Rima International Journal of Education (RIJE), Vol. 3 (No. 3): Nov 2024; P: 201-213 ISSN: 2756 - 6749

Exploring Database Accessibility and Usage among Undergraduate Students in Katsina State University Libraries

USMAN ABDULKADIR UMAR, MOHAMMED TUKUR TOKAWA, SADIQ ABDULKADIR BATAGARAWA & SANI ABDU FARI

Department of of Library and Information Science, Umaru Musa Yar'adua University Katsina Nigeria. Email: usmanumar62160@gmail.com & mohammed.tukur@umyu.edu.ng

Abstract

This study investigates the accessibility and utilization of databases by undergraduate students in Katsina State University libraries. Its goal is to assess the extent to which undergraduate students can access and use databases in these libraries. Using a quantitative approach, the research employed a cross-sectional descriptive survey design, targeting a total population of 200 undergraduate students. Questionnaires were distributed, with 178 collected, representing an 89% response rate. The findings of the study indicate that databases such as JStore, Elsevier, E-Granary, and AGORA are readily accessible to undergraduate students in the university libraries under study. Surprisingly, Science Online was found to be very easily accessible by 64(8.0%), respondents while 68 (38.9%) respondents did not provide any comments on its accessibility. Regarding the utilization of databases, the study reveals that digital library resources, JStore, AGORA, and PubMed are utilized on a daily, weekly, or bi-weekly basis. On the other hand, databases like AGORA, WASH LAW, WorldCat, and SpringerLink are utilized quarterly. Moreover, it was found that MC Graw Hill and Elsevier are among the databases that students utilize the least. The primary factors impeding the usage of databases are identified as inaccessibility, which consequently leads to low levels of utilization among students.

Keywords: Accessibility, Utilization, Databases. Undergraduate students, Libraries

Introduction

The university library serves as a vital hub for academic activities, functioning as a repository of diverse and valuable information in various formats essential for functions like acquisition, cataloging, circulation, and the management and delivery of information, both traditional and electronic. University libraries play a crucial role in supporting their institutions' goals by providing current and relevant information resources, including databases, necessary for learning, teaching, research, and other academic activities.

Databases, as described by Urhiewhu and Omah (2016), are searchable collections of electronic information sources curate by publishers across various fields. Accessible both offline and online, these databases are regularly updated to reflect current literature and trends, facilitating research, teaching, and overall academic excellence. They house millions of records, including not only textual data but also multimedia elements like images, audio, and videos, according to (Pathshala 2017).

The ever-expanding quantity and uncertain quality of information within databases pose significant challenges for undergraduate students seeking to utilize these resources effectively for their academic pursuits. Exploring the accessibility and utilization of databases by undergraduate students in universities in Katsina State is crucial to enhance their ability to search, access, evaluate, and utilize information effectively, especially as databases increasingly shift towards digital forms.

Accessibility, in this context, refers to the ease with which users can locate, retrieve, and use information within databases. It encompasses various aspects such as physical accessibility, technological compatibility, user interface design, content organization, and compliance with legal and policy requirements (Young & Nevius 2017).

Ensuring the accessibility of databases is essential for promoting equitable access to information and empowering users to make informed decisions, conducts of research, and enhance their academic pursuits. However, despite the availability of relevant databases, some undergraduate students may lack awareness, access of their existence or face challenges in making effective use of them.

In developing countries like Nigeria, university libraries often show overdependence on print-based resources or face challenges with database accessibility, as highlighted by previous research (Uzomba& Izuchukwu, 2018). Katsina State University Libraries may not be exempt from these issues, potentially leading to the inability of undergraduate students to effectively utilize databases.

Thus, investigating the accessibility and utilization of databases among undergraduate students in universities in Katsina State aims to bridge this gap, providing insights into the current state of accessibility and opportunities for improving database utilization. Ultimately, this research contributes to the academic growth and

success of undergraduate students in the university libraries under study.

Statement of the Problem

The study delves into the accessibility and utilization of databases among undergraduate students in Katsina State University libraries. Despite the critical role databases play in enriching academic endeavors, preliminary observations from the researcher's pilot study indicate a concerning trend: undergraduate students are not harnessing these resources frequently. This underutilization may stem from a lack of awareness among students regarding the available databases in the university libraries, potentially exacerbated by technological barriers like poor internet connectivity or compatibility issues with devices and software.

Furthermore, the issue of content accessibility adds another layer of complexity. With the vast quantity and varying quality of information housed within databases, undergraduate students may struggle to locate relevant and credible resources, hampering their ability to effectively utilize these platforms for research and academic pursuits. This underutilization could have adverse implications for students' academic performance and research output, ultimately impacting their overall learning experience and academic success.

Addressing these challenges is paramount for enhancing the accessibility and utilization of databases among undergraduate students in Katsina State University libraries. By doing so, we can create a more conducive environment for learning, research, and academic excellence, ensuring that students have the necessary resources and support to thrive in their academic pursuits.

Objectives

To assess the level of accessibility of the databases by undergraduate students in the University libraries in Katsina State.

Determine the extent of utilization of databases by undergraduate students in the University libraries under study.

Hypothesis

Ho1: There is no significant relationship between accessibility and utilization of databases and of undergraduate students in university Libraries in Katsina State.

Significance of the Study

The research is intended to benefit University libraries most especially staff and students and librarians, the significance of exploring database accessibility and usage among undergraduate students in Katsina State University libraries. The significance is to enhancing Academic Success, that understands the accessibility and utilization of databases can directly impact the academic success of undergraduate students. By identifying barriers to access and usage, universities can implement strategies to improve resource availability and support student learning, ultimately enhancing academic outcomes. Databases serve as repositories of valuable information crucial for research and innovation. By exploring how undergraduate students utilize these resources, institutions can identify areas for improvement and foster a culture of research and innovation among students, contributing to the advancement of knowledge and scholarship. The study will be significance for improving information literacy skills, including the ability to search, evaluate, and utilize information effectively. By studying database accessibility and usage patterns, universities can develop targeted information literacy programs to equip undergraduate students with the necessary skills to navigate and utilize databases for their academic and professional pursuits. Overall, exploring database accessibility and usage among undergraduate students in Katsina State University libraries is significant for fostering academic success, promoting research and innovation, improving information literacy, addressing technological challenges, optimizing resource allocation, and informing policy and practice within the university libraries.

Scope and Delimitation of the Study

The study was conducted exclusively within Katsina State, focusing on undergraduate students in Universities in the State. The primary participants in this study were the undergraduate students enrolled at Katsina State Universities namely: Umaru Musa Yar'adua University Katsina, Alqalam University Katsina, and Federal University Dutsinma.

Accessibility of the Databases in University Libraries

Based on the literature consulted by the researcher its revealed that, database accessibility emerges as a central theme, underscoring the importance of users' ability to effectively identify, locate, and utilize available databases. Accessibility, within this context, denotes the

ease with which individuals can enter an information center or library, access its databases, and retrieve pertinent information. Imo (2017) asserts that access mechanisms serve as vital indicators of user satisfaction, serving as benchmarks for evaluating the effectiveness and relevance of databases. The ease of accessing, locating, and retrieving online databases housed within libraries is of paramount importance.

Databases function as meticulously organized and searchable repositories of data, offering invaluable resources for researchers, students, and library patrons alike. However, the accessibility of these databases can be influenced by various factors, including licensing agreements, user authentication processes, and technological infrastructure (Association of Research Libraries, 2019). Traditional methods of accessing databases entail on-site visits, necessitating physical presence at the library to utilize computers connected to the internet. While this approach may be convenient for local users with ample time, it may pose challenges for individuals located far from the library or those constrained by time limitations.

Utilization of Databases in the Libraries

Utilization, as defined by Dewald and Randles, (2018), is a pertains to the practical and optimal use of identified, accessed, and acquired databases to address various issues, forming a cornerstone of information resource availability. It encompasses the act of employing databases effectively for problem-solving purposes. In this study, utilization denotes the ability and extent to which undergraduate students in Katsina State universities libraries exploit databases to enhance their educational and research endeavors.

The integration of databases into library resources has become integral to contemporary research and learning, offering a plethora of information to support academic and professional pursuits. This essay delves into the advantages, hurdles, and recommended strategies linked to accessing and utilizing databases effectively (Dewald and Randles, 2018). One key benefit lies in the convenience and accessibility afforded by databases, enabling users to retrieve information from any location with internet connectivity. This streamlined access saves time and effort compared to traditional methods reliant on physical materials. Furthermore, databases boast well-organized structures, simplifying the process of searching and filtering information.

Notwithstanding these advantages, challenges persist, particularly concerning users' acquisition of the requisite skills to navigate and assess information competently (Lu, Y. 2017).. Addressing this necessitates offering training programs covering search techniques, information evaluation, and the utilization of specific database tools.

Methodology

This study utilized quantitative approaches, employing methods such as surveys and statistical analysis to gather data for a more comprehensive understanding. These quantitative methods facilitated the collection of data, allowing for a detailed examination and analysis of the research variables.

The study focused on the population of undergraduate students in Katsina State Universities. To ensure proportional representation, the researchers employed stratified random sampling. A sample size of 200 undergraduate students was targeted to attain statistical significance. The sample size was calculated using the formula outlined by Krejcie and Morgan (1970) in a stratified manner.

Descriptive analyses, including frequencies, percentages, and averages, were utilized to analyze the quantitative data. Inferential analysis was conducted using the Statistical Package for the Social Sciences (SPSS)

The study population comprises all undergraduate students enrolled in the universities under study in Katsina State, including Umaru Musa Yar'adua University Katsina, Alqalam University Katsina, and Federal University Dutsinma. The total population of undergraduate students across these universities is 35,467. From this population, a sample of 200 undergraduate students was selected to represent the entire population.

Table 1 Population of the study

S/N	Name of Universities	No of Undergraduate students	Sample Size
1	Federal University Dutsinma	19872	90
2	Umaru Musa Yar'adua University, Katsina	9660	70
3	Alqalam University Katsina	5935	40
4	Total	35467	200

Source: Registry Department (2023)

Data Analysis

Response Rate

Table 2: Table of Questionnaire Returned

S/N	Institutions	Questionnaires distributed	Questionnaires returned	%
1	FUDMA	90	89	50
2	AUK	40	39	21.9
3	UMYU	70	50	28.1
	Total	200	178	100

A total of 200 copies of the questionnaire were distributed to respondents across Federal University Dutsinma, Alqalam University Katsina, and Umaru Musa Yar'adua University Katsina. Out of these, 178 questionnaires were completed, returned, examined, and deemed suitable for analysis, representing an 89% response rate. This notable response rate can be attributed to the researcher's direct administration of the instrument and assistance from research assistants over the course of one month, along with subsequent follow-ups to retrieve completed questionnaires. Establishing a positive rapport with respondents facilitated the swift completion of questionnaires by some participants. Analysis of the data reveals that out of the total respondents, 50 (28.1%) were from Umaru Musa Yar'adua University (UMYU), while 39 (21.9%) were from Alqalam University Katsina (AUK), representing the least proportion. Federal University Dutsinma (FUDMA) had the highest number of respondents, with 89 individuals accounting for 50% of the total. Despite having the largest population of questionnaires distributed, FUDMA respondents constituted the highest proportion, indicating a strong participation rate from that institution.

Table 3: How easily accessible are the Databases in the University Libraries in Katsina State

S/N	Access to Databases	Easily	Very easily	Not easily	No comment
1	Digital library	36(14.3)	52(12.6)	64(13.7)	23 (13.1)
2	Summon	51(29.1)	43 (13.1)	69(14.3)	12(12.6)
3	Science Direct	41(12)	53(24.6)	56 (14.9)	26 (14.9)
4	JStore	56 (14.9)	59(16.6)	42(6.9)	13 (7.2)
5	Science Online	48 (16)	64(8.0)	46(9.1)	68 (38.9)
6	Elsevier	61(6.3)	57(26.9)	43 (13.1)	18 (10.3)
7	E-Granary	59(22.3)	63(30.3)	43 (13.1)	19(10.9)
8	AGORA	36(20.6)	52(29.7)	51(29.1)	15 (8.6)
9	BIOLINE	43(24.6)	32(18.3)	14(8.0)	17 (9.7)
10	OARE	50(17.1)	57(28.6)	35 (8.6)	18 (10.3)
11	DOAJ	35(14.3)	63(24.6)	36(9.1)	49 (28)
12	HINARI	42(24)	59(16.6)	52(29.7)	10 (5.7)
13	PUB MED	66(37.2)	44(8)	48(16)	15 (8.6)
14	PLOS	55(14.3)	57(21.1)	48(4.6)	38 (21.7)
15	HINDAWI	57(32.6)	56(9.1)	43 (7.2)	11(6.3)
16	REPEE	46(9.1)	52(24)	59(16.6)	21(12)
17	FREEMED	51(17.7)	62(6.2)	54(18.3)	18 (10.3)

18	WASH LAW	54(19.4)	64(30.9)	45 (8.6)	18 (10.3)
19	FIND LAW	44(8.0)	53(24.6)	66 (14.9)	32(6.2)
20	LIBDEX	46(9.1)	59(16.6)	33 (7.2)	33(18.9)
21	BIOMED	61(12)	41(12)	51 (17.7)	22(12.6)
22	HEINONLINE	51(12)	37(21.1)	60(17.1)	26 (14.9)
23	WorldCat	49(6.9)	56(32)	43 (13.1)	23 (13.1)
24	Springer link	58 (10.3)	52(29.7)	49(16.6)	28 (16)
25	MC Graw Hill Collections	47(26.9)	52(18.3)	44(8.0)	18 (10.3)
26	World Bank e-Library	50(22.9)	60(28.6)	45 (8.6)	19(10.9)
27	IEEE	45(14.3)	50(22.9)	43(24.6)	15 (8.6)
28	Willey-Blackwell Journal	42(24)	69(16.6)	43(24.6)	17 (9.7)
29	Emerald	66(37.7)	54(18.3)	48 (10.3)	14(8.0)
30	elFL.net	44(18.3)	57(21.1)	42(19.4)	19(10.9)
31	DOAB	57(11.2)	56 (14.9)	48 (10.3)	16(9.1)
32	EBSCOHost	45 (8.6)	62(6.9)	39(16.6)	55 (31.4)
33	ProQuest	41(23.4)	52(18.3)	41(12)	38 (21.7)
34	IPL	54(19.4)	47(26.9)	55(20)	17 (9.7)
35	TEEL	41(12)	63(24.6)	46(9.1)	21(12)

The table illustrates that JStore, Science Online, Elsevier, E-Granary, and AGORA were deemed very easy to access. However, FREEMED and REPEE were identified as not easily accessible based on the study's findings. Notably, Science Online stood out as being very easily accessible by 64 (8.0%) respondents, while 68 (38.9%) respondents did not provide any comments on its accessibility. The research findings indicate a low level of accessibility for available databases in university libraries in Katsina State among undergraduate students. This limitation could potentially hinder their research and learning endeavors, especially considering that a significant portion of current information resources are housed within databases. Encouraging undergraduate students to access these databases for their academic pursuits is crucial in the 21st century. These findings align with those reported by the Association of Research Libraries (2019), which highlighted on-site access as one of the most common methods for users to access databases in libraries. However, they contradict the assertion made by Kuhlthau and et al (2018), who emphasized mobile access as another viable option for accessing databases in libraries.

Level of Utilization of Databases in the University Libraries under study

Table 4: Level of Utilization of Databases

S/N	Databases	Daily	Once a week	Twice a week	Twice a month	Once a month	Quarterly	Never
1	Digital library	13 (7.2)	60(34.3)	25(14.3)	22(12.6)	24(13.7)	23 (13.1)	8(4.6)
2	Summon	22(12.6)	11(6.3)	51(29.1)	23 (13.1)	25(14.3)	22(12.6)	21(12)
3	Science Direct	26 (14.9)	19(10.9)	21(12)	43(24.6)	26 (14.9)	26 (14.9)	14(8.0)

4	J Store	53 (30.3)	31(17.7)	26 (14.9)	29(16.6)	12(6.9)	13 (7.2)	7(4)
5	Science Online	28 (16)	14(8)	28 (16)	14(8.0)	16(9.1)	68 (38.9)	7(4)
6	Elsevier	18 (10.3)	29(16.6)	11(6.3)	47(26.9)	23 (13.1)	18 (10.3)	29(16.6)
7	E-Granary	19(10.9)	11(6.3)	39(22.3)	53(30.3)	23 (13.1)	19(10.9)	11(6.3)
8	AGORA	15 (8.6)	19(10.9)	36(20.6)	52(29.7)	29(16.6)	15 (8.6)	29(16.6)
9	BIOLINE	17 (9.7)	36(20.6)	43(24.6)	32(18.3)	14(8.0)	17 (9.7)	16(9.1)
10	OARE	18 (10.3)	22(12.6)	30(17.1)	50(28.6)	15 (8.6)	18 (10.3)	22(12.6)
11	DOAJ	19(10.9)	11(6.3)	25(14.3)	43(24.6)	16(9.1)	49 (28)	12(6.9)
12	HINARI	16(9.1)	18 (10.3)	42(24)	29(16.6)	52(29.7)	10 (5.7)	8(4.6)
13	PUB MED	15 (8.6)	26 (14.9)	66(37.2)	14(8)	28(16)	15 (8.6)	26 (14.9)
14	PLOS	33 (18.9)	18 (10.3)	25(14.3)	37(21.1)	8(4.6)	38 (21.7)	16(9.1)
15	HINDAWI	17 (9.7)	36(20.6)	57(32.6)	16(9.1)	13 (7.2)	11(6.3)	25(14.3)
16	REPEE	11(6.3)	33(18.9)	16(9.1)	42(24)	29(16.6)	21(12)	23(13.1)
17	FREEMED	11(6.3)	48(27.4)	31(17.7)	32(6.2)	24(18.3)	18 (10.3)	11(6.3)
18	WASH LAW	18 (10.3)	18 (10.3)	34(19.4)	54(30.9)	15 (8.6)	18 (10.3)	18 (10.3)
19	FIND LAW	32(18.3)	14(8.0)	14(8.0)	43(24.6)	26 (14.9)	32(6.2)	14(8.0)
20	LIBDEX	53 (30.3)	15(8.6)	16(9.1)	29(16.6)	13 (7.2)	33(18.9)	16(9.1)
21	BIOMED	43(24.6)	26 (14.9)	21(12)	21(12)	31 (17.7)	22(12.6)	11(6.3)
22	HEINONLINE	29(16.6)	13 (7.2)	21(12)	37(21.1)	30(17.1)	26 (14.9)	19(10.9)
23	World Cat	19(10.9)	11(6.3)	12(6.9)	56(32)	23 (13.1)	23 (13.1)	31(17.7)
24	Springer link	15 (8.6)	19(10.9)	18 (10.3)	52(29.7)	29(16.6)	28 (16)	14(8.0)
25	MC Graw Hill Collections	17 (9.7)	18 (10.3)	47(26.9)	32(18.3)	14(8.0)	18 (10.3)	29(16.6)
26	World Bank e-Library	18 (10.3)	22(12.6)	40(22.9)	50(28.6)	15 (8.6)	19(10.9)	11(6.3)
27	IEEE	19(10.9)	14(8.0)	25(14.3)	40(22.9)	43(24.6)	15 (8.6)	19(10.9)
28	Willey-Blackwell Journal	16(9.1)	12(6.9)	42(24)	29(16.6)	43(24.6)	17 (9.7)	16(9.1)
29	Emerald	15 (8.6)	26 (14.9)	66(37.7)	24(18.3)	18 (10.3)	14(8.0)	12(6.9)
30	elFL.net	33(18.9)	18 (10.3)	24(18.3)	37(21.1)	34(19.4)	19(10.9)	10(5.7)
31	DOAB	17 (9.7)	36(20.6)	57(11.2)	26 (14.9)	18 (10.3)	16(9.1)	8(4.6)
32	EBSCOHost	21(12)	33(18.9)	15 (8.6)	12(6.9)	29(16.6)	55 (31.4)	10(5.7)
33	ProQuest	17 (9.7)	8(4.6)	41(23.4)	32(18.3)	21(12)	38 (21.7)	18 (10.3)
34	IPL	18 (10.3)	8(4.6)	34(19.4)	47(26.9)	35(20)	17 (9.7)	16(9.1)
35	TEEL	32(6.2)	24(13.7)	21(12)	43(24.6)	16(9.1)	21(12)	18 (10.3)

World Cat, and Springer link are utilized quarterly. Additionally, databases such as MC Graw Hill and Elsevier are among the most underutilized by students. The underutilization of certain databases may be attributed to factors affecting their accessibility, as identified in the present research. To address this issue, university libraries should take urgent measures to improve access to databases and raise awareness among students about the available resources. These findings are consistent with those of Oriogu et al. (2017) in their study on the Availability and Use of Scholarly Journals by Students in University Libraries in Nigeria, specifically at Ado Ekiti, Ekiti State. Their research revealed that the majority of respondents used scholarly journals on a bi-monthly basis, primarily for self-examination, enhancing subject knowledge, completing assignments,

and coursework. They emphasized the ready availability and accessibility of scholarly journals to respondents.

Hypothesis Analysis

The outcome of the inferential statistics used to test the one (1) research hypothesis formulated for this study is presented. The use of inferential statistics was needed in order to test the stated hypothesis. In this respect, the researcher used PPMC statistics, the hypothesis has been evaluated at the significance level.

Ho1: There is no significant relationship between accessibility and utilization of databases and of undergraduate students in university Libraries in Katsina State

Table 5: Result of Hypothesis

Hypothesis	Predicted	Outcome	Effect	Decision
There is no significant relationship between accessibility and utilization of databases and of undergraduate students in university Libraries in Katsina State	-	+	Dismissed	Ho1

Analysis of PPMC that is Pearson Product-Moment Correlation statistics was utilized to test this hypothesis. The data was analyzed using SPSS v.23 and the outcome was presented in the Table 5.

Findings

The study reveals that databases play a vital role in supporting undergraduate students' academic endeavors, offering a convenient and diverse range of resources for research and learning.

1. Database accessibility is acknowledged as a significant factor influencing students' information-seeking behaviors. The preferred methods of access, including on-site, remote, and mobile access, contribute to the overall satisfaction of users. The study found out that JStore, Science Online, Elsevier, E-Granary, AGORA were accessedVery easily while Science Online was found to be very easily accessible by 64(8.0%), respondents while 68 (38.9%) respondents did not provide any comments on its accessibility.

2. The finding of the study shows the frequency Digital library, J Store, AGORA, PUB MED are utilized Daily than any other available databases in the library while MC Graw Hill, Elsevier

are the highest number of databases that students are not utilized.

Conclusion

Based on the exploration of database accessibility and usage among undergraduate students in Katsina State University libraries, despite the availability of databases, accessibility remains a concern for some undergraduate students. Issues such as limited internet connectivity, inadequate access to computers, and lack of training on database navigation hinder students' ability to fully utilize available resources. The study revealed varying levels of database usage among undergraduate students. While some students utilize databases extensively for research and academic purposes, others rely more on traditional library resources or external sources. Integrating database usage into the curriculum and academic programs can significantly enhance students' understanding of information literacy and research skills. Incorporating database navigation and evaluation skills into coursework can empower students to become more proficient researchers. To address the identified challenges and maximize the benefits of database usage among undergraduate students, it is recommended that universities invest in improving infrastructure, providing comprehensive training and support services, and integrating database literacy into the curriculum. In conclusion, while undergraduate students in Katsina State University demonstrate varying levels of accessing and utilization of databases, there is room for improvement in terms of accessibility, training, and integration into academic programs. By addressing these areas, universities can better equip students with the necessary skills to excel in their academic pursuits and beyond.

Recommendations

1. The study recommended that the library should be provided offline databases to be access and reduced the dependence on the Internet due to erratic power supply and internet technical issues. Explore ways to diversify access options, ensuring that both on-site and remote access methods are user-friendly and seamless.

2. The study recommended that orientation programmes should be intensified to make the students more aware of the available databases, facilitating effective database utilization by providing guidance, training, and support to undergraduate students.

Information literacy programs are crucial for enhancing students' skills in navigating databases and critically evaluating information. Develop and implement comprehensive information literacy programs to empower undergraduate students with the necessary skills to navigate databases utilized effectively.

Reference

Association of Research Libraries. (2019). Accessibility of Library Services. https://www.arl.org/programs-services/diversity-inclusion/accessibility-library-services/

Dewald, N. H., & Randles, J. M. (2018*). How Librarians Use and Help Researchers Use Zotero. The Journal of Academic Librarianship,* 40(3-4), 324-331.

Imo Marti, M., & García-Sanjuán, S. (2017). Assessment of the user experience of the main academic library databases. *Information Processing & Management,* 58(3), 102464.

Krejcie, R. V. & Morgan, D.W. (1970). Determining Sample Size for Research Activities. *Educational and Psychological Measurement.* Vol. 30, p. 607 – 210.

Kuhlthau, C. C., Heinström, J., & Todd, R. J. (2008). The "Information Search Process" Revisited: Is the Model Still Useful? Information Research: *An International Electronic Journal,* 13(4), 2-4. https://www.informationr.net/ir/13-4/paper355.html

Lu, Y. (2017). Accessibility of library databases: a case study of a university library. *The Electronic Library,* 35(6), 1065-1079. doi: 10.1108/EL-06-2016-0121.

Oriogu and et al (2017). "Faculty Awareness, Perception and use of Information Resources and Services in a Private University in Nigeria". *Covenant Journal of Library & Information Science,* pp. 32-44.2018

Pathshala, J. E. (2017). Electronic Databases in Social Science: A Gateway to all Postgraduate Courses. India: Rohan Publisher Limited.

Urhiewhu, L.O & Omah, J. E. (2016). Levels of Electronic Information Resources Usage among Undergraduate Students in Taraba State University Library. *International Journal of Information and Technology (ASPL Journal series)*, 2(1) 1-12 Retrieved April 8, 2020, from http://www.africaresearchcorps.com

Uzomba, U., Oyebola, T. & Izuchukwu, W., (2018) "The Use and Application of Open-Source Integrated Library System in Academic Libraries in Nigeria: Koha Example". *Library Philosophy and Practice (e-journal)* Paper 1250.

Young, J. R., & Nevius, M. S. (2017). Exploring the Information Seeking Behaviors of Education Doctoral Students. *Journal of Academic Librarianship*, 43(2), 125-131.