

√ = Implemented

— = Not Implemented

#### 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.

### 6.4 Functionality of the Software Packages Adopted

Table 5 – 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 5 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.

#### 6.4.1 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/sec (4 Megabytes)

ii- University of Ibadan 4mb/sec (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.

## 6.5 Level of Users' Satisfaction with the Automated Systems

Table 6 – Retrieval of Information from the Systems

S/N	Library		Very Easy	Good	Not Easy	Very Poor	Total
1	* A.B.U. Zaria	Frequency	16	79	83	19	197
		Percentage	8.1%	39.6%	42.1%	9.7%	100%
2	U.I. Ibadan	Frequency	7	40	34	43	124
		Percentage	5.7%	32.2%	27.4%	34.7%	100%
3	Total	Frequency	23	119	117	62	321
		Percentage	7.1%	37%	36.4%	19.3%	100%

Table 6 dealt with the users' perception about the retrieval of information from the two automated systems. The data shows that in ABU 16(8%) respondents assessed the retrieval of information from the system as Very easy, while 79(39.6%) described the retrieval of information as Good. It was also revealed that 83(42%) respondents felt that the retrieval of information from the system as not Easy, while 19(9.7) respondents described the retrieval as Very Poor.

In UI, the responses show that 7(5.7%) respondents found the retrieval of information from the system Very Easy, while 40(32.2%) assessed the retrieval of information from the system as Good. Furthermore, 34(27.4%) respondents described the retrieval of information from the system as not Easy, while 43(34.7%) respondents revealed that the retrieval of information from the system as Very Poor.

The data indicated that "Not Easy" is the response that dominated the responses in ABU as far as retrieval of information from the system is concerned, while those that find the retrieval of information from the system as "Very Poor" in UI dominated the responses.

As it could be seen from the data, users in the two university libraries had similar experience regarding the retrieval of information from their systems. This means that both users found the retrieval of information from the systems as generally Not Easy. Majority of the respondents in ABU 83(42%) assessed the retrieval of information from the system as Not Easy, while in UI majority of the respondents 43(34.7%) also found the retrieval of information from their system as Very Poor.

This is consistent with the foregoing findings especially level of automation in the two university libraries, and speed of the systems in delivering information to users.

Table 7 – Satisfaction Derives from the Systems

S/N	Library		Very Satisfactory	Satisfactory	Fairly satisfactory	Not satisfactory	Total
1	A.B.U. Zaria	Frequency	12	60	98	23	193
		Percentage	6.2%	31%	50.8%	11.1%	100%
2	U.I. Ibadan	Frequency	6	34	31	57	128
		Percentage	4.7%	26.6%	24.2%	44.6%	100%
3	Total	Frequency	18	94	129	80	321
		Percentage	5.6%	29.2%	40.1%	24.9%	100%

Table 7 shows the general levels of satisfaction derives by users when using the automated systems of the two libraries. The findings revealed that in ABU 12(6.2%) respondents described their satisfaction as very satisfactory, while 60(31%) respondents assessed the level of satisfaction as satisfactory. The data also shows that 98(50.8%) respondents assessed their level of satisfaction as fairly satisfactory, while 23(11%) respondents described the satisfaction as not satisfactory.

In UI, 6(4.7%) respondents felt that their level satisfaction level with the automated system as Very Satisfactory, while 34(26.6%) respondents described their level of satisfaction as Satisfactory. Furthermore, 31(24.2%) respondents assessed the level of satisfaction as Fairly Satisfactory, while 57(44.6%) described the level of satisfaction as Not Satisfactory.

The data shows that the level of users' satisfaction with the automated systems in the two university libraries was generally Poor. As it could be seen, in ABU majority of the respondents 98(50.8%) described their 1 satisfaction level as Fairly Satisfactory, in UI majority of the respondents, 57(44.6%) assessed their satisfaction level as Not Satisfactory.

This is consistent with the retrieval of information from the two systems where majority of users in ABU 83(42%) assessed the retrieval as not easy, while in UI majority of users described the retrieval of information as



Very Poor. These findings also confirmed the earlier information regarding the level of automation in the two university libraries.

The above disposition has confirmed the claims made by Aguolu, Haruna and Aguolu (2006) as quoted by Sharma (2009) which expressed that:

Technology was introduced in academic libraries of Nigeria in 1975 led by the University of Ibadan, Ahmadu Bello University and Obafemi Awolowo University. But the progress has been very slow. In fact, most academic and research libraries in Nigeria have not computerised any of their functions. The public card catalogue and the visible index are still finding tools for books and journals. In most libraries, likewise, indexes and abstracts are compiled manually. Library and Information Services in Nigeria have yet to transcend the traditional functions.

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

Table 8 – Problems of Automation in the Two Institutions

S/N	Library		Power failure	Information not always relevant	Inadequate staff expertise	Software/ interface too difficult to operate	System failure	Total
1	ABU Zaria	Frequency Percentage	97 32.3%	40 13.3%	45 15%	33 11%	85 28.3%	300 100%
2	University Of Ibadan	Frequency Percentage	90 39.9%	21 9.2%	32 14.1%	20 8.9%	63 27.9%	226 100%
3	Total	Frequency Percentage	187 35.6%	61 11.6%	77 14.7%	53 10%	148 28.1%	526 100%

Table 8 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, to concretise the above findings, Ani (2007:115) postulated that:

Despite all the benefits, Nigerian Universities are still at the crawling stage

of the automation of their library services. The present scenarios of inadequate funding of our universities and their libraries by both the federal and state governments, which are the proprietors of the institutions, leave much to be desired. University funding has continued to dwindle since the mid-1980s along with the down turn in the economic fortunes of Nigeria.

## 7. CONCLUSION AND RECOMMENDATIONS

The fully integrated online system has helped to improve the quality of operation of all departments of academic libraries including acquisition, cataloguing, circulation, inter-library loan, reference, periodicals and even bibliographic instruction also known as information literacy. Through technological application, academic libraries have succeeded elsewhere in giving the much needed information to all faculties, students, researchers and other users twenty four hours a day, 365 days of the year from the comfort of their homes, offices, student dorms, libraries and other places. Access to many full text-electronic databases, the online catalogue, and other documents has certainly helped all users to do their research and other academic pursuits in a timely manner. Finally 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. The effort of the government in previous years through the Federal Ministry of Education which aimed at establishing National Virtual Library and automation in all Nigerian University Libraries need to be revived.
- 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. This would go a long way in enhancing research and development in our institutions of higher learning and to a large extent turn around the economic fortunes of the country in general.
- 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 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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