Issues and Measures for Improving Lecturers' Use of Electronic Information Resources in Federal University Libraries in South East Nigeria

Victoria Obianuju Ezejiofor,Ph.D[1], Angela Ifeoma Ndanwu, Ph.D[1], Enuma Maureen Azolo[1] and Grace Chinwe Uwaechina[1]

[1]*Professor Festus Aghagbo Nwako Library, Nnamdi Azikiwe University, Awka*

Abstract

EIRs are invaluable tools that impact teaching, learning and research productivity all over the world. They have revolutionized how information is accessed and shared, impacting various domains such as education, research, healthcare, and business. This study investigated the constraints encountered by lecturers in their use of electronic information resources (EIRs) and identified potential measures to ameliorate the situation. Descriptive survey design was adopted and two research questions guided this study. The population of the study comprised 4265 lecturers in four federal universities in South East Nigeria out of which 428 were selected as sample size through multi-stage sampling technique. The instrument for data collection was a structured questionnaire. Data were analyzed using mean rating and standard deviation. The findings revealed that major issues were lack of awareness, irregular power supply, inadequacy of ICT facilities and poor Internet access. Recommendations made include awareness creation, regular power supply, provision of adequate infrastructure and broader and technical assistance.

Keywords: *University Libraries, Lecturers, Electronic Information Resources, Utilization.*

Introduction

University lecturers are academics whose core function is teaching. Apart from teaching, marking examination scripts and supervising students' theses; lecturers engage in research which is a priority in higher education. They have to write and publish books and journal articles and make other creative outputs to extend the frontiers of knowledge, increase visibility, gain promotions, and promote the image and ranking of their institutions. A majority of lecturers engage in community service and also study for higher degrees especially Doctor of Philosophy (Ph.D). Lecturers, due to the nature of their job need to access and utilize current and relevant information resources as the quality of information resources they utilize determines the quality of their teaching and research. Lecturers, therefore seek information resources from numerous sources which include libraries, Internet, conferences, family and friends.

Ezejiofor Victoria O., Ndanwu Angela I., Azolo Enuma M. and Uwaechina Grace C.

Issues and Measures for Improving Lecturers' Use of Electronic Information Resources in Federal University Libraries in South East Nigeria

University libraries are established to provide information resources, conducive accommodation and facilities to enhance teaching, learning and research among members of the academic communities, especially, faculty. Apart from making information resources available in various formats; it is the responsibility of university libraries to ensure unobstructed access and maximum utilization of available materials through awareness creation and adoption of feedback mechanisms. Yusuf and Iwu as cited in Usman (2015) describe a university library as a sophisticated and highly developed information system which inhabits a collection of information resources on all the knowledge areas by a university. In the opinion of Bundy cited in Usman (2015), university libraries are a legacy to each generation as they convey knowledge of the past and the promise of the future. Irrespective of wherever they are, "the university library is a citadel which promotes the free flow of ideas in the interest of a nation's thriving culture, economy, religion and democracy".

Over a decade ago, when university libraries in Nigeria were providing mainly print resources and print-based services; current information resources were grossly inadequate. During that period, lecturers demanded for electronic information resources through Internet and when university libraries could not afford it; they resorted to roadside cybercafé paying for time to surf the Internet. Ubogu as cited in Ezejiofor, (2023) observed that technological advancement influenced information seeking behavior of academics who demanded networked information resources and online services from academic libraries.

Presently, application of ICTs in libraries has transformed library methods of operation, library tools and personnel. University libraries have metamorphosed from print-based resource centres to hybrid libraries where both traditional and modern technologies are merged for more effective information service delivery. E-library, Digital library, Library without walls and Borderless library have become commonplace.

Electronic information resources are materials in digital format accessible electronically. This digital information and materials are accessed and utilized through various devices, such as computers, smartphones, tablets, and e-readers. The increasing popularity of EIRs can be attributed to their accessibility, cost-effectiveness, efficiency, and eco-friendliness. EIRs have revolutionized how information is accessed and shared, impacting various domains such as education, research, healthcare, and business.

However, several university libraries in Nigeria and other developing countries are providing electronic information resources under harsh economic conditions and literature is replete with reports of underutilization in many academic libraries (Wagwu & Obuezie, 2018; Yebowaah & Plockey, 2017). Federal university libraries in South East Nigeria are not exempted from this problem. A majority of the lecturers do not utilize EIRs provided by the

Ezejiofor Victoria O., Ndanwu Angela I., Azolo Enuma M. and Uwaechina Grace C.

Issues and Measures for Improving Lecturers' Use of Electronic Information Resources in Federal University Libraries in South East Nigeria

libraries. This paper, therefore, attempts to decipher the issues and proffer possible measures to ameliorate the situation.

Statement of Problem

Effective utilization of relevant information resources is indispensable for quality teaching, learning and research. Lecturers need to access and utilize EIRs which are invaluable tools that impact research productivity and collaboration with peers all over the world. Ahmad and Panda (2013) averred that lecturers need to utilize EIRs optimally due to the nature of their job which requires access to high quality information resources. Technological advancement has enabled many university libraries both in Nigeria and overseas to provide EIRs but literature depicts underutilization of the resources by lecturers. Federal university libraries in South East Nigeria, provide EIRs which cost millions of naira. Yet, lecturers' utilization of these expensive resources provided have been low (Ezejiofor, 2023). It is, therefore, pertinent to decipher the factors militating against lecturers' utilization of EIRs provided by federal university libraries in South East Nigeria.

Objectives of the Study

The objectives of this study are to:

1. Identify the challenges encountered by lecturers in utilization of electronic information resources in federal university libraries in South East Nigeria.
2. Ascertain the measures which can enhance lecturers' utilization of

electronic information resources in federal university libraries in South East Nigeria.

Research Questions

The following research questions guided the study:

1. What are the challenges encountered by lecturers in utilization of electronic information resources in federal university libraries in South East Nigeria?
2. What are the measures that can be adopted to enhance lecturers' utilization of electronic information resources in federal university libraries in South East Nigeria?

Review of Related Literature

Lecturers are the academic staff responsible for planning, directing and undertaking teaching and research in higher institutions of learning (Higher Education Statistics Agency, 2009). Academics are assigned certain basic functions in the universities. They teach students, write and publish books and research articles in academic journals. They are requested to encourage the advancement and pursuit of learning in all its branches through study, teaching, research, and community services.

Electronic information resources refer to those materials that require computer access, whether through a personal computer, mainframe, or handheld mobile device. They may either be accessed remotely via the Internet or locally. Some of the most frequently encountered types are:

Ezejiofor Victoria O., Ndanwu Angela I., Azolo Enuma M. and Uwaechina Grace C.

Issues and Measures for Improving Lecturers' Use of Electronic Information Resources in Federal University Libraries in South East Nigeria

E-journals, E-books, Full-text (aggregated) databases, indexing and abstracting databases, Reference databases (biographies, dictionaries, directories, encyclopedias), Numeric and statistical databases, E-images, E-audio/visual resources (IFLA, 2012). Electronic information resources are documents in digital formats which can be accessed through computer based information retrieval systems either remotely through the Internet or locally through CD-ROMs, tapes and other peripheral devices.

EIRs save space and makes physical library visits optional as readers can enjoy library services from anywhere on the globe. Asom and Suleiman (2017) observed that EIRs provide universal access: multiple readers can utilize the same resources all over the world at the same time. Many EIRs were utilized from home during COVID 19 lockdown especially free ones such as MIT Course Ware and TEEAL. Users develop more ICT skills and information literacy skills through the use of EIRs which are also more portable than print resources.

Scholars can maintain websites on the Internet where they can showcase their publications which give them international visibility. Lecturers can also collaborate with professional colleagues and join such scholarly organizations as Academia.edu and Researchgate which will enable them to utilize information materials from scholars across the globe and showcase their own publications.

Academic Libraries in Nigeria and the Challenge of Service Delivery in the Digital Age

University libraries in Nigeria have played major roles in the acquisition and dissemination of electronic information resources. An academic library is a critical infrastructure in advancement of knowledge supporting teaching, learning and research. The major resources of the library had been in print but advent of information technology has compelled them to take up the additional responsibility of online information delivery. Many academic libraries subscribe for online databases not only independently but also through consortia due to the expensive nature of the materials. Subscriptions to the resources such as online databases has expiry date whether utilized or not.

Efforts were made to ensure availability of e-resources in Nigerian university libraries. A number of initiatives were introduced for the development of e-resources and training in some institutions among which are the Mortenson Centre for International Library Programmes acting on behalf of MacArthur Foundation to support some selected grantee university libraries in Nigeria; The Electronic Information for Libraries Network (EIFL.Net) and MTN Foundation. The Nigeria Virtual Library Project is a major effort by The Federal Government of Nigeria towards making EIRs available. The online databases that are popular among academics in Nigerian universities

Ezejiofor Victoria O., Ndanwu Angela I., Azolo Enuma M. and Uwaechina Grace C.

Issues and Measures for Improving Lecturers' Use of Electronic Information Resources in Federal University Libraries in South East Nigeria

include EBSCO HOST, AGORA, HINARI, MEDLINE, JSTOR and OARE. Internet connectivity have been made available in Nigerian universities and a majority of academic staff have acquired personal computers and other ICT gadgets. The university libraries are, however, providing EIRs with multiple constraints particularly funding. Omekwu as cited in Wagwu and Obuezie (2018), averred that academic libraries all over the world, particularly in Nigeria, are facing challenges in providing information resources due to poor funding, lack of competent human resources and power supply instability.

Diffusion of Innovations Theory (DoI) by Rogers (1995)

This study is anchored on Diffusion of Innovation Theory which was developed by a French Sociologist, Everett M. Rogers in 1995. The theory identified attributes of innovation as relative advantage, compatibility, complexity, trialability and observability. DoI states that the greater these attributes are the more likely a person will adopt an innovation except complexity which should be less for a person to adopt an innovation. This means that the greater the relative advantage, compatibility, trialability and observability and the lesser the complexity of using electronic information resources; the more likely lecturers will utilize them.

Relative advantage: This is the degree to which an innovation is perceived as being better than the idea it supersedes. For instance, if lecturers perceive that OPAC is better than manual catalogue it will motivate them to utilize the online catalogue.

Compatibility: This is the degree to which an innovation is perceived to be consistent with existing values, past experiences and needs of potential adopters.

Complexity: This is the degree to which an innovation is perceived as relatively difficult to understand and use. Lecturers are not likely to adopt an innovation they perceive to be difficult.

Trialability: This is the degree to which an innovation may be experimented with on a limited basis. The more an innovation is tried, the faster will its adoption be.

Observability: This is the degree to which the results of an innovation are visible to others. The more the results of the innovation are visible to others, the greater the probability that the innovations will be adopted. This means that if lecturers can observe the impact of using e-resources on their teaching, learning and research activities they will likely adopt them.

Diffusion of Innovation Theory can be applied to this study because if lecturers understand that electronic information resources have advantage over print resources, and are compatible with their values, and are less complex, and can be tried and the results observed; they will utilize the resources more. Complexities, in the context of this study refers not only to systems which are difficult to operate but every challenge which lecturers encounter in their use of EIRs such as irregular power

Ezejiofor Victoria O., Ndanwu Angela I., Azolo Enuma M. and Uwaechina Grace C.

Issues and Measures for Improving Lecturers' Use of Electronic Information Resources in Federal University Libraries in South East Nigeria

supply and inadequate facilities to use EIRs. The theory supports that an enabling environment should be created to ensure that lecturers utilize EIRs seamlessly.
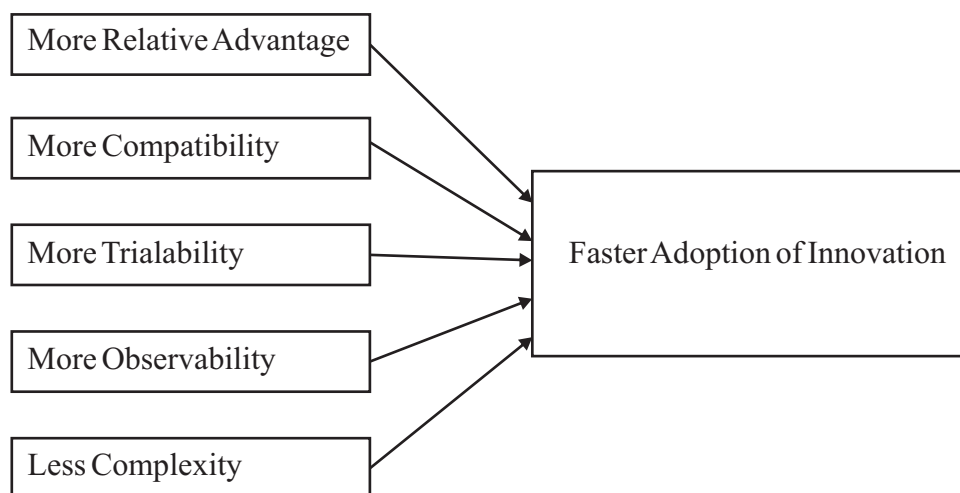
Diffusion of Innovations Theory

Source: **Researcher's Construct**

Empirical Studies on Availability and Use of Electronic Information Resources

Yebowaah and Plockey (2017) examined the use of electronic information resources by lecturers of the University for Development Studies, Wa Campus in South Africa. Primary data were collected from 80 lecturers through simple random sampling procedure. The data were collected through questionnaire and analyzed through the use of binary logistic regression model. Awareness was high but utilization was low. The study revealed that the challenges which lecturers face in their use of EIRs include inadequate infrastructure, low Internet speed, inadequate trained library staff, lack of functional computers in the library, password problems, and lack of assistance from librarians. The study recommended awareness creation, training and workshops for users and library staff.

Amusa and Atinmo (2016) investigated availability, level of use and constraints to use of electronic resources by Law lecturers in public universities in Nigeria. The major findings of the study were: the level of availability of electronic resources for the use of Law lecturers was very low; most of the electronic resources on Law were not available except during accreditation exercises and most of the lecturers reported non-use of EIRs. Poor use of the resources was due to paucity of work stations, absence of sufficient training on the use of EIRs, and low level of local contents.

Ezejiofor Victoria O., Ndanwu Angela I., Azolo Enuma M. and Uwaechina Grace C.

Issues and Measures for Improving Lecturers' Use of Electronic Information Resources in Federal University Libraries in South East Nigeria

Aregbesola and Oguntayo (2014) examined awareness, use and constraints to faculty members in their use of EIRs in Landmark University, Omu-Aran, Nigeria. The study revealed that all the lecturers were aware of EIRs but 86.9% used the resources while 13% never used. The study identified poor computer literacy skills as a major problem and recommended user training on advanced search strategies and use of controlled vocabulary.

Methodology

Descriptive survey design was adopted for this study which was conducted in the South East Geopolitical Zone of Nigeria. The population of this study comprised of 4,265 lecturers out of which 428 were selected through multi-stage sampling technique. At the first stage, purposive sampling was used to select the university libraries that provide EIRs. University libraries in University of Nigeria, Nsukka (UNN), Nnamdi Azikiwe University, Awka (NAU), Federal University of Technology, Owerri (FUTO), and Michel Okpara University of Agriculture, Umudike (MOUA) were selected. At the second stage, proportionate stratified random sampling technique was used to group the lecturers into faculties and randomly selected those who will participate. The instrument for data collection was questionnaire titled Questionnaire on Issues and Measures for Improving Lecturers' Use of EIRs (QIMMILUE). 428 copies of the questionnaire were administered but 372 copies were returned and found usable. Mean and standard deviation were used to answer research questions 1 and 2. The researcher used a four-point rating scale for the research questions based on a Modified Likert scale. For the decision on the cut-off point for the item means; a criterion mean of 2.50 was used to make decision on the challenges and measures. 2.50 and above is positive while less than 2.50 is negative.

Results

The results of this study are presented in tables 1 and 2, and analyzed in line with the research questions that guided the study.

Research Question 1: What are the challenges encountered by lecturers in utilization of electronic information resources in federal university libraries in South East Nigeria?

Ezejiofor Victoria O., Ndanwu Angela I., Azolo Enuma M. and Uwaechina Grace C.

Issues and Measures for Improving Lecturers' Use of Electronic Information Resources in Federal University Libraries in South East Nigeria

Table 1: Mean and Standard Deviation for Challenges facing Lecturers in Utilization of Electronic Information Resources in Federal University Libraries N=372

S/N		SD	D	A	SA	Mean	SD	Remark
1.	I am not aware of available library EIRs	22	69	178	103	2.97	.84	Agreed
2.	There is irregular power supply in the library	41	101	152	78	2.72	.92	Agreed
3.	I have limited access to functional computers in the library	47	60	138	127	2.93	1.00	Agreed
4.	Slow Internet speed in the library	37	61	124	150	3.04	.98	Agreed
5.	I lack ICT proficiency skills needed to use EIRs.	152	110	82	28	1.96	.96	Disagreed
6.	I find it difficult retrieving relevant materials online	88	120	121	43	2.32	.96	Disagreed
7.	I find it difficult obtaining user name and password	67	86	141	78	2.62	1.01	Agreed
8.	The server does not function most of the time	20	48	190	114	3.07	.80	Agreed
9.	The library lacks other ICT facilities for using EIRs	36	94	188	54	2.70	.83	Agreed
10.	The library does not provide technical support.	20	90	161	101	2.64	.73	Agreed

The analysis in Table 1 shows that the respondents agree that 8 out of the 10 items listed are the challenges lecturers encounter in utilization of electronic information. They include lack of awareness of available library EIRs (2.97), irregular power supply (2.72) limited access to computers in the library (2.93), slow Internet speed (3.04), difficulty in obtaining username and password (2.62), server does not function most of the time (3.07), lack of other facilities for using EIRs (2.70), and library does not provide technical support (2.64). The respondents, however, disagreed on the

Ezejiofor Victoria O., Ndanwu Angela I., Azolo Enuma M. and Uwaechina Grace C.

Issues and Measures for Improving Lecturers' Use of Electronic Information Resources in Federal University Libraries in South East Nigeria

two remaining items. These are: lack of ICT proficiency skills needed to use EIRs (1.96) and difficulty in retrieving relevant materials online (2.32).

Research Question 2: What are the measures that can be adopted to enhance lecturers' utilization of electronic information resources in federal university libraries in south East Nigeria?

Table 2: Mean and Standard Deviation for Measures that can Enhance Lecturers' Awareness and Utilization of Electronic Information Resources N=372

S/N		NA	FA	A	VA	Mean	SD	Decision
1.	The university library should create awareness of EIRs	0	9	142	221	3.57	.54	Appropriate
2.	The university should provide regular electricity	3	24	159	186	3.48	.67	Appropriate
3.	The university should provide more computers in the library	4	17	162	189	3.44	.64	Appropriate
4.	The libraries should ensure faster Internet speed	8	15	137	212	3.49	.68	Appropriate
5.	The university and the university library should train lecturers on ICT skills.	3	20	177	172	1.39	.63	Not Appropriate
6.	Librarians should assist lecturers in retrieving EIRs.	18	60	169	125	2.08	.83	Not Appropriate
7.	The university library should make it easy for lecturers to obtain user name and password.	3	30	180	159	3.33	.66	Appropriate
8.	The university library should provide functional servers.	3	16	150	203	3.46	.62	Appropriate
9.	The un iversity library should provide necessary ICT facilities such as scanners and printers	3	13	137	219	3.54	.61	Appropriate
10.	The librarie s should provide technical support.	4	36	182	150	2.74	.68	Appropriate

Ezejiofor Victoria O., Ndanwu Angela I., Azolo Enuma M. and Uwaechina Grace C.

Issues and Measures for Improving Lecturers' Use of Electronic Information Resources in Federal University Libraries in South East Nigeria

The analysis in Table 2 shows that the respondents agree that 8 out of the 10 items listed are appropriate measures which can be adopted to enhance lecturers' utilization of EIRs. These are: the university libraries should create awareness of EIRs (3.57), universities should provide regular power supply (3.48), the libraries should provide sufficient functional computers (3.44), the libraries should ensure fast Internet speed (3.49), libraries should provide functional servers, (3.46), the libraries should provide necessary ICT facilities (3.54), and libraries should provide technical support (2.74).

Discussion of Findings

The findings from research question one indicate that the challenges lecturers encounter in utilization of EIRs provided by Federal university libraries in South East Nigeria are lack of awareness of available library EIRs, irregular power supply, limited access to computers in the library, slow Internet speed, difficulty in obtaining username and password, server does not function most of the time and library does not provide technical support. The findings of this study agree with those of Yebowaah and Plockey (2017) which revealed similar issues such as inadequate infrastructure, low Internet speed, lack of functional computers in the library, password problems, and lack of assistance from librarians.

The findings are, however, in disparity with those of Aregbesola and Oguntayo (2014) which showed that the issues discovered were not encountered by lecturers who utilized EIRs in the Landmark University

Library. There was regular power supply, adequate ICT facilities for using EIRs, high Internet speed and the lecturers found it easy to obtain username and password. This finding is expected because Landmark is a private university while the university libraries understudied are in federal universities where less attention is paid to provision of infrastructure. This implies that ownership of institutions influences availability of fund for library facilities.

The findings from research question two reveal that appropriate measures which can be adopted to enhance lecturers' utilization of EIRs are awareness creation of EIRs, provision of regular power supply, and provision of adequate ICT facilities. These findings are in consonance with the studies of Okiki (2013) and Wagwu and Obuezie (2018) which suggested similar measures. Okiki (2013) suggested that awareness creation and orientation should be continuous as the universities recruit new staff on a regular basis and that the university library should find an alternative source of power supply either through standby generator, inverter or solar energy system. The study also suggested improved Internet facilities for easy access.

Conclusion and Recommendations

Utilization of EIRs in teaching, learning and research has become the norm among lecturers. EIRs have numerous benefits which include ability to access large quantities of current information resources even from remote locations such as homes and offices; saving storage space; ability to utilize resources at convenient time and

Ezejiofor Victoria O., Ndanwu Angela I., Azolo Enuma M. and Uwaechina Grace C.

Issues and Measures for Improving Lecturers' Use of Electronic Information Resources in Federal University Libraries in South East Nigeria

possibility of linkage to related sources and increased scholarly collaboration among scholars from various countries.

The study revealed such major constraints as lack of awareness of EIRs, erratic power supply, limited access to functional computers and Internet connectivity in university libraries, lack of ICT facilities and difficulty in obtaining user name and password.

In view of the above conclusion, the following recommendations are made:

1. The libraries should embark on regular awareness creation targeted at marketing library services and products;
2. Constant power supply is necessary in libraries.
3. Adequate ICT facilities should be provided for utilizing EIRs in libraries.
4. The libraries should provide technical support to assist library users.

Adoption of these measures will promote effective utilization of EIRsand information service delivery in the libraries studied.

References

Ahmad, M. A. & Panda, K. C. (2013). Awareness and use of electronic information resources by the faculty members of Indian Institutes in Dubai International Academic City (DIAC): A Survey. *International Research Journal of Computer Science and Information System (IRJCSIS), 2(1):* 8-17. Retrieved from http//www.interesjournals.org/IRJCSIS.

Amusa, O. I. & Atinmo, M. (2016). Availability, level of use and constraints to use of electronic resources by Law lecturers in public universities. *JLIS Journal of Information Science,*7 (3), 140-172. Retrieved from DOI: 1044.3jlis.it-11955.

Aregbesola, A. & Oguntayo, O. (2014). Use of electronic resources by faculty members in Landmark University. *Computing Information System, Development Informatics and Allied Research Journal,*5(2). Retrieved from www.cisdijournal. net/uploads/V5N2P5.

Asom, F. & Suleiman, M. (2017). The Incursion of Digital Information Resources and Services for Effective Service Delivery in University Libraries in Nigeria. Paper Presented at the 1st International Conference and Home Coming of the Department of Library and Information Science, University of Nigeria, Nsukka, 25th - 30th June, 2017.

Ezejiofor, V. O. (2023). Awareness and utilization of electronic information resources by lecturers in federal universities in South East Nigeria. A Ph.D thesis submitted to the Department of Library and Information Science, University of Nigeria, Nsukka.

Higher Education Statistics Agency (HESA) (2009). *Staff definitions.* http:www.hesa.ac.uk/index.php?option=com.

Ezejiofor Victoria O., Ndanwu Angela I., Azolo Enuma M. and Uwaechina Grace C.

Issues and Measures for Improving Lecturers' Use of Electronic Information Resources in Federal University Libraries in South East Nigeria

IFLA (2012). Key issues for e-resource collection development: A guide for libraries. *IFLA 34.* Retrieved from www.ifla.org.

Okiki, O. C. (2013). Availability of information resources for research output: Perceptions of academic staff members in Nigerian federal universities. *International Journal of Computer Science and Telecom-munications,* 4(8),22-33.

Rogers, E.M. (1995). Diffusion of innovations, 3rd ed. New York: Free Press.

Usman, M. K. (2015). The roles of university libraries: A Paradigm change perspective. *Academic Research Journal,* 3(11), 346-350. DOI:10.14662/IJALIS2015.063.

Retrieved from http://www.academic researchjournal.org/IJALIS/Index.htm.

Wagwu, V. & Obuezie (2018). Problems and prospects on the use of electronic information resources by academic library clientele. *University of Ibadan-Journal of Library and Information Science (UI-JLIS),* 112-127.

Yebowaah, F. A. & Plockey, F. D. D. (2017). Awareness and use of electronic resources in university libraries: A case study of University for Development Studies Library. *Library Philosophy and Practice,* 1-32 *(e-Journal).* 1562. Retrieved from *http://digitalcommons.unl.edu/philprac1562.*