MANAGEMENT OF INTEGRATED LIBRARY MANAGEMENT SOFTWARE IN PRIVATE UNIVERSITIES IN NORTHERN NIGERIA

BY

Abdulkadir Ahmed Idris (PhD): Department of Library and Information Sciences, Faculty of Education, Bayero University, Kano; E-mail: aaidris06@gmail.com
&
Ahmed Lawan: University Library, Bayero University, Kano; E-mail: alawan6323@gmail.com

Abstract

The study examines the management of Integrated Library Management Software (ILMS) in private university libraries of northern Nigeria. The major objectives of the study were to identify the types of ILMS available in the private universities under study, management procedure of ILMS in the private university under study and the challenges associated with use of ILMS in private universities in North Nigeria. Related literatures to this study were reviewed. Qualitative research methodology was adopted using narrative research design. One university librarian and one automation Librarian of the private university libraries were sampled as the participants of the study. Interview was the instrument used to collect data and the data obtained was analyzed using thematic qualitative data analysis. The study revealed that, various types of ILMS were deployed and maintained by the University libraries studied, such as, Koha, Newgenlib, Dspace among others. The study revealed the procedures used in managing the ILMS such as policies guiding the management and used of ILMS developed by the libraries, training, support, and maintenance of the software by the libraries and providers of the software to the libraries studied. However, the study also identifies challenges associated with management of the software such as: poor technical support from the suppliers, in adequate technical expertise, in adequate ICT facilities, erratic power supply, lack of adequate power back-up facilities, poor internet services among others The study recommend that management of the universities should develop a uniform policy statement for managing ILMS Software, frequent training should also be given and there should be financial, human, technological support as well as maintenance for the software in order to render effective services to the library users.

Keywords: Management, Integrated Management Software, Private Universities, Nigeria

Introduction

Libraries are going through transition from traditional library operations to digital resource centers giving information in various formats namely, text, image, video and audio. Information communication technologies have made significant progress in the access and distribution of information to users. Advancement in technology has led to a new concept known as library application software packages. According to Uzomba, Oyebola & Izuchukwu (2015) described integrated library management software, as a system designed to enhance all library routine activities as expected by the library users. A good and reliable ILS enhances management, control and easy access to information resources that are physical in a library and outside, for example, books, CD ROM, e-journal, e-books, e-databases, and repositories, among others. It also helps to reduce time wastage in the delivery of services to the library users.

Similarly, it enables library staff to serve library patrons better by facilitating, execution of multitude operational tasks such as cataloguing, acquisition, circulation, OPAC, management of e-resources and reference services among others with less stress. Despite the significance of ILMS it has been observed by the researcher that, there is lack of Software upgrading in the libraries. Thus, most of the private university libraries are not moving with current trends of upgrading of their version of integrated library management software by paying as per their request. Notwithstanding, new security features and other new modules are being integrated in the software every day. However, this condition could therefore be attributed to the lack of commitments from the private universities to settled the required annual payment to the vendors in order to effectively provide support on the management of the software to the respective libraries. It is on this basis that this study examined the

management procedure of integrated library management software in private university libraries in the Northern Nigeria.

Objectives of the Study

The study is design to investigate the management of integrated library management software in private university libraries of Northern Nigeria.

1. What type of ILMS are available in private university libraries in the Northern Nigeria.
2. What are the procedure used in managing the integrated library management software in the university libraries under study in terms of;
   a. policy statement
   b. training
   c. support and maintenance
3. What are the challenges associated with the use of ILMS in the university libraries under study

Literature Review

Types of integrated library management software deployed in University Libraries

University libraries acquire and install different type of integrated library management software packages to manage their operation and services in order to reduce in efficiency in their services delivery. Integrated library management software is a simple programme to perform the job of acquisition or cataloguing. Circulation, serial control and others. However, university libraries select, acquire and install different types of management software packages to manage their operations and services so as to ensure efficiency in their service delivery. Ukachi, Nwachukwu, and Onuoha (2014) stated that "library software come in two different types, the Proprietary software (those that require the payment of subscription fees) and the Open Source Software (OSS). The terms Open Source Software Free/Libre Open Source Software" (FLOSS) are often used interchangeably (Johnson, B., & Christensen, L. (2012)). Similarly, Garoufallou, E. and Charitopoulou, V. (2011) define open Source Software as the source code which is available along with the software and user has the liberty to run, copy, and distribute, study and alter the software under the licensing policies of OSS. The reason OSS has been so successful is that it provides users with ability to choose the technology best suited for their needs without being tied to a particular vendor solution. However, Breeding, M (2018) which investigated the adoption footprints of KOHA among HEIs in Zambia.

On the other hand, the word proprietary is derived from the Latin word "proprietas" meaning property. Proprietary software is a software that is owned by an individual or a company (generally the one that developed it). There are almost always major limitations on its use, and its source code is almost always kept secret. Source code is the form in which a program is formerly written by a human using a programming language and prior to being converted to machine code which is straightforwardly readable by a computer's CPU (central processing unit) (Gauri, Shipra and, Rachna (2016). The restrictions on the use of proprietary software are generally enumerated in the end user license agreements (EULAs) that users must consent to. For software provided by large companies, EULAs are generally long and complicated contracts. Among the most familiar of the prohibitions for such programs are making unauthorized copies, using it on more than a certain number of computers and reverse engineering it. "Proprietary software" which in a nutshell means that it costs money and that the actual code of the software is restricted, in that the code of the software cannot be modified, copied, or changed from its original construction. The code is unreadable" and pretty much is what it is. Some of the major proprietary LMS products according to Breeding (2012) include; virtua fron Vtls inc., Symphony from SirsiDynix, Millennium from Innovative Interfaces, Aleph, from Ex Libris Group, voyager from Ex Libris Group, Polaris from Polaris Library Systems, Library brary Corporation, Carl.X from The Library Corporation, Spydus from Civica, Virtue software and many Others.

Procedures of Managing Integrated Library Management Software

Management consists of the interlocking functions of creating corporate policy and organizing, planning, controlling, and directing an organization's resources in order to achieve the objectives of that policy. On the same vain, Hassan (2014), view Management of library management software to include all components of the administration, planning, implementation, monitoring, evaluation and stimulating, it is characterized by its ability to synthesize knowledge continuously and use it for the achievement of objectives. It is highly dependent on the development of IT infrastructure within the organization to achieve the integration of visions and then perform the work. In view of the above, this study is intended to view management of integrated Library Management Software in terms of the following subheadings below:

Policy Statement

The development and use of policies is critical in library management software and for communicating a library's goals. Policies are of set guidelines of practice that aid in library management software management. Leedy, P.D. & Ormrod, J.E. (2010). who studied selection and management of software packages in Federal University Libraries of North West Zone of Nigeria, in which their results revealed that "all the ten participants of federal university libraries indicated that their institutions do not have any written policy for management of library management software. Additionally, he maintains that, policies in place were on policy on purchasing and acquisition, policy on installation and policy on media software storage. Similarly, the intellectual freedom committee of American Library association (2017) provide a checklist intended to help 1libraries of all capabilities take practical steps to implement the principles that are laid out in the library privacy guidelines for library management system and provide them with appropriate information for data management and purity practices in respect to library patrons personally identifiable information and data about their reading habits and use of library resources. These practical steps are as follows:

1. Develop a privacy policy about patron information in the LMSs and publish it on the Library's website in a place that is easy to find.
2. Request and store only the personal information of patrons for the purpose of library operation. Periodically remove data that is no longer necessary for library operations e.g. purchase request data).
3. Aggregate or anonymize reports to remove personally identifiable information. Report should be periodically reviewed to ensure they are not revealing this type of information.
4. Configure the LMSs by default to remove transactional data between patrons and materials they borrow/access when it is no longer needed for library operations, that is:-

Allow patrons the ability to opt-in to personalization features like keeping their checkout history or a list of favorite titles. Allow patrons to later opt-out of features if they change their mind. Ensure that data previously retrained for these features is deleted when patrons opt-out

5. Develop procedures for library staff on how to handle law enforcement and governmental request for library information or patron's records.

Based on the important issues outlined in the policies, it can be simply understood that, Installation of unauthorized computer programs and software, can introduce viruses and Trojan programs that aid hackers' attempt to illegally obtain sensitive, proprietary, and confidential data. Therefore, Protecting the organization's computers, systems, data, and communications from unauthorized access and guarding against data loss is of paramount importance and this can only be achieved through optimum adherence to the Software application and use Policy.

Staff Training

The responsibility of the software designer or supplier does not end by selling the software without training until and unless the people learn entire operations of the software and provided with the know-how required to use it. So, it is necessary to make training arrangements for the professional development of librarians. However, Jibril, (2013) emphasized that librarians can no longer afford to fold their arms and wait for patrons to come to their desks. He stressed that digital skills must be developed in order to satisfy the information needs of the 21st-

century patrons. This is clear that much of the success of migration from one automated system to another depends on staff training. According to Cohn, & Fiels, (2011) the training on implementing new integrated system does not involve just learning how to use the system itself but in most cases involves staff learning new jobs and this can create stress in some staff members. Also, the new automated system usually has uncertainties, and where the selected system is seen by some staff members as not best meeting the needs of their library, these factors are likely to cause resistance and feelings of stress and confusion among staff members.

Support and Maintenance
Most of maintenance of the software are included in the customer support services. It also includes publications (e.g. manual and newsletter) which contain information about latest development of the software. It helps to keep the users up to date in the latest development of the library software. According to Thompson and Pwadura (2014) the following are necessary for system support and maintenance of library management software:

Maintenance: One should examine very carefully the support and maintenance arrangements being offered by the vendor/ supplier. Maintenance may include removing the bugs or errors that might become evident in the software as it is used for a greater variety of applications and improving the software.

Documentation: The reference manual with detailed written instruction (step by step) is necessary for using software package after training programme. The language of the manual should be easy to understand and should have a table of contents, glossary and index

Performance: Provision of searching the OPAC and web simultaneously (Meta search) using a single word search, search response time, search options, back-up facilities, database security etc. shows the performance of any library automation software. The functions of packages are inter-related each other. The response time of the search module depends on different factors, such as file organization, operating system, hardware platform, numbers of records in database, etc.

Search Options: The search option includes simple search, Boolean search, (AND, OR, NOT) Advanced search, string search, keyword search, field limitation search, truncation, use of related terms in searching. Provision of multiple manipulations and adequate searching capabilities must be in good characteristic software.

Security: Security mechanism prevents the software from misusing database by the users and other people. For the safety purpose, the software should have following things:
- Provision of user id /barcode etc.
- Provision of access restriction to certain records/ fields.
- Provision for students and staff to log in and log off on their own
- Modification/ new version of the software obtains by the librarian

User Friendliness: The system should be easy to use and check whether the system empowers the experienced user with short cut and flexible tool. The system should be easy to learn, menu driven and command mnemonic based. Besides the above criteria, copyright & licensing consideration is also important for evaluation of software.

Management Support
There are number of things associated with infrastructure in terms of finances and human resources support.

Financial support: It is challenging to manage and win full automation of library without efficient budget thus, according to Bantu (2011), all libraries that became totally machine-driven within the early and middle nineteen nineties, however, have found their current software package terribly limiting, migrate and unless one afforded to migrate onto new and updated systems, the first begin can be an obstacle. The totally machine-driven libraries are those who either started late with donor help or have secured funds to migrate to up-to-date systems. Similarly, Aghion (2010) assert that monetary sector development is very important not just for fostering the method process, however conjointly for wetting the volatility of the expansion method. Monetary systems will alleviate the liquidity constraints on companies and facilitate long-run investment that ultimately reduces the volatility of investment and growth. Similarly, well-developed monetary markets and establishments will facilitate dampen the negative impact that charge per unit volatility has on firm liquidity and therefore

investment capability. This is often particularly necessary in economies that rely heavily on natural resources and square measure, therefore subject to high terms of trade and real charge per unit volatility.

Technological support: Technological factors contend a significant role in respect to supporting the spirit of library automation, therefore, Kumar, K. (2013). said, poor or lack of ICT policy, low net property, the inadequate provision of electricity, inadequate range of PCs, applied properly, ICT and data systems will be ready to bring necessary edges for people, organizations, and customers. Once misapplied, however, they'll waste tremendous amounts of your time, effort, and money.

Human Support: Human factors emanate from the library leadership, organization culture associates degrade trained library personnel who here play an important role in decisive the role and standing of educational libraries in respect to the management and automation. Therefore, Xiao and Sajo (2011) advocate the conducting of a team identification exercise to make sure that the strengths and weaknesses of every team member are appreciated. Project groups with the higher level of skills lead to higher probabilities of success. They further said once the choice of the human personnel, the project manager then fits the human resource to the various project tasks. This involves instructive job descriptions and writing system out deliverables. This essential exercise ensures there are not any human resource surpluses or shortages throughout the project execution.

Challenges Associated with Use of Library Management Software

There are many challenges with regard to management of ILS world over. It is in this light that Gbadamosi (2012) said that management ILS has faced varied problems and challenges which may differ from institution to institution depending on the disposition of the institution to ICT application, funding and technical expertise of the librarian anchoring the project. Chisenga (2014) postulates that challenges facing library automation projects in Sub-Saharan Africa include lack of budgets, inadequate ICT facilities, lack of ICT strategies, low skills levels of users, lack of qualified staff in ICT, lack of commitment by institutional management, and reluctance among staff to use ICT. Among the above-mentioned challenges, the most important is the lack of budget (money) to execute the project. Some institutions have abruptly stopped the implementation of library management software in their libraries simply because at some point they realized to their dismay that the entire project will be too expensive to finish. Budgets must therefore be drawn to cater for all stages of the systems' design, development, testing and deployment. There must be adequate budget lines that will cater for increase in prices of logistics such as servers, network infrastructure, and barcode scanners.

Similarly, Adeyinka, neemah and Olanniyi, (2017) in a study on assessment of the Use of Koha Library Software in four Selected University Libraries in Nigeria. The findings revealed poor management 33(64.7%), inadequate infrastructural facilities 30(58.8%), and power failure (43 (84.3%)) are the three most important challenges. The rest were related to Software problems e.g. hanging, malfunctioning, inadequate infrastructural facilities etc which are as a result of poor internet facilities and bandwidth. Within the Zambian academic library context, Lungu and Mwamba (2010) found that in addition to the findings of Chisenga (2014), that there is a lack of motivation and enthusiasm by library management to embark on the implementation of library management software projects. However, Singh (2013) warns adopters of open source library management software that even as they free themselves of Vendor lock-in and reliance, high initial cost and future maintenance cost of library management software, they are bound to face challenges such as: lack of functional modules and inadequate staff technical expertise. Walls (2011), who studied the experience of NYU Health Sciences academic library as they migrated from Millennium (Proprietary library management software) to KOHA (Open Source library management software) identified the inadequacy of the OPAC module for Online Computer Library Centre (OCLC) catalogued records import and the absence of Course Reserves and E-Resource modules.

Accordingly, Nok (2016) reports that the unavailability of reliable Wide Area Network (WAN), Local Area Network (LAN) and irregular electricity supply across Nigerian University Campuses militates against the effective utilization of library management software in Nigeria. Other challenges identified by Nok (2016) include low level of computer literacy amongst staff, poor maintenance culture, inadequate funding of library services and lack of adequate preparatory training in information science necessary for such automation projects.

The challenges faced by Ghanaian academic librarians, as highlighted by Thompson and Pwadura (2013) include frequent power outages, poor maintenance culture, lack of requisite technical skills, inadequate project finance and inadequate protective measures to forestall theft of servers, LAN equipment and books.

Methodology
Qualitative research methodology was adopted using narrative research design. The total population for this study will comprise all the Seventeen (17) Private universities in northern Nigeria (secondary population) while the Primary population has seventeen (17) University Librarians and thirty-three (33) Automation librarians. The researcher purposively selected (1) Automation librarian and one university Librarian of the of six (6) selected private university libraries to serve as participants from each of the libraries, making twelve (12) Staff which made up the sample for the study; their choice was informed by the fact that they are responsible for management of library management software in their respective libraries. In the same narrative base qualitative research. The Interview was used in gathering data and the data obtained was analyzed using thematic qualitative data analysis.

Results
Types of library management software in university library
The researcher asked the participants on types of library management software (LMSs) available in their libraries.
Table 1: Types of library management software in university library

Types of library management software	AUK (P1, P2)	SUN (P3, P4)	KUW (P5, P6)	AAU (P7, P8)	BUA (P9, P10)	BUN (P11, P12)
KOHA	√	√	×	√	√	×
CoNCos	×	×	√	×	×	×
Dspace	×	×	×	×	×	√
Newgenlib	×	×	×	×	×	√

Key: √= available, ×= not available
AUK: AlQalam University,katsina, SUK: Skyline University Kano, KUW: Kwararrrafa University Wukari, Tararba, AAU: AbtiAmerican University, Adamawa, BUA: Baze university Abuja, BUN: Bingham University, Nasarawa
When asked about the types of LMS, the participants in AlQalam University, Katsina stated that: the type of (LMSs) commonly available in this library is KOHA (P1, P2). Further, at Skyline University Kano, the response was a little different, the participants aired out that Here in Skyline University Kano as of today we are having KOHA and ILPS. Management Software (P3, P4). In another development, those at Kwararrrafa University Wukari, Tararba, stated that: out of the different types of Library management software in the market we choose to use in this library CoNCos (P5, P6). At AbtiAmerican University, Adamawa, they Stated that: the types of Library management software available in this library is KOHA (P7, P8). In another developmet, at Baze University Abuja, they stated that: The type of Library management software in use in this library is KOHA management software (P9, P10). The respondents at Bingham University, Nasarawa Stated that: we have acquired and using of DSpace, Koha and Newgenlib as Library management software in this Library (P11, P12). In response to the above question, there were different types of (LMSs) available. The participants have identified different (LMSs) available in the Private university libraries understudy ranging from KOHA, Dspace, Newgenlib, and CoNCos.

The Procedures use in the management of library management software in the university libraries studied
Policy Statement with Regard to Management of Library Management Software
The participants were asked on the existence of policies with regard to the use of Library management software. The responses are in Table 4.4.

Table 2: Procedures Use in the Management of Library Management Software

Policy	AUK (P1, P2)	SUN (P3, P4)	KUW (P5, P6)	AAU (P7, P8)	BUA (P9, P10)	BUN (P11, P12)
Written policy	×	×	×	×	×	×
Non written policy	√	√	√	√	√	√

Key: √= available, ×= not available

On the policy issue, the universities studied responded unanimously that they have no policy. Individually, P1 and P2 stated that: There is no written policy on how to go about managing the software. Further, P3 and P4 aired their responses that: We have no general policies that guide us to execute our process, but a section was dedicated that takes care of all infrastructure that has to do with ICT. Responding from Kwararrrafa University Wukari, Tararba, P5 and P6 stated that: There is no policy about managing the library management software solely in the area of LMS management but in the area of purchase, and acquisition of LMS, but there is no policy with regard to training, support infrastructures Library. Participants P7 and P8 responded that: We have no written policy specifically for management of LMS but we have on general ICT use in the university. Further, P9 and P10 pointed out that: really there are policies with regard to other resource of the library but we do not have specifically on managing the LMS. Finally, P11 and P12 narrated that: there was no policy in relation to managing the software, but we have policies in relation to other resources.

Available Training on Library management software

The researcher asked the participants of the type of training given on (LMSs). In response to the above question the data obtained from the participants has been summarized in Table 4.5.

Table 3: Training on Library Management Software

Training	AUK (P1, P2)	SUN (P3, P4)	KUW (P5, P6)	AAU (P7, P8)	BUA (P9, P10)	BUN (P11, P12)
Seminars	√	√	√	√	√	√
Workshops	√	√	√	√	√	√
conferences	√	√	√	√	√	√
Symposium	×	√	√	×	√	√
Exchange program	×	×	×	√	×	×
User group training	×	√	×	×	×	×

Key: √= available, ×= not available

On the training on library system, **P1** narrated that: Yes, virtually all the staff undergoes in house training and retraining inform of workshops, seminars, and symposium and attend conferences outside the university. Added to the above, **P2** stated that: Yes, actually the form of training we have undergone include: of workshops, seminars, in house. Further, on the same issue, **P3** made mentioned that: workshops and user group training are used for training our staff. On the part of **P4** noted that: our staff undergo training in management of LMS in this library through workshops, seminars, and however in house we share information within us on new updates. **P5** stated that: the trainings available for our staff were workshops, seminars, in house, symposium and conferences. To buttress on what P5 said, **P6** said that: The form of training we got is very adequate and the training we received include the Seminars, Workshops and In House training between among us the staff. In another development, P**7** revealed that: well, the training are given through symposium, workshops, seminars, in house, and conferences available whenever the need arises and **P8** added that: Our management team are really trying in terms of training on which includes: workshops, Seminars, in house, exchange program, and collaboration with other institution. Inquiring further, **P9** mentioned that: Career development with regard to automation activities is our first priority hence, conferences workshops, seminars, in house, and symposium are the used as avenue for training of staff. On his part, **P10** stated that: the training was inform of workshops, Seminars, in house, and

symposium to effectively manage our software. More so, **P11** stated that: we normally sponsored our staff to undergo one training or the other inform of conferences workshops, seminars, in house, and symposium and **P12** stated that: you know training is the key, so we train and retain through the following: workshops, Seminars, in house and within us the staff mostly we share and update ourselves with new knowledge about the software. From the above, it can be deduced that workshops, seminars, symposium, in house training, exchange programe, and User training group are the ways the studied library train their staff on library management software.

Support for managing the LMSs
The researcher asked the participants the type of Support they received that assist in the management of LMS. In response to this question, the summary of their responses is presented in Table 4.7.

Table 4: Support for Managing the Library Management Software

Support	AUK (P1, P2)	SUN (P3, P4)	KUW (P5, P6)	AAU (P7, P8)	BUA (P9, P10)	BUN (P11, P12)
Financial	√	√	√	√	√	√
Technological	√	√	√	√	√	√
Human resources	√	√	√	√	√	√

Key: √ = available, × = not available

P1 and P2 stated that: we are doing all we can to provide all necessary supports be it Financial, Technological as well as Humana resource Support. Further, **P3 and P4** stated that, Financial, Technological and Humana resource Support were available. Seriously we are having support both Financial and technologic once a new technology comes out our management provide all the means to take the technology into the Library (P4). **P5** said that: the following support, Financial, Technological and Human Resource Support are the type of support available for the effective management of LMS. **P6** pointed out that: The management are really trying in providing us with supports at any point in time, which include Financial, Technological as well as Humana resource Support. **P7** stated that: Financial support, Technological support, and Humana resource Support are available to effectively and efficiently manage our LMS. To buttress the above, **P8** responded that: The type of support available include: Financial, Technological as well as Humana resource support.

P9 said that: financial support, Technological support, and Humana resource Support are some of support available while **P10** noted that: The LMS support include: financial support technological support and lastly human resources. **P11** narrated that: the types of support benefited are financial support, technological support, and Humana resource Support and P12 said that**:** our parent institution is really doing wonderful in the area of Support, both financial and technical were given. The main support available in the universities studies are financial, human and technological support.

Maintenance for managing the Library Management Software
The interviewees were asked to briefly explain maintenance culture set aside for managing the LMSs. The summary of their responses is presented in Table 5

Maintenance culture	AUK (P1, P2)	SUN (P3, P4)	KUW (P5, P6)	AAU (P7, P8)	BUA (P9, P10)	BUN (P11, P12)
Maintenance from vendor	√	√	√	√	√	√
In house maintenance	√	√	√	√	√	√

Key: √ = available, × = not available

Based on the maintenance culture, **P2** stated that: Regarding the maintenance of our library management software, we normally do modification/ new software version release and in-house periodic maintenance. Further, **P4 and P3** said that: yeah, we were maintaining our LMS through annual maintenance from vendor to update the software so that we make sure the software are optimally working. **P6 and P5** stated that: Library

management software maintenance technique includes: annual maintenance from vendor and in-house periodic maintenance. In a similar development, **P8 and P9**: reported that: the following were maintenance strategies: annual maintenance from vendor and in-house periodic maintenance as well as provision of access restriction in the course of managing our LMS to efficiently and effectively serve the purpose.

P10 revealed that: In this aspect, we have dedicated staff that maintaining of our LMS through the following: contacting our vendor for annual maintenance and modification of new version software release. **P11 and P12** stated that: we maintain our library management software in various ways which include; annual maintenance from vendor and in-house periodic maintenance as well as provision of access restriction. Basically, the libraries studied use vendor maintenance and in house maintenance for maintaining LMS.

Challenges associated with the Management of Library management software
The researcher asked the participants of the challenges associated with the management of Library Management software. The responses obtained by the researcher revealed that there are number of challenges associated with the management of Library Management software as revealed by all the ten participants. The responses of the participants are presented Table 4.10.

Table 6: Challenges associated with the Management of Library Management Software

Challenges	AUK (P1, P2)	SUN (P3, P4)	KUW (P5, P6)	AAU (P7, P8)	BUA (P9, P10)	BUN (P11, P12)
Erratic power supply	√	√	√	√	√	√
Inadequate technical expertise	√	√	√	√	√	√
Inadequate ICT facilities	√	√	√	√	√	√
Poor staff training	√	√	√	√	√	√
Inadequate finance	√	√	√	√	√	√
Lack of manpower	√	√	√	√	√	√

Key: √= available, ×= not available

From AUK **P2** stated that: The problems confronting our library in the area of management of library management software as you are numerous but principal among these include erratic power supply, inadequate technical expertise, inadequate ICT facilities in the library and poor staff training. P4 responded from SUN that: The following poses threats to successful management of library management software in our library are erratic power supply, inadequate technical expertise, and inadequate ICT facilities in the library. Further, **P6** from KUW revealed that: Our challenges in effective management of library management software are include erratic power supply, inadequate technical expertise, inadequate ICT facilities in the library and Poor staff training. Further, **P8** stated that: The difficulties we are facing in the task of management of our library management software are high cost of maintenance. In another development. **P10** stated that: we are challenge by number of problems such as; high cost of maintenance, inadequate ICT facilities and lack of manpower. **P12** stated that: Major challenges we are facing concerning the issue of managing the software are; in adequate ICT facilities, high cost of internet and lack of manpower. Thus, from the above, the challenges faced by the libraries include, erratic power supply, inadequate technical expertise, inadequate ICT facilities, Poor staff training, inadequate finance, and lack of manpower.

Discussion of Findings

The discussion of findings of this study was presented based on the responses obtained from the interview conducted with the university librarians and automation staff of the Private universities libraries studied. The findings in respect of the types of (LMS) available and managed by private university libraries in Northern Nigeria, it was revealed that, KOHA, Dspace, Newgenlib, and ConCos were the library management software for operation and services of their libraries. This finding is in line with the study of Bwalya, Akandelwa and Mwalimu (2019) which investigated the adoption footprints of KOHA among HEIs in Zambia. The research findings show that 41 (76%) of HEIs surveyed have automated their libraries using KOHA. The study further shows that, colleges of education and universities in Zambia have adopted KOHA more than any other type of HEIs. It has been also established that public owned HEIs have adopted KOHA more than the privately owned HEIs.

On the policy used for the management of information resources in the private libraries under study. This finding agreed with Lawal (2020) which studied selection and management of software packages in Federal University Libraries of North West Zone of Nigeria, and found no written policy for management of library management software. On staff Training with regard to management of LMS it was revealed that workshops, seminars, symposium, in house training, exchange programe, and user training group are the ways the studied library train their staff on library management software. This finding were in line with study by Ayodele (2015) in his study assessment of library Application software packages for Library operation and services in federal university libraries in North Western Nigeria, found that the University Library train library staff for proper management of the software both within and outside the university community is tutorial, seminar, one-to-one discussion, workshop, and the two-unit course among others.

In respect of findings on support needed for the management of library management software all the twelve (12) participants revealed that, the necessary support required for the management library management software includes financial support, technological support and human support. This was confirmed by Pallavi (2013), which found that Financial, technology and Human personnel are enough fund that facilitates the organization for consecutive growth and quality performance. With regard to the findings on maintenance culture needed for managing library management software, it revealed that modification/new software version release, in-house periodic maintenance, annual maintenance from vendor to update the software, provision of access restriction. This finding are in line with the findings of Thompson and Pwadura (2014) which found that support and maintenance arrangements being offered by the vendor/ supplier, removing the bugs or errors that might become evident in the software as it is used for a greater variety of applications, provision of access restriction to certain records/ files and improving the software, regarding maintenance.

Findings as regards to the challenges associated with management of (LMSs), revealed that the following challenges; erratic power supply, inadequate technical expertise, inadequate ICT facilities, Poor staff training, inadequate finance, and lack of manpower were revealed as the challenges.

Conclusion

Based on the findings of the study, it is therefore concluded that the librarians in private university of northern Nigeria mostly follow the following procedures in managing their ILMS software; in the area of policy, there is no written policy for the management of library software and with regard to staff training; Workshops, seminars, symposium, in house training, exchange program, and user training group are the ways found to be used by the libraries in training their staff on library management software. While with regard to support, the main support available in the universities are financial, human and technological support. Lastly, the libraries studied use vendor maintenance and in house maintenance for maintaining their ILMS.

Recommendations

Based on the findings, it was recommended that, the Management of the Private Universities Studied should provide the following:

1. There should be modern information and communication technologies gadgets linked with the internet facilities to enable librarians to have access to various facilities attach to the software.
2. Also, provide opportunities for the librarians and information professionals to attend workshops/conferences.
3. Adequate power backup facility should be provided to solve the problem of power outage in the library.
4. The library management should provide adequate funds for the payment of annual dues to the vendors as well as upgrading the software to the latest version. There should be a provision of training and retraining on the use of software for staff managing the software regularly.
5. The University Management should ensure that funds are made available for regular maintenance and upgrade of ICT facilities in their libraries.

References

Adeyinka, T. Neemah, D., Olaniyi, O.T., Ajala, M. S. & Adebisi, O. S. (2017). Assessment of the Use of Koha Library Software in four Selected University Libraries in Nigeria. *Journal of Applied Information Science and Technology,* 10 (2), 1-10

Breeding, M. (2018). Automation marketplace 2013: The rush to innovate. *Library Journal: The Digital Shift.* Retrieved October 22, 2019, from 43 http://www.thedigitalshift.com/2014/04/ils/automation-marketplace-2014-therush

Cohn, J. M., Kelsey, A. L., & Fiels, K. M. (2011). *Planning for Integrated Systems and Technologies (pp. 29). New York, London: Neal-Schuman Publishers,* Inc. Cormack, C. (2012). koha 3.8.0 Released. Koha Library Software Community. Retrieved from http://koha- community.org/koha-3-8-0-released/

Garoufallou, E. and Charitopoulou, V. (2011) The Use and awareness of Web 2.0 tools by Greek Academic Libraries. *New Library World,* 112 (11/12).

Gbadamosi, B. O. (2012) Emerging Challenges to Effective Library Automation and An E Library: The Case of Emmanuel Alayande College of Education, Oyo, Nigeria. *Library Philosophy and Practice (e-journal.)*

Hassan, N. (2014). Raodmap for RFID implementation in Libraries issues and challenges Special Reference to India. Retrieved from http://crl.du.ac.in/ical09/papers/index_files/ ical-43_144_317_1_RV.pdf

Jibril, A. (2013). Public libraries and the librarians: Making a difference in information and communication technology (ICT) era. *Samaru Journal of Information Studies*, 13(1-2), 49-53

Johnson, B., & Christensen, L. (2012). *Educational research: Quantitative, qualitative and mixed approaches* (4th ed.). London: SAGE publications.

Kumar, K. (2013). Attentiveness of Librarian 2.0: A Survey of Engineering Educational Librarians in Andhra Pradesh. *International Journal of Academic Library and Information Science,* 12, 67-76

Leedy, P.D. & Ormrod, J.E. (2010). *Practical research: planning and design*. 9th ed. Boston (Mass.): Pearson Education

Nok, G (2006). *The challenges of considering university library services in Nigeria: A case study of Kashim Ibrahim library ABU Zaria* available at http://www.uni.edu.2000/LPP/Nok.htm accesseds on 28/09/2013

Onuoha, U. D. & Awonyiyi, A, A. (2011). Comparative analysis of students' in seeking behavior in Adventist university: A survey of Babciock and Solusi Universities. *Library Philosophy and Practice*. ISSN 1522-0222. Retrieved from http://unl.edu/LPP/onuoha-awoniyi.htm

Oyekale, J.O. (2018) An Investigation on Integrated Library Systems (ILS) in Use in University Libraries in Osun State, Nigeria. *Open Access Library Journal*, 5: e4915. https://doi.org/10.4236/oalib.110491

Singh, V. (2013a). Challenges of open source ILS adoption", *Proceedings of the American Societyfor Information Science and Technology*, 50(1), 1-4. Doi: 10.1002/meet.14505001115

Thompson, E. S., & Pwadura, J. (2014). Library automation at the University for Development Studies: Challenges and prospects. *New Review of Academic Librarianship*, 20(1), 66-77

Uzomba, E. C., Oyebola, O. J. & Izuchukwu, A. C. (2015). "The Use and Application of Open Source Integrated Library System in Academic Libraries in Nigeria: Koha Example" *Library Philosophy and Practice* (e-journal). Paper 1250. http://digitalcommons.unl.edu/libphilprac/1250

Xiao, L., & Sajo, T.J. (2011). *Towards Training Librarian 2.0 Through a Community Based Participatory Group Project: A Case Study*. Retrieved from http://www.cais-acsi.ca/ proceedings/2011/63_Xiao_Sajo.pdf