# Library Application Software Packages Utilization among University Libraries in North Central Nigeria

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**Abstract**

*This study investigated the use of library application software packages among academic libraries in North Central Nigeria. It was designed to ascertain the purpose of library application software packages use among university libraries in North Central Nigeria. The study adopted a descriptive survey research design. The population of the study was 57 consisting of librarians and system analyst and all the population was used as a result there was no sample. A total of Data was 57 copies of questionnaire were administered by the researcher while a response rate of 44 (77.2%) was recorded. Data was analyzed using influential statistics such as frequencies, percentages and mean. Findings revealed that LASPs such as Micro CDS/ISIS, Tinlib, Alice for windows, Greenstone and Koha are available and were used for different purposes among the libraries. Change in library administration was identified as major factors that inhibit the use of the packages in the libraries. Based on this the study suggested that newly appointed university librarians who take over the mantle of administration should not abandoned useful policies of the previous administration such as software implementation and usage. The study therefore, recommends that university librarians should encourage the current use of LASPs among the libraries so as to enable them serve their clientele better.*

***Keywords:*** *Library Application Software Packages, Utilization, University Libraries, North Central Nigeria*

## 1.0 Introduction

Library application software packages are veritable tools introduced by the emergence of information and communication technology (ICT) to achieve efficiency in library functions and services. Library application software packages are instructions designed by human beings in a computer readable language bearing in mind the functions and services performed by libraries to enable libraries carry out their daily routine effectively. They are specifically designed to carry out library functions and services in order to save cost and reduce repetition of routine work. Inconsideration of the above discuss, university libraries depend on utilization of library oriented software packages in order to effectively carry out their daily routines in developed countries like Britain. Ukachi (2012) asserts that library

profession is now at a crossroad as traditional library services appear to be on the decline while technology-based services are on the rise as a result of the adoption of software management and service provision of libraries.

Preliminary research shows that availability and utilization of library oriented software packages are achieved with little or no fund via open source software initiative. The advent of development of library application software packages in this dispensation has made the transition from "traditional" to technological services which give room for the provision of more efficient services in a cost effective manner, hence the adoption of the packages by university libraries in their services such as acquisition, processing, storage and dissemination. This is amplified by Glance, Kerr and Reid (2004) on the extent of use of Open Source Software (OSS) by tertiary education institutions (TEIs) in Australia, New Zealand and UK that all the TIs who responded to the survey were already using OSS in their services provision. Historically, Library Application Software Packages (LASPs) otherwise called Library automation or oriented software packages in Nigerian university libraries systematically kicked off in the late 70s and was boosted in the 80s. Although, most libraries in Nigeria have acquired and made use of software packages, the use of the packages was at that time limited to word processing functions while only a few percentages of the packages was used for library operations purposes. Oyinloye (2004) has it that early efforts at library automation were recorded when some university libraries produced serial listings by computers. However, in 1980s notable changes were recorded. In 1982 Kenneth Dike Library of the University of Ibadan had already acquired Micro CDS ISIS software from UNESCO (Adeniyi, 2004).

Consequently, library application software packages utilization could not record

a successful beginning until the intervention of National University Commission (NUC), National University Network (NUNET) and United Nations Education, Scientific and Cultural Organization (UNESCO) in acquisition and distribution of Tinlib and Micro CDS/ISIS to university libraries in Nigeria free of charge. Following this trend, a good number of university libraries in Nigeria acquired and are using the packages for their functions and services. Consequently, it may be observed that university libraries in North Central Nigeria are lagging behind in the provision and use of library application software packages. The implication is that these libraries may be affected in their services provision to users. It is based on this that the need to carry out a survey of library oriented software packages in university libraries becomes necessary.

## 1.1 Statement of the problem

Library oriented software packages are effective means of carrying out library functions and services. They provide effective and new ways of organizing information and publishing it on the internet or on the CD-ROM, DVD or any other format. LOSPs enable libraries to effectively and efficiently organize and deliver information for easy dissemination to users. Proper and effective utilization of the packages may give university libraries an edge over other information service oriented institutions. This is because they will enable them to build and manage their institutional resources as well as offer efficient services as well as provide quick and open access to information resources which may support teaching, learning, research and community services.

Non utilization of the services may lead to poor services provision and poor support of teaching, learning, research and community services. Consequently, it has been observed that university libraries in North Central Nigeria in spite of the danger accrue to non

utilization of the packages may not use or be making use of the packages. Surprisingly, there seem to be no effort to the best of the researcher's knowledge to examine the purpose of library oriented software packages use in university libraries in North Central Nigeria. It is based on this that this study is set to examine the library application software packages utilized among university libraries in North Central Nigeria.

## 1.2 Purpose of the Study

This study is designed to examine the library application software packages used among university libraries in North Central Nigeria. Specifically, the study sought to:

1. Identify the kinds of library application software packages available in university libraries in North Central Nigeria
2. determine the packages that are used in these libraries
3. Ascertain the purpose for which the packages are used in the libraries
4. Identify the factors that militate against the current use of LASPs in the libraries
5. Determine the ways of enhancing the use of LASPs in the libraries

## 1.3 Research Questions

The following research questions were formulated to guide the study

1. What kinds of library oriented software packages are available in university libraries in North Central Nigeria?
2. What are the packages used in these libraries?
3. What purpose is library application software packages used in these libraries?
4. What are the factors that militate against the current use of LASPs in the libraries
5. How can the use of LASPs be enhanced in the libraries?

## 2.0 Literature Review

Literature available on library oriented software packages is numerous. However, this review tried to limit itself on library oriented software packages use in university libraries. There are many types of library oriented software packages in the market. According to Oyinloye (2004) these packages are specifically designed for libraries, information and documentation centres. Some of these packages include resource-mate, Alice for Windows, greenstone, Dspace, BookWhere, Lib+, TINLIB, X-LIB, GLAS, MastaLib, Alice for windows, BASIS, CDS/ISIS, etc. Sambe, Omeje and Onah (2013) reported that libraries need library oriented software packages for the provision of instant access to a local database, support online public Access Catalogue, manage local content, and institutional repositories as well as empower users in building digital collections/libraries, cataloguing of materials, support check in and out, hold, renewal, fine payment.

Researchers have shown that a good number of library oriented software packages are used in Nigerian University libraries. For instance, Idowu and Mabawonku (1999) opine that TINLIB software package was used by all the federal University libraries in order to facilitate and ensure uniformity in database management networking and resources sharing. Other software packages used by Nigerian university libraries such as UNN library and Federal university of Technology Owerri (FUTO) library all in south East Nigeria according to Onah (2013) include X-lib, Greenstone, Koha, Graphical Library Automation System (GLAS), Resource-Mate, Alice for Windows. Sambe (2012) in his study of availability and utilization of library oriented software packages in university libraries in North Central Zone of Nigeria reported that library oriented software packages are not in use in the libraries.

Library oriented software packages could

be used for various purposes. Adeniran (1992) reported the use of TINLIB modules for reference services, the catalogue production and online catalogue at the Nigerian Institute of International Affairs, Lagos. This means that library oriented software packages could also be used for digital/content management of their institutional repositories.

Ukachi, Nwachukwu & Onuoha (2014) open that "library automation and use of open source software are relevant for achieving optimal library effectiveness at minimal cost". However, Imo (2007) identify that the major problem of software use is that of the system unit. In order to overcome the challenges of software use in Nigerian libraries, Imo and Igbo, (2011) suggested study and evaluation of the software before purchase; regular seminar/workshop on software maintenance; involving library management and staff in software evaluation and acquisition and collaborating with ICT experts and bodies to identify quality software.

Furthermore, Obajemu, Osagie Akinade, & Ekere, (2013) assert that there is an eagerness on the part of librarians and libraries in Nigeria to shift from traditional methods of information representation to modern information technologies. This has led to the influx of various library software into the ICT market to drive automation needs of libraries. There is the need, however, for quality and reliable software that can effectively run on the operating systems of computers in Nigerian libraries. They conducted a study which provides librarians with pragmatic steps to take when making choices and highlights the operational problems associated with library software.

Kari and Baro (2015) conducted a study aimed to look at the library software in use in Nigerian university libraries, and the challenges and frustrations experienced in their automation projects. The study adopts a descriptive survey method and covers university libraries in Nigeria. A questionnaire was used to collect data from 32 university libraries in Nigeria. The study revealed that university libraries in Nigeria widely use library software such as KOHA, SLAM and VIRTUA for their library operations. Challenges such as lack of skilled manpower, lack of fund, absence of modern systems (computers) and erratic power supply were identified as the major problems university libraries in Nigeria encountered while using library software. Librarians recommended the use of KOHA, SLAM or VIRTUA library software for use by university libraries that are in search for library software to use.

## 3.0 Methodology

This study adopts a descriptive survey research design. The population of this study consists of four (4) university libraries comprising of one University of Technology Library, one University of Agriculture Library, one State University Library and a Private University Library with fifty seven (57) librarians and system analysts. Observation checklist and structured questionnaire were used as instruments for data collection. The researcher personally observed what software was available in the four university libraries in the zone while questionnaire containing thirty-three (33) items were administered to respondents in their offices in their respective institutions and collected by the researcher with the help of three trained research assistants. Data collected through observation checklist was descriptively analyzed while that of questionnaire was analyzed using frequencies, percentages and mean. Any percentage of above 50 was accepted and used while any one below 50 was rejected and not used. Similarly, the researcher considered the mean of 2.5 and above as accepted while any mean below 2.5 was considered as rejected.

**Table 1: Library Oriented Software Packages Available in University Libraries**

| S/N | Items | Available | Not Available |
|---|---|---|---|
| 1 | ALICE FOR WINDOW | ✓ | |
| 2 | BASIS | | ✓ |
| 3 | BOOKWHERE | | ✓ |
| 4 | DSPACE | | ✓ |
| 5 | GLAS | | ✓ |
| 6 | GREENSTONE | ✓ | |
| 7 | KOHA | ✓ | |
| 8 | LIBPLUS | | ✓ |
| 9 | MASTALIB | | ✓ |
| 10 | MICRO-CDS/ISIS | ✓ | |
| 11 | MINISIS | | ✓ |
| 12 | TINLIB | ✓ | |
| 12 | X-LIB | | ✓ |
| | Total | **5/13** | **8/13** |

**Table 2: Percentage Responses on the Library Oriented Software packages used in these libraries**

N=44

| S/N | Items | Used | % | Not Used | % | Remark |
|---|---|---|---|---|---|---|
| 1 | ALICE FOR WINDOW | 29 | 65.9 | 10 | 22.7 | Used |
| 2 | BASIS | 3 | 10.7 | 25 | 89.2 | Not Used |
| 3 | BOOKWHERE | 3 | 9.6 | 28 | 90.3 | Not Used |
| 4 | DSPACE | 1 | 3.3 | 29 | 96.6 | Not Used |
| 5 | GLAS | 3 | 21.2 | 26 | 78.2 | Not Used |
| 6 | GREENSTONE | 37 | 84.1 | 7 | 15.9 | Used |
| 7 | KOHA | 27 | 61.4 | 17 | 38.6 | Used |
| 8 | LIB PLUS | 2 | 6.8 | 27 | 91.1 | Not Used |
| 9 | MASTALIB | - | - | 29 | 100 | Not Used |
| 10 | MICRO-CDS/ISIS | 34 | 77.3 | 9 | 20.4 | Used |
| 11 | MINISIS | 1 | 3.3 | 28 | 96.5 | Not Used |
| 12 | TINLIB | 32 | 72.7 | 14 | 31.8 | Used |
| 12 | X-LIB | - | - | 30 | 100 | Not Used |

Table 2 above shows the library oriented software packages that were used in university libraries in North Central Nigeria. Data in the table established that Greenstone 37 (84.1%), Micro CDS/ISIS 34 (77.3%), Tinlib 32 (72.7), Alice for window 29 (65.9%) and KOHA 27 (61.4%) LOSPs were used in these libraries. This clearly shows that library application software packages are used in university libraries in North Central Zone Nigeria.

**Table 3 : Mean Responses on the Purpose of library oriented software packages utilization in the libraries**

N=44

| S/N | Items | SA | A | D | SD | $\overline{X}$ | Remark |
|---|---|---|---|---|---|---|---|
| 1 | For u niformity in database management networking purposes | 35 | 7 | - | - | 3.83 | Acc |
| 2 | For retrospective conversion of catalogue records purposes | 25 | 15 | - | 3 | 3.79 | Acc |
| 3 | For the purpose of creating multiple databases | 31 | 4 | 2 | 4 | 3.60 | Acc |
| 4 | For the purpose of indexing and abstracting journals | 28 | 9 | 4 | 1 | 3.52 | Acc |
| 5 | For the purpose of g uiding against unauthorized users | 20 | 15 | 5 | 4 | 3.34 | Acc |
| 6 | For the purpose of s pecify how information can be stored, formatted , sorted, manipulated to meet output requirement | 10 | 5 | 21 | 2 | 2.67 | Acc |

**KEY: SA=Strongly Agree, A=Agree, D=Disagree, SD=Strongly Disagree, Acc = Accepted.**

The table above presents the purpose of library oriented software packages utilization among university libraries in the zone. Findings reveal that the librarians mean scores are all above the average of 2.5. This indicates that librarians strongly agreed with the above items as being the purpose of library oriented software packages use in the libraries.

**Table 4: Mean Responses on the Factors that militate against the Current Use of LOSPs in University Libraries**

N=44

| S/N | Items | SA | A | D | SD | $\overline{X}$ | Remark |
|---|---|---|---|---|---|---|---|
| 1 | Change in library administration | 30 | 7 | 5 | - | 3.59 | Accepted |
| 2 | Staff resistance to the use of software packages | 31 | 7 | 2 | 4 | 3.47 | Accepted |
| 3 | Database conversion problems | 25 | 13 | 4 | 2 | 3.38 | Accepted |
| 4 | Poor network server which lead to no interne t access | 23 | 13 | 3 | 3 | 3.33 | Accepted |
| 5 | Lack of after sales maintenance and support | 23 | 15 | 5 | - | 3.30 | Accepted |
| 6 | Phobia of computer/software or internet usage among librarians | 20 | 11 | 2 | 7 | 3.10 | Accepted |
| 7 | Lack of knowledge about library software packages | 12 | 17 | 11 | 2 | 2.92 | Accepted |

Table 4 shows the factors that affect the effective use of LOSPs in libraries. Data presented in the shows that all the seven items presented in the table are accepted as factors that affect LASPs use in the libraries. This is because all the mean responses are above the mean of 2.5 which is the basis for decision taking in the research work.

**Table 5: Mean Responses on the Ways of Encouraging the Current Use of LOSPs in University Libraries in the Zone**

N=44

| S/N | Items | SA | A | D | SD | X | Remark |
|---|---|---|---|---|---|---|---|
| 1 | Newly appointed university librarians should not abandoned useful projects of the old administration | 34 | 6 | 0 | 2 | 3.71 | Accepted |
| 2 | Proper training should be given to librarians on how to use LOSPs for database conversion | 37 | 4 | 0 | 3 | 3.70 | Accepted |
| 3 | Libraries should upgrade or acquire and install quality network server which will facility full internet access | 26 | 10 | 5 | 2 | 3.39 | Accepted |
| 4 | LOSPs awareness should be created to inform librarians about the packages | 9 | 29 | 5 | O | 3.09 | Accepted |
| 5 | Librarians/library staff s    hould know the importance of LOSPs and accept the adoption and use of the  packages | 13 | 21 | 10 | 0 | 3.06 | Accepted |
| 6 | There should be maintenance and support from the software companies for a reasonable period | 15 | 15 | 3 | 9 | 2.85 | Accepted |
| 7 | Librarians should not be    shire of using computer/software or internet | 7 | 17 | 10 | 9 | 2.51 | Accepted |

Data presented in Table 5 above reveal that the major ways of enhancing the use of LASPs in university libraries are that newly appointed university librarians should not abandoned useful projects of the old administration with a highest mean of 3.71 and proper training should be given to librarians on how to use LOSPs for database conversion among others while the least among the ways is that librarians should not be shire of using computer/software or internet with 2.51.

**5.0 Discussion of Findings**

In recognition of the importance of library oriented software packages in libraries in general and university libraries in particular, it is interesting to understand from the study that a good number of library oriented software packages are available in these libraries. These packages include Greenstone, Micro CDS/ISIS, Tinlib, Alice for window and KOHA. The packages were not just acquired and kept for availability purposes but were used in various libraries for different purposes. This agree with Idowu and Mabawonku (1999) who reported that TINLIB software package was used by all the federal University libraries in order to facilitate and ensure uniformity in database management networking and resources sharing. The finding also tally with Onah (2013) who said that X-lib, Greenstone, Koha, Graphical Library Automation System (GLAS), Resource-Mate, Alice for Windows were used by Nnamdi Azikiwe Library, University of Nigeria and Nnamdi Azikiwe University Library Awka in South East Nigeria.

The study further revealed that library oriented software packages were used in these libraries for different purposes. The major purpose in which the packages were used in the libraries is uniformity in database management networking. This confirms the finding of Idowu and Mabawonku (1999) who reported that TINLIB software package was used by all the federal University libraries in

order to facilitate and ensure uniformity in database management networking and resources sharing. Other purposes of software use as revealed by the study include retrospective conversion of catalogue records, creating multiple databases, indexing and abstracting journals, guiding against unauthorized users, and specify how information can be stored, formatted, sorted, manipulated to meet output requirement. Consequently, the packages are not currently in use in majority of these libraries. However, observation shows that LASPs packages are currently receiving more attention in terms of use in some libraries in the zone such as Francis Sulemanu Idachaba Library, University of Agriculture Makurdi, and Chief Ason Bur Learning Resource Centre, University of Mkar, Mkar among others.

The study attributed the non-current use of the packages to change in library administration. This is because software acceptance, installation and usage lies in the hands of the library administrators and if there is a change of library administrator the present administrator brings his/her own policies that will decide either to continue using the packages or not. Other factors include staff resistance to the use of software packages, database conversion problems, poor network server which lead to no internet access, lack of after sales maintenance and support, phobia of computer/software or internet usage among librarians and lack of knowledge about library software packages. One of these finding is in line with Imo (2007) who reported that the major problem software use is that of the system unit. This means when the network server is down or not on librarians cannot make use of the software packages since the server is the source of internet access.

In search of the ways of enhancing the use of LASPs in university libraries the study revealed that newly appointed university librarians should not abandoned useful projects of the old administration. This is

followed by proper training should be given to librarians on how to use LOSPs for database conversion. Others include librarians should not be shire of using computer/software or internet, libraries should upgrade or acquire and install quality network server which will facility full internet access, LASPs awareness should be created to inform librarians about the packages, librarians/library staff should know the importance of LASPs and accept the adoption and use of the packages, there should be maintenance and support from the software companies for a reasonable period and librarians should not be shire of using computer/software or internet. This goes with what Imo and Igbo (2011) who suggested that regular seminar/workshop on software maintenance should be conducted to overcome the challenges of software use in Nigerian libraries. This means that the libraries are tirelessly in search of ways of enhancing the effective use of library application software packages.

**Conclusion**

Library application software packages enable the creation and sharing of information through the digital library collections. However, findings from this study show that change in library administration, staff resistance to the use of software packages, database conversion problems, poor network server which lead to no internet access, lack of after sales maintenance and support are among the factors that inhibit the current use of the packages in university libraries. The implication is that if the library administration does not ensure that software packages are installed and are in use most especially in this global world, it will affect library functions and services and this will lead to the ineffectiveness of university libraries to support teaching, learning and research. This study therefore recommends that university library administrators should encourage the current use of library application software

packages in university libraries in the zone to enable them offer efficient services to their patrons.

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