

## Information Use of Software Packages in Nigerian University Libraries

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### Abstract

*The use of two library software in managing information in four Nigerian university libraries was investigated. The study population comprised 56 library staff and 234 undergraduates who were library users and data was collected using questionnaire and interview. Library staff in all the libraries revealed that ease of use, user friendliness, availability of system manual were the major software selection factors used. Cataloguing module was used the highest on a daily basis by the staff in all the libraries while the undergraduates used the OPAC mostly on a daily basis in University of Lagos and Covenant University (57.4% and 54.7%) respectively. Problems such as occasional system failure, erratic power supply, inadequate training facilities and network problem hindered the maximum use of the software by library staff, while inadequate orientation on their use which resulted in difficulty in its use were the problems encountered by the undergraduates. The library software have been useful to both library staff and undergraduates but training and re-training of library personnel, adequate orientation of users and provision of sufficient computer systems at OPAC section of the libraries would enhance their use.*

**Keywords:** Database management system, library staff, undergraduate students.

### Introduction

Information is an important organizational resource, which needs to be controlled and managed like other important business assets. Every organization and individual need information to make decisions that would improve them. Ifidon (2005) stressing the importance of information confirmed that underlying every field of human endeavor is the need for information. Libraries have been established to acquire and organize knowledge and make such available to users to satisfy their information needs. Corral (2008) buttressed this view by asserting that 'the ability to find, access and use information effectively is now widely recognized as an essential competence for effective participation in contemporary society'. Ikhizama (2004) reported that the provision of information has been considered a major factor in the development of a society and the information rich countries have through the use of ICT advanced technologically, while the information – poor ones are lagging behind.

ICT has been applied to operations in library and information centers with the sole aim of improving access to information, ensuring easy method of updating, as well as eliminating strenuous tasks performed by library staff. These have greatly enhanced accuracy and efficiency in information handling and delivery. ICT has brought rapid growth in the way information is being managed in libraries. The basic functions of libraries in an electronic age have been influenced by new development brought into the field of information.

Omogor (2006) noted that for libraries to provide services that will satisfy the increasing number of users in our universities, computerization of library processes and operations is necessary. Zaid (2004) asserted that library automation no doubt will offer many opportunities to improve library services to library patrons as users will be able to locate materials easier and staff will serve them better. In this information explosion era, there is the need for university libraries and other libraries to create a form of control to be able to make information readily available and accessible to the users. Chukwu (2005) however observed that the rate at which the world population is growing has a direct bearing on information generation and utilization, and there is the need for information managers to ensure proper handling and management. Abioye (2004) posited that the industrial revolution which brought about unprecedented growth in science and technology created the need for more organized method of knowledge management.

Before the advent of computers, libraries used card catalogue to index their holdings and this method of managing records and public catalogue was time consuming and cumbersome. Gadzama (2004) observed that there was decreasing efficiency which manifests in delays, backlog and heavy workload on staff and the job of record keeping and monitoring performance is comparatively easier with the introduction of computer which gave rise to the creation of databases in order to meet up with the trend. Automation saves time and labor of staff involved in re-sorting the card catalogue and keeping it up to date. Igben and Akobo (2007) reported that libraries globally have been transformed from a purely traditional manual service delivery system to a more dynamic one with the use of ICT for information organization and dissemination. One way in which computer-based systems have met the requirements of an information retrieval system is the use of databases.

Date (2004) defines a database as a kind of electronic filing cabinet, that is, a repository or container for a collection of computerized data files, while Adesanya, Onilude and Sodipe (2004) explained a database as a modern system of storing and retrieving information with the aid of electronic devices. They stressed that databases have the sole aim of making available through one source, a comprehensive and exhaustive assemblage of information on any given subject area. The advantages of a database system over the traditional, paper-based methods of managing information as identified by Date (2004) are: compactness, speed, less drudgery, data sharing, currency and protection.

The challenging part of using a database is retrieving information in a timely and appropriate manner. Yamazaki (2007) supporting this view said the volume and variety of information being produced day by day have reached an alarming extent and suggested that there should be a form of control to be able to use any piece of information to satisfy specific enquiries which a database system provides. There are databases for different disciplines, while some are multidisciplinary e.g. LISA (Librarianship and Information Science), AGRICOLA, TEEAL, TROPAG,

TROGANS (Agriculture), BIOSIS (Biology), ERIC (Education), MEDLINE (Medicine), SCISEARCH (Science), Management Content (Management), ENVIROLINE (Environmental Science).

The data that is physically stored is referred to as a database and organized using a Database Management System Software (DBMS) and this is between the database and the user. DBMS could also be referred to as Database manager or database server as reported by Date (2004). Database Management Systems (DBMS) are important in that they control all the activities of a library by providing the basic storage and retrieval technology. It manages in coming data, organizes, provides ways for the data to be extracted by users and has become a popular way of handling large file of non numerical data, including bibliographic information. DBMS are also suitable for some library house- keeping processes such as acquisitions, circulation control, in-house information retrieval system, enquiries and for online public access cataloguing systems or for general online searching.

Adegbule-Adesida (2005) states that there are several software packages for library automation systems available in the market that are capable of efficiently and effectively acquiring, storing, sorting, retrieving and disseminating information to library users on a stand-alone computer, local area network and via the internet. Examples of such library software are: Micro CDS/ISIS, TINLIB, GLAS, ALICE for windows, X-LIB, INMAGIC, Virtual etc.

Many writers have provided some useful insights into factors that need to be put into consideration in selecting library software. Studies such as those carried out by Oyinloye (2004) and Oketunji (2005) highlight the place of needs assessment, ascertaining the credibility of the manufacturer or supplier in terms of his background and experience in library related issues. Others include support issues, in terms of technical maintenance and software upgrades; cost and adequate security facilities.

### **Problem Statement**

Ever since the advent of ICT in the developing countries, Nigeria has witnessed a high level of development in libraries and information centers with the traditional manual methods now faced with the challenges of having to cope with the organization of increased information which has come as a result of information explosion. The use of database management software packages in Nigerian University Libraries aim at providing fast and organized access to information resources in order to increase the efficiency of library services.

It has been observed in recent times that many Nigerian university libraries are moving from traditional manually operated to a more dynamic electronic – based system. Many university libraries have automated all their services while some are at various stages of automation. However, it has been observed that these libraries frequently migrate from one software to another. The effectiveness of the system can only be measured by the benefit gained in the use of the system by staff and students depending on their ability to personally manipulate the software. This study was therefore, designed to investigate the utilization of library software in managing databases in Nigerian university libraries.

### **Objectives of the Study**

The broad aim of this study is to assess the suitability or otherwise of the application of database management software packages to library routines and services.

The specific objectives are to:

- i. assess the library computerization program in the selected libraries.
- ii. ascertain the factors that influence the choice of library software packages in the chosen libraries.
- iii. determine the frequency of use of the library software packages and their modules in these libraries.
- iv. find out the challenges associated with the use of the packages.

### **Research Questions**

The study sought to provide answers to the following research questions:

1. What are the software, ICT facilities and services available in the selected libraries?
2. What factors influenced the choice of library software in libraries?
3. What is the frequency of use of the library software package and their modules in these libraries?
4. How effective are the modules of these software packages in information handling and delivery?
5. What problems are associated with the use of the selected library software packages?

### **Research Methodology**

The study adopted the descriptive survey research design and the population was made up of 300 undergraduates that were registered library users and 80 information professionals and para professionals in four universities: University of Lagos Akoka (UNILAG), University of Agriculture, Abeokuta (UNAAB), Lagos State University (LASU), Ojo and Covenant University (CU), Ota. The total population was 380 which constituted the sample size. Questionnaire and interview were the data collection instruments employed for this study and collected data were analyzed using frequency distribution with percentages.

### **Results**

#### **Questionnaire Distribution and Retrieval**

Two sets of questionnaire were administered to the different categories of respondents: library staff (80) and undergraduates (300). Out of the 380 copies distributed, 312 copies were returned and 290 were found usable, giving a response rate of 70% for staff and 78% for students (Table 1).

Table 1. Questionnaire Distribution and Response rate

LIBRARY	Distributed Questionnaire		Retrieved Questionnaire		Usable Questionnaire		Response Rate (%)	
	Staff	Students	Staff	Students	Staff	Students	Staff	Students
University of Lagos, Akoka (UNILAG).	25	80	20	73	20	68	80.0	85.0
Lagos State University, Ojo (LASU).	15	80	11	66	11	62	73	77.5
University of Agriculture Abeokuta (UNAAB).	20	70	11	60	11	51	55	72.9
Covenant University, Ota (CU).	20	70	14	57	14	53	70	75.7
<b>TOTAL</b>	<b>80</b>	<b>300</b>	<b>56</b>	<b>256</b>	<b>56</b>	<b>234</b>	<b>70</b>	<b>78.0</b>

### Demographic information of respondents

There were 36 males and 20 females among the library staff and only one staff possessed a Ph.D degree, while half (28) had masters degree as their highest educational qualification.

Table 2. Distribution of Library staff by demographic characteristics

Variable	Library Staff		
	Freq	%	
Sex	Male	36	64.3
	Female	20	35.7
	<b>Total</b>	<b>56</b>	<b>100.0</b>
Highest Educational	Diploma	10	17.9
	Bachelor	17	30.6
	Masters	28	50.0
	Ph.D	1	1.5
	<b>Total</b>	<b>56</b>	<b>100.0</b>
Work Experience	Less than 5 years	10	17.9
	6 – 10 years	16	28.6
	11 – 15 years	6	10.1
	Above 15	24	42.9
	<b>Total</b>	<b>56</b>	<b>100.0</b>

The distribution of the staff respondents by work experience indicated that 10 (18%) had less than five years work experience while 46 (82%) had a work experience ranging between six and fifteen years (Table 2). The sex distribution of the undergraduates revealed that the males were 130 and females 104 (Table 3)

*Table 3.* Distribution of Library users by demographic characteristics

Variable	Undergraduates		
	Freq	%	
Sex	Male	130	55.6
	Female	104	44.4
<b>Total</b>	<b>234</b>	<b>100.0</b>	

**Research Question 1:** What are the software, ICT facilities and services available in the surveyed libraries?

The result from the interview conducted with the system librarians of the libraries revealed that UNILAG and UNAAB were using GLAS software while LASU and CU were using ALICE for windows software package (Table 4). UNILAG and CU had both automated all the core library modules in their libraries while UNAAB and LASU had partially automated their services in the area of OPAC and cataloguing. All libraries had the following ICT facilities and services: OPAC, Local Network, e-mail services, Internet Connectivity, E-Journals and CD-ROM search available for use in their libraries.

*Table 4.* Profile of the Libraries

Library	Year of Establishment	Software in Use	Year of Automation	State of Automation
University of Lagos, Akoka (UNILAG)	1962	GLAS	1995	Full
University of Agriculture, Abeokuta (UNAAB)	1988	GLAS	1995	Partial
Lagos State University, Ojo (LASU)	1984	ALICE	2004	Partial
Covenant University, Ota, (CU).	2002	ALICE	2002	Full

**Research Question 2:** What factors influenced the choice of library software packages in the selected libraries?

Ease of use, user friendliness, availability of system manual were the major software selection factors as indicated by all the respondents from UNILAG and UNAAB that were users of GLAS software package (Table 5), while two respondents representing 10% from UNILAG disagreed

with cost of software as a determining factor. The results for LASU and CU also followed the same trend as those for UNILAG and UNAAB, while two respondents (18.2%) from LASU disagreed with the ability of the system to integrate data from other units, though Alice for windows was the software package used in these libraries (Table 5).

Table 5. Factors that Influenced Choice of Library Software Packages

FACTOR	UNIVERSITIES															
	UNILAG				UNAAB				LASU				COVENANT			
	F	A	F	D	F	A	F	D	F	A	F	D	F	A	F	D
Credibility of the manufacturer	20	100.0	-	-	11	100.0	-	-	11	100.0	-	-	14	100.0	-	-
Ease of use	20	100.0	-	-	11	100.0	-	-	11	100.0	-	-	14	100.0	-	-
Modularity of Software	20	100.0	-	-	8	72.7	3	27.3	11	100.0	-	-	14	100.0	-	-
User friendliness	20	100.0	-	-	11	100.0	-	-	11	100.0	-	-	14	100.0	-	-
System manual/documentation	20	100.0	-	-	11	100.0	-	-	11	100.0	-	-	14	100.0	-	-
Ability to integrate data from other units	20	100.0	-	-	11	100.0	-	-	9	81.8	2	18.2	14	100.0	-	-
Vendor support	20	100.0	-	-	11	100.0	-	-	11	100.0	-	-	14	100.0	-	-
Adequate training	20	100.0	-	-	11	100.0	-	-	11	100.0	-	-	14	100.0	-	-
Cost and facilities available	18	90.0	2	10	11	100.0	-	-	7	63.6	4	36.4	14	100.0	-	-
Database backup	20	100.0	-	-	11	100.0	-	-	11	100.0	-	-	14	100.0	-	-
Compatibility with available hardware	20	100.0	-	-	8	72.7	3	27.3	11	100.0	-	-	14	100.0	-	-
Meet up with the objective of the library	20	100.0	-	-	11	100.0	-	-	11	100.0	-	-	14	100.0	-	-
Flexibility and versatility of the software	20	100.0	-	-	11	100.0	-	-	11	100.0	-	-	14	100.0	-	-

**Research Question 3:** What is the frequency of use of the library software packages and their modules?

Cataloguing module was used the highest on a daily basis by the staff in all the libraries while the report module was least used (Table 6). The undergraduates used the OPAC mostly on a daily basis in UNILAG and CU (57.4% and 54.7%) respectively, while reports/enquiries was least used (Table 6). In UNAAB and LASU, only 10 (19.6%) and 21 (33.9%) undergraduates respectively made use of the OPAC once a week while 16 (31.4%) from UNAAB and 15 (24.2%) from LASU used it occasionally (Table 7).

**Research Question 4:** How effective are the modules in information handling and delivery?

Five areas were considered for the determination of the usefulness of the software: shorter time to access information, increase efficiency, eliminates repetition, easy retrieval together with accuracy and timeliness (Table 8). All the library staff in CU agreed that Alice for Windows was highly relevant to library operations. Over 90% of those in LASU agreed that the software was useful except in the areas of elimination of repetition of routine activities and easy retrieval with only (72.7%) and (36.4%) respectively agreeing to its usefulness (Table 8). Library staff in UNILAG and UNAAB submitted that GLAS software package has been useful in all areas except OPAC in UNAAB library which was least useful (27.3%) in retrieving information.

Findings revealed that over 88% of the undergraduates in CU admitted that Alice for Windows software had proved an effective information retrieval, while over 58% of those in

LASU indicated that they felt satisfied with the system (Table 9). Over 66.2% of the students in UNILAG expressed their satisfaction to the usefulness of GLAS software, while over 80.4% of those in UNAAB posited that the system was difficult to use (Table 9).

Table 6. Frequency of use of the Software Module by Library Staff

University libraries	Library activities	Frequency									
		Daily		2-4 times a week		Once		Occasionally		No response	
		F	%	F	%	F	%	F	%	F	%
UNILAG	Circulation	3	15.0	2	10.0	5	25.0	4	20.0	6	30.0
	Acquisition	3	15.0	1	5.0	3	15.0	-	-	13	65.0
	Serials	4	20.0	2	10.0	-	-	2	10.0	12	60.0
	Cataloguing	5	25.0	4	20.0	1	5.0	6	30.0	4	20.0
	Report	2	10.0	-	-	4	20.0	8	40.0	6	30.0
	OPAC	4	20.0	6	30.0	4	20.0	5	25.0	1	5.0
UNAAB	Circulation	-	-	-	-	-	-	-	-	11	100
	Acquisition	-	-	-	-	-	-	-	-	11	100
	Serials	-	-	-	-	-	-	-	-	11	100
	Cataloguing	3	27.3	4	36.4	1	9.1	-	-	3	27.3
	Report	-	-	-	-	-	-	-	-	-	-
	OPAC	-	-	2	18.2	-	-	5	45.5	4	36.4
Covenant	Circulation	2	14.3	2	14.3	4	28.6	2	14.3	4	28.6
	Acquisition	2	14.3	1	7.1	-	-	5	35.7	6	42.9
	Serials	2	14.3	3	21.4	1	7.1	4	28.6	4	28.6
	Cataloguing	3	21.4	3	21.4	1	7.1	5	35.7	2	14.3
	Report	1	7.1	1	7.1	2	14.3	4	28.6	6	42.9
	OPAC	2	14.3	4	28.6	2	14.3	4	28.6	2	14.3
LASU	Circulation	-	-	-	-	-	-	-	-	11	100
	Acquisition	-	-	-	-	-	-	-	-	11	100
	Serials	-	-	-	-	-	-	-	-	11	100
	Cataloguing	3	27.2	1	9.1	4	36.4	-	-	3	27.2
	Report	-	-	-	-	-	-	-	-	11	100
	OPAC	-	-	3	27.2	4	36.4	-	-	4	36.4



Table 7. Frequency of use of the Software Modules by Students

University libraries	Library activities	Frequency									
		Daily		2-4 times a week		Once		Occasionally		No response	
		F	%	F	%	F	%	F	%	F	%
UNILAG	Serials	10	14.7	23	33.8	12	17.6	15	22.1	8	11.8
	Report	14	20.6	15	22.1	6	8.8	29	42.6	4	5.9
	OPAC	39	57.4	17	25.0	4	5.9	3	4.4	5	7.4
UNAAB	Serials	-	-	-	-	-	-	-	-	51	100.0
	Report	-	-	-	-	-	-	-	-	51	100.0
	OPAC	-	-	-	-	10	19.6	16	31.4	25	49.0
Covenant	Serials	25	47.1	22	41.5	-	-	2	3.8	4	7.5
	Report	17	32.1	9	16.9	5	9.4	20	37.7	2	3.8
	OPAC	29	54.7	24	45.3	-	-	-	-	-	-
LASU	Serials	-	-	-	-	-	-	-	-	62	100.0
	Report	-	-	-	-	-	-	-	-	62	100.0
	OPAC	-	-	-	-	21	33.9	15	24.2	26	41.9

Table 8. Usefulness of the Software Packages to Library Staff

LEVEL OF USEFULNESS	UNIVERSITIES															
	UNILAG				UNAAB				LASU				CU			
	A	D	F	%	A	D	F	%	A	D	F	%	A	D	F	%
Short access time	18	90	2	10	9	81.8	2	18.2	10	90.9	1	9.1	14	100	-	-
Increases efficiency	20	100	-	-	11	100	-	-	10	90.9	1	9.1	14	100	-	-
Eliminates repetition	20	100	-	-	11	100	-	-	8	72.7	3	27.3	14	100	-	-
OPAC has been helpful in retrieval	20	100	-	-	3	27.3	8	72.7	4	36.4	7	63.6	14	100	-	-
Accuracy and timeliness	20	100	-	-	11	100	-	-	10	90.9	1	9.1	14	100	-	-

Table 9. Usefulness of the Software Packages to Students

LEVEL OF USEFULNESS	UNIVERSITIES															
	UNILAG				UNAAB				LASU				COVENANT			
	A	D	F	%	A	D	F	%	A	D	F	%	A	D	F	%
Easy access to information	61	89.7	7	10.3	14	27.5	37	72.5	34	54.9	28	45.1	50	94.3	3	5.7
Speedy information retrieval	54	79.4	14	20.6	18	35.3	33	64.7	41	66.1	21	33.9	53	100	-	-
Availability of manual	65	95.6	3	4.4	10	19.6	41	80.4	44	71	18	29	53	100	-	-
Revolutionized access to information retrieval	50	73.5	18	26.5	12	23.5	39	76.5	47	75.8	15	24.2	49	92.5	4	7.5
Satisfied with the system	45	66.2	23	33.8	9	17.6	42	82.4	36	58.1	26	41.9	47	88.7	6	11.3
Difficulty in using the system	33	48.5	35	51.5	41	80.4	10	19.6	39	62.9	23	37.1	2	3.8	51	96.2

**Research Question 5:** What problems are associated with the use of the selected library software packages?

Occasional system failure, erratic power supply, inadequate training facilities and network problem were the major problems affecting the use of library software packages as indicated by library staff (Table 10). However, library staff in CU disagreed that inadequate training facilities was a hinderance to software use and this could be because the library had been automated from inception.

For the library users, the result revealed that 50 (73.5%) of those in UNILAG and 47 (92.2%) of UNAAB respondents using GLAS software indicated inadequate orientation on the use of the package, while 55(88.7%) of those in LASU using Alice for windows software agreed with inadequate orientation and 45(72.6%) indicated they found the database difficult to use, while those in CU disagreed with these problems (Table 11). This may be as a result of exposure and training given to them. However, 38(71.7%) of the respondents in CU indicated over population of users at OPAC section was a problem militating against the use of Alice for Windows software (Table 11).

Table 10. Hinderances to use of Library Software by library staff

HINDERANCES	UNIVERSITIES															
	UNILAG				UNAAB				LASU				CU			
	F	A	F	D	F	A	F	D	F	A	F	D	F	A	F	D
Occasional system failure	18	90.0	2	10.0	9	81.8	2	18.2	8	72.7	3	27.3	12	85.7	2	14.3
Inadequate funding	5	25.0	15	75.0	11	100.0	-	-	7	63.6	4	36.4	3	21.4	11	78.6
Erratic power supply	12	60.0	8	60.0	11	100.0	-	-	10	90.9	1	9.1	8	57.1	6	42.9
Virus infection	9	45.0	11	55.0	8	72.7	3	27.3	6	54.5	5	45.5	10	71.4	4	28.6
Inadequate training facilities	14	70.0	6	30.0	11	100.0	-	-	11	100.0	-	-	4	28.6	10	71.4
Network problem	11	55.0	9	45.0	8	72.7	3	27.3	7	63.6	4	36.4	12	85.7	2	14.3
Insufficient skilled personnel	15	75.0	5	25.0	11	100.0	-	-	10	90.9	1	9.1	2	14.3	12	85.7
Problem of retrospective conversion	17	85.0	3	15.0	8	72.7	3	27.3	11	100.0	-	-	-	-	14	100
Lack of support from the management	4	20.0	16	80.0	10	90.9	1	9.1	10	90.9	1	9.1	4	28.6	10	71.4

Table 11. Hinderances to use of Library Software by undergraduates

HINDERANCES	UNIVERSITIES															
	UNILAG				UNAAB				LASU				CU			
	F	A	F	D	F	A	F	D	F	A	F	D	F	A	F	D
Database is difficult to use	39	57.4	29	42.6	40	78.4	11	21.6	45	72.6	17	21.4	10	18.9	43	81.1
Breakdown of system	38	55.9	30	44.1	48	94.1	3	5.9	36	58.1	26	41.9	21	39.6	32	60.4
Attitude of Library staff	44	64.7	24	35.3	37	72.5	14	27.5	41	66.1	21	33.9	31	58.5	22	41.5
Inadequate ICT knowledge	36	52.9	32	47.1	39	76.5	12	23.5	28	45.2	34	54.8	14	26.4	39	73.6
Irregular power supply	48	70.6	20	29.4	43	84.3	8	15.7	40	64.5	22	35.5	9	17.0	44	83.0
Overpopulation of users	45	66.2	23	33.8	18	35.3	33	64.7	21	33.9	41	66.1	38	71.7	15	28.3
Too much control over system	27	39.7	41	60.3	28	54.9	23	45.1	18	29.0	44	71.0	21	39.6	32	60.4
Inadequate orientation on use	50	73.5	18	26.5	47	92.2	4	7.8	55	88.7	7	11.3	10	18.9	43	81.9
Insufficient computer systems	42	61.8	26	38.2	34	66.7	17	33.3	44	71.0	18	29.0	35	66.0	18	40.0

## Discussion

ICT facilities such as computers, databases on CD-ROM and Internet connectivity were available in all these libraries and they were all automated, although in different stages. UNILAG and UNAAB were using Graphical Library Automation System (GLAS), while LASU and CU made use of Alice for Windows Software Package. At UNILAG and CU libraries, the systems were used to create bibliographic databases for cataloguing, serials control, acquisition, circulation and OPAC searching, while UNAAB and LASU had only automated their activities in the areas of cataloguing and OPAC. There is therefore the need for these two libraries to acquire the remaining modules and implement them in order to ensure efficient service to users. This finding supports the assertion of Adanu (2006) who was of the view that library automation means more than the use of computers alone but purchasing and installing software for an integrated library system.

Factors that influenced the choice of software packages were credibility of the manufacturer, ease of use, user friendliness, among others. This corroborates the findings of Chisenga (1996), Fatoki (2002), Nkhoma (2003) who reported that issues such as vendor reliability, system compatibility, sustainability cost and modularity of software are crucial factors in software acquisition as mistakes made in selecting wrong software would be costly to the library involved.

The cataloguing module had the highest frequency of use on a daily basis among the library staff and this confirmed the findings of Uwaifo (2008) who reported that cataloguing was the major library routine to which computer was applied in Nigerian Universities. On the other hand, OPAC was used the most by the undergraduates especially in UNILAG and CU.

The staff and students expressed their satisfaction with the system in information handling and delivery which is confirmed by the findings of Zaid (2004) who reported that library automation had improved library functions and services in the management of vast resources available in the library and serving the patrons better. More than half of the library staff in UNAAB and LASU disagreed that OPAC had been helpful in information retrieval, while more than half of the undergraduates in LASU and UNAAB were of the opinion that they found the system difficult to use. This indicates that much needs to be done in creating awareness on software use in these libraries. This finding is supported by Ochogwu (2007) and Fatoki (2004) who posited that user education and information literacy programs on ICT use should be made available for student by the University Library Management.

For students, inadequate orientation on the use of the system, irregular power supply, over population of users at OPAC section and attitude of library staff were the major factors that hindered their use of these library software. The major problems affecting the use of the library software by the staff were: occasional system failure, erratic power supply and network problem. The result agrees with the findings of Nok (2006), Obajemu and Ibegwam (2006) who reported that computerization is beset with many challenges despite its advantages.

### **Conclusion and Recommendations**

Application of ICT has greatly improved and promoted efficiency in information handling and delivery with the sole aim of enabling the users to make the most effective use of the resources and services of the libraries. Libraries should endeavor to acquire and use all the core modules needed for library management and efficiency and staff–student relationship should be improved for library automation to have a positive impact on the patrons. Effort should be made to provide training and retraining on a regular basis on the use of library software packages to library staff and users in particular.

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