

Organizational Factors as Predictor for Motivation to Use Library Management Software among Librarians in South West University Libraries, Nigeria

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Abstract

Libraries like every other profession has been obstructed by technological innovations like Integrated Library Management Software (ILMS). ILMS offers numerous benefits and serves as a powerful tool for libraries to efficiently manage their resources, operations and services. Koha as an example of open-source integrated library management software has gained popularity among academic libraries all over the world, Nigeria not left behind. However, with the numerous advantages, low or partial automation was found, of which several studies have been done to delineate the reasons. The study, adopting descriptive survey research design, investigated organizational factors as predictor for motivation to use Koha Integrated Library Management Software in Southwest Universities, Nigeria. The population for this study consists of all the three hundred and eight (308) librarians from all the 22 libraries of universities in Southwest Nigeria that use Koha library management software. From the study population, 175 were sampled using Krejcie and Morgan sampling table with an approximate 70% response rate. The study found that organizational factors have significant influence on motivation to use Koha ILMS (Adj. $R^2 = 0.254$, $F(1,118) = 41.429$, $p = 0.000$). The study concluded that Koha ILMS is compatible with library operations. Therefore, the study suggests that both library management and the university management should ensure adequate availability of infrastructures that allow for effective utilization of library oriented technological innovations like ILMS.

Keywords: Integrated Library Management Software, Library Management System, Koha, Library Automation

Introduction

Libraries occupy a crucial position in the dynamic realm of information management, serving as key facilitators in enabling individuals to obtain knowledge and fostering a commitment to continuous learning throughout one's lifetime (Corrall, 2022). The incorporation of technology, specifically Library Management Software (LMS), has become a crucial element in contemporary library operations in recent times (Ayo, Jotic, Raqueño, Loresca, Mendoza, & Baroña, 2023). The Library Management System (LMS) optimizes a range of activities, including cataloging, circulation, acquisitions, and patron administration, so allowing librarians to dedicate additional time and resources to services that prioritize the needs of users (Mandal, 2019). The effective implementation and utilization of Library Management System (LMS) are contingent upon not only the technical attributes of the software but also the motivation and engagement exhibited by librarians who regularly interact with it.

The effective utilization of a Library Management System (LMS) by librarians is highly dependent on their intrinsic motivation, as it plays a critical role in ensuring its seamless integration into their professional workflows (Tahar, Riyadh, Sofyani, & Purnomo, 2020). In order to have a thorough understanding of the determinants that impact this motivation, it is important to conduct a detailed analysis of the organizational elements present inside libraries. The impact of organizational characteristics on employee motivation and engagement has been widely recognized across several areas (Ajibade, 2018). These elements include leadership support, training opportunities, job satisfaction, and perceived usefulness. When examining the relationship between library professionals and LMS, exploring these organizational aspects has the potential to reveal valuable insights that can support the effective implementation and longterm utilization of technology-enhanced library systems.

The primary objective of this research is to investigate the correlation between organizational characteristics and the desire of librarians to utilize Library Management Software. Through an

examination of the intricate relationship between these variables, the research endeavors to offer a comprehensive comprehension of how organizational environments influence the attitudes and actions of librarians towards Library Management Systems (LMS). These findings have the potential to provide guidance to library administrators, policy makers, and software developers when developing strategies that promote a favorable climate for increased utilization of Learning Management Systems (LMS). Ultimately, this can result in enhanced library services and improved user experiences.

Moreover, extant literature have revealed that a substantial number of libraries in the developed world have automated virtually all their services, however only few libraries in developing countries have fully taken the huge benefits of using library management systems to the fullest (Nayama, 2019). This low level of use can affect the effectiveness of the library and its ability to achieve their stated objectives. As a result of this, researchers are interested in factors that may be responsible for low level of Koha ILMS usage in academic libraries, South west, Nigeria.

The objectives are to:

- i. identify the motivation to use (perceived usefulness, perceived ease of use and purpose of use of Koha Integrated Library Management Software) among Librarians in Southwest University Libraries
- ii. examine the organizational factors (management support, staff training and available infrastructure) in the use of Koha Integrated Library Management Software among Librarians in Southwest University Libraries
- iii. ascertain the influence of organizational factors on the motivation to use Koha Integrated Library Management Software among Librarians in Southwest University Libraries

Research Questions

- i. what is the motivation to use (perceived usefulness, perceived ease of use and purpose of use) of Koha Integrated Library Management Software among Librarians in Southwest University Libraries?
- ii. what are the Organizational factors (management support, staff training and available infrastructure) in the use of Koha Integrated Library Management Software among Librarians in Southwest University Libraries?

Research Hypothesis

H₀₁. There is no significant influence of organizational factors on the motivation to use Koha Integrated library software among Librarians in University libraries of Southwest Nigeria.

Literature Review

The emergence of information and communication technology has resulted in terms and concepts like automation, computerization, digitization and so on. The impact of ICT is enormous and its influences have cut across all aspects of life. Its emergence obstructed the old manual system with its several disadvantages by creating an avenue for efficiency and effectiveness in the library's staff performance and service delivery (Bello, & Chioma, 2020). Libraries as early adopters of technology require cutting-edge technological innovations to work successfully, effectively, and efficiently in the face of information explosion and a wide range of media, as well as to serve an ever-increasing number of users. Library automation and electronic library services, such as database subscriptions, e-books and e-journal collections, open educational resources, open access collections, institutional repositories, and so on, were

concepts and phenomena born as a result of the adoption and application of technological innovations in library operations (Lund, Oname, & Agbaji, 2020).

Moreover, the quest for efficiency and rationality in the overall management of library's human, physical, and information resources is at the root of libraries' increasing adoption and use of information technology. More so, traditional or paper-based libraries have been shown to have significant limitations, necessitating the use of an automated library system. It is a strictly localized medium, for example, because the resources and users must be in the same location at the same time, and only one person can utilize a single paper document at a time. As a result, several copies of books for multiple users would be purchased which will automatically create space and storage problems. Secondly, a book is a somewhat inflexible medium because it cannot be reformatted like the electronic resources, and finally, collections on paper are heavy and require storage facilities that occupy useful space. All these are some other factors that necessitated the use of an automated system in libraries, especially academic libraries (Uzomba, Jesudunni, & Chukwuma, 2015).

Koha being a foremost library automation software aside the fact that is open and free, the advantages of open source is numerous compared with proprietary software. This explains the reasons for the wide adoption in both developed and developing countries of the world. These advantages are philosophical, ethical and practical especially in the field of librarianship (Ajani & Olayinka, 2022). For example, it enhances community participation. It is reliable because of the access to source code, flexible for modification to suit specific needs, it involves little or minimal expenses and so no (Aliyu, & Dutse, 2019). Open source library management software is adopted and reportedly used by libraries especially in developing countries where the cost of proprietary software is too exuberant to acquire. Studies has shown that the most widely used open source library management software in Nigeria Academic libraries is Koha and the

adoption is largely motivated by the fact that is free, aside its functionalities which is highly library compliant (Lai, 2017; Ayira, 2020 and Jasimudeen, & Kumar, 2012).

Different factors has been found to influence Koha integrated library management software among which organizational factors is ranked highest. In a study on integrated library systems in use in university libraries in Osun state, Nigeria, from the 7 university libraries surveyed, all making 100 percent asserted that organizational factors such as Lack of constant power supply, high cost of training, inadequate management support for the project, poor IT facilities in the academic community, poor awareness of training opportunity in academic community were their major challenges encountered (Oyekale , 2018).

However, this was not the case in a study on Evaluation of Automated Cataloguing System in Academic Libraries in Oyo State Nigeria, using 39 respondents, where it was found that 77% agreed that there is availability of functional personal computer and a commensurable internet bandwidth while 23 % disagreed more so, all the respondents (100%) agreed that there is internet connection, however, power outage is the problem all (100%) complained about (Odunola, Tella, Oyewumi, Ogunmodede, & Oyetola, 2019).

In a study on adoption factors of integrated Library management systems (ILMS) In selected Nigerian university Libraries, using library factors in place of organizational factors, 100% of the respondents revealed that the Libraries relied on Management's awareness of the benefits that can be achieved with the use of ILMS, Management's support and encouragement for the use of information systems for job-related work, Management's provision of most of the necessary help and resources to enable people to use the system and Management's provision of good access to hardware and software resources when people need them as indications of top management support for the eventual adoption and continuous use of ILMS (Adegbore,

2018). This means that maximum support is need from the organization for effective and smooth running of the project.

Methodology

The study is a descriptive survey, the population for the study consists of all the three hundred and eight (308) librarians from all the 22 libraries of universities in Southwest Nigeria that uses Koha library management software. From the study population, 175 was sampled using Krejcie and Morgan sampling table. Adapted questionnaire from related studies was used proportionally to the number of staff in each university library to gather data. Data was analyzed using SPSS software and the hypothesis was tested via linear regression analysis.

Analysis and Discussion of findings

Demographic analysis showed that majority of the respondents (52.5%) were female. Majority (28.3%) are within age range 35-39. The age group "35-39" with 28.3%. Majority of the staff cadre are Librarian II with 30.8% of the population.

Table 1: Perceived Usefulness, Perceived Ease of Use and Purpose of Use of Koha ILMS

Motivation to Use Koha ILMS Perceived Usefulness	Strongly Agree	Agree	Disagree	Strongly Disagree	Mean
Using Koha ILMS for my job would enable me to accomplish tasks more quickly.”	85 (70.8%)	35 (29.2%)			3.71
Using Koha ILMS improve my job performance	67 (55.8%)	53 (44.2%)			3.56
Using Koha would make it	73 (60.8%)	46	1	-	3.60
Koha ILMS is useful for my job	72 (60.0%)	48 (40.0%)		-	3.60
Weighted Mean					3.6
easier to do my job. (38.3%)	(.8%)				

Perceived Ease of Use					
I believed that interaction with Koha ILMS would be clear and understandable	59 (49.2%)	61 (50.8%)	-	-	3.49
I believed navigation of Koha ILMS would be easy.	69	51	-	-	3.57
Learning to use Koha ILMS would be easy for me	58	53	52	52	3.52
It would be easy for me to become skillful at using Koha ILMS	62 (51.7%)	61 (50.8%)			3.49
Weighted Mean					3.5
Purpose of Use of Koha ILMS					
My Library uses Koha ILMS Cataloguing and Classification module for copy-cataloguing and classification	70 (58.3%)	36 (30.0%)	13 (10.8%)	1 (.8%)	3.46
My Library uses Koha ILMS for Online public Access Catalogue (OPAC).	62 (51.7%)	48 (40.0%)	9 (7.5%)	1 (.8%)	3.43
My Library uses Koha ILMS Acquisition Module for acquiring library resources	53 (44.2%)	37 (30.8%)	25 (20.8%)	5 (4.2%)	3.15
My Library uses the Serial module of Koha ILMS for serial management	43 (35.8%)	58 (48.3%)	14 (11.7%)	5 (4.2%)	3.21
In my library, we make use of the Circulation module of Koha ILMS for charging, discharging and so other circulation related functions	56 (46.7%)	41 (34.2%)	20 (16.7%)	3 (2.5%)	3.25
In my library we make use of the Patron registration module of Koha ILMS	50 (41.7%)	48 (40.0%)	20 (16.7%)	2 (1.7%)	3.22
Weighted Mean					3.3
Grand Mean					3.5

Source; Field work, 2023

From the table above, librarians' responses indicate that they perceive Koha ILMS as both useful and relatively easy to use, with a grand mean of 3.5. They view the system as beneficial for task accomplishment and job performance, and they generally find its navigation and usage to be

clear and understandable. The purpose of use for various modules within Koha ILMS also receives a positive perception, with the highest mean for the Cataloguing and Classification module. These findings suggest a favorable attitude towards the perceived utility, ease of use, and specific functionalities of Koha ILMS among the librarians surveyed.

Table 2: Organizational factors (Management support, Staff training and Availability of Infrastructure)

Management Support	Strongly Agree	Agree	Disagree	Strongly Disagree	Mean
Koha ILMS project is important to top management	39 (32.5%)	63 (52.5%)	18 (15.0%)		3.18
The Koha ILMS project was shouldered by the institution's management	43 (35.8%)	63 (52.5%)	12 (10.0%)	2 (1.7%)	3.23
Management is doing a helpful job by providing necessary infrastructures as regards the use of Koha ILMS	36 (30.0%)	60 (50.0%)	19 (15.8%)	5 (4.2%)	3.06
Weighted Mean					3.4
Staff Training					
I've undergone the training that I needed to be able to understand and use Koha ILMS	44 (36.7%)	57 (47.5%)	18 (15.0%)	1 (.8%)	3.20
Koha ILMS training makes it more useful to me	40 (33.3%)	63 (52.5%)	15 (12.5%)	2 (1.7%)	3.18
The management funded my Koha ILMS training seminar	32 (26.7%)	48 (40.0%)	38 (31.7%)	2 (1.7%)	2.92
Weighted Mean					2.9
Available Infrastructures					
There is reliable and uninterrupted internet connection in the library	25 (20.8%)	56 (46.7%)	37 (30.8%)	2 (1.7%)	2.87
There is reliable and uninterrupted power supply in the library	21 (17.5%)	48 (40.0%)	49 (40.8%)	2 (1.7%)	2.73

Hardware infrastructure (e.g. Computers, printers, scanners etc.) are made available	45 (37.5%)	54 (45.0%)	18 (15.0%)	3 (2.5%)	3.18
<u>Weighted Mean</u>					2.9
<u>Grand Mean</u>		3.1			

Source: Field Work, 2023

As observed from Table 2, the librarians' responses indicate that they perceived relatively higher levels of management support and availability of hardware infrastructure for using Koha ILMS. However, staff training and available infrastructures such as reliable internet and power supply received lower mean scores of 2.9 indicating potential areas for improvement. The grand mean of 3.1 suggests a generally positive perception of the organizational factors studied in relation to librarians' motivation to use Koha ILMS.

Discussion of Findings

Findings on the question, “what are the Organizational factors (management support, staff training and available infrastructure) in the use of Koha Integrated Library Management Software among Librarians in Southwest University Libraries”, showed that organizational factors in the use of Koha ILMS is high with a grand mean of 3.1. However, aside management support as a sub-construct of organization factors which has an average mean of 3.6, both staff training and availability of infrastructural facilities were found fairly high with an average mean of 2.9 each which according to the decision rule is fairly high. A study negated this finding with respect to management support where it was found that approval from the library’s parent body poses a great problem to the adoption, implementation and use of Koha ILMS (Asim, & Mairaj, 2019). Lack of support from parent body can reflect on staff training which is believed to be an indispensable strategy for motivating librarians since library is a service rendering organization (Tella, Ayeni, & Popoola, 2007). The findings of a study in Zambia revealed that the major challenge was the inability of

librarians to effectively use all the modules in Koha because of a lack of skills (Bwalya, & Akakandelwa, 2021).

More so, according to the available search results, there is limited information on the influence of organizational factors on the use of Koha integrated library management software. However, some studies have examined the adoption and diffusion of open-source integrated library systems (ILS) in academic libraries in Africa, including Koha (Ponelis, & Adoma, 2018). The study found that Koha is the most adopted open-source ILS and is being considered by all libraries without any ILMS or a proprietary ILMS. The research also identified barriers to use of Koha ILMS, including ICT infrastructure, organizational procurement policies and national procurement legislation, human resource capacity, and limited finances (Reddy, 2013).

Another study compared the features of Koha, Newgenlib, and e-Granthalaya, and found that Koha and Newgenlib have more advanced and varied features than e-Granthalaya. However, few studied specifically address the influence of organizational factors on the use of Koha. Moreover, a study in Malawi found that the main challenges faced in the use of Koha ILMS included lack of information and communication technology infrastructure, unreliable Internet connectivity and limited finances all of which are captured in the organizational factors that influences motivation to use Koha in this study (Chaputula, & Kanyundo, 2019) . Specifically, in Nigeria, a descriptive survey study on the factors affecting the effective utilization of KOHA by librarians in Nigerian academic and research libraries found that lack of institutional support was a major challenge. Challenges of infrastructural facilities like poor internet connectivity, poor Internet connectivity, lack of technical support, and difficulties upgrading and backing up the Koha database was found in a study in Zambia (Bwalya, & Akakandelwa, 2021).

Hypothesis testing

There is no significant influence of Organizational factors on the motivation to use Koha Integrated library software among Librarians in University libraries of Southwest Nigeria.

Table 4.3 (a-c) Influence of Organizational factors on the Motivation to use Koha ILMS among Librarians in University Libraries in south west

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.510 ^a	.260	.254	4.85075

a. Predictors: (Constant), Organizational Factors

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	974.816	1	974.816	41.429	.000 ^b
	Residual	2776.509	118	23.530		
	Total	3751.325	119			

a. Dependent Variable: Motivation to Use Koha ILMS

a. Predictors: (Constant), Organizational Factors b.

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	32.921	2.411		13.655	.000
	Organization	.554	.086	.510	6.437	.000

a. Dependent Variable: Motivation to Use Koha ILMS

The ANOVA F-test is significant (Adj. $R^2 = 0.254$, $F(1,118) = 41.429$, $p = 0.000$) indicating that the regression model is statistically significant in predicting the motivation to use Koha ILMS among librarians. Also, the coefficients table indicate a positive and significant relationship between organizational factor and motivation to use Koha ILMS ($B = 0.554$, $p <$

0.05). Therefore, the null hypothesis is rejected as there was a significant influence of organizational factors on motivation to use Koha ILMS.

In summary, the study found that there is high level perception of librarians as regards the availability of organization factors in the use of Koha ILMS. However, the place of staff training and available infrastructure is fairly high. This means that staff training and infrastructural facilities needed for use of Koha ILMS are not adequate

Conclusion

Overall, using an ILM software helps librarians to provide better services to their users, optimize the use of library resources, and streamline workflows. As it has been proven by several studies, librarians and libraries should consider their options as regards the type of integrated library management they adopt and use. This could be based on the purpose, capabilities and compatibility with the library house-keeping activities, and its relative advantages to the manual system. It is expected that this would motivate a perception, which could be perceived ease of use or perceived usefulness, that can in turn informed the librarians' decision to adopt and use Koha ILMS.

Recommendations

1. More effort should be made by the parent body in terms of training and retraining of library staff in the use of Koha ILMS, this will solve the problems of the perception that Koha is complex.
2. More so, organizations should ensure that librarians and libraries are equipped with adequate infrastructural facilities.

3. Organizations should also provide funds for training and make sure there is adequate provision of infrastructure facilities like high bandwidth internet connectivity, stable electric power supply and computer hardware.

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