

Influence of Koha Software on Technical Operations of the Public University Libraries in North Central Nigeria

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Abstract The Study was designed to find out the Influence of Koha Software on Technical Operations in Public University Libraries in North Central Nigeria. The study was guided by two specific objectives, two research questions and two hypotheses. Descriptive Survey research design was adopted for the study. The Study area was North Central Nigeria. The population comprised of 650 library staff in 12 public university libraries in North central Nigeria. The sample size for the study was 354 library staff from five (5) public university libraries using Koha in North central Nigeria. Purposive sampling technique was used to select five (5) out of the twelve (12) public university libraries in North Central Nigeria using Koha. Method of data collection was a self developed questionnaire titled: Influence of Koha Software on Technical Operations Questionnaire (IKSTOO). Research questions were answered using descriptive statistics of mean and standard deviation while hypotheses were tested using chi-square at 0.05 level of significant. The findings of the study revealed that Koha software packages has significant negative effect on acquisition while it has significant positive effect on cataloguing and classification operations in public university libraries in North Central Nigeria. The study recommends the use of acquisition module to purchase library materials and subscribe journals among others.

Keywords Acquisition, Cataloguing and classification, Koha software, University libraries

1. Introduction

The university library is an indispensable and vital subset of a university system. This is simply because the university library houses various information resources that are of relevance for the sustenance of academic activities in the various colleges, faculties and departments in the university system. This type of library falls under the category of academic library. Academic libraries as cited by Reitz in [1] is a library that is an integral part of a college, university or other institutions of post secondary education, established to meet the information and research needs of its students and staff. University libraries exist to serve the goals, objectives, mission and core values of the university. Every library programme must support the university's total programme. In other words, a university library's aim is to advance the functions of its university.

The primary objective of a university library is to support the university in areas of teaching, learning, and research in ways consistent with the university mission, goals and core

values. In line with this, [2] have discussed how university library plays a pivotal role as an information providing system by supporting teaching, learning, and research with information materials of various types. For the university to achieve its objectives, librarians carry out different library operations before the resources gets in contact with the user. The resources go through processes of preparation in order to give ownership stamps for identification, unique standard number, arrangement into subjects and discipline for easy identification, for the avoidance of theft and easy accessibility to render varying services to its users.

[3] defined Library operations are routine professional duties carried out daily by library staff in rendering services to its users. The extent to which these library operations are carried out determines the effectiveness of the services been offered to library users. The author further outline Some of these library operations as: circulation, acquisition, serial management, cataloguing and classification, reference services, selective dissemination of information, current awareness services, report generation, interlibrary loan, stock verification, acquisition and reprographic services. Library operations involve circulation with activities such as charging and discharging of books which are also an aspect of borrowing and returning borrowed books, inter library loan and reserved of books on limited copies.

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[4] describe acquisitions of materials, as a library operation that has to do with the purchase of library resources, the departmental request of book and publisher's catalogue advertises newly published books in a subject area for purchase form the acquisition of library collections and also through donations, self membership of professional bodies to be organized for use by the academic community. The author further explains cataloguing and classification as a library operation carried out on library materials in order to organize them for easy retrieval and access. The physical description of the resources including the assigning standard numbers known as classification number and standardized words known as subject headings, typing of catalogue cards, and filling of cards in cabinets.

2. Purpose of the Study

The general purpose of the study was to investigate the influence of Koha software packages on technical operations in public university libraries in North Central Nigeria. Specifically, the Study was conducted to:

- i. Find out the influence of Koha software on acquisition operations in public university libraries in North Central Nigeria.
- ii. Ascertain the influence of Koha software on cataloguing and classification operations in public university libraries in North Central Nigeria.

3. Statement of Hypotheses

Two Null hypotheses were raised to guide the research as follows:

Ho1: Koha software packages have no significant effect on acquisition operations in public university libraries in north central Nigeria.

Ho2: Koha software packages have no significant effect on cataloguing and classification operations in public university libraries in north central Nigeria

4. Literature Review

Influence of Koha software packages on acquisition operations

Acquisition is the process of selecting, acquiring and taking ownership of library resources both in print or non-print. Acquisition features on acquisition modules are selection of item, duplicate checking, selection of vendor, ordering, general order request letter, receiving, fund control etc. In support of this Reitz in [5] describes acquisition module as a module for selection, ordering and receiving of reading materials by purchase, exchange or gift and budgeting. [5] further explained that Collection development looks at the procurement of reading materials as a policy approach, which involves planning a balanced

collection over a chronological period to fulfil the information needs of library users. [5] further states that many integrated library systems offer the partial or full automation of acquisition functions as one of their modules. Examples of this include Koha, Evergreen, NewGenLib, Virtual, and Software for university libraries (SOUL) and Voyager. Koha is the oldest open source library management software and provides all essential modules for a library to function, including acquisition.

[6] maintained that Koha provides two types of acquisition, simple acquisition and full acquisition. They further explained that simple acquisition makes it possible to acquire materials like books, add the item directory to cataloguing and provide Z39.5 search and MARC format. Full acquisition on the other hand makes budgets, book funds and supplies baskets. This type of acquisition provides acquire materials through suggestion, existing records, new empty record and an external source, by using this module, librarian's saves time needed to acquire materials separately, catalogue and type manual catalogue cards as all these operations are done on a single platform.

Irrespective of the Integrated Library Software (ILS), the acquisition module generally facilitates in the procurement of reading materials in various formats, with a little difference, depending on the specific ILS. The acquisition module has a work flow for procurement operations.

Influence of Koha software on cataloguing and classification operations

Cataloguing and classification module of the software is able to do the copy catalogue, call No, import and export data, union catalogue, cataloguing of different items, reports, cataloguing of electronic documents etc. Eguaveon in [7] posited that cataloguing and classification exert much energy, requires great concentration, commitment and application of high intellectual ability; it is also described as being tedious and uninteresting. In the words of [8], copying of cataloguing in publication (CIP) data from either the printed book or MARC tape by the librarian onto a cataloguing worksheet marked the first phase of computerization in the library. [7] asserts that CIP records help in improving library services to users since it provides all the information cataloguers need to create a record for a particular material into their databases or card catalogue. Most of the procedures in cataloguing have been greatly simplified by the application of Koha ILS. As a direct and indirect result of the involvement of Koha ILS in library operations, new trends and paradigms have emerged. These include on-line public access catalogue (OPAC)/web-based public access catalogue (WEBPAC), on-line /copy cataloguing and use of resource description and access (RDA).

[9] in their article "Using Koha for cataloguing and classification: A case study of University of Ilorin" states that Koha has enhanced cataloguing and classification operations in their library by increasing the speed in getting library materials processed and efficiency of the tools in

that cataloguers now process more books per day, precisely 20 or more books in a day can be processed in comparison to the use of manual tools when a cataloguer sometimes process only five books per day.

[9] also assert that the utilization of various online catalogues in the cataloguing processes has resulted in skill enrichment for the cataloguers. This has provided an opportunity for continues learning, as Koha is able to provide a platform for fast classification and keep record of materials publish in the section.

5. Research Methodology

The study adopted descriptive survey research design. Hence, descriptive survey research is aimed at collecting and describing the characteristics, features, or facts of a given population.

6. Population of the Study

The population of the study comprised 650 library staff in 12 public university libraries in north central Nigeria. The 12 public universities under this study area are: Federal University of Agriculture, Makurdi (120), Benue State University, Makurdi (74), Federal University Lafia, Nassarawa State (33), Nassarawa State University Keffi (57), Federal University Lokoja, Kogi State (30), Kogi state university Anyigba (20), Federal University of Technology (FUT) Minna (100), University of Ilorin, Kwara State (92), Kwara State University, Malete (23), University of Jos, Plateau State (48), Plateau State University Bokoos (25) and University of Abuja, Gwagwalada (28). Therefore, population under study from the 12 public universities in North Central Nigeria is summed to 650.

7. Sample and Sampling Technique

Sample size for the study was 354 library staff from five (5) public university libraries that have adopted the use of Koha library software. Purposive sampling technique was used to select five (5) out of 12 public university libraries in north central Nigeria which are using Koha software.

8. Instrument for Data Collection

The data relevant to the study was collected using structured questionnaire constructed by the researcher, titled, "Influence of Koha Software on Technical Operations" (IKSTOQ).

9. Method of Data Analysis

In analysing the data collected, the researcher used descriptive statistics to answer research questions. Specifically, Means and Standard Deviation was used to answer the 2 research questions of the (IKSTOQ) questionnaire for the study. Also, to interpret the findings exclusively, a decision mean of 2.50 was set for mean decision point, hypotheses was also tested using Chi – square at 0.05 level of significant.

10. Results and Discussion

Research Question 1: What is the influence of Koha Software packages on acquisition operations in public university libraries in North Central Nigeria? To answer this research question, responses on the Influence of Koha Software packages on acquisition operations were collected and analysed as shown in Table 1 below.

Table 1. Mean and Standard Deviation Analysis of The Influence of Koha Software Packages on Acquisition Operations

S/N	Item Statement	VHE	HE	LE	NE	Mean	SD	Decision
1.	Helps in Receiving title suggestion	20	56	40	238	1.60	.71	NO Effect
2.	Helps in Duplicate Checking	12	29	91	222	1.52	.73	NO Effect
3.	Helps in getting approval from the supervisor	0	58	14	282	1.37	.68	NO Effect
4.	Helps Compiling the suggestions with complete bibliographic details	21	5	88	240	1.45	.71	NO Effect
5.	Helps in sending the titles for quotations	50	12	13	279	1.53	.69	NO Effect
6.	Koha helps in comparing quotations and finalizing the power.	31	44	81	198	.174	.69	NO Effect
7.	It helps in preparation of payment vouchers and getting approval from supervisor	11	11	130	202	1.52	.70	NO Effect
8.	It Helps in getting approval from finance	90	110	6	148	2.40	.72	NO Effect
9.	It helps in communicating the order	1	0	33	320	1.10	.77	NO Effect
10.	Koha helps in receiving the ordered title	41	49	51	213	1.77	.73	NO Effect
11.	It helps in making payment and provision to input payment details	68	58	30	198	1.99	.77	NO Effect
12.	Koha helps in claiming for late orders	29	18	18	289	1.40	.71	NO Effect
13.	It helps in tracking vendors	1	4	19	330	1.08	.69	NO Effect
14.	Helps in Reporting	0	43	145	166	1.85	.62	NO Effect
	Grand Mean					1.59	.71	No Effect

KEY: HHE - Very High Effect, HE - High Effect, LE - Less Effect, NE - No Effect
Source: Field Work: 2019

Analysis of data as presented on Table 1 shows the mean responses of respondents on the influence of Koha Software packages on acquisition operations with corresponding Standard Deviations values. Data presented on Table 1 revealed that using Koha software packages to carry out library operations from items 1 - 14 had no influence. This

is because mean scores ranging from 1.08 – 2.40 were obtained, which are below the benchmark of 2.50.

Research Question 2: What is the influence of Koha Software packages on cataloguing and classification operations in public university libraries in North Central Nigeria?

Table 2. Mean and Standard Deviation Analysis of the Influence of Koha Software on Cataloguing and Classification Operations

S/N	Item Statement	VHE	HE	LE	NE	Mean	SD	Decision
15.	Koha ensures efficiency and Consistency	201	96	31	26	3.33	.91	Effective
16.	Koha organizes online public access catalogue	187	67	59	41	3.13	.86	Effective
17..	It enhances branches relationship for faculty libraries	192	58	50	54	3.10	.87	Effective
18.	It is adaptable	220	131	3	0	3.60	.93	Effective
19.	Koha Cataloguing framework is user friendly	309	37	6	2	3.84	.95	Effective
20..	Koha is able to catalogue electronic resources	198	87	41	28	3.29	.93	Effective
21..	Koha enhances easy classification of digital library resources	186	129	34	5	3.40	.88	Effective
22.	With Koha, copy cataloguing has simplified cataloguers task	300	34	19	1	3.79	.88	Effective
23.	Koha helps in fast cataloguing	281	40	26	7	3.68	.90	Effective
24.	It facilitates online classification	300	54	0	0	3.85	.89	Effective
25..	It customize search using advanced search terms	149	196	9	0	3.40	.91	Effective
26.	It helps in entering of barcodes	162	140	52	0	3.31	.88	Effective
	Grand Mean					3.48	.90	Effective

KEY: HHE - Very High Effect, HE - High Effect, LE - Less Effect, NE - No Effect
Source: Field Work: 2019

Analysis of data as presented on Table 2 shows the mean responses of respondents on the influence of Koha Software packages on cataloguing and classification operations with corresponding Standard Deviations values. Data presented on Table 2 reveals that the use of Koha software packages to carry out library operations on items 15 - 26 is effective. This is because items 15 - 26 have mean scores ranging from 3.10 – 3.84 which are above the benchmark of 2.50.

Hypothesis 1: Koha software packages has no significant effect on acquisition operations in public university libraries in North Central Nigeria.

Table 3. Chi - Square Test on the Influence of koha software packages on Acquisition Operations in Public University Libraries in North Central Nigeria

	DF	X ² cal	Sig	Alpha Level	Remarks
Pearson Chi-Square	39	41.814	.110	.05	Not Significant
Number of Valid Cases		354			

P<.05; DF=Degree of Freedom; x²Cal = Chi-Square Calculated Value; Sig = P-Value

Table 3 above shows the Chi-square calculated value of 41.814, degree of freedom df=39 and a sig (P-value=0.110) which is greater than the alpha value (α=.05). Since P>.05, the result is not significant, therefore the null hypothesis is accepted. This implied that, Koha software packages has no significant effect on acquisition operations in public university libraries in North Central Nigeria.

Hypothesis 2: Koha software packages have no significant effect on cataloguing and classification operations in public university libraries in North Central Nigeria.

Table 4. Chi - Square Test on the Influence of koha software packages on Cataloguing and Classification in Public University Libraries in North Central Nigeria

	DF	X ² cal	Sig	Alpha Level	Remarks
Pearson Chi-Square	33	3350.56	.000	.05	Significant
Number of Valid Cases		354			

P<.05; DF=Degree of Freedom; x²Cal = Chi-Square Calculated Value; Sig = P-Value

Table 4 above shows the Chi-square calculated value of 3350.56, degree of freedom df=33 and a sig (P-value=0.00) which is less than the alpha value (α=.05). Since P<.05, the result is significant, therefore the null hypothesis is rejected. This implied that, Koha software packages has significant positive effect on cataloguing and classification operations in public university libraries in North Central Nigeria.

11. Discussion of Findings

Findings on table 1 revealed that, Koha software packages have a negative effect on acquisition operations in public university libraries in North Central Nigeria. This is evident in that, the respondents reveal that koha software

has no effect on items such as: koha software helps in receiving title suggestions, helps in duplicate checking, helps in getting approval from supervisors, helps in compiling the suggestions with complete bibliographic details, among others. This indicates that acquisitions module is not used in the selected university libraries. Similarly, a related test of hypothesis as shown on table 3 revealed a significant negative effect of Koha software on acquisitions operations in public university libraries in North Central Nigeria.

The finding is not in consonance with [6] findings which revealed that Koha provides two types of acquisition, simple acquisition and full acquisition. They further explained that simple acquisition makes it possible to acquire materials like books, add the item directory to cataloguing and provide Z39.5 search and MARC format. However it conforms with the findings of [10] which revealed that acquisition in most university library was done from the university management unit, thus the negative effect of response from respondents. Full acquisition on the other hand makes budgets, book funds and supplies baskets. This type of acquisition provide acquire materials through suggestion, existing records, new empty record and an external source, by using this module, librarian's saves time needed to acquire materials separately, catalogue and type manual catalogue cards as all this operations are done on a single platform.

Irrespective of the Integrated Library Software (ILS), the acquisition module generally facilitates in the procurement of reading materials in various formats, with a little difference, depending on the specific ILS. The acquisition module has a work flow for procurement operations.

Findings of the study as shown on Table 2 revealed that, Koha software packages has a positive effect on cataloguing and classification operations in public university libraries in North Central Nigeria. This is evident in that, the respondents reveal that koha software is effective on items such as: Koha ensures efficiency and consistency, organizes online line public access catalog, is adaptable, user friendly, enhances easy classification of digital library resources, customize search using advance search terms and helps in fast classification among others. Similarly, a related test of hypothesis as shown on table 4 revealed a significant positive effect of Koha software on cataloguing and classification operations in public university libraries in North Central Nigeria. This finding corroborate with that of [9] who in their study titled "Using Koha for cataloguing and Classification: A case study of University of Ilorin" found out that Koha have enhanced cataloguing and classification operations by increasing the speed in getting library materials processed and efficiency of the tools in that catalogers now process more books per day. [9] further reports that, with Koha, 20 or more books in a day can be processed in comparison to the use of manual tools when a cataloguer sometimes process only five books per day. In further agreement with the findings of this study, [9] also

reported that the utilization of various online catalogues in the cataloguing processes has resulted in skill enrichment for the cataloguers; it has provided an opportunity for continues learning as Koha is able to provide a platform for fast classification and keep record of materials publish in the section thus making the operations to be more faster and effectively carried out and much effect is felt compare to the traditional methods of doing it. The finding of this study as observed could be that, the use of Koha software in public universities in North Central Nigeria has greatly enhanced their cataloguing and classification operations.

12. Conclusions

Based on the results of the findings, it was concluded that, implementing Koha software to drive library operations will improve library services with reduced efforts and enhanced service delivery in public university libraries in North Central Nigeria.

13. Recommendations

Based on the findings of the study, the following recommendations were made:

1. Acquisition module; from the findings it is noted that acquisition module is not implemented in the university libraries under study. However, this module should also be used for making purchase of library materials and journal subscription, track orders, so that other modules like the reporting, cataloguing, making item entries, will be applied more faster as the reports from these areas of application will be track down on purchase from the notices received.
2. Cataloguing and Classification Module: the findings encouraged the use of cataloguing and classification module to enhance circulation and classification operations. Such operations are processing of library materials to ensure standardization and complaints to other library protocol such as z39.50 and MARC 21. Also, by using this module, processing of library materials is faster using copy cataloguing. All processed materials can be visible through the On line Public Access Catalogue (OPAC) to enhance remote access and visibility. Lastly, generating Mysql saved reports, data about library holdings can be seen by just a click.

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REFERENCES

- [1] E. C. Nkamnebe, O.K. Udem and C. B. Nkamnebe., 2014 Evaluation of the use of University Library Resources and Services by the Students of Paul University, Awka. Anambra State, Nigeria. *Library Philosophy and Practice*. Available: <http://digitalcommons.unl.edu/libphilprac/1147>.
- [2] C. V. Anunobi and B. E. Edoke., 2010, Use of ICT facilities for Serials Functions in Southern Nigeria Federal University Libraries. *Library Philosophy and Practice*. Available: <http://digitalcommons.unl.edu/libphilprac/355>.
- [3] D. U. Imeremba., 2011, *Routines Libraries: A Synthesis of Technical and Readers Services Operations* Enugu, Nigeria: Kennedy Publishers.
- [4] I. A. Yahaya, A.A. Aliyu and A.A. Adamu., 2016, Managing Academic Library Services in Nigeria in the 21st Century. *International Conference on Information and Communication Technology and its Applications*. Available: https://www.researchgate.net/publication/311455476_28-30.
- [5] A. R. Banahal., 2018, Self-Reliance of The Koha Acquisition Module for Managing Procurement of Printed Books: An Academic Library Perspective. *The Electronic Library*. Available: <http://doi.org/10.1108/EL-12-2016-0263>, 36(2): 338-349.
- [6] J.K. Jha and A.S. Mishra., 2016, Acquisitions Module Through Koha Library Management System: How to Use in Library. *E-Library Science Research Journal*. Available: [https://www.researchgate.net/profile/Ajay_Mishra18/publication/320016256_4\(9\)](https://www.researchgate.net/profile/Ajay_Mishra18/publication/320016256_4(9)).
- [7] J. I. Idiegbeyan-Ose and O. Adebayo., 2016, New Paradigms in Cataloguing in the 21st Century. A Review of Implications and Adoption of New Strategies for Nigerians Libraries, *BILGI DUNYASI*. DOI: 10.15612/BD.2016.50 17(1).
- [8] K.I.N Nwalo., 2013. New Mode of Universal Access: Challenges to Nigerian Cataloguers. *The Nigerian Cataloguer*, 1(1): 89-100.
- [9] A.T.B Abdussalam and U.A Saliu., 2014, Using Koha for Cataloguing and Classification: A Case Study. *Library Hi Tech News*. Available: [https://doi.org/10.1108/LHTN-11-2013-0070_31\(2\):_15-21](https://doi.org/10.1108/LHTN-11-2013-0070_31(2):_15-21).
- [10] A.T. Asen, S. Iaana and M. Adejo., 2017. Application of Koha Software in Universities in Benue State. *Journal of Library and Information Sciences*.