

# **SURVEY ON USE OF OPEN SOURCE LIBRARY BY UNDERGRADUATE STUDENTS OF ABUBAKAR TAFAWA BALEWA UNIVERSITY, BAUCHI-NIGERIA**

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## **ABSTRACT**

The study surveyed the perception of Undergraduate Students of Abubakar Tafawa Balewa University Bauchi on Open Source Library (OSL). The objectives of the study determined the understanding and perception of the students on OSL; resources of OSL; and status of membership and borrowing privileges. A survey design was used in conducting the research. The random sampling technique was adopted drawn from the entire students' population. The instrument used for data collection was a self-design questionnaire, while the collected data was analyzed using frequency counts and percentages. The results of the study revealed that, majority of the students lacked knowledge of OSL resources as a result of lack of awareness and/or non-availability. They however, had indicated interests in registering with the OSL. Recommendations were made on how to assist students in the use of OSL resources for enhancing their academic pursuits.

**KEYWORDS:** Survey, Perception, Open Source Library, Abubakar Tafawa Balewa University, Undergraduate Students.

## **INTRODUCTION**

The Open Source Library (OSL) may mean a kind of library that is opened to all as the term implies, but in reality it is not the case. It becomes imperative to look at the pros and cons of an Open Source Library, so as to expose students to this enriched library resources that is web-based and yet little known. The essence of this study therefore, was to assess the perception of undergraduate students of Abubakar Tafawa Balewa University, Bauchi on the OLS with a view to assisting them to explore the use, and how to gain membership of the

OLS which will enhance their academic performance. "Open Source Library promotes software reliability and quality by supporting independent peer review and rapid evolution of source code" (Kamble, 2012).

Open Source is computer software whose source code is available under a license (or arrangement such as the public domain) that permits users to use, change, and improve the software, and to redistribute it in modified or unmodified form ([www.richchristiecomputer.com](http://www.richchristiecomputer.com)).

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“It is often developed in a public, collaborative manner. It is the most prominent example of open source development and often compared to user generated content” (Wikipedia). There are some well-known benefits that OSL could bring to libraries which include:

- **LOWER COSTS:** Open source offers a lower total cost of ownership than traditional library systems. There is none of the traditional license costs associated with open source. Libraries are able take advantage of the reduced costs the cloud offers by reducing local support and hosting costs (if it is supported and hosted by a third party).
- **NO LOCK-IN:** Libraries are, in a sense, removed from the traditional lock-in associated with library systems. There is a greater opportunity to pick and choose components, and take advantage of what is, generally, better interoperability with open source solutions. Related to this is also the idea that open source is more sustainable: If a vendor goes out of business the software may disappear or be sold-on. With open it is always available, and there is usually a community involved in it to continue its development.
- **ADAPTATION AND INNOVATION:** Connected to the above is the greater capacity that libraries have to innovate with open systems and software. There is no need to await the next update or release, instead in either isolation or collaboratively, can develop the functionality required. This enables much more agile services and systems, as well as ensuring user expectations are exceeded.
- **A RICHER LIBRARY SYSTEMS ECOSYSTEM:** A less direct impact of open source is a richer library systems ecosystem. This is both in terms of the library solutions available (a healthier marketplace with both proprietary and open solutions) and in

terms of collaboration and engagement between libraries themselves. Libraries are able to collaborate and share code on the functionality and fixes they require. Indeed, there are open source systems such as Evergreen, which were developed as an open source library system for a consortia approach.

Reasons for the success of open source software as identified by Kumar and Rao 2014; Agbo 2015; and Carvalho 2015 are as follows:

### **OPENNESS**

The generally open conducted development corresponds to the academic tradition to directly exchange results of (scientific) work, provide research data etc. So far, that “rule” attaches itself to the experiences of many people uses established communication channels and co- operation methods.

### **FLEXIBILITY**

Many OSS projects integrate a large number of developers’ with very different emphasis and background. This facilitates the understanding for special requirements and, at the same time, offers the potential to quickly implement needed adjustments.

### **SPEED**

The speed by which there is reaction to problems, errors or security leaks of the software is legendary. A large group of people that want to make a product successful immediately undertake the tasks and test new versions, is significantly faster and more successful than the proprietary competitors.

### **MOTIVATION**

Open Source Software developers are (experienced themselves) part of a community that works on a collaborative success (-

product). Often they are, by the way, no part-time hobby developers but professional developers that create OSS full-time. The standard for governmental financed projects to provide the resulting software cost-free for others (that does not necessarily mean OSS or free software), supports the motivation for use.

## **DEFINITION OF AN OPEN SOURCE LIBRARY**

Open Source Library is an online project intended to create “one web page for every book ever published”. Created by Aaron Swartz and Brewster Kahle among others, open library is a project of the nonprofit internet archive and has been funded in part by a grant from the California state library and the Kahle Austin foundation. Open Source Library was launched in 2006, it claims to have 6 million authors and 20 million books (not work) and about one million public domain Books available as digitized books, Tens of thousands of modern books were made available from 4 and then 150 libraries publishers for digital lending. To date Open Source Library have gathered over 20 million records from variety of large catalogs as well as single contributions with more on the way. Open Source Library is an open project, the software is open, the data are open, the documentation is open, and welcome new contribution, whether to add a book or writing journal, Open Source Library has over 200,000 e-books available to anyone to borrow, 1 copy at a time for 2 weeks. A person can be a participating member, (individual) or a library (institutional) can register with the Open Source Library for in-library lending program and obligation free.

## **THE RESOURCES OF OPEN SOURCE LIBRARY**

Open Source Library claims to have 6 million authors and 20 million books (not works) and about one million domain books available as

digitalized books. Tens of thousands of modern books were made available from 4 to 150 libraries account holders who can borrow books from growing collection of mainly 20<sup>th</sup> century titles available now. Each title can be borrowed by one patron at one, and you can read it in web browser or in Adobe Digital Edition as a pdf or e pub and publishers for digital lending. Open Source Library provides access too many public domains and out-of-print books, which can be read online. Its book information is collected from the library of congress, other libraries, and Amazon. com, as well as from user contributions through wiki like interface. If books are available in digital form, a button labeled “Read” appears next to its catalog listing. Links to where the books can be purchased or borrowed are also provided. Open Source Library has different entities in the databases:

**AUTHORS:** Works (which are the aggregate of all books with the same title and text)

**EDITIONS:** (which are different publications of the corresponding works)

These are few different type of borrow links:

**IN LIBRARY LOANS:** There is a growing cooperative pool of eBooks contributed by 1,000 libraries participating in the in-library lending program. Head to any of the libraries in the pool, log in to the wifi and will have access to special set of over 100,000 eBooks. It is like an instant hassle-free inter library eBooks loan.

**OPEN LENDING:** Open lending is a process whereby any open library account holder around the world can borrow from a smaller collection of about 10,000 e books or brought by the internet archive and its partner libraries.

**WORLD CAT:** World cat is the world’s largest network of library content and services. World Cat Libraries are dedicated to providing access to their resources on the web, where most

people start their search for information. If there isn't any book to borrow, open library link into the World Cat catalog to help you find a copy to borrow from library near you.

**OVER DRIVE:** Open library worked with overdrive.com to connect their records into the local library eBook lending program. Overdrive libraries add to their collections from a catalogue of over 2 million eBooks, audio books and videos.

**EVERGREEN:** Evergreen is highly scalable software for library patrons finds library materials, and helps libraries manage catalog, and circulate those materials. It uses open library for covers, tables of contents, with plans to expand into other areas.

**DAISY:** (Digital Accessible Information System) is a technical standard for digital audio books, periodicals and computerized text. Daisy is designed to be a complete audio substitute for print materials and is especially designed for use by people with "print disabilities" including blindness, impaired vision, and dyslexia. Based on the mp3 and XML formats, the Daisy format has advanced features in addition to those of a traditional audio book. Users can search, place bookmarks, precisely navigate line by line and regulate the speaking speed without distortion.

Daisy also provides aurally accessible tablets, references and additional information as a result, Daisy allows visually impaired listeners to navigate something as complex as an encyclopedia or textbook, otherwise impossible using conventional audio recordings. There are number of Daisy books in open library. There are two types of Daisy eBooks on open library: open and protected.

**OPEN DAISY:** can be read by anyone in the world on many different devices.

**PROTECTED DAISY:** (with the lock icon) can only be opened using a key issued by the LOC NLS

program. Digital talking book is a collection of electronic files arranged to present information to the target population via alternative media, namely human or synthetic speech, refreshable Braille, or visual display e. g. large print. The DTB files comprising the Daisy format are:

**PACKAGE FILE:** A set of metadata describing the DTB.

**TEXTUAL CONTENT FILE:** Contains the text of the document in XML.

**IMAGES FILES:** For visual displays.

**AUDIO FILES:** For human or synthetic speech MP3 recordings.

**SYNCHRONIZATION FILES:** Synchronizes the different media files of the DTB during playback.

**NAVIGATION CONTROL FILES:** For viewing the document's hierarchical structure.

**BOOKMARK/HIGHLIGHT FILE:** Support to user - set highlights.

**RESOURCES FILES:** For playback management.

**DISTRIBUTION INFORMATION FILES:** Maps each SMIL files to a specific media unit. Since Daisy is often used by people with disabilities, Daisy books can be heard on standalone Daisy players. Open library computerized a text Daisy book, which can be read using refreshable Braille display or screen reading software, printed as Braille book using synthesized voice or a human narration.

## **OPEN SOURCE LIBRARY AND KOHA**

KOHA has the distinction of being the first open source integrated library management system, which includes all the main functions related to library management. It is web-based open source software distributed under the general public license. Koha supports windows as well as Linux platform. The first version of it was

released in year 2000. The 'KOHA Development Team' offers to host the website for KOHA library system on its server. KOHA also has the capacity to manage digital libraries and online and offline electronic resources. It has been developed by BIREME (WHO, Brazil) in collaboration with the Flemish Interuniversity Council, Belgium, and using UNESCO's ISIS database technology. This software provides flexibility and versatility (Dhamdhere, 2011). Carvalh(2016) described the distinctiveness of an Open Source Software. The bibliographic structures, including all types of digital resources, can be managed by this software and created along with non-bibliographic structures (Dhamdhere, 2011). The first version of ABCD (v1. 0) was released on 5th December, 2009. ABCD has been built up with technologies such as ISIS database, ISIS formatting language, CISIS, ISIS Script, ISIS NBP, Java Script, Groovy and Jetty, PHP, My SQL, Apache, and YAZ.

Koha includes modules for circulation, cataloguing, acquisition, serials, reserves, patron management and branch relationship. Koha is an open source integrated library system, used world-wide by public, school and special libraries, which include catalogue searches and member organizing. It uses open library, covers displays OL related subject and lendable eBooks using the read API. In October 2010, George Oates from the open library project stated how we can use koha with the open library. Oates (2010) says open library started with records from something like 30 libraries. He also stated that open library is open source, which means project like koha

could benefit from some of the APIs, it is important to note that open library has several APIs available.

## **OBJECTIVES OF THE STUDY**

The objectives of the study were as follows:

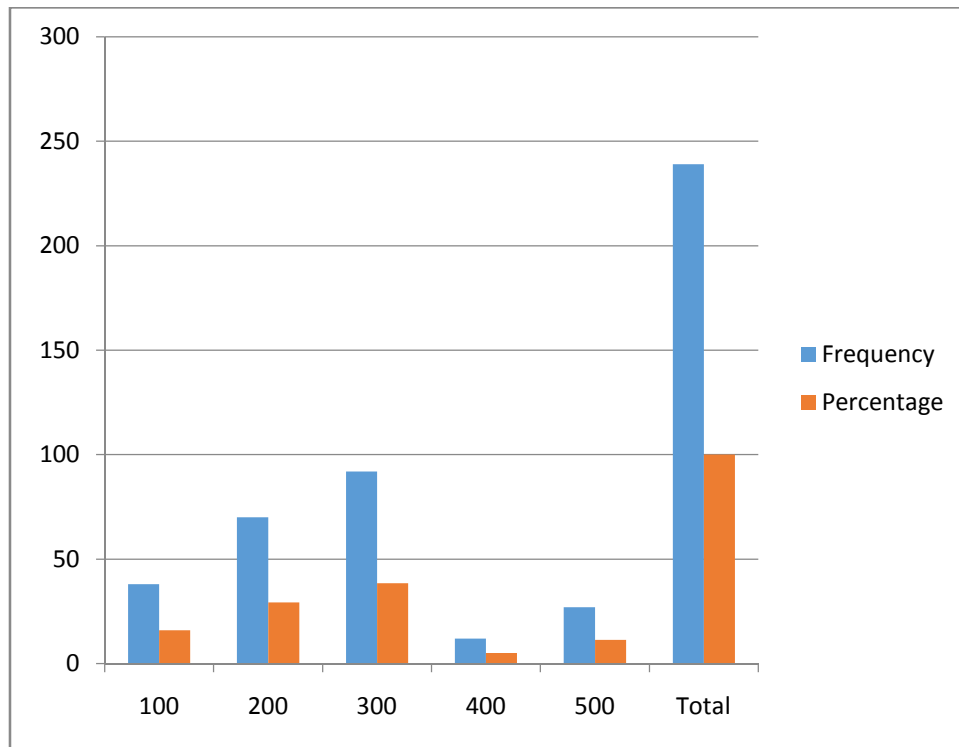
1. To examine the understanding and the perception of undergraduate students on the Open Source Library;
2. Determine the resources of the Open Source Library; and
3. Determine the membership and borrowing rights of users of the Open Source Library.

## **METHODOLOGY**

The descriptive survey was used in conducting the research. The random sampling technique was adopted in determining the respondents. The questionnaire was administered to registered students in the reading areas of the library cutting across all the levels of study. The administration and retrieval was completed in the month of September, 2016. Of the 250copies distributed, 239 (95. 6%) were collected and found useable for analysis, while (4. 4%) were either not return or rejected. The questionnaire had four sections: Section A: Background information; Section B: concept of open library; Section C: Resources of the Open library; Section C: Membership and Borrowing Rights. Collected data was analyzed using frequency counts and percentages.

## **RESULTS AND DISCUSSION**

The result of responses is as shown in Figure 1



**Figure 1. Respondents' Level of Study**

Figure 1 profiles the level of study of the responding students. Out of the 239 respondents 38 (15.90%) were 100; 70 (29.29%) 200; 92 (38.49%) 300; 12 (5.02%) 400; and 27 (11.29%) were 500 level students respectively. This shows that 300 level students were the majority of the sampled students' population.

**THE CONCEPT OF OPEN SOURCE LIBRARY**

One of the objectives of the study was, to determine their understanding on the perception of the Open Source Library. A question was posed as to whether you have ever used an OPEN SOURCE LIBRARY'. 69 (28.87%) answered "Yes", while 170 (71.12%) answered "No". Those who answered 'No' were further asked the reasons for non-use of the Open Source Library. 105 (43.93%) identified lack of awareness as reason for non-use; while 65 (27.96%) admitted non availability. The results showed that majority 170 (71.12%) respondents have little or no

understanding of the open library. On their perception of what an Open Source Library is, 79(33.05%) viewed it as online library project; 108(45.18%) see it as a library opened to all users; 59 (24.68%) don't know; with only 3(1.28%) who did not respond. The implication of this finding revealed that 164(68.61%) had no understanding of what an Open Source Library.

**RESOURCES OF THE OPEN LIBRARY**

On students' knowledge of resources of the Open Source Library, 180 (75.31%) answered "they don't know". While 59 (24.68%) admitted that "they know" what Open Source Library resources constitute. This finding reveals that, majority of the respondents were generally ignorant of the resources of the Open Source library.

**MEMBERSHIP AND BORROWING RIGHTS**

Another variable was to test their knowledge on membership and borrowing rights. Table1 shows the result.

**Table 1. Membership and Borrowing Rights**

Membership	Frequency	Percentage
Institutional library	59	24. 68
individuals	130	54. 39
National libraries	50	20. 92
<b>Total</b>	<b>239</b>	<b>100</b>

Results from table 1 reveal that, 59(24. 68%) respondents admitted that institutional library constitute members of the Open libraries. From the results, it seems the respondents have an understanding of membership of the open library better. As to whether they were interested in registering a member of the Open Source library, 220(92. 05%) answered in the

affirmative, whereas 19(7. 95%) answered “No”.

Results from table 1, indicates the number of books that can be borrowed and the duration of the loan period as opined by the respondents. The number of books and the loan duration for a registered member of the library is shown in table 2.

**Table 2. Number of books and loan period**

Number of loan able books	Loan period	Frequency	%
2	3 weeks	115	48. 1
1	1 week	85	35. 5
1	2 weeks	39	16. 3
<b>Total</b>		<b>239</b>	<b>100</b>

Results from table 2, indicates the number of books that can be borrowed and the duration of the loan period as opined by the respondents.

### FINDINGS

- It was found that, majority of the students never used Open Source Library.
- Their lack of use was attributed to lack of awareness and non-availability of open library resources; while majority of respondents had little or no understanding of the Open Source Library.
- On the knowledge of Open Source Library, majority of the students had a distorted understanding of what open library is/was.
- Majority of the students were generally ignorant of what constitutes the resources of the Open Source Library.
- The students have indicated interest in registering with the Open Source Library.

### CONCLUSION

Based on the findings of the study, and despite enormous benefits derivable from OSL to all its users, majority of the Undergraduates of Abubakar Tafawa Balewa University Bauchi have never used the OSL, their perception on OSL was distorted and they never knew what constitute OSL resources.

It has become imperative for the university library to create awareness on use of OSL in order to reverse the untapped free resources via the web-based search engines.

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