

Students' Perception and Use of The Online Catalogue at The University of Zambia.

Conference ID: CFP/950/2018

¹Francina N. Makondo, ²Eness M.M. Chitumbo & ³Pailet Chewe

University of Zambia Library
P.O. Box 32379, Lusaka, Zambia

Abstract— *The purpose of this study was to investigate students' perception and use of Online Public Access Catalogue (OPAC) at the University of Zambia. A Survey approach was adopted to conduct the study. Using a structured questionnaire, data was collected from 395 respondents who were conveniently sampled. The statistical package for the social sciences (SPSS) software was used to analyse quantitative data into frequencies and percentages. The study revealed that though most students were aware of OPAC, very few of them used it. The findings further revealed that majority of students retrieved library resources by manually browsing the shelves. Limited number of computers with Internet access, inadequate searching skills, and unfriendly features and functionalities of OPAC system were cited as some of the barriers that militate against effective use of OPAC. It is hoped that effective usage of OPAC by library patrons will bring about positive changes in the library practices. The study recommends, among others, introduction of compulsory information and digital literacy courses across the curriculum and provision of more Internet access points on campus.*

Keywords: *OPAC; OPAC Usage; Online Public Access Catalogue; Information Retrieval Tools; University of Zambia Library*

I. INTRODUCTION

Traditionally, libraries have had one form of catalogue or another; such as book catalogues, card indexes, etc. These catalogues have existed to guide library users through the collection they wish to use. For the libraries, information and communication technologies (ICTs) have transformed their management as well as the way services are delivered. While general ICT application tools and Integrated Library Management Systems are largely used in housekeeping operations, like acquisition, etc.; Internet has been used extensively as a resource as well as a tool to deliver library information services. Nwalo (2000) opines that the application of ICT in libraries has brought about tremendous improvement in existing services while making possible more services. As a result of the technological revolution taking place all over the world, the amount of and the rate at which information is generated is so high, challenging its storage and dissemination to bring in electronic systems to satisfactorily meet these pressing issues. Among these systems is the Online Public

Access Catalogue (OPAC) (Nwalo, 2000). With the development of OPACs, it became easier to access the library collections without the agony of sifting through cards filed in cabinet drawers (Butterfield, 2003).

The OPAC is an information retrieval tool characterized by short bibliographic records, mainly of books and journals available in a particular library. It is an online database of information resources of an individual library or a group of libraries. The OPAC is the public face on a library's Integrated Library System, which controls circulation, cataloging, acquisitions, serials, the OPAC, and Interlibrary loan (Butterfield, 2003). The OPAC is meant to provide effective and efficient access to information about the library holdings from any location and any time of the day. It provides access to the catalogue through a computer terminal and allow patrons to search for material by keyword, title, author, subject, call number, ISSN/ISBN, and so on.

II. UNIVERSITY OF ZAMBIA LIBRARY

The University of Zambia is the largest institution of learning in Zambia with a student population of 24,628 (UNZA, 2016), providing a wide-range of tertiary-level academic programs in Education, Humanities and Social Sciences, Medicine, Law, Natural Sciences, etc. The Library is expected to provide relevant information resources and adequate services to the users in support of the mission of the parent

institution. To achieve the academic objectives of the institution, it becomes imperative for the Library to provide easy access to all relevant information materials. The Library therefore automated its housekeeping operations, including the introduction of the OPAC services in 1996 (Mwacalimba, 1999).

In April 2008, UNZA Library adopted a new library management system namely; Unicorn, which was later upgraded to Symphony Library Management System, a web-based Library Management System with the OPAC as one of the five modules. The Library considers the OPAC as a gateway to meeting the diverse information needs of its users contained in books, journals, theses, electronic databases and multimedia productions maintained by the collection. With this in mind, this study was undertaken to understand students' perception of OPAC as an information retrieval tool. The study further examined problems students encounter when using OPAC and explored strategies that promote awareness and use of the OPAC.

III. STATEMENT OF THE PROBLEM

The automation of activities and services of the library such as catalogues provide effective and efficient retrieval services. Although considerable amounts of money have been spent on providing OPAC services to UNZA library users, it is not known whether the users value the service or not. The researchers observed little usage of the Personal

Computers designated for OPAC search. To confirm this suspicion, statistics for January to march 2018 revealed low usage. While OPACs have become major retrieval tools in libraries, to date, no study has been carried out to assess students' perceptions of the OPAC at UNZA. It is against this background that this study was carried out.

IV. OBJECTIVES OF THE STUDY

The main objective of this study was to gain insight into how students perceived OPAC as an information retrieval tool at UNZA. Specific objectives were to:

1. Examine awareness and utilization of OPAC among UNZA students
2. Investigate the value of OPAC services as perceived by UNZA students
3. Determine the constraints of using the OPAC among library users.
4. Explore strategies of enhancing OPAC usage

V. LITERATURE REVIEW

Recent OPAC awareness and use studies constitute a large body of literature (e.g. Msagati, 2016; Fati & Adetimirin, 2015; Fabunmi & Asubiojo, 2013). Most studies found that students' lack of awareness of OPAC had a negative bearing on usage of OPAC for retrieving library information resources. For instance, Ebiwolate (2010) observed that majority of undergraduate students at Niger Delta University in Nigeria were not aware of

OPAC as a result they had never used it. The study further showed that, due to limited use of OPAC, mainstream of students resorted to browsing through shelves to locate books. Owing to poor usage of OPAC, he recommended high quality user education; orientation programme; demonstrations on the use of the catalogue and guidelines on use of catalogue as solution to the problems encountered by students in using OPAC. However, contrary to this finding, Yusuf (2012) surveyed the effectual use of OPAC at the Lagos State Polytechnic Library and found that 91.14% of the respondents used OPAC to retrieve materials in the library while 8.86% did not. This finding is an indication that some institutions have stepped up user education campaigns on the value of OPAC services. Kani, Ghinea and Chen (2008) in a study on user perceptions of OPAC found that regardless of users' Information Technology backgrounds, their functionality expectations of OPACs are the same, as users are expecting OPACs to facilitate easier ways to achieve their tasks. However, based on users' previous experiences with OPACs, their requirements with respect to specific features may change.

From a related but a different perspective, Islam and Ahmed (2011) assessed Dhaka University students' perceptions of ease of use and their satisfaction with University Library's OPAC. The study showed that students are overwhelmingly satisfied with the OPAC.

It is worth noting that several factors can constrain the use of OPAC. For instance, Moore (2006) identified various factors that can affect OPAC use. These include age and occupation, time, medium of communication, credibility of source of information, etc. Similarly, a study by Adedibu (2008) investigated OPAC use by science students of the University of Ilorin. The study found that only 7.9 percent of the respondents use OPAC. Mulla and Chandrashekara (2009) also found that some of the major constraints for the use of OPAC were lack of awareness; OPAC is not a user friendly, and lack of information technology skills.

As opposed to previous studies reviewed in this paper, which have mainly focused on OPAC awareness and use in other countries, the purpose of the research reported in this paper is to determine end user perceptions and suggestions in respect of OPAC as an information retrieval tool at UNZA Library.

VI. RESEARCH METHODOLOGY

The survey research method was adopted for this study because of its flexibility which permits the use of a variety of data collection techniques such as questionnaires.

A. *Sample size and sampling technique*

Convenience sampling method was used to select a sample size of 395 undergraduate and postgraduate students from a total student population of over 24,628. This sample size was drawn from students, who had entered the

Library Internet Access Area over a period of three (3) months between January and March, 2018.

B. *Instruments for data collection*

A structured questionnaire was developed and distributed to the selected sampled students. A total of 264 duly completed questionnaires were returned for analysis.

C. *Data analysis*

The statistical package for the social sciences (SPSS) software was used to analyze quantitative data into frequencies and percentages while qualitative data, in form of open-ended survey questions, was analyzed using thematic coding.

D. *Limitation (s) of the study*

One of the limitations of the sampling method used in this study is that the sample was not evenly selected across different categories of respondents. There is a possibility that the study sample could have been drawn from two or three schools only. A more comprehensive study should be carried out in future to fully assess general perceptions of OPAC usage university- wide. Therefore, results from this study may not be generalized.

VII. FINDINGS

A. *Bio data*

Out of the 395 questionnaires distributed to students, 264 respondents answered and returned their questionnaires for

data analysis, translating into a response rate of 66.8%. Table 1 below gives details of the demographic distribution of the respondents. Out of 264 respondents, 143 (54%) were male and 108 (41%) were females while 13 (5%) did not respond. The average age was 21-30 years. The majority of the respondents (N=233, 88%) were undergraduate students and 7 (3%) were postgraduate students while 24 (9%) did not respond. Of the 233 undergraduates, the majority N=138 (52%) were first years.

its existence in the Library, while 77 (29.2%) were not aware of it.

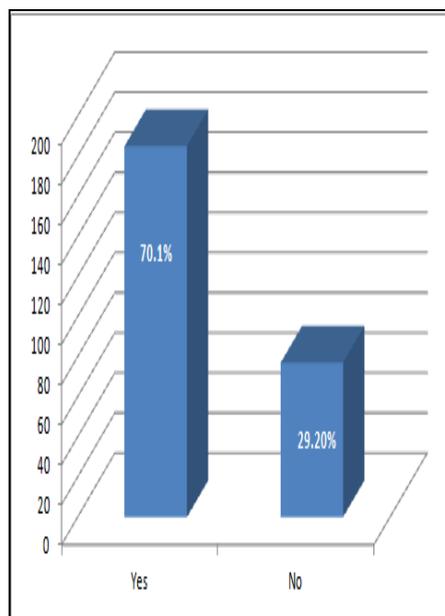


Fig.1: OPAC awareness

TABLE 1

DEMOGRAPHICS OF RESPONDENTS

Gender	Male		Female		
		54%		41%	
Age	20 and below	21- 30	30- 40	Above 40	
	37%	56%	5%	2%	
Category of study	Undergraduate			Postgraduate	
	88%			2%	
Year of study	Year	Year 2	Year 3	Year 4	Year 5
	52%	19%	15%	13%	1%

B. Awareness and utilization of OPAC

The study set out to understand how widely OPAC was known in order to establish effective measures to improve its use. The respondents were asked to indicate whether or not they were aware of OPAC. Results in figure 1 below, show that 185 (70.1%) were aware of

OPAC is expected to be the first point of call when accessing library materials. The level of its utilization is a good indicator of the value users place on it. The respondents were asked if they used the OPAC when retrieving materials in the Library. One hundred and sixty-two N=162 (62%) of the 264 respondents indicated that they did not use OPAC. A cross-tabulation of awareness and use showed that from the total of 185 respondents that said were aware of OPAC, 99 used OPAC while 86 did not use it. See figure 2 below. This shows that 70% of the respondents that were aware of the existence of OPAC did actually use it.

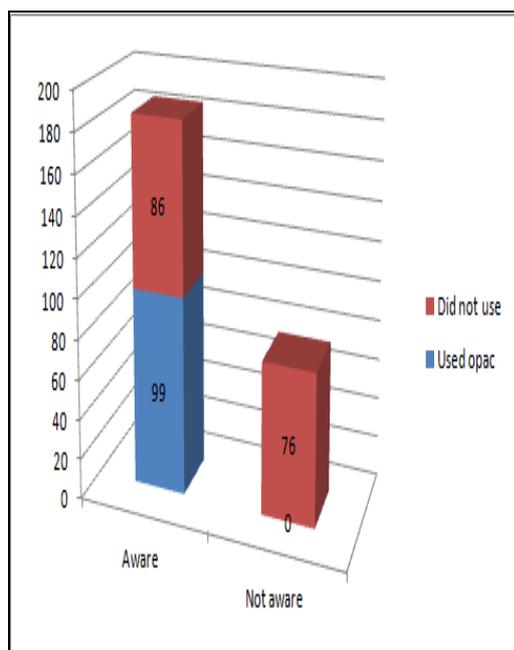


Fig. 2: AWARENESS AND USAGE OF OPAC

A second statistical analysis was done using Chi-square test to prove whether there was a relationship between OPAC awareness and its use. The null hypothesis was that ‘there is no relationship between awareness and the usage of OPAC’. The significance level used was 0.05. The chi-square test results are shown in table 2 below.

TABLE 2

In this case, the test statistical probability (.00) is less than the formulated significance level (0.05) hence the null hypothesis was rejected. This shows that there is a strong relationship between awareness and usage of OPAC. The rest of the respondents that did not use it were not aware of its existence.

CHI-SQUARE TEST

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	65.524 ^a	1	.000	.000	.000	
Continuity Correction	63.271	1	.000			
Likelihood Ratio	90.915	1	.000	.000	.000	
Fisher's Exact Test				.000	.000	
Linear-by-Linear Association	65.273 ^c	1	.000	.000	.000	.000
N of Valid Cases	261					

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 28.83.
 b. Computed only for a 2x2 table
 c. The standardized statistic is 8.079.

C. Features of OPAC and its effect on usage

To determine whether the performance of OPAC and usability of its interface had any effect of its usage by students, the respondents who used it were asked to rate its features such as the basic searching capabilities, display features, search limits and help features. Most of these features were rated as average by those

that used the OPAC as indicated by table 3 below.

TABLE 3
OPAC FEATURES AND FUNCTIONALITIES

Feature	Excellent	Average	Poor
Basic Searching capabilities	38.4	55.6	6.0
Search limits such as item type, year of publication, location, etc.	41.5	48.3	10.2
Bibliographic display features	40.7	45.7	13.6
External links; such as Google	48.9	37.6	12.8
Provides user assistance or help messages	19.3	34.8	28.7
Interface layout is simple and pleasant	34	56.0	9.2
Instructions on the screen are simple, clear and inviting	44.4	44.4	11.1

D. Age and usage of OPAC

A cross tabulation was run to determine whether age had any effect on use of OPAC.

TABLE 4
OPAC USE AND AGE OF RESPONDENT CROSS TABULATION

		Age of Respondent				Total
		20 yrs. & below	21-30 yrs.	31-40 yrs.	Above 41 yrs.	
Do you use the OPAC?	Yes	42	47	7	2	98
	No	55	97	5	3	160
Total		97	144	12	5	258

The table above confirms that of the 144 who constituted the average age group of the

respondents which is 21-30 years, 97 did not use OPAC, while only 47 used it.

E. How students locate library materials

Given the fact that the majority of the respondents (62%, N=162) did not use the OPAC, it was important to establish the alternative methods of retrieval of library materials students used. Therefore, respondents were asked to indicate the other ways they used to locate the materials in the library.

TABLE 5
HOW RESPONDENTS LOCATE LIBRARY MATERIALS

Variables	Responses		Percent of Cases
	N	Percent	
Card catalogue	21	13.5%	13.7%
Ask Library staff	29	18.6%	19.0%
Look for book on the shelves	85	54.5%	55.6%
Other	21	13.5%	13.7%
Total	156	100.0%	102.0%

It was revealed that 85 (54.5%) of the respondents went straight to browse for books on the shelves, followed by 18.6% who sought help from the library staff, while the rest used other methods as shown in the table 5.

F. Frequency of OPAC use

Kumar (2011) opines that the frequency of using OPAC indicates its value in the library.

The study assessed the value of OPAC based on time students spent using OPAC. Out of the 100 respondents that used the OPAC, only 25 (25%) used it very frequently while the rest rarely used it. Results are shown in figure 3 below.

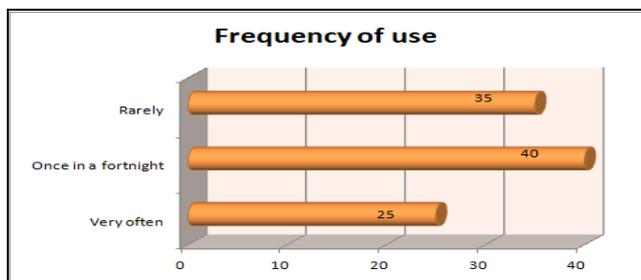


Fig. 3: FREQUENCY OF OPAC USE

The frequency of use of a service is an indication of the appreciation and value placed on it by its users.

G. Perceived usefulness of OPAC

A user's perception of the usefulness of a service will determine how well they will embrace such a service. OPAC was introduced at UNZA because it is a useful information retrieval tool which if well marketed can enhance information searching for students. In understanding the reasons for low frequency of usage, the study took a further analysis to determine how useful the respondents thought the OPAC was to the information search process. The study found that 46 (46%) found it very useful, 35 (35%) said it was useful, while 16 (16%) found it slightly useful and 3 (1.1%) did not find the OPAC useful. See figure 4 below: -

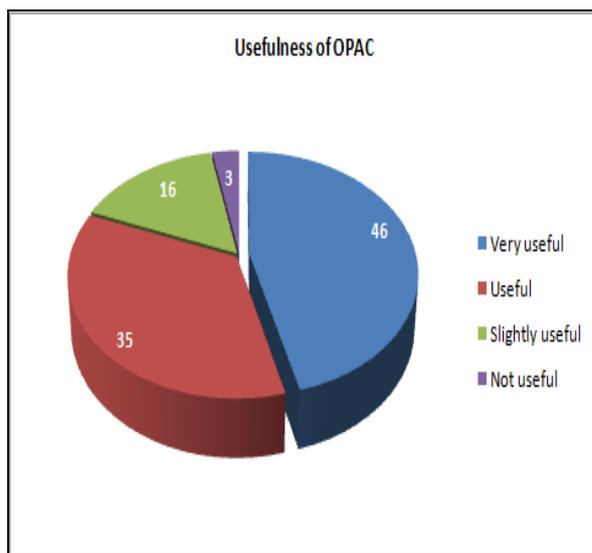


Fig. 4: USEFULNESS OF OPAC

In other words, of the 100 that used it, a cumulative percentage of 81% found the OPAC to be a useful tool in locating and retrieving materials in the Library.

H. Limitations of OPAC use

In order to find out the difficulties that users encounter in the course of using the OPAC, the researchers asked a closed-ended question with a list of choices from which respondents were to tick-all-that-applied to them. The results show that 121 (74.2 percent) of respondents indicated limited OPAC access points while 44 (27%) indicated 'lack of search skills. Twenty-seven (16.6%) indicated non retrieval of required information, 16 (9.8%) said OPAC is not user friendly and 15 (9.2 %) stated other problems such as lack of proper guidance to use OPAC and lack of assistance from library staff.

I. *Strategies for enhancing OPAC use*

OPACs are the interfaces that help users to communicate with the collection(s) of a library. With regard to the strategies for improving OPAC usage, the study revealed those orientation sessions that first year students undergo are not enough to adequately and effectively equip students with the much needed OPAC search skills.

VIII. DISCUSSION

A. *Awareness and utilization of OPAC*

With regard to *awareness and utilization of OPAC*, the study found that 185 (70.1%) were aware of its existence while 77 (29.2%) were not aware of it. These results are similar to the study by Adedibu (2008) who found that, only 7.9 percent of the respondents studied reportedly use OPAC. In contrast, Fabunmi and Asubiojo (2013) found lack of awareness of the OPAC by students at Obafemi Awolowo University as being one of the factors causing low usage of OPAC. Since the number of respondents at UNZA that are aware of OPAC does not correspond with those using it, it may be an indication of other factors at play such as lack of skills to use OPAC. Since OPAC is expected to be the first point of call when accessing library materials, its level of utilization is a good indicator of the value users place on it.

B. *Features and functionality of OPAC and its effect on usage*

To determine whether the performance of OPAC and usability of its interface had any effect on its usage by students, the respondents who used it were asked to rate its features such as the basic searching capabilities, display features, search limits and help features. Most of these features were rated as average by those that used the OPAC. It is therefore important to improve the usability of OPAC so that users are not discouraged from using it. Studies have shown that the popularity of Google is because of its simple interface. According to Kumar and Vohra (2011) many researchers have also noted that the users' experience of the OPAC is that it is difficult to use. Features of the interface of the OPAC therefore need to be examined for user friendliness in order for its potential to be fully utilized. Mulla and Chandrashekara as cited by Kumar and Vohra (2011) investigating the libraries of Engineering Colleges in Karnataka found that OPAC systems were not user-friendly.

C. *How students locate library materials*

Given the fact that the majority of the respondents (62%, N=162) did not use the OPAC, it was important to establish the alternative methods of retrieval of library materials students used.

It was revealed that majority of the respondents went straight to browse for books

on the shelves, while the rest either sought help from the library staff or used other methods for information retrieval. It is therefore safe to assume that majority of library users did not possess the necessary OPAC search skills. It also shows that the users have not fully appreciated the value of OPAC as an information retrieval tool. This may suggest that students are not taught enough regarding the use of retrieval tools available for finding information. These findings are similar to those of Kumar and Vohra (2013) who said that students did not use the OPAC, but that 85% of the respondents searched the library shelves themselves to locate the requisite documents. Due to limited use of OPAC, mainstream of students resorted to browsing through shelves to locate books. The reasons advanced are mostly due to lack of guidance by the Library staff. In the case of UNZA, students are only introduced to the OPAC during the first-year orientation, which time is not adequate to show the students the full features and benefits of OPAC. This calls for the need to integrate information literacy into the curriculum so that the students may be compelled to learn the necessary skill to improve their use of the Library.

D. Frequency of OPAC use

Kumar (2011) opines that the frequency of using OPAC indicates its value in the library. The study assessed the value of OPAC based on time students spent using it. Out of the 100

respondents that used the OPAC, only 25 used it very frequently while the rest rarely used it. The frequency of use of a service is an indication of the appreciation and value placed on it by its users. This study reveals low frequency of OPAC use from those who were aware of its existence because they did not appreciate its value in information retrieval. There is need to promote the benefits of using the OPAC to those that do not use it and ensure that it enables them to meet their information needs effectively as alluded to by Moore (2006).

E. Perceived usefulness of OPAC

A user's perception of the usefulness of a service will determine how well they will embrace such a service. In understanding the reasons for low frequency of usage, the study took a further analysis to determine how useful the respondents thought the OPAC was to the information search process. The study found that of the 100 respondents that used it, a cumulative percentage of 81% found the OPAC to be a useful tool in locating and retrieving materials in the Library. This means that OPAC is appreciated by those that have used it because they have seen the value it has in facilitating information retrieval. The students' approach to library use during their course work will be indicative of the extent to which they appreciate and use the services on offer to enhance their time spent in the library.

F. Limitations of OPAC use

In order to find out the difficulties that users encounter in the course of using the OPAC to access library resources, the researchers asked a closed-ended question with a list of choices from which respondents were to tick-all-that-applied to them. The study found that OPACs are accepted by patrons only if they have a useful and flexible user interface. The major reasons that militate against effective use of OPAC were attributed to limited number of computers with internet access, inadequate searching skills, and functionality of OPAC. The researchers further discovered that users do not know where to find library staff for assistance. This is a wakeup call to Librarians to avail themselves to the library users. The implication of the study findings for the library is that all the problems that have been highlighted need to be addressed urgently if OPAC usage is to be enhanced. The findings corroborate those of Gohain and Saikia (2013) who opines that lack of skills to use OPAC independently, lack of awareness about OPAC and lack of proper guidance to use OPAC were the major problems faced by the users while using OPAC.

G. Strategies for enhancing OPAC use

OPACs are the interfaces that help users to communicate with the collection(s) of a library. With regard to the strategies for improving OPAC usage at UNZA, the study

revealed that orientation sessions that first year students undergo are not enough to adequately and effectively equip students with the much-needed search skills. To enhance usage of the OPAC, it is suggested to continue with training and sensitization of the user community about the OPAC. Other proposals include provision of user guides by the OPAC terminals. This strategy may improve user knowledge and basic skills for searching the OPAC because it is an essential gateway to students' academic achievements. There is need therefore for the Library to actively market the OPAC for its optimum utilization. These suggestions are supported by Ebiwolate (2010) who recommended that high quality user education; orientation programme; demonstrations and guidelines on the use of catalogue as a solution to the problems encountered by library users in using OPAC be implemented.

IX. CONCLUSIONS

In general, this research has revealed poor usage of OPAC due to a number of factors such as lack of appreciation of its value as an information retrieval tool, inadequate marketing strategies, lack of search skills, fewer access points, and lack of awareness. The end user therefore needs to be educated on the full benefits of using the OPAC for its value to be realized.

The study recommends that:

- Concerted efforts should be made to increase the number of OPAC terminals and improve internet bandwidth;
- Well-coordinated user education training on OPAC search skills should be offered to all students;
- Library management should engage developers of the library management system in order to improve the usability of its interface as students prefer using user-friendly and simple interfaces similar to Google.

REFERENCES

- [1] Butterfield, K. (2003). Online Public Access Catalogs. In Encyclopedia of Library and Information Science (pp. 2268-2273). New York: Marcel Dekker, Inc.
- [2] Ebiwolate, P.B. (2010). The Use of the Library Catalogue by Undergraduate Students in Niger Delta University Library. Library Philosophy and Practice (e-journal). Retrieved from <http://unllib.unl.edu/LPP/posigha.htm>
- [3] Fabunmi, O. M. & Asubiojo, B. O. (2013). "Awareness and Use of Online Public Access Catalogue by Students of Obafemi Awolowo University, Ile-Ife, Nigeria." Library Philosophy and Practice. Retrieved from <http://digitalcommons.unl.edu/libphilprac/922>
- [4] Fati, O. I., & Adetimirin, A. (2015). OPAC awareness as a factor affecting OPAC use by Undergraduates in two Nigerian libraries. Retrieved from <http://cactus.unijos.edu.ng/jspui/handle/123456789/1933>
- [5] Israel, I. G. (2011). Assessing Faculty Use of University Library Collection and Services in Nigeria: A Case of Covenant University, Ota. Retrieved from <http://digitalcommons.unl.edu/libphilprac/574/>
- [6] Islam, M. & Ahmed, Z. (2011) "Measuring Dhaka University students' perceptions of ease-of-use and their satisfaction with University Library's online public access catalogue", Performance Measurement and Metrics, Vol. 12 Issue: 3, pp.142156, <https://doi.org/10.1108/14678041111196631>
- [7] Kani-Zabihi, E., Ghinea, G., & Chen, S. Y. (2008). User perceptions of Online Public Library Catalog. International journal of information management, 28(6), 492-502.
- [8] Kumar, S. (2012). The impact of demographic characteristics of users on patterns of usage on search engines and OPAC. Library Review. Vol. 61 No. 3, pp. 172-187
- [9] Kumar, S. & Vohra, R. (2011). Online Public Access Catalogue Usage at Panjab University Library, Chandigarh. Journal of Library & Information Technology, 31(4): 302-310
- [10] Kumar, S. & Vohra, R. (2013). "User perception and use of OPAC: a comparison of three universities in the Punjab region of India", The Electronic Library, Vol. 31 Iss: 1, pp.36 - 54
- [11] Markely, K. (1983). "Thus, spike the OPAC uses", Information Technology and Libraries, Vol. 2 4, pp. 3817. [Infotrieve]
- [12] Moore S (2006). What are the factors that influence the public's use of OPACs? Master's thesis, University of Sheffield, South Yorkshire, England. Retrieved from: http://dagda.shef.ac.uk/dissertations/200506/External/Moore_Sarah_MALib.pdf.
- [13] Msagati, N. (2016). "Awareness and Use of OPAC by Distance Learners: The Case of the Open University of Tanzania" Library Philosophy and Practice (e-journal). 1482. <http://digitalcommons.unl.edu/libphilprac/1482>
- [14] Mulla K. R. & Chandrashekara M. (2009). A study on the effective use of Online Public Access Catalogue at the libraries of Engineering Colleges in Karnataka (India)". International Journal of Library and Information Science, 1(3): 29-42. Retrieved from: <http://www.academicjournals.org/ijlis>.

- [15] Mwacalimba, H. (1999). 1996-1999 sub project 2 – Library Support: The University of Zambia Library Programme Completion Report. Unpublished Report.
- [16] Nwalo, K. I. N. (2000). Collaboration in the provision and utilization of IT facilities for library and information science education in Nigeria. In Papers Presented at the 10th Biennial Conference of NALISE: 42-49.
- [17] Saikia, M. & Gohain, A. (2013). "Use and Users Satisfaction on Online Public Access Catalogue (OPAC) Services among B.Tech. Students of School of Engineering in Tezpur University: a survey. Library Philosophy and Practice (e-journal). Retrieved from <http://digitalcommons.unl.edu/libphilprac/990>
- [18] Sankari, R. L., Chinnasamy, K., & Balasubramaniam, P. (2013). A study on the use of Online Public Access Catalogue (OPAC) by students and faculty members of Unnamalai institute of Technology in Kovilpatti (Tamil Nadu). International Journal of Library and Information Studies, 3(1), 17-26.
- [19] Shaheen, M., Mumtaz, A. A., Tamara, S. E. (2001). "User perceptions of library effectiveness in Malaysian agricultural libraries", Library Review, Vol. 50 Iss: 4, pp.176 – 186
- [20] UNZA (2016). The University of Zambia Calendar, 2014 – 2016. Lusaka. UNZA Press
- [21] Yusuf, K. F. (2012). Utilization of Online Public Access Catalogue (OPAC) at the Lagos State Polytechnic Library in Nigeria. Journal of Research in Education and Society; 3(3). Retrieved from http://www.icidr.org/doc/ICIDR_PDF_contents/journal_research_in_education_and_society/JRES_VOL3_NO3_DEC2012/Utilization_of_Online_Public_Access_Catalogue.pdf