

ADOPTION OF 'NEWGENLIB' LIBRARY AUTOMATION SOFTWARE FOR LIBRARY OPERATIONS IN NIGERIAN UNIVERSITY LIBRARIES

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Abstract

Library automation is the conversion of a library's routine activities such as storage, access and retrieval from manual to electronic means. Integrated library automation packages are used in a wide range of library automation. This study focused on adoption of 'NewGenLib' library automation software for library operations in Nigerian University Libraries. Descriptive survey was used in this study. A purposive sample technique was used. Questionnaire and interview were used as instruments for data collection. Only libraries that use 'NewGenLib' were used. The findings of this study revealed among others, that there are only 5 university libraries in Nigeria that use 'NewGenLib' and all the 5 use the open-source, the software is user friendly and easy to navigate. The modules implemented by all of them are cataloguing, followed by OPAC. It is concluded that 'NewGenLib' is not widely adopted for library operations by Nigerian University Libraries. It is recommended among others that the software should be adopted by the University libraries in Nigeria, that are not using it for library operations. Also, Stable light, good attitude, available Internet etc., should be provided in order to use the software.

Keywords: Adoption, Library Automation, NewGenLib, Open Source Software, University Libraries

Introduction

Library automation is the use and application of computers and the utilization of computer-based products and services in operating different library housekeeping operations and functions to replace the traditionally practised operations (Majumder, 2017) Library automation has revolutionized how libraries organize, create, distribute and use information system /services. Software is required to automate library functions, this software is referred to as, library automation software, Integrated Library Management System (ILMS), library management system, etc. Automation software is normally expected to provide for all of the usual library functions like acquisitions, cataloguing, circulation, administration, serials management, OPAC, ILL and statistical reporting with a facility for directly accessing any sub modules across these main functional modules (Giri, 2012). There are mainly two types of software, proprietary (commercial) software and Open Source Software (OSS), then later as the name implies is open and freely available and accessible on the Internet and can be downloaded and installed with little or no cost.

There are different kinds of open source library software solutions that could be embraced by libraries. Some of the open-source software include Emilda,

EspaBiblio, Evergreen, Gnuteca, InfoCID, Jayuya, Koha, and NewGenLib. oBiblio, OPALS, OpenAmapthèque, OpenBiblio, PhpMyLibrary, PMB Senayan etc.

In this era of economic hardship, especially in Nigeria, libraries are providing better modern services to their users by using open-source library management software. For budgeting reasons, libraries look for less costly but good quality technology solutions that can help them serve their users effectively. Library budgets are shrinking, the cost of library resources is rising, and user expectations are ever-increasing. In this situation, Open Source Software (OSS) provides excellent help to librarians economically and effectively automating their operations and services while acting as a continuous reality check on user needs. Open-source systems have been part of the overall automation landscape for over than 15 years and have become a well established and better choice (Breeding, 2017)

Uzomba et al. (2015) in a study of the use and application of open-source integrated library systems in Nigerian libraries discovered that many libraries in Nigeria had experienced several challenges having adopted wrong library software and had to discontinue its use due to technical complications.

One of the most common library open source software, especially in India is New Gen Lib. (NGL). Many large libraries in India have successfully implemented it and are using it for their household chores. NewGenLib has been growing rapidly over the years. Its unique features and services have attracted libraries all over the world. It is installed in more than 2500 libraries in 58 countries of the world (Agrawal, 2015).

Statement of the Problem

There are different types of integrated library system software that have been adopted by various academic libraries in Nigeria (Uzomba, et al 2015). With the restricted access and cost of purchasing propriety software, many libraries have shifted their attention to free and open software.

Experience has shown that many libraries in Nigeria run into one problem or the other due to the wrong choice of library software (Uzomba, et al, 2015). Among various library software, which have found their way into the Nigerian market today, Koha has gained more popularity and acceptability in Nigerian libraries, especially academic libraries. However, according to a comparative study conducted by Singh (2011) on Koha and NewGenLib library software, it was revealed that NewGenLib had better functionality of modules than Koha.

The importance, viability, reliability and effectiveness of NewGenLib library software, make it imperative to be adopted by libraries that strive to better serve the interest of their users. However, there is scarcity of literature concerning the wide of adoption of NewGenLib for library operations among University libraries in Nigeria. Hence, the reason for this study.

Objectives

The specific objectives of the study are:

1. To identify the University libraries in Nigeria that are using NewGenLib software for library operations.
2. To determine the versions of the NewGenLib Software being used for library operations by University libraries in Nigeria.
3. To find out the reasons for the choice of NewGenLib Software for library operations by University libraries in Nigeria.
4. To find out the services provided by mobile applications using NewGenLib software for library operations by University Libraries in Nigeria.
5. To find out the NewGenLib software functional modules implemented for library operations by University libraries in Nigeria.
6. To identify the challenges encounter in using NewGenLib software for library operations by University libraries in Nigeria.

Literature Review

Recently the rate of libraries adopting open-source integrated systems for their automation is increasing. The study by Muruli and Kumar (2014) revealed that proprietary software is going beyond the affordability of most Indian libraries. Open-source software has found wide adoption and acceptability in many libraries of the world, including developing countries like Nigeria. Apart from the fact that it requires little or no cost to operate, it has also proved to be more reliable and effective. According to Olatunji et al., (2018), Kano University of Science and Technology (KUST), Wudil, Kano State , Nigeria Library has implemented its automation project using the NewGenLib OSS at a relatively low cost.

While proprietary software remains the dominant approach, Breeding (2017) opined that a growing percentage of libraries are adopting open source products. Libraries with open-source integrated systems report the same levels of satisfaction as those using proprietary products, according to the Perceptions 2016 survey on library automation.

Baba, et al (2015) stated the benefits of open source software as stable, any programmer can read, distribute, modify the source code, and it does not put restrictions on the use or distribution by any organization or user. Baba, et al also pointed out that Sayid Hamid Library migrated from SOUL software to NewGenLib software to automate the library services

Singh (2011) conducted a comparative study between Koha and NewGenLib to find that NewGenLib had better functionality of modules than Koha. It has essential components for digital library functionalities in terms of technology, data structure and programming. NewGenLib offers more enhanced features, which are significant for OSILS. Similarly, Muruli and Kumar (2014) stated that NewGenLib offers all possible services according to the needs of any given library ranging from a school library to a university. In the same vein, Agrawal (2010) noted that Koha is also one of the best open-source library management software, but NewGenLib can

be used more efficiently in academic and special libraries while Koha is more useful and public libraries.

NewGenLib was developed by Verus Solutions PVT. Limited (VSPL) on the domain expertise provided by the Kesavan Institute of Information and Knowledge Management. NewGenLib is compatible with international standards such as MARC 21 for bibliographic description, ISBD, OAI-PMH Protocol, Z39.50 protocol, Dublin core, Unicode, etc., (Agrawal, 2015). NewGenLib has gone through changes since its initial version 1.0 which was released in 2005 (Muruli and Kumar, 2014). Verus Solutions provide a detailed list of features on their websites as follows: (Agrawal, 2015).

In General, NewGenLib library Management Software has among others the modules/features needed for successful library automation, as follows (Agrawal, 2015):

Acquisition: Facilitates the invitation of quotations from vendors. Library users can also make requests for purchase through OPAC and it reflects on the acquisition module. Books can also be accessed.

Technical processing (cataloguing): This carries forward the acquisition module, books, journals, digital documents, etc. acquired and accessed in the acquisition module are recorded by the technical processing module for cataloguing. If the library does not receive books through the acquisition module, it can catalogue the books directly from the module. Gen Lib is z39.5 protocol compatible, therefore, it can search and import bibliographic which helps to import the bibliographic records of other libraries such as the library of congress, the British Library, etc. which saves a lot of time for cataloguers and classifiers. Cataloguing is normally done under MARC 21 standards using the cataloguing template.

Circulation: Does the function of circulation services such as issue, return, renew, reservation, inter-library loan, binding management, recall, and issue item back, if a book is found, this module can report the recorded loss of books, provide self-check-in, and self-checkout, collecting overdue books. NGL is integrated into the RFID and barcoding, circulatory functionalities are integrated. Sends overdue notices.

Serial Management: adds new subscription, adds the list of approved serials for subscription, raises order, cancel the order, re-order, receive receipts, process payments, add a supplement, create a list of serials which library wishes to renew.

OPAC: Displays the result of a search for not only what is available in the library but also searches the various online databases.

Administration: A library can set rules for users, library materials, vendor details, publisher, binders, public holidays, and currency.

NGL allows seamless import of metadata directly from freely available MARC 21 data sources on the web. This feature alone will save considerable costs of

creating metadata records apart from ensuring better consistency, accuracy, and completeness of records.

Utilities: They are fused for the enhancement of the library management and the ease of reporting **Reports:** reports available at the end of the day help the librarian better monitor and verify circulation records and details of the collection of fines for overdue materials.

Attachment of digital objects: also allows such as full text in PDF or MS word, images, files, sounds, video clips, etc. to catalogue records, serial articles, research reports, presentations, pamphlets, audio recordings, videotapes, contact pages of books, etc.

Wireless technology and mobile phones are becoming an integral part of everyday life, library services can now be provided via mobile technology (Savitha, et al, 2019) NewGenLib also Supports Android mobiles and Tablets. Library services can be provided via mobile technology, anywhere, anytime. The rise of cutting-edge technologies like android mobile has transformed the way libraries offer their services. One of the best ways to increase the accessibility of resources and your library's relevance and to engage patrons is by encouraging them to use the mobile app can provide a wide array of virtual/online access library services to users to their palm, these include the following:

- Access OPAC: Search the catalogue by author, title, subject, barcode, keyword, and views.
- SMS notification: libraries may provide alerts on the latest news, events, and new arrivals of books.
- SMS messages can be sent to a group of users through
- Google mail – libraries can create the email in Gmail for users
- OPAC –
- Use your android phones to perform check-in and check out thus creating temporary circulation desks.
- Enhances communication channels with your library users
- Messages are sent as text messages (SMS) instantly, especially in circulation functionality
- Help to reduce user traffic at the circulation desk, especially during peak circulation hours.
- Users' smartphone become their circulation desk
- Have easy access to your library account
- Search and renew items online
- Place and manage reservations
- Access a range of e-books and other resource.

Similarly, Giri (2012) pointed out that the use of robust technology, open standards and well-designed system analysis has made NewGenLib a highly capable, flexible, user-friendly library management software. The context-sensitive help provided with every window and its self-explanatory style has made NewGenLib a

very useful ILMS, which can be easily implemented in a library without help from computer specialists. As has been seen from the number of downloads and the increasing number of participants in the forum, its popularity is increasing gradually.

In the same vein, Giri (2012) collected feedback from the participants of five different workshops, below is the comment of the participant about NewGenLib:

- While discussing the user-friendliness and ease of management with these three open-source ILMS software, one participant used an interesting metaphor in comparing NewGenLib, Koha and ABCD. He believed that NewGenLib is like DDC, quite enumerative and easy. It can be implemented in the library without much technical expertise, and with a minimal training.
- 80 per cent of the total participants of both of the training programs were able to install NewGenLib independently on the Windows platform
- Ten out of all of the participants who attended the workshops/training courses of the three felt software that NewGenLib was the easiest to handle among the three ILMS
- One participant used an interesting metaphor in comparing NewGenLib, Koha and ABCD. He believed that NewGenLib is like DDC, quite enumerative and easy. It can be implemented in the library without much technical expertise, and with minimal training.

According to Olatunji et al., (2018), the main reasons for the adoption of NewGenLib ILMS by the KUST library were: the provision of on-the-spot access to information, proper organization of information resources, accurate charging and discharging process, up to date statistical records, evaluation of information resources, linkage to all the faculty libraries for efficient management and adequate services to the users and resource sharing.

Methodology

This study adopted the descriptive survey design. A questionnaire and interview were the instruments used for data collection. The questionnaire was administered during a meeting of the Association of the Nigerian University Librarians held in Abuja in 2021. The choice of this venue as a place for questionnaire administration was made following the fact that the meeting drew participants from all University libraries in Nigeria. That was easier for the researcher to find out the universities that use NewGenLib Software. The researcher sought the assistance of the Chairman of the Association to find out the Universities that used NewGenLib as their Library automation software. Only five, 5 university libraries said that they use the software. Therefore, the questionnaires were purposively given to such university libraries that use the software. All the questionnaires were completed and returned to the researcher. In this technique, the researcher specifically tries to include those cases, individuals or communities in his sample that he thinks are appropriate or very informative for his research study (Mangal and Mangal, 2013). The data was analyzed using simple frequency count.

Findings and Discussion

Out of about 170 universities in Nigeria, only 5 universities adopted NewGenLib. This is in support of the study by (Olatunji et al., 2018) which stated that there is very little research on the adoption of NewGenLib software because most libraries are not using it. Below is the list of the universities that adopt NewGenLib

Table 1: List of Universities that Use NewGenLib Library Automation Software

S/N	Names of the Universities
1.	University of Lagos, Lagos
2.	University of Benin, Benin, Edo
3.	Sule Lamido University, Kafin Hausa, Jigawa
4.	Birham University, New Karu, Nasarawa
5.	Kano University of Science and Technology, Wudil, Kano

It is obvious from the table 1 that only 5 universities use NewGenLib software for library operations in Nigeria. This finding could be inferred that the NewGenLib software is not popular in Nigeria. This could be the reason the software is not widely being adopted among Nigerian Universities for library operations.

Table 2: Versions of the NewGenLib software used

S/N	Versions	Frequency
1.	Open Source	5
2.	Proprietary	0
3.	Not sure	0
Total		5

To ascertain the version of NewGenLib used by the libraries, the result in table 2 revealed that all the 5 universities use open source software. This is not surprising because open source software requires little or no cost to install and operate. This implies that the Open Source version of NewGenLib software, facilitates library operations carried out in Nigerian University Libraries.

Table 3: Reasons for choice of NewGenLib

S/N	Reasons	Frequency
1.	Well-structured features	4
2.	Easy to navigate	5
3.	User friendly	5
4.	Easy to install	4
5.	Allows multiple data entry	4

Libraries have their reasons for choosing NewGenLib, a question was sought to find out why they choose the software. Table 3 revealed that their reasons for the choice of NewGenLib are: It has well-structured features, it is easy to navigate, it is user friendly, easy to install and it allows multiple data. These findings confirm the findings of Giri (2012) that NewGenLib software is user friendly and highly capable. This implies that the software is important in carrying out library operations in Nigerian University Libraries.

Table 4: Services provided via Mobile Technologies

S/N	Services	Frequency
1.	Alert of New Arrivals	3
2.	Check in (return) Check out (issue)	3
3.	Proof of transaction	0
4.	Data Browsing	3
5.	Distance Learning	1
6.	Membership registration	1

On the services provided by mobile technologies, 3 universities stated that they provide Alert of new arrivals, 3 check in – check out, 3 Data browsing, 1 distance learning. The response to the “others” indicated that the membership registration is one of the services provided by NewGenLib through a mobile device. This implies that the software has multiple applications in library operations.

Table 5: Functional Modules Implemented

S/N	Functional Modules	Frequency
1.	Cataloguing	5
2.	Circulation	3
3.	Acquisition	1
4.	Serial Management	1
5.	MIS Report	0
6.	Web OPAC	4
7.	Administration (System Settings)	0
8.	Utilities	1
9.	Reports	1
10.	User check messaging	1

The functional modules implemented by the universities studied are displayed in table 4. The results show that all the 5 universities indicated that they have implemented the Cataloguing module, 4 universities implemented Web OPAC, universities implemented Circulation, while Serial management, Acquisition, Utilities and Reports are each implemented by 1 university. The response to the “others” indicated that they have implemented “user check messaging”. Because NewGenLib has many modules, only a few, such as cataloguing, OPAC and Circulation are mostly used. This implies that the users are missing out on the benefit on how the other modules can ease many of their libraries chores.

Table 6: Challenges encountered using NewGenLib

S/N	Challenges	Frequency
1.	No access to the Internet	1
2.	Unstable electricity	2
3.	Unqualified staff	1
4.	Complexity of NewGenLib	1
5.	The unfriendly attitude of library users towards ICT	2

The NewGenLib users were asked to indicate the challenges encountered when using the software, 2 respondents indicated unstable electricity and 2 stated unfriendly attitude of library users towards ICT. This is in contrast with Olatunji, et al, (2018) in their study that revealed that the major challenges faced in the adoption of NewGenLib in the KUST library are: erratic power supply, insufficient manpower, inadequate training and technical support, lack of participation, inability to modify some of the fields, accession number field not available on the interface where other fields are, scalability and speed, lack of supervision, lack of motivation. This implies that the libraries have no favourable condition to use the software anytime they need.

Ways to improve on the use of NewGenLib Software for Library operations by University Libraries in Nigeria

The open-ended question seeks to ask the respondents to suggest ways to improve on NewGenLib. The most common answers are: “the software should be upgraded” “The software should have an auto-save feature” and “It should enable multiple users to input.” The answers proved by the respondents show that they are not aware that the software can do all that they mentioned above. The responses imply that the users need more training on NewGenLib software to take advantage of the more useful features of the software. This means that the software needs to be improved in order to facilitate the library operations carried out in University Libraries in Nigeria.

Conclusion

Library automation is the use of computers in the performance of all types of library functions and operations to replace the manual system with the electronic system. Integrated Library Systems (ILS) or Library Management Systems (LMS) are used for the automation of library operations. With the high cost of propriety library automation software, libraries all over have resulted in acquiring free and open-source software such as NewGenLib, which has proven to be effective. The finding of this study showed that NewGenLib software is not widely adopted among University Libraries in Nigeria. This is because only 5 universities are using the software for library operations.

Recommendations

Based on the findings, it is recommended that:

1. The ‘NewGenLib’ should be promoted to create awareness on its existence in order to be adopted and used among Nigerian University libraries.
2. Nigerian University libraries can use Open Source version of NewGenLib Software for their operations in order to save cost of running the libraries.
3. Nigerian University libraries should find if there are other applications of the software in library operations and use it for apart from the reasons of its use such as, easy to navigate, user friendly, easy to install among others.
4. Nigerian University libraries should find if there are other services the software can be used for in library operations and use it for apart from the

services such as, alert of new arrivals, check in and check out, data browsing etc.

5. It is recommended that the Nigerian University libraries should use the software in MIS report and administration in addition to its use in catalogueing, Web OPAC, circulation among others in order to facilitate many of the library operations.
6. Unstable power supply and staff attitude towards Information and Communication Technologies, ICTs are some of the challenges faced by the NewGenLib users, these challenges have always bedevilled the success of automation in libraries, it is therefore recommended that universities management should provide funding for alternative power supply, improving the staff attitude towards ICTs among others, in order to use the software for library operations effectively.

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