

# University Librarians' Attitude towards Open Source Software in University Libraries in Adamawa State, Nigeria

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**Abstract:** This study assessed the University Librarians' Attitude Towards Open Source Software in University Libraries in Adamawa State, Nigeria. The specific objectives of the study were to; find out if university librarians are familiar with open source software; identify the types of software university librarians uses; assess the criteria for selecting software by university librarians; and describe librarians' attitude towards open source software. Primary data were collected from 80 randomly selected university library staff in the study area using a structured questionnaire. Data collected were analysed using descriptive statistics. Findings of the study revealed that over 90% of the respondents are familiar with the common library software, and that KOHA is the most preferred (76.3%) software. Similarly, cost is the major (50%) consideration for selecting the software, and that 83.7% of librarians are strongly favourable to open access software. Therefore, the study recommended that university Libraries should embrace networking and exchange programmes to enhance the capacity of their staff to use common software in the libraries.

**Keywords:** Librarians, University, Attitude, Open Source Software.

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## I. INTRODUCTION

Open source software, which is free and whose source code is freely available to the public for any individual to modify as they see fit, has grown to be a crucial part of human existence. According to Pitegoff (2001), open source software differs from proprietary software in the manner in which it is distributed. When compared to proprietary software, which has its source code kept secret and requires its programmers to sign a confidentiality agreement, open source software is freely distributed with its source code. According to Weber (2006), the innovation of open source lies in its capacity to motivate and finance software development by releasing the code to the commons rather than keeping it close to the corporate heart for competitive advantage. This allows users to benefit from pooled resources, inspire additional innovation from anywhere, and create better tools by subjecting them to endless real-world peer review.

The use of open source software aims to enhance and transform university libraries' business processes and services, including the Online Public Access Catalogue (OPAC), customer support, reference services, bibliographic services, current awareness services, inter-library loan services, and media services, among others. Although there are many advantages to using open source software, university librarians still face some challenges. These include the lack of funding, outdated open source software, a lack of manpower, an epileptic power supply, and the software that is currently available to them for the effective and efficient use of these programs in the library.

According to Dorman (2002), a major conflict over who will control information in contemporary society is being fought primarily through the use of open source software. The advent of open source software has had a significant impact on how libraries and librarians perform their conventional tasks of information management and dissemination. Libraries and librarians have historically played a crucial role in information management. It will be a good indicator of the future role libraries and librarians will play in delivering information services how they decide to respond to this open source software

trend. Other difficulties mentioned by Adegboro (2010) include the inflexibility of the software used to handle all library operations. They added that university librarians had to deal with a wide range of issues with their automation initiatives, not the least of which was insufficient technical help from software suppliers or their local technical representative. Due to a lack of adequate feasibility studies on the compatibility of such software, software is typically donated to academic libraries, and the donor and library administration are not properly consulted. It is against this background that, this study will investigate librarians' attitude towards open source software in university libraries in Adamawa state. Specifically, the study sought to;

- i.find out if university librarians are familiar with open source software;
- ii.identify the types of software university librarians uses;
- iii.assess the criteria for selecting software by university librarians; and
- iv.describe librarians' attitude towards open source software.

## II. MATERIALS AND METHOD

The study adopted a descriptive survey research design to achieve the set objectives. The study population consisted of library staff across the entirety of Adamawa state Tertiary Institutions. Multi-stage, purposive and simple random sampling techniques were employed for the study. Specifically, the study sampled eighty (80) library staff in the libraries investigated. Library staff in the Adamawa State University Mubi, American University of Nigeria Yola and Modibbo Adama University of Nigeria Yola. Data for the study was collected from primary sources using structured questionnaire. The instrument was validated and a reliability test was carried out after conducting the pilot test. In analysing the data collected, descriptive statistics involving the use of frequencies and means was used. The mean for analysing the Liker scale responses was 3.0.

## III. RESULTS AND DISCUSSION

The description of the respondents' demographic characteristics is presented in Table 1. Gender wise, it was discovered that male respondents were more than female respondents with male respondents accounting for 68.7% of the total respondents while females accounted for 31.3% of the respondents. Similarly, the result indicated that 47.5% of the respondents were between the ages of 20-30 years, 36.2% had 31-40 years, 41-50 years had 15%, 51-60 years had 1.3% and 61 above also had none. This is to say that 20-30 years forms the majority of the library Similarly, the result shows the educational qualification of the respondents in the libraries investigated. The result shows that 25% of the respondents had HND, 60% had first degree, 7.5% had master's degree, 0% had PhD and 7.5% represent others. This is to say that majority of the respondents 60% had a minimum of first degree as a qualification.

**TABLE I: DEMOGRAPHIC CHARACTERISTICS OF THE RESPONDENTS**

Variable	Frequency	Percentage (%)
<b>Sex</b>		
Male	55	68.7
Female	25	31.3
<b>Total</b>	<b>80</b>	<b>100.0</b>
<b>Age</b>		
20-30 years	38	47.5
31-40 years	29	36.2
41-50 years	12	15
51-60 years	1	1.3
61 and above	0	0
<b>Total</b>	<b>80</b>	<b>100</b>
<b>Educational Qualification</b>		
HND	20	25
BSc/B.TECH	48	60
MLS/MSC/ M. TECH	6	7.5
PhD	0	0
Others	6	7.5
<b>Total</b>	<b>80</b>	<b>100</b>

Source: Field Survey, 2018

The respondents' familiarity with library related software is shown in Table 2. The result clearly shows that 98.7% are familiar with the term software while 1.3% respondents are not familiar with the term software. The result also indicated that 90% of respondents responded in the affirmative to the question whether they are familiar with proprietary software while 10% responded negatively. Similarly, the result shows that 97.5% are familiar with the term open source software while 2.5% are not familiar with the term open source software. The study revealed that University librarians are familiar with software (both proprietary and open source software). They also make use of open source software in their day to day lives. This supports Pitegoff's (2001) assertion that open access and proprietary software coexist amicably in many corporate computer systems. Open source software is used to automate many libraries.

**TABLE 2: RESPONDENTS' FAMILIARITY WITH SOFTWARE**

Variable	Frequency	Percentage (%)
<b>Software</b>		
Yes	79	98.7
No	1	1.3
<b>Total</b>	<b>80</b>	<b>100.0</b>
<b>Software Proprietary</b>		
Yes	72	90
No	8	10
<b>Total</b>	<b>80</b>	<b>100.0</b>
<b>Open Source Software</b>		
Yes	78	97.5
No	2	2.5
<b>Total</b>	<b>80</b>	<b>100.0</b>

Source: Field Survey, 2018

In the same vein, the distribution of the respondents based on the type of software is shown in Table 3. When it comes to the type of software used by librarians, 2.5% of the respondents indicated that they use proprietary, 52.5% use open source, while 45% use both types. Also, the result shows that 81.3% indicated that the ILMS (Integrated Library Management Software) used is KOH (an open-source system developed by Katipo in New Zealand). Furthermore, Virtua represent 8.7% and Slam accounted for 3.7%. Equally, VTLS (Virginia Tech Library Software) and NewGenLib accounted for 2.5% and Millennium was used by 1.3%.

**TABLE 3: TYPES OF SOFTWARE UNIVERSITY LIBRARIANS USE**

Variable	Frequency	Percentage (%)
<b>Type</b>		
Proprietary	2	2.5
Open Source	42	52.5
All of the Above	36	45
<b>Total</b>	<b>80</b>	<b>100.0</b>
<b>Integrated Library Management Software (ILMS)</b>		
SLAM (Strategic Library Automation and Management)	3	3.7
VTLS (Virginia Tech Library Software)	2	2.5
Virtua	7	8.7
Papyrus	0	0
KOHA (an open-source system developed by Katipo in New Zealand)	65	81.3
NewGenLib	2	2.5
Millennium	1	1.3
Liberty	0	0
AgriOcean	0	0
<b>Total</b>	<b>80</b>	<b>100.0</b>

Source: Field Survey, 2018

The considerations for selecting library software is presented in Table 4. The result revealed that cost was the most common reason having 50% of the total respondents. This was followed by Ease of use with 21.3% and Support 13.7%. Also, 5% indicated that security was their reason for selecting while 3.7% picked Budgetary constraints. Similarly, 2.5% picked Recommendations of colleagues and documentation respectively, and 1.3% indicated popularity as the reason for selecting software. Most people choose an LMS for its simplicity of use. Freedom is highlighted as one of the main benefits of using open source software by Dorman (2002), and Gbaje (2013) emphasized economic viability as the primary justification. Muller (2011) observed that when selecting ILS software, libraries must consider both the system's performance and efficiency as well as its inherent flexibility to quickly adjust to its customers' changing wants and needs.

**TABLE 4: CRITERIA FOR SELECTING SOFTWARE BY UNIVERSITY LIBRARIANS**

Criteria	Frequency	Percentage (%)
Cost	40	50
Support	11	13.7
Ease of use	17	21.3
Recommendations of colleagues	2	2.5
Security	4	5
Documentation	2	2.5
Budgetary constraints	3	3.7
Popularity	1	1.3
<b>Total</b>	<b>80</b>	<b>100</b>

Source: Field Survey, 2018

Table 5 shows Librarians attitudes to open access software and it indicates that 83.7% of librarians are strongly favourable to open access software, while 16.3% are moderately favourable to open access software. According to Reed (2013), there are numerous library open source programs that are widely utilized by libraries. Before making a decision in this regard, librarians may need to conduct a thorough analysis of these programs. According to Pund (2014), the majority of university librarians favor open source software because it is backed by tested, reliable technologies and is used by hundreds of libraries around the world. Open source software has also proven to be stable and scalable. Software solutions that are freely accessible to all libraries globally include collaboration and resource sharing.

**TABLE 5: ATTITUDE OF UNIVERSITY LIBRARIANS TOWARDS OPEN SOURCE SOFTWARE**

Attitude	Frequency	Percentage (%)
Strongly favourable	67	83.7
Moderately favourable	13	16.3
Not favourable	0	0
<b>Total</b>	<b>80</b>	<b>100.0</b>

Source: Field Survey, 2018

#### IV. CONCLUSION

Nigerian University Librarians are aware of Open Access software which is an indication that there is paradigm shift to trending issues and developments brought by Information and Communication Technology (ICT) in their area of expertise. Based on the findings of this research, the following recommendations are made:

- I. Networking and exchange initiatives ought to be supported by university libraries. Sharing and disseminating knowledge would be made easier because of their ability to learn from one another about cutting-edge uses of open source software being used by their international network of sister institutions.
- II. Every university library has unique qualities, so university librarians should keep these in mind while implementing any innovation in their organization. Not everything that works elsewhere necessarily fits well in your institution. Don't be too rigid. The idea would very certainly need to be modified to fit the unique characteristics of the situation.
- III. Because of the constant change in technology in today's world, university librarians must be prepared to handle this change. For this reason, libraries and librarians should take continuing education and professional development very seriously in order to acquire skills that will make them more relevant to and capable of serving their users.

- IV. The fourth point is that university librarians need to be cognizant of technophobia, or the fear of technology for its own sake. It is not advisable to use every technology or piece of software because not all technologies will be profitable. Additionally, since there might be glitches and other growing pains, not every technology or piece of software should be used right away. Wait till there is some level of stability before applying.

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