# Assessment of the Use of Koha Library Software in four Selected University Libraries in Nigeria

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**Abstract**

**Purpose:** *This study examined the use of KOHA library software in some selected university libraries in Kwara and Oyo States, Nigeria.*

**Design/Methodology/Approach:** *The study adopted a descriptive survey design and the data was collected using a questionnaire. Census of the available librarian when the questionnaire was administered was taken this gave a total of 37 librarians spread across the four university libraries that participated in the study. Data collected was analyzed using frequency count and percentage.*

**Findings:** *The findings indicated that 90% of the respondents of the study had positive perception that KOHA has a customizable and easy to search options and that KOHA is free library software with original source code that users can modify to make it work better for them. Findings reveal that majority of the respondents have positive perception towards the use of KOHA and also library staffs have commended the decision of the University Library for installing dynamic software like KOHA. The findings revealed that erratic power supply and insufficient manpower are bane for the smooth running of the software. It was also established that the installation and management of software incorporated as a course to be taught in the department of Library and Information Science (LIS) of the University in order to train people who will manage the software. Koha was found to be the common open source used by academic libraries in Oyo and Kwara State. However, since the installation of KOHA in the participated libraries, major challenges encountered have been power failure, poor management and inadequate in-house experts, inadequate infrastructural facilities, vendors' inadequacy, among others.*

***Implication:*** *Suggested solutions to the challenges in the use of KOHA library software include making available standby power generating set, recruiting more experts, and procure more infrastructural facilities.*

***Originality/Value:*** *The paper's originality lies in its position that the library management should not compromise the perception and satisfaction of the library professional about KOHA software but should make intensive improvement on the installation of KOHA software and also intensify efforts to educate staff and users of the library on effective use of library software. Workshops and seminars attendance be made mandatory for the librarians and technical staff of the Library on the appropriate selection of library software in order to improve the ease of use and user friendliness of KOHA software.*

***Keywords:*** *Academic libraries, Koha, Library software, Library Management System, Open Source Library System, University libraries, Oyo, Kwara,States, Nigeria.*

***Paper type:*** *Empirical research*

## Introduction

Library automation starts with the adoption of library management software in the library. The software should have the maximum facilities to automate the library into computerized systems. Library automation is the general term for information and communication technologies that are used to replace manual systems in the library. The key functions of the library, which may be automated, are acquisition, cataloguing, circulation, serials control, and reference service. There is much commercial library software in use in different libraries, but open source library management software has generated lot of

interest among the library professionals over the past years (Kamble, Raj & Sangeeta 2012).

Library software has become the most powerful tool for changing the scenario of libraries from traditional to automated, from automated to electronic, from electronic to digital, and from digital to virtual. Software has become increasingly more sophisticated and the introduction of new applications has increased. Producing customized programs has become easier with software development packages. A number of software packages have been developed for use in the management and dissemination of information in libraries. Some have been developed by commercial agencies, others have been developed indigenously by institutions for in-house use and there is yet another category where customized applications have been generated on the basis of existing software. Some are also the open source code, which allows free modification by everyone; they are called open source library software. Free software are those which are available free of cost with source code. According to Free Software Foundation "Free software" means software that respects users' freedom and community. The users have the freedom to run, copy, distribute, study, change and improve the software for any purpose. With these freedoms, the users (both individually and collectively) control the program and what it does for them. The two terms, Free and open source are used synonymously for free distribution of software. Free and Open Source software movements are two ideological groups working for free distribution of software. Both groups strongly believe in community participation and peer review (Vimal & Jasimudeen 2012. P.223-230). Open source library software does not need the initial cost of commercial software and enables libraries to have greater control over their working environment. All over the world Nigeria inclusive, several libraries and commercial firms have developed library software but these are expensive. The various library software that has penetrated the Nigerian libraries includes Micro CDS/ISIS (free), Library Plus (which replaced x-lib software), Green Stone Software, Graphical Library Automation System (this replaced The Information Navigator Library Software, TINLIB), Alice for Windows Software and EBSCO Software Anyaogu, (2003). Others include Docuware, Strategic Library Automation Management, Liberty 3 Software, Microsoft Access Software and KOHA Software. One of the reviewed library software is KOHA. Scholars who have contributed to the review of this library software are Lavji and Niraj (2006), Kushwah (2008), Abboy and Hoskins (2008), Oduwole (2005), Okoroma (2010), Lopata (1995) and Zaid (2004).

KOHA is the most advanced open-source Integrated Library System in use today by hundreds of libraries worldwide (Kumar, 2013). The development of KOHA is steered by a growing number of libraries throughout the world. These libraries either on their own or collaborating in groups, sponsor the development of new features to support their workflows. KOHA's impressive feature continues to evolve and expand to meet the needs of its sponsoring libraries. The freedom to pick and choose from features, through the administration of system preferences, offers librarians the opportunity to tailor KOHA library software in order to match their specific workflow needs. Since the original implementation in 1999, KOHA functionality has been adopted by thousands of libraries world-wide, each adding features and functions, deepening on the capability of the system. With the release of KOHA3.0 in 2005 and the integration of the powerful Zebra indexing engine, KOHA became a viable, scalable solution for libraries of all kinds. KOHA is built on this foundation with its advanced feature set; KOHA is the most functionally advanced open source ILS in the market today (Kumar, 2013).

The name KOHA comes from a Maori term for a "gift" or "donation". The development of KOHA began in 1999, funded by a group of libraries in rural New Zealand that found proprietary software expensive and lacking some needed features. The full featured KOHA was developed initially in New Zealand by Katipo Communications Limited and first deployed in January, 2000 for Horowhenua Library Trust. KOHA is designed to work with a minimum of hardware resources. It runs on the Linux operating system in conjunction with the Apache Web server, uses the popular MySQL open source database management system, and is written in Perl.

An ILS is a system of keeping track of the operations of a library payroll, expenses, purchases, and most importantly, keeping track of the various media being checked out by the librarians. Many smaller libraries cannot afford to purchase, install, and maintain an ILS, and

KOHA is a perfect alternative (Kumar, 2013). KOHA is built using library ILS standards and also it uses the OPAC (open public access catalog) interface (Kumar, 2013).

Despite the modern technologies and the emerging technology been introduced in university libraries today, observations have shown that most libraries do not have enough resources at their disposal to embark on the purchase of readymade library software. In the light of this, many libraries resort to the use of open source library software such as KOHA. However, many libraries and librarians are not aware of the existence of KOHA.

As evidence from the literature, there are many libraries currently using KOHA for the management of library operations in Nigeria. This has started for quite a while now. However, since the introduction and the adoption of KOHA in Nigeria libraries, there have been little efforts from the Library and Information Science (LIS) researchers to examine and evaluate the software performance from the users' point of view.

Since the introduction of KOHA to libraries in Nigeria, research that consider the evaluation of the use of KOHA among libraries to determine whether or not it's a good library software for the management of library materials is so scarce. It is in the light of this gap, that this study endeavor to conduct an assessment of the use of KOHA library software among some selected academic libraries in Kwara and Oyo States, Nigeria.

This study is considered very important as it examines the use of KOHA library software in selected university libraries in Nigeria. This study will benefit the library professionals and enlighten them more on KOHA library software which is an available open source software. Moreover, it is expected that the outcomes from the study will increase the number of libraries in Nigeria who uses KOHA software. In addition, the study will change the perception of the librarians towards the use of KOHA software in their daily activities and also it will help in creating more awareness about the software in order for the library administrators and managers or library patron to find it more interesting and easy to use, through its importance and features among libraries.

**Objective of the Study**

The main objective of the study was to assess the use of KOHA library software in selected academic libraries in Nigeria. The specific objectives of the study are to:

1. Examine the perception of library professionals about KOHA library software.
2. Determine the satisfaction level of library professionals about KOHA library software.
3. Identify factors affecting the use and non-use of library software by the library.
4. Determine the ease of use and user friendliness of KOHA library software by the library professionals.
5. Find out if there is any difficulty or challenges faced by the library professionals during the use and installation of KOHA software.

**Research Questions**

The following research questions were answered by the study.

1. What is the perception of library professionals about the KOHA library software?
2. What is the satisfaction level of library professionals about KOHA library software?
3. What is the ease of use and user friendliness of KOHA library software by the library professionals?
4. What are the factors affecting the use and non-use of KOHA library software by the library professionals?
5. What are the difficulties faced by the library professionals during the installation of the KOHA library software?

**Literature Review**

Koha library software is an open source software (OSS) is computer software whose source code is available under a license for users to look at and modify freely and permits users study, change, and improve the software, and to redistribute it in modified or unmodified form. The OSS differs from the closed source or proprietary software. The primary difference between the two is the freedom to modify the software. Open source has been explained by many authors in their articles on the subject. According to Poulter (2010) open source is known as open source software (OSS) or free OSS or free/libre OSS. The source in open source refers to source code. Source code is a

computer file containing statements in a programming language, and those statements are intended to define the performance of a task; so, all software is produced from source code. The difference of open source is that original source code files are made publicly available, typically via the internet or on some digital storage medium. The other type of source code files, that are not publicly published, are known as proprietary (i.e. closed source) and are kept private (Poulter, 2010). Since the late 1990s, several open source ILSs have been developed. They include Avanti MicroLCS, Emilda, Evergreen, Gnuteca, KOHA, OpenBiblio, PhpMyLibrary, and PhpMyBibli. Among various ILS, KOHA and green Stone are the most widely used open source ILSs.

KOHA software according to Projektlink (2010) was initially developed in New Zealand by Katipo Communications Limited and first deployed in January of 2000 for Horowhenua Library Trust. Since the original implementation, KOHA has been adopted by thousands of libraries worldwide, each adding features and functions, deepening the capability of the software. With the release of KOHA 3.0 version in 2005 and the integration of the powerful Zebra indexing engine. The software became a viable, scalable solution for libraries of all kinds (http:// www.KOHA.org). There are about 47 languages of the world that the software is accessible to.

KOHA is open source software according to Boss (2008) is a free software that includes the original source code used to create it so that users can modify to make it work better for them. It also includes the right of redistribution; therefore, there may be both open source and proprietary products that are based on open source software. Conversely, a closed, proprietary system limits the ways the library can access the underlying data (Breeding, 2009).

Müller, (2012) ranked KOHA ILS the most complete FOSS/ILS because of a number of functions including routing periodicals, inventory control, authorities, generation of notices to customers, order tracking, among others. The developers have always improved its features with the collaborating effort of the user community through a superb feedback mechanism. This method makes the software best among equals.

A comparative study by Yang, Hofmann and Weeks (2009) affirms that KOHA is an ILS that has state of the art web interface, enriched content, faceted navigation, keyword searching, user contribution and Rich Site Summary (RSS) feeds. KOHA is web-based multilingual Integrated Library System that caters for the automation needs of medium to large libraries around the world. KOHA satisfies all the functional requirements of a library management system. It is full-featured MARC based integrated library system and is customized to cater for the needs of libraries. KOHA has five main Modules. These are acquisition, cataloguing, circulations, OPAC and serials. The user interface is very configurable and adaptable and has been translated into many languages. KOHA has most of the features that would be expected in an ILS Somashekara, (2014). KOHA mainly support to user oriented and librarian friendly software. The feature of KOHA is very simple for all the librarians, it is totally Simple, clear interface for librarians and members (patrons), KOHA provide Various Web 2.0 facilities like tagging, comment, Social sharing and RSS feeds, Not only these, other features of KOHA a are as follows: union catalog facility is available; customizable and easy to search options; circulation and transaction management is very easy, acquisitions system including budgets and pricing information (supplier and currency conversion) is very accurate and manageable to each work, simple acquisitions system for the smaller library is available, ability to cope with any number of branches, patrons, patron categories, item categories, items, currencies and other fields, serials system very easy. For magazines or newspapers clipping work also manageable, reporting facilities are available, reading lists for members and manage the statistics for each field are accurate and overdue facility also available.

**Empirical Study: Adoption and Perception of KOHA in Libraries**

In order to ascertain the reasons why libraries made the shift to KOHA, Keast (2010) conducted an internet based survey of Australian KOHA libraries in February 2010, an expanded version of an earlier survey conducted in June 2009. The response rate was 21/45 or 46.67 per cent. The respondents were health and medical libraries (71 percent) and other specials (29 per cent). The respondents included clients of both major support companies, and seven in-house installations. There was little difference in responses between any of these groups. The

survey found two main reasons for changing to an open source system; dissatisfaction with previous systems, especially the lack of flexibility in achieving customizations and budgetary difficulties (Keast, 2010).

Apart from budget and dissatisfaction, strategic reasons given by Poulter, (2010) can make libraries adopt open source software. Poulter, (2010) explained that the development of the internet has created a public information landscape which has isolated libraries by passing their aging commercial systems and undercut the value of their services. Rather than pay for the maintenance of existing systems and functions, by adopting OSS (open source software) resources money could be directed into research and development of better library systems and services, to try to win a secure place and a bright future for libraries in the new networked world.

One more thing that makes libraries decide to adopt or shift to open source software is their perception. The study of Muhammad Rafiq, (2009) shows that the libraries' perception towards open source software adoption is positive. From the article written by Payne and Singh, (2010) Rafiq's study examines Library Information Science (LIS) perceptions within the context of public versus private institutions, between that of academic, public, and special libraries and of developing and developed countries. Rafiq's analysis of the data provides compelling insights into the response to OSS (open source software) by LIS professionals of international localities, including India, Pakistan, the United States, Canada, the United Kingdom, and Australia. The study represented an analysis of 370 contributed responses from 48 countries. The overall results suggested that respondents had positive perceptions towards OSS adoption in libraries. Nonetheless, OSS adoption in libraries is still in infancy. This is an interesting revelation that the LIS community had positive perceptions to OSS but adoption is still at the beginning. Hence, the findings necessitate the need for further enquiry to unfold the factors that are hindering the adoption of OSS in libraries on a wider scale.

Krishnamurthy, of the Indian Statistical Institute in Bangalore, released a paper in (2008) which trends the OSS movement in DL (Digital Library) environments. Krishnamurthy reports that over 700 repositories participated in open access. The KOHA ILS (Integrated Library System) alone is used in over one hundred institutions internationally, and E-Prints, an OSS application for document management are employed by over 200 repository institutions (Payne and Singh, 2010).

Kumar and Jasimudeen, (2012) also conducted a research on the adoption and use of open source library management systems in Indian libraries, a structured questionnaire was prepared with the help of a web based survey tool. This paper provides a brief picture of KOHA software adoption and the users' perceptions about it in the Indian library scenario and evaluates the satisfaction level of Indian library professionals with KOHA. It is found that the software is popular among the southern states of India and the number of KOHA users in India is growing. KOHA open source library management system is a new entrant into library automation marketplace in India.

Saturday, et al (2012) conducted a research and appraised the implementation process of KOHA Integrated Library Management Software (ILMS) at the Babcock University (B.U.) Library, Nigeria. This study adopted a survey design using questionnaire as the instrument for gathering of data. It enumerates the experiences of B.U. Library in the implementation of KOHA ILS using a total of 17 librarians and 24 technical staff that were part of the implementation program to illicit information. It explains strategies towards efficient migration of data from X-Lib to KOHA, and elements responsible for adequate utilization of ILS. Analysis of data was only on challenges to the implementation program and strategies for successful implementation of KOHA. Findings revealed that erratic power supply and insufficient manpower were bane for the smooth running of the software. Based on the findings the study concluded that ILS be incorporated as a course to be taught in the department of Information Resources Management (IRM) of Babcock University in order to train people who will manage the software. Moreover, 100% of the respondents agreed that seminars and workshops be organized. In addition, an effective collaboration between the ICT unit and the University Library was also seen as an advantage. This work was based on facts and experiences gathered before and during the implementation period. It elaborates the basics and suggests steps toward successful implementation of ILS. It is intended to serve as stepping stone for libraries especially in Nigeria

that are in dare need to implement automation software.

From the analysis of the reviewed literature, it is evident that KOHA library software is used world-wide by public, school and special libraries. But it is most common in academics libraries in India. It was found that the software is popular among the southern states of India and the number of KOHA users in India is growing and also KOHA open source library management system is a new entrant into library automation marketplace in India. The study Rafiq, (2009) show that the libraries' perception towards open source software adoption is positive. The KOHA ILS (Integrated Library System) alone is used in over one hundred institutions internationally, and E-Prints, an OSS application for document management are employed by over 200 repository institutions (Payne and Singh, 2010). Similarly, it was discovered in the previous results that KOHA is designed to work with a minimum of hardware resources. It runs on the Linux operating system in conjunction with the Apache Web server, uses the popular MySQL open source database management system, and is written in Perl. The KOHA ILS can also be installed on Windows operating system. KOHA supports MARC21 and UNIMARC bibliographic records.

## Methodology

### *Research design*

The design adopted in this study was a survey. A Survey is often used to assess thoughts, opinions and feelings. A survey consists of a predetermined set of questions that is given to sample. With a representative sample, that is, one that is representative of a larger population of interest, one can describe the attitude of the population from which the sample was drawn (Shaughnessy, 2011). This survey design was chosen because it usually helps researchers to obtain general results about the sample.

### *Population of the Study*

Population is the total collection of object to be observed or studied. According to Best and Khan (2006), population is any group of individuals that have one or more **c**haracteristics in common which are of interest to researcher. It is a universal set of units from which sampling is drawn. Therefore, the targeted population for this study comprises the total number of all the available librarians in the selected universities in Oyo State and Kwara State Nigeria which are; University of Ilorin Library, Kwara State University Library and Ladoke Akintola University Library respectively.

### *Sample and Sampling Techniques*

A sample is a small proportion of the population that is selected for observation and analysis. Sampling is the process of selecting units from a population of interest so that by studying the sample, we may fairly generalize our results back to the population from which they were chosen Osuala, (2001). There are different methods of sampling which are referred to as sampling technique such as systematic random sampling, simple random sampling, cluster sampling, stratified sampling among others. Therefore, the sampling technique that was adopted for this study is total enumeration sampling technique. A total number of 45 Librarians were sampled which cut across the three universities used for the study. This was to give every respondent in the population the equal chance of being selected. As deduced from the name, this type of sampling guaranteed every member of the population equal opportunity of being chosen, that the choice of any member did not affect another one.

### *Instrument for Data Collection*

The instrument that was be used for data collection in this study is questionnaire designed by the researcher titled 'assessment of the use of KOHA library software in selected academic libraries in Oyo and Kwara State Nigeria '. Questionnaire has been known to be one of the most common research instruments especially when conducting a survey study. It is used to elicit useful information in the area of attitude and opinion. Hence, questionnaire was used to gather information from the respondents. The questionnaire contained both the open and closed ended items and also the questionnaire was divided into two (2) sections. Section 1 deals with the demographic information of the respondents such as age, gender, Age, Name of Institution, Level of education, Position/designation in the institution, Years of service while section 2 deals with the items related to the assessment of the use of KOHA library software about the perception and satisfaction of KOHA library software.

### *Validity and Reliability of the Instrument*

An instrument is valid if it measures what is intended to measure and accurately achieve the purpose for which it was designed (Wallen & Fraenkel, 2001). Pattern (2004), emphasizes that the validity is a matter of degree and discussion should focus on how valid a test is, not whether it is valid or not. According to pattern (2004) no test instrument is perfectly valid. The researcher needs some kind assurance that the instrument being used will result in accurate conclusions. (Wallen & Fraenkel, 2001). Validity is one of the most crucial properties of measurement and it is concerned with whether a test or a scale really measures what it is supposed to measure. In order to ensure content and construct validity mechanism, the instrument was given to a specialist within the department for scrutiny and expertise judgment with the view of checking the appropriateness of language to enable measure what it is supposed to measure before administering the instrument.

Reliability refers to the degree of consistency with which an instrument measures what it claims to measure. There are different types of reliability test, e.g. test-retest, split half reliability, inter-rater reliability etc. the method used to determine the reliability of the instrument for this study is split-half reliability method. This involves administering the questionnaire to 10 respondents outside the envisaged population. The responses collected from the respondents was splitted into two equal half and then correlated Through a Crobach alpha, the correlation coefficient return an r=0.75. This was high enough to be used for data collection in this study.

### *Data Collection Procedures*

The researcher personally distributed forty-five (45) copies of the questionnaire to the respondents in their respective libraries and copies of questionnaire were collected immediately. Out of the 45 copies of the questionnaire administered (37) copies of the questionnaires were returned completely filled and used for the data analysis. This represents 83% return rate.

### *Methods of Data Analysis*

The data collected from the field was analyzed using the descriptive statistics of simple percentage and frequency count. Data collected for the six objectives of the study were coded using SPSS Version 16.0. This method was adopted because of their simplicity and easy understanding.

## **Results**

### *Demographic Variables*

***Table 1: Distribution of Respondents***

| **Age** | **Frequency** | **Percentage (%)** |
|---|---|---|
| 20-25years | 4 | 7.8% |
| 26-35years | 10 | 31.4% |
| 36years And Above | 23 | 60.8% |
| Total | **37** | **100%** |
| **Gender** | | |
| Male | 23 | 64.7% |
| Female | 14 | 35.3% |
| **Total** | **37** | **100%** |
| **Institution** | | |
| Lautech | 10 | 29.4% |
| Kwasu | 7 | 33.3% |
| Unilorin | 20 | 37.3% |
| **Total** | **37** | **100%** |
| **Qualification** | | |
| Bachelor's Degree | 20 | 58.8% |
| Master Degree | 13 | 33.3% |
| Ph.D | 4 | 7.8% |
| **Total** | **37** | **100%** |

| | | |
|---|---|---|
| **Position** | | |
| System Analyst | 9 | 17.6% |
| Librarian | 27 | 80.4% |
| Library Officer | 1 | 2.0% |
| **Total** | **37** | **100%** |
| **Experience** | | |
| 0-5years | 18 | 47.1% |
| 6-10years | 8 | 15.7% |
| 10-15years | 4 | 9.8% |
| 16years And Above | 7 | 27.5% |
| **Total** | **37** | **100%** |

The demographic information of the age of the respondent who took part in the study in table 1 reveals that 4(7.8%) were between the age of 20-25years, 10(31.4) were 26-35years, while 23(60.8%) fall between the age of 36years and above respectively. This indicate that the larger percentage were within the range of 36years and above. In addition, 23(64.7%) of the respondent were male while 14(35.3%) of the respondent were female. This indicates that more male took part in the study. The total number of the institution that took part in the study were 3 LAUTECH, KWASU and UNILORIN whereby, 10(29.4%) were from LAUTECH, 15(33.3%) were from KWASU and 12(37.3%) were from UNILORIN respectively. This indicates that the larger percent of the respondent were from Unilorin. On the qualification of the respondent, 20(58.8%) of the respondents had Degree, while 13(33.3%) had Masters Degree, and while 4(7.8%) of the respondent had PhD respectively. This indicates that majority of the respondent were Degree holder's in library and information science. Also the years of experience of the respondents that took part in the study, 9(47.1%) were 0-5years, while 27(15.7%) were within the years of 6-10 years of experience, 1(9.8%) were 11-15years experience and 18(27.5%) already had 16 and above years of experience. This indicated that majority of the respondents of the study were between the range of 0-5 years of experience.

***TABLE 2: Perception of Library Professionals on KOHA***

| Perception towards the use of KOHA | Agree | Disagree | Not Sure |
|---|---|---|---|
| KOHA has a Customizable and easy to search options. | 49 (96.1%) | 1 (2.0%) | 1 (2.0%) |
| With KOHA, Serials system is very easy for magazine/newspapers clipping work and it's also manageable. | 41 (80.4%) | 1 (2.0%) | 9 (17.6%) |
| Using KOHA; acquisitions system including budgets and pricing information (supplier and currency conversion) is very accurate and manageable. | 34 (66.7%) | 2 (3.9%) | 15 (29.45%) |
| By using KOHA; union catalog facility is available | 44 (86.35%) | 3 (5.9%) | 4 (7.8%) |

From Table 2, it is apparent and clearly stated that 49 (96.1%) of the respondents used for the study agreed that KOHA has a Customizable and easy to search options while 1(2.0%) of the respondent disagree to the fact and 1(2.0%) were not sure this indicate that majority of the respondents agreed that KOHA has a customizable and easy to search option. Also 41 (80.4%) of the respondent agree to the fact that with KOHA, Serials system is very easy for magazine/newspapers clipping work and it's also manageable while 1 (2.0%) respondent disagree to the question and 9 (17.6%) were not sure of their response. This means that most of the respondents agreed to this. As stated in the above table 34 (66.7%), agreed 2 (3.9%), disagreed and 15 (29.45%) were not sure if, Using KOHA; acquisitions system including budgets and pricing information (supplier and currency conversion) is very accurate and manageable. Obviously most of the respondent agreed to this question. Also 44 (86.35%) of the respondent agreed that by using KOHA; union catalog facility is available whilst 3 (5.9%) disagree to this and 4 (7.8%) were not sure. With this I can say that most of the respondent agreed that KOHA union catalog facility is available. Invariably, the librarian perception towards the use of KOHA library software is positive due to their high response to each variable given in the study.

***Table 3: Librarians Satisfaction with KOHA***

| Satisfaction with KOHA software | Highly Satisfied | Moderately Satisfied | Less satisfied |
|---|---|---|---|
| Are you satisfied with using KOHA software | 49 (96.1%) | 1 (2.0%) | 1 (2.0%) |
| Due to the level of your satisfaction, would you recommend the use of KOHA to other library? | 50 (98.05) | 0 (0%) | 1 (2.0%) |
| Based on my satisfaction with KOHA, I can say that KOHA works better than other library system | 40 (78.45%) | 4 (7.8%) | 7 (13.7%) |
| Based on your satisfaction, would you prefer other types of software to KOHA? | 13 (25.5%) | 21(41.2%) | 17 (33.3%) |
| If yes in question 1, how satisfied are you? | 32 (62.7%) | 21 (41.2%) | 1 (2.0%) |

Out of the 51 respondent representing the 3 institutions using KOHA in the course of the study in Table 3, 49 (96.1%) were satisfied with the use of KOHA, 1 (2.0%) were not satisfied and less satisfied. Also 50 (98.05) of the respondent would like to recommend the use of KOHA to other library, while no respondent would like to recommend KOHA to other libraries and 1(2.0%) were not sure. In the same vein, most of the respondent agreed that Based on their satisfaction with KOHA, they can say that KOHA works better than other library system which account for 40 (78.45) of the respondent agreeing to this, 4 (7.8%) of the respondent disagreed to this fact and 7 (13.7%) of the respondent were not sure. 13 (25.5%) of the respondent would prefer other types of software to KOHA while 21(41.2%) of the respondent disagree to this statement and 17 (33.3%) were not sure. This means that higher percentage of the respondent would not prefer other types of software to KOHA library software. However, 32 (62.7%) of the respondent are highly satisfied with using KOHA, 21 (41.2%) were moderately satisfied and 1 (2.0%) were less satisfied with using KOHA and no result was gotten for no satisfaction. From this table above, it was deduced that most of the respondent of the study were highly satisfied with the use of KOHA library software.

***Table 4: Factors Affecting the Use and Non Use of KOHA Library Software***

| Factors affecting the use and non use of KOHA library software: | Agree | Disagree | Not Sure |
|---|---|---|---|
| Product quality | 36 (70.6%) | 9 (17.6%) | 6 (11.85) |
| Operating system | 33 (64.7%) | 16 (31.4%) | 9 (17.6%) |
| Design: Flexibility, switching from one module to another, multifunction modules, does it enhance the productivity | 33 (64.75%) | 13 (25.5%) | 5 (9.8%) |
| User interface: Navigation, error alerts, intuitive, customization | 29 (56.95%) | 13 (25.5%) | 9 (17.6%) |
| Functionality: What modules are available and value addition to existing functions of KOHA. | 33 (64.7%) | 5 (9.8%) | 13 (25.5%) |

From Table 4 which is talking about the Factors affecting the use and non use of KOHA library software, almost half of the respondent of KOHA users agreed on the product quality which represent 36 (70.6%) while 9 (17.6%) of the respondent disagree to this factor and 6 (11.85) were not sure. Operating system is one of the factor affecting the use and non use of KOHA library software and it has the following responses which is represented by 33 (64.7%) which means that majority if the respondent agreed on the operating system and 9 (17.6%) of the respondent used for the study disagree while 9 (17.6%) of the respondents were not sure. 33 (64.75%) of the respondents used for the study agreed that the design and Flexibility, switching from one module to another, multifunction modules, does it enhance the productivity whilst 13 (25.5%) of the respondent disagree to this factor and 5 (9.8%) of the respondent were not sure of this factor. One of the factors that affect the use and non use of KOHA library software is User interface which makes navigation, error alerts, intuitive, customization easy. 29 (56.95%)

of the respondent agreed to this factor, 13 (25.5%) of the respondent disagreed and 9 (17.6%) of the respondents were not sure. 33 (64.7%) of the respondents used for the study agreed on the functionality if the software, 5 (9.8%) of the respondent disagreed and 13 (25.5%) of the respondent were not sure. This means that most of the respondents were aware of the product quality and also the functionality of KOHA software as the factors affecting the use and non use of KOHA software.

***Table 5: The Ease of Use and User Friendliness of KOHA***

| The ease of use and user friendliness of KOHA. | Agree | Disagree | Not Sure |
|---|---|---|---|
| KOHA is free library software with original source code that users can modify to make it work better for them. | 49 (96.1 %) | 2 (3.9%) | 0(0%) |
| KOHA is very easy to install that it does not require the help of technicians. | 22 (43.1%) | 21 (41.2%) | 8 (15%) |
| KOHA makes acquisitions system for smaller library available and simple. | 39 (76.3%) | 6 (11.8%) | 6 (11.8%) |
| KOHA makes Serials system very easy for magazines or newspapers clipping work. | 43 (84.3%) | 1 (2.0%) | 7 (13.7%) |
| KOHA is web-based multilingual Integrated Library System that caters for the automation needs of large libraries. | 48 (94.1%) | 0(0%) | 3 (5.9%) |

From the above table 6, on the ease of use and user friendliness of KOHA, 49 (96.1%) of the respondents used for the study agreed that KOHA is a free library software with original source code that users can modify to make it work better for them. 2 (3.9%) of the respondents disagreed that KOHA is a free library software with original source code that users can modify to make it work better for them. While none of the respondents were not sure. Also 22 (43.1%) of the respondents used for the study agreed that KOHA is very easy to install that it does not require the help of technicians while 21 (41.2%) of the respondents disagreed to this and 8 (15%) of the respondents were not sure if KOHA is very easy to install that it does not require the help of technicians. 39 (76.3%) of the respondents agreed that KOHA makes acquisitions system for smaller library available and simple. While 6 (11.8%) of the respondents disagreed to this and 6 (11.8%) of the respondents were not sure if KOHA makes acquisitions system for smaller library available and simple. 43 (84.3%) of the respondents used for the study agreed that KOHA makes Serials system very easy for magazines or newspapers clipping work while 1 (2.0%) of the respondents disagreed to this and 7 (13.7%) of the respondents were not sure of their response. 48 (94.1%) of the respondents used for the study agreed that KOHA is web-based multilingual Integrated Library System that caters for the automation needs of large libraries. 3 (5.9%) of the respondents were not sure and none of the respondents disagreed to this. However, it is obvious from the study that most of the respondents agreed on the ease of use and user friendliness of KOHA.

***Table 6: Challenges Encounter by Libraries with the Use of KOHA.***

| Challenges of KOHA software | Yes | No |
|---|---|---|
| Financial difficulties. | 13 (25.5%) | 38 (74.5%) |
| High cost of maintenance | 17 (33.3) | 34 (66.7%) |
| Power failure. | 43 (84.3%) | 8 (15.7%) |
| Poor management. | 33(64.7%) | 18 (35.3%) |
| Vendors' inadequacy. | 15(29.4%) | 36(70.6%) |
| Software problems e.g. hanging, malfunctioning, etc | 23 (45.1%) | 28 (54.9%) |
| Constant breakdown of hardware | 19 (37.3%) | 32 (26.7%) |
| Inadequate infrastructural facilities | 30 (58.8%) | 21 (42.2%) |
| Inadequate in-house experts | 32 (62.7%) | 19 (37.3%) |

All the causes of the failure of the software listed above can be broadly divided into three. These are power failure, poor management and inadequate in-house experts. Two of the

respondents even gave one major cause which is poor bandwidth of internet facilities. A number of these libraries have even experience some occasional failures before the final failure. These occasional failures ultimately lead to total failure. The issues of 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. It is apparent in Table 7 above that power failure is at the heart of every organization. Inadequate power supply and poor management is a great challenge. Libraries have to try as much as possible to make do with limited funding in order to provide standby generator and also training of the librarians on the maintenance of the software. Inadequate in-house experts which account for 32 (62.7%) is another challenge. This means that the software vendor presence or an in-house expert would always be needed. Inadequate infrastructural facilities, vendors' inadequacy, constant breakdown of hardware among others were also cited as challenges.

**Discussions of Findings**

Easy access to information resources in a library collection and beyond is one reason behind every installation of an ILS. Anything short of what is expected of an ILS in this present age will breach its installation. Utilizing information technology (I.T.) to change the ways and manners that library offer services to her users demands conscious effort and determination. KOHA's ability to accommodate a large collection, ability to integrate the basic library operations, easy to configure, quick response time, menu driven, adaptable to other systems/software and easy to use among others makes it a viable option for University Libraries (Saturday et al, 2012). Through the implementation of KOHA, users' satisfaction in the area of quick information access and retrieval, online search for e-resources, OPAC search, client's registration, charging and discharging of resources among others were done with ease. However, the major objective of this study was to assess the use of KOHA library software in some selected academic libraries in Kwara and Oyo states Nigeria. The following are the finding deduced from this study.

The first findings in this study showed that majority of the respondents of the study had a positive perception that KOHA has a Customizable and easy to search options. This is supported by Rafiq (2009) whose finding shows that the librarians' perception towards open source software adoption is positive. Payne and Singh (2010) finding cited in Rafiq's study provides compelling insights into the response to OSS (open source software) by LIS professionals of international localities, including India, Pakistan, the United States, Canada, the United Kingdom, and Australia. The study represented an analysis of 370 contributed responses from 48 countries. The overall results suggested that respondents had positive perceptions towards OSS adoption in libraries. Nonetheless, OSS adoption in libraries is still in infancy. This is an interesting revelation that the LIS community had positive perceptions to OSS but adoption is still at the beginning. Hence, the findings necessitate the need for further enquiry to unfold the factors that are hindering the adoption of OSS in libraries on a wider scale. Similarly, the level of support for OSS was indicated by Ho (2007) and Chawner (2004).

It was revealed in the second findings of this study that majority of the library professionals are highly satisfied with the use of KOHA software and would recommend it to other libraries. This finding corroborates Vimal and Jasimudeen (2012) study which reports that the Adoption rate of KOHA in public libraries in India is very few and also handling of Indian languages in KOHA is a promising feature for public libraries. Popularity of KOHA in India among library professionals is growing. Previously, KOHA 2.x version was not mature for use in Indian libraries without technical support and most of the users are satisfied with the present version of KOHA 3.x. Contributions of growing number of community members from India helped KOHA to become a mature integrated library system within a short period of time. In the early stages of development the open source automation systems offer only promise and potential and were not yet a viable option for a run-of-the-mill library. Similarly, the things have changed quickly and KOHA has become mature in terms of features of commercial library automation systems. This is the result of the generous support from community members. Availability of community support, commercial support, learning tools, library standards and active development has helped KOHA Open Source ILS to make a footprint in library automation market in India.

The third finding in this study shows the factors affecting the use and non-use of KOHA library software by the libraries. It was indicated that the quality of the product is one of the major factors that affect the usage of the KOHA library software and also that the Operating system, Design, Flexibility, switching from one module to another, multifunction modules, availability of the software which enhance the productivity and also the functionality of the library software. This result is supported by (Kamble, Raj & Sangeeta 2012) that the LIS professionals should keep eyes on development and to choose appropriate technology depending upon their needs. Since numbers of libraries worldwide are using OSS for managing their library systems more economically and effectively. Librarians and programmers may worked together to implement open source integrated library systems and at the same time, library professional are required to acquire new skills for developing and managing the digital library by using open source LMS for taking benefit from OSS additional technology, education, and training are essentially required

The fourth finding shows the ease of use and user friendliness of KOHA library software by the library professionals. The finding shows that KOHA is free library software with original source code that users can modify to make it work better for them and also because KOHA is web-based multilingual Integrated Library System that caters for the automation needs of large libraries with the second highest frequency which make it easy to use. This finding corroborates Vimal and Jasimudeen (2012) whose study report that KOHA makes use of MARC 21 and UNIMARC standard for cataloguing framework. It also attached Z39.50 standard for downloading the cataloguing details from remote library servers (e.g. Library of Congress). KOHA lacks customized cataloguing framework with minimum data entry fields. It displays all MARC fields and users have to customize it to minimum number of fields required for the library. This feature may cause difficulty for new KOHA users. Among KOHA users, 32.14% marked ease of cataloguing as excellent and 53.57% marked it as very good.

The final finding of the study shows the difficulty or challenges faced by the library professionals during the installation of KOHA software. The finding shows that the major challenges that the respondents encountered is power failure. However, this depends on the management system of the library. Also, poor management and inadequate in house expert are other challenges facing the use of KOHA in some selected academic libraries in Nigeria. This is supported by the finding by Ayankola, (2012) in the article titled the challenges and frustration of software adoption in Nigeria libraries. The study states that the main problems faced in the libraries are related to retraining end-user to get use to new paradigm shift. The library professional and user have faced initial difficulties adopting to open source technology practice due to non- availability of proper training. There are no sufficient equipments available in the library. Sometimes library authority does not agree to adopt new technology and therefore it is very difficult to adopt new systems to provide library service to the users. Major problem faced by the library is to shift data from existing software to OSS because library professionals are not well acquainted about software programming or source code. About 16% sought the assistance of Nigerian Library Association (NLA) in choosing good software. Again about 12% will opt for better funding, provision of standby generator for power supply and quick response by vendors respectively. Some few libraries will embrace sound training for librarians, encouraging back-up and encouraging local software developers.

## Conclusion

Going by the opinions of the respondents KOHA library software is a great tool for converting the library activities from conventional to automated system. The results shows the librarian perception towards the use of KOHA library software is positive due to their high response to each variable given in the study and also respondents were highly satisfied with the use of KOHA software and would highly recommend it to other libraries. However findings also indicated that the quality of the product (KOHA) is one of the major factors to be considered for the selection and the usage of the KOHA library software and also that the Operating system and Design among others enhance the productivity and the functionality of the software. It was also deduced that KOHA is free library software with original source code that users can modify to make it work better for them. Furthermore, the major challenges facing KOHA library software are power failure, poor maintenance and inadequate in house expert. Power failure is at the heart of every organization. Inadequate power supply and poor management is a great

challenge that can hinder the functionality of KOHA library software.

**Recommendations**

Based on findings in this study, it is recommended that Library management should not compromise the perception and satisfaction of the library professional about KOHA software but should make intensive improvement on the installation of KOHA software and also intensified efforts to educate staff and users of the library on effective use of library software. Workshops and seminars attendance be made mandatory for the librarians and technical staff of the Library on the appropriate selection of library software in order to improve the ease of use and user friendliness of KOHA software. The library should be provided with a reliable source of powers as backup against erratic power supply with strong internet connection with broad bandwidth to ensure the smooth running of the server.

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