



Social Demographic Variables and the Use of Electronic Information Resources among University Students in Nigeria

Diodemise Ese Ovwasa Department of Library and Information science, Faculty of Social Sciences, Delta State University, Abraka, Nigeria

ABSTRACT

This research investigates the influence of social demographic factors on the use of electronic information resources (EIR) among Nigerian university students. The study aims to understand how these variables affect students' engagement with EIR. A survey design, rooted in a positivist paradigm, was employed, involving 2700 undergraduate students from five purposively selected universities that possess the necessary facilities, infrastructure, and manpower to support EIR usage. Data were collected using a questionnaire. Results indicate that EIR significantly aids students in accessing academic materials, with academic information being the primary motivation for its use. Despite frequent utilization of EIR, students face challenges due to inconsistent power supply. The study recommends that university libraries enhance awareness of the benefits of EIR and integrate EIR into the university curriculum. Additionally, library management should establish alternative power solutions to mitigate power outages. The findings offer valuable insights for policymakers and university library administrators seeking to enhance the adoption and utilization of EIR.

ARTICLE INFO

Article History
Received: January, 2023
Received in revised form: March, 2023
Accepted: March, 2023
Published online: June, 2023

KEYWORDS

Age, Sex, Gender, Electronic Information Resources, Students

INTRODUCTION

The information environment in which university students operate has altered since the emergence of information and communication technology. Changes have occurred as a result of advances in ICT. The massive increase of material accessible through the internet has transformed the quest of knowledge. Information is now gathered, organized, stored, accessed, and utilized in many ways. Information is now available in electronic form, which can be found on a variety of platforms. Many organizations, such as university libraries, are adopting and using eresources because they are more accessible, less expensive, and efficient (Ternenge. and Kashimana, 2019). This implies that information and communication technology has resulted in an exponential increase of electronic resources such as e-books, e-journals, and a slew of others, primarily to satisfy the information needs of university students, as well as for learning, teaching, and research.

For every learner, having accurate knowledge is critical. Students may not be able to engage in trustworthy teaching and learning if they do not have access to correct and up-to-date information. Students, as a result, require access to knowledge in university libraries in order to improve their academic performance.

Students can use electronic information resources (EIR) to get timely and accurate information that will help them in their academic pursuits and research.

Electronic information resources, also known as electronic resources, are digital data that can be accessed electronically using computers and other types of electronic portable devices. Electronic information resources, according to Abubakar, Issa, and Ambali (2021), are items that are readily available in digital formats and accessible through a computer,





mainframe, or handheld mobile device that can be accessed remotely over the internet or locally. This means that EIR is a type of information resource that is made available in electronic form over the Internet. E-books, e-journals, CD-ROM databases, Online Public Access Catalogues, and numerous computer-based electronic networks are examples of EIRs. It's worth noting that having access to electronic information resources allows people to have easy access to information. It saves time and is very handy for consumers to use electronic information resources. According to Ofordule, Agbanu, and Nwankwo (2019) electronic information resources are typically in digital formats, such as e-books, e-journals, online databases, e theses, and a variety of others. It's worth noting that e-resources are typically accessible via the internet, as well as other online and offline resources like CD-ROM, DVD, and other computer-based electronic networks. Electronic information resources offer a wealth of opportunities for research, teaching, and the discovery and creation of new fields of investigation, especially for university students (Rabaa, 2015). This means that electronic information resources are typically accessed via computer-based networked facilities including online library catalogs, the internet and the World Wide Web, CD-Rom databases, and a variety of others. Adoption and usage of electronic information resources in university libraries, especially in developing countries, would increase access to enormous collections of digital materials such as e-books and e-journals for students as well as other library users such as academic staff.

Ani, Ngulube and Onyacha (2014) describe several features of EIR, including the ability to save essential information electronically, which may be done concurrently and with multiple accesses via various electronic systems. Additionally, the accessibility and availability of EIR in university libraries allows library users to access e-resources from a variety of locations, including their homes, hostels, libraries, and other areas.

RELATED WORK

To encourage effective use of eresources at Nigerian universities, the National Universities Commission. which oversees university education in the country, has subscribed to a number of local and foreign eresources and made them available to Nigerian institutions (Okiki and Asiru 2012). Furthermore, the council stipulated that 10% of the university's budget be set aside for library resource development, which includes the distribution of eresources. Tella et al. (2007) suggest that in order to effectively use EIR among Nigerian students, it is necessary to identify the many elements that support its use, as well as the impact of demographic characteristics, and that by doing so, the use of EIR among Nigerian students will rise. The use of EIRs at Nigerian institutions is influenced by a number of factors, including demographics; the university's financial situation, technology, and organizational (Diyaolu, 2015) According to Lolade (2020) and (Ovwasa, 2024), electronic information resources in university environments provide researchers with access to advanced and basic search capabilities while also allowing for adequate information without time or location constraints. Electronic resources, on the other hand, provide a number of advantages over print materials, including rapid speed, ease of use, the capacity to search many files at once, and the ability to save and print. As a result, electronic information resources are valuable tools that can be used in conjunction with traditional library materials. The EIR is critical to library collections, especially in this era of ICT. As a result, university libraries must subscribe to full-text databases and electronic books in order to provide better access to information to library customers. As a result, university libraries must adapt to the dramatic changes that EIR has wrought in the operations of academic libraries. According to Sahu and Pandey (2018) several university libraries in developed nations have adjusted and embraced the use of EIR in their collections. EIR has long advocated for the advancement of scholarly communication. EIR are components of effective teaching, learning, and research processes in





universities, and their use is critical in the process of gathering information for research and updating knowledge in numerous fields. However, numerous scholars have looked at the problem of demographic characteristics and EIR, and their findings revealed that there are disparities in male and female EIR usage and attitudes. (Tella et al 2007)

Osinulu (2020) looked at the usage of EIR by undergraduate students and discovered that gender has no bearing on the use of EIR, but that academic level does. The use of EIR among postgraduate students in the South West of Nigeria was investigated by Johnson (2020); the findings suggested that male students used the EIR more than female students. They explained it by saying that male pupils have more time for female students. Bimber (2000) conducted another study in a Chinese institution, and the results revealed that there is a gender disparity in the use of e-resources, and that female students are less likely to use e-resources. This suggests that male students are more likely to use eresources. This was related to a variety of gendered technologies that favor men. Odell, Korgen, Schumacher, and Delucchi (2000) found that male students preferred to use e-resources for recreational purposes in a study conducted in the United Kingdom. Furthermore, Ford, Miller, and Moss (2001) investigated the use of EIR among Nigerian undergraduate students, finding that female students had a variety of obstacles in using EIR, including feeling inadequate and uncomfortable while searching for information on EIR. Furthermore, Oyeniyi (2013) found that attributes and behavior of male and female students manifested in their cultural and social construction of their personalities in a comparable study in Nigeria's south west region. According to Raham, Mahmud, and Jamaludin (2013), the usage of EIR among Malaysian students is influenced by their age and gender. Male students use e-resources more than female students. according to the findings. The results of Kooiang's (2004) investigation into the usage of EIR among part-time students found that age had no bearing on the use of EIR among students. Students' age group influences their usage of e-resources,

according to Tayler and Hasting (2011), who found that students aged 17 to 20 were significantly happy with their use of EIRS. Ganiyu (2013) looked into the use of EIR in two Nigerian colleges and discovered that there is a considerable positive correlation between respondents' age and their use of e-resources. Furthermore, Ebijuwa and Mabawonku (2019) claim that demographic factors like as age, gender, and academic qualifications influence the usage of EIR among Nigerian undergrads. Bar -Ilan, Peritz, and Wolman (2003) investigated the usage of EIR among Israeli students and discovered a strong association between the students' age and their use of EIR. Okiki and Asina (2011) conducted a study in Nigeria on the usage of EIR by postgraduate students. The findings demonstrated a favorable association between EIR use and the use of EIR. In comparison to adult students, young pupils are more likely to use EIR, according to the findings. Similarly, Ebijuwa and Mabawonku (2019) investigated the impact of demographic characteristics on the usage of EIR in Nigerian colleges. The findings demonstrated that the financial status of students has no bearing on their usage of EIR. The use of EIR among university students in India was investigated by Sivathaasan and Velnampy (2013), and the findings suggested that EIR consumption has a good link with students' academic performance.

Statement of the problem

Users' access to information and how libraries supply and manage resources have both changed as a result of technological advancements. As a result, Nigerian university libraries have developed more dynamic methods of making their information resources accessible in a variety of formats rather of relying primarily on print versions. Many university libraries in Nigeria have invested a significant portion of their budgets to subscribe to EIR for their users' usage. Despite this, as noted by Agboola and Bamigboye (2011), undergraduate students still avoid using these resources, preferring instead to use Google search, despite Google's limitations, particularly in providing access to reliable and credible information.





Furthermore. existina literature. personal observation, and pre-research interviews with undergraduate students and academic librarians in various Nigerian university libraries revealed that the resources are extensively underutilized by students. Despite the multiple values and benefits of EIR, it is often believed that these resources are underutilized by Nigerian students. There are a variety of causes for this, including a lack of skills, insufficient ICT infrastructure, and the impact of demographic variables (Ovwasa, 2021). Academic librarians in Nigeria have expressed worry about students' failure to make efficient use of EIR, therefore the study's goal is to look into the relationship between social demographic characteristics and EIR use in Nigerian universities.

The study would address the following research questions based on this.

- i. What are the benefits of undergraduate students at Nigerian universities using electronic information?
- ii. Did they use electronic information resources on a regular basis?

- Are the users satisfied with EIR's performance?
- Demographic factors influence (Genders and Ages on the use of EIR)
- · What are the obstacles to implementing EIR?

RESEARCH METHODOLOGY

The current study made use of a survey that was based on the positivist paradigm. The argument for the positivist paradigm is that it fosters precision while also emphasizing empirical methods in data collection for academic study. According to Owolabi (2016), the positivist paradigm allows academic research to be founded on observable facts. The students were largely undergraduates (2700) in their final years of study who registered in the selected university libraries. However, there hundred final years students were randomly selected form each of the universities Purposive sampling was employed to choose five universities for the students, with the argument being that they had the requisite facilities, infrastructure, and manpower to support the use of EIR. Furthermore, final-year students were chosen because they were the most qualified.

Table 1. Overview of the population

Table 1. Overview of the population						
Faculties	OAU	OAU	UI	UI Returned	FUNNAB	Returned rate
	Distributed	Returned	Distributed	rate of the	Distributed	of the
	Questionnaire	rate of the	Questionnaire	questionnaire	Questionnaire	questionnaire
		questionnaire		1		
Education	300	173	300	163	300	178
Science	300	151	300	134	300	165
Engineering	300	161	300	159	300	156
Total	900	485	900	456	900	499
Grand total					1440	

Demographic Features of Respondents

Results in Table 3 on demographic features of respondents reveal that the majority of them were female (58.6%) who were within the

ages of 23 and 27 years old (42.2%), mostly from the University of Lagos (42%) with 1 to 5 years' (54.7%) computer experience.

Table 2: Demographic features of respondents

Variables	Respondents	Percentage
Gender		
Male	925	64
Female	515	36
Age		
16- 20	413	29

Corresponding Author: Diodemise Ese Ovwasa

<u>ese.evwaras.ovwasa@gmail.com</u>

Department of Library and Information Science, Faculty of Social Sciences, Delta State University, Abraka.

© 2023. Faculty of Technology Education. ATBU Bauchi. All rights reserved



JOURNAL OF SCIENCE TECHNOLOGY AND EDUCATION 11(2), JUNE, 2023 ISSN: 2277-0011; Journal homepage: www.atbuftejoste.com.ng



21-25	604	42
26 -30	293	20
31-35	100	07
36 and above	30	02
Total	1440	100

The benefits of using EIR by undergraduate students

Table 3. The benefit of using EIR

Benefits	Respondents	Percentage
Provide access to range of academic information	493	34
Very fast to use particularly in searching for information	284	19
Provide access to current and reliable information	372	26
Use to support my academic activities	291	21
Total	1440	100

Purpose of using EIR

Table 4. Purpose of using EIR

Purposes	Respondents	Percentage	
Academic purposes	532	37	
For doing my assignments	331	23	
For research activities	429	30	
For communication with my friends	48	03	
For entrainment	101	07	
Total	1440	100	

Table 5. Frequency of using EIS

Frequency	Respondents	Percentage	
Very often	364	25	
Often	679	47	
Occasionally	258	18	
Rarely	139	10	
Total	1440	100	

Challenges facing the use of EIR

Table 6. Challenges facing the use of EIR

Challenges	Respondents	Percentage
Time consuming due to the high number of information	206	15
Inadequate power supply	412	29
There is too much information retriever	123	09
Limited access to computer terminal	312	22
Lack of necessary computer skills to operate skills to operate the	45	3.0
resources		
Poor Internet connectivity	34	25
Total	1440	100

Corresponding Author: Diodemise Ese Ovwasa

<u>ese.evwaras.ovwasa@gmail.com</u>

Department of Library and Information Science, Faculty of Social Sciences, Delta State University, Abraka.

© 2023. Faculty of Technology Education. ATBU Bauchi. All rights reserved





Relationship between the age and gender and demographic variables of the students toward the use of EIR

Test of hypotheses

For the objectives of this study, Chisquare was used to evaluate the link between gender and the use of EIR, and Pearson's Product Moment Correlation (PPMC) was used to test the relationship between age and the usage of EIR, which was measured at nominal and ordinal levels. However, there is no significant link between gender and EIR use among undergraduate students (p>0.05), according to the findings. As a result, gender does not appear to have a major impact on undergraduate students' usage of the EIR.

In addition, the interval and ration levels were used to evaluate the association between a demographic characteristic (age) and the use of EIR. The results revealed that there is a strong link between age and the usage of EIR. There is a significant link between age and the usage of EIR (p 0.05), according to the findings.

DISCUSSION OF FINDINGS

One of the study's findings found that there are more male students than female pupils in the study. This indicates that the study had a large number of male participants. This finding supported the findings of Owolabi et al (2020) in a similar study in Nigeria, which found that males make up the majority of students in Nigerian universities.

Furthermore, the findings are consistent with those of Gakibayo and Oke;;o –Obura (2013) in Uganda, who discovered that there are more male students in Ugandan universities. The findings of the study, however, contradict those of Osinulu (2020) in a study on the usage of EIS in a Nigerian institution. Another finding of the study was that the majority of the students who participated in the research were between the ages of 21 and 25. This indicates that the study included a large number of young adult pupils. This finding backed up Gakinayo and Oke (2013) Obura's findings from a similar survey in Uganda

(2013), which found that the bulk of the respondents are between the ages of 21 and 25.

Furthermore, the findings revealed that access to a wide range of academic knowledge was the primary reason for respondents' use of EIS. This study corroborated the findings of Thanuskodi (2012), who concluded that the primary benefit of using e-resources among students is to give access to a wide range of academic knowledge that will aid students in their academic pursuits. Pawar and Moghe (2014), Thanuskodi came to similar conclusions (2014).

Another outcome of the survey found that students used the EIR for academic objectives. This finding backed with what Izuagbe, Hamzat, and Joseph (2016) found in a study on the use of EIR at Nigerian private universities. The findings revealed that the primary reason students use the EIR is for academic purposes. Furthermore, the findings corroborated those of Nkoyo and Nsanta (2016) in a Nigerian public university, who discovered that the EIR is primarily used for academic purposes. In addition, the findings corroborated those of Negahban and Talawar (2009)

Furthermore, the majority of respondents claimed to using EIS on a regular basis. This finding supported the findings of lzuagbe and Hamsat (2016), who found that students in a Nigerian private university used EIR often. They attributed this to the study's perceived benefit from utilizing the resources. Furthermore, the findings corroborated Damilola's (2013) findings on the usage of EIR by distance students in Nigerian Open University study centers, which revealed that the students accessed the resources often.

Inadequate power supply was discovered to be one of the most significant obstacles to students' usage of EIR. This finding matched Adetunla's (2016) findings in a previous study, which found that the main difficulty to using EIR among Nigerian undergraduate students is a lack of power supply. In addition, the findings of the study corroborated those of Ajuwon et al. (2003) and Okiji et al (2013).

In terms of hypothesis testing, it was discovered that there is no statistically significant





link between gender and the use of EIR. This finding contradicts Bassi and Camble (2011)'s assertion that there is a statistical difference in the utilization of e-resources between male and female students. The findings of their research revealed that male students have a mean value of 23.5302, which is higher than female students' 21.4693. Furthermore, the findings supported those of Utuly (2006) and Tella and Mutula (2008).

Furthermore, the findings of the study demonstrated that there is a link between age and the usage of EIR. This supported Quardri's (2013) observation that age influences the usage of EIR among Nigerian university students. The findings backed up Isalm's (2011) findings in Malaysia about the usage of EIR among undergrad students in the country. The findings are likewise consistent with those of Rahman, Mahmud, and Jamaludin (2013), as well as Enock and Socker (2006)

CONCLUSION

According to the report, male students used the EIR more than female students. Similarly, the discovery found that young adult students used the library. The main advantage of using the resources is having access to a wide range of academic knowledge. Concerning the reasons for employing EIR. It was discovered that the primary motive for utilising the materials is for academic purposes. It is explicitly stated that the students used the EIR frequently, and that the biggest problem to using the EIR is a lack of power supply.

The following recommendations were made based on the study's findings. There is a critical need for increasing knowledge about the usage of EIR among students of all ages and genders. EIR education should be integrated in university curricula. Furthermore, the course on the use of EIR should be taught by a highly experienced academic staff. Furthermore, library workers must encourage students to become more interested in using EIR. In order to increase the academic performance of the kids. Furthermore, faculty members should be encouraged to provide homework to students. This will allow them to make extensive use of the

EIR. The university administration should provide an alternative power supply in the event that the government agency that supplies electricity to the country has a power outage.

The study adds to knowledge in a variety of ways, including policymaking on the use of EIR in the country's colleges. Furthermore, the research will be valuable for academic librarians and librarians in promoting the use of EIR. Furthermore, because the study gives new data, it will be valuable for researchers pursuing EIR research.

Despite this, there are several limitations to this study. For starters, the study is limited to a small number of undergraduate students and a small number of universities; as a result, the study's conclusions cannot be generalized. However, more research on the use of EIR at other higher education institutions in the country, including as polytechnics and colleges of education, is required.

REFERENCES

Adetunla, G. O. (2016). Perceived ease and use of electronic information resources by undergraduate students of private universities in Oyo State Nigeria.

African Journal of Education and Practice, 1(2), 15–28.

Abubakar, L, Issa, A. O. and Ambali, Z. O, (2021)Adoption and Utilization of Electronic Databases by Postgraduate Students in Selected Universities in North-central, Nigeria" (2021). Library Philosophy and Practice (e-journal). 6402.

Ajuwon, G. A. (2003). Computer and internet use by first year clinical and nursing students in a Nigerian teaching hospital. *BMC Medical Informatics* and Decision Making, .3 (10), 12-20

Ani, O.E, Ngulube, P & Onyancha, B. (2014).

Effect of accessibility and utilization of electronic information resources on productivity of academic staff in selected Nigerian Universities.

Science Research. 2(6):166-171.



JOURNAL OF SCIENCE TECHNOLOGY AND EDUCATION 11(2), JUNE, 2023 ISSN: 2277-0011; Journal homepage: www.atbuftejoste.com.ng



- Bamigboye, O. B. and Agboola, I.O.(2011)

 Availability and accessibility of internet facilities in Nigerian university libraries: A case study of two federal universities in South West Nigeria.

 Library Philosophy and Practice (e-journal). 547.
- Bamigboye, O.B and Agboola, I.
 O.(2010)"Availability and accessibility
 of internet facilities in Nigerian
 university libraries: A case study of
 two federal universities in South West
 Nigeria. Library Philosophy and
 Practice (e-journal). 547.
- Bassi, M. D. and Camble, E,(2011) Gender differences in use of electronic resources in university libraries of Adamawa state, Nigeria. Library Philosophy and Practice (e-journal). 549.

 https://digitalcommons.unl.edu/libphilprac/549
- Bimber, B. (2000). Measuring the Gender Gap on the Internet. *Social Science Quarterly*.
- Damilola, O, A, (2013) Use of electronic resources by distance students in Nigeria: The case of the National Open University, Lagos and Ibadan Study Centers . Library Philosophy and Practice (ejournal).915.
- Diyaolu, O. B.(2018) Influence of demographic characteristics on utilisation of EIR by postgraduate students in three selected universities in South-west Nigeria . Library Philosophy and Practice (ejournal). 2105.
- Ebijuwa, A. S. and Mabawonku, I.(2019),
 Demographic variables and academic discipline as determinants of undergraduates' use of electronic library resources in Federal universities in South-west, Nigeria.

 Library Philosophy and Practice (e-journal). 2164.
- Ford, N., Miller, D. & Moss, N. (2001). The role of individual differences in Internet searching: An empirical study. *Journal*

- of the American Society for Information Science and Technology, 52(12), 1049-1066.
- Gakibayo, A; ; and Okello-Obura, T, (2013)
 Electronic information resources
 utilization by students in Mbarara
 university library *Library Philosophy*and *Practice* (e-journal). 869.
- Ganiyu, O. Q. (2013). Influence of demographic factors on use of online library resourcesby Undergraduate students in two private Nigerian University Libraries. Library Philosophy and Practice (e-journal). Paper 976.
- Islam, M.A. (2011). Effects of demographics factors on e-learning effectiveness in a higherlearning institution in Malaysia. *International Educational Studies*, 4 (1), 4-7.
- Izuagbe, R. and Saheed, A. H. and Edith, I. J. (2016) Electronic Information
 Resources (EIR) Adoption in Private
 University Libraries: The Moderating
 Effect of Productivity and Relative
 Advantage on Perceived Usefulness.
 Journal of Information Science Theory
 and Practice, 4 (1)
- Johnson O. A.(2020). Awareness and use of electronic journals by postgraduates in two federal universities in south west, Nigeria Samaru Journal of Information Studies 20(1)
- Koohang, A. (2004). Students' perceptions toward the use of the digital library in weekly web-based distance learning assignments portion of a hybrid program. *British Journal of Educational Technology*, 35,617-626.
- Lolade, F.O. (2020). Awareness and use of electronic information resources by students of college of health sciences in Olabisi Onabanjo University, Nigeria. Journal of Information and Knowledge Management, 1(11): 11-12.
- Negahban and Talawar, (2009). Dependency on e –resources among social –science faculty in Iranian universities. *Chinese*



JOURNAL OF SCIENCE TECHNOLOGY AND EDUCATION 11(2), JUNE, 2023 ISSN: 2277-0011; Journal homepage: www.atbuftejoste.com.ng



- Librarianship: an International Electronic Journal 2
- Nkoyo, B. E. and Nsanta, E. (2016). Availability and utilisation of electronic resources by postgraduate students in a Nigerian university library: a case study of University of Calabar, Nigeria. Information and Knowledge Management, 6(2).
- Odell, P. M., Korgen, K. O., Schumacher, P., and Delucchi, M. (2000). Internet use among female and male college students. *CyberPsychology & Behavior*, *3*(5), 855–86
- Ofordule, J.O., Agbanu, N.A. & Nwankwo, N.G. (2019). The use of resources as a correlate of user satisfaction in University libraries. *International Journal Science and Humanities*, 1(9), 1-2.
- Okiki, O.C. and Asina, S.M. (2011). Use of Electronic information sources by postgraduatestudents in Nigeria: Influencing factors. *Library Philosophy and Practice*. 4-6..
- Okiki, O.C. and Asiru, S.M. (2011). Use of electronic information sources by postgraduate students in Nigeria: influencing factors, *Library Philosophy and Practice*.
- Okiki, O.C. and Asina, S.M. (2011). Use of Electronic information sources by postgraduatestudents in Nigeria: Influencing factors. Library Philosophy and Practice. 4-6
- Osinulu, L (2020) Awareness and use of electronic information resources by students of College of Health Sciences in Olabisi Onabanjo University, Nigeria. *Information Impact: Journal of Information and Knowledge Management*, 11 (3), 1-11.
- Ovwasa, (2021). Information needs and seeking behavior of small and medium enterprises (SMEs) managers in Nigeria. University of Ilorin, Nigeria. International Journal of Information

- processing and communication. 11(1), 113-126.
- Oyeniyi, A. S. (2013). Gender difference in information retrieval skills and use electronicresources among information professions in South West Nigeria. International Journal of Library and Information services,5(7),2008-2011
- Pawar, R.R. and Moghe, G.S. (2014). Need of eresources in academic libraries. researchgate publication. Retrieved 14th Jan,2022.https://www.researchgate.n et/publication/30397213
- Quadri, G.O, Adetimirin, A.E. and Idowu, O.A (2014). A study of availability and utilization of library electronic resources by undergraduate students in private universities in Ogun, State, Nigeria. International Journal of Library and Information Science; 6(3):28-34.
- Rabaa, A.A. (2015). An empirical investigation on the adoption of e-government in developing countries: The case of Jordan. *Computer and Information Science*, 8(3): 2015
- Rahman, A.A, Mahmud, Z. and Jamaludin, A. (2013) Age, gender and race differences in the usage of digital library among Malaysian postgraduate students. Recent Researchers in Education, 137-140.
- Sahu, P. and Pandey, S.R. (2018). Measuring satisfaction of users from e-library visà-vis selected libraries of Rajasthan States. *Library Waves*, 4 (1),51-59.
- Sivathaasan, N. and Velnampy, T. (2013) Use of Electronic information resources and academic performance of university teachers: A case study. European Journal of Business and Management, 5, 46-52
- Tayler, K. and Hastings, N.B. (2011), Factors influencing virtual patrons satisfaction withonline library resources and



JOURNAL OF SCIENCE TECHNOLOGY AND EDUCATION 11(2), JUNE, 2023 ISSN: 2277-0011; Journal homepage: www.atbuftejoste.com.ng



services, Florida. *The Journal of Education Online*,21..

Tella, A, Ayeni, C. O and Omoba, R.O. (2007).

Self-efficacy and use of electronic information as predictor of academic performance. Electronic Journal of Academic and Special Library 8 (2)

Tella, A., and Mutula, S.M. (2008). Gender difference in computer literacy among undergraduate students at the University of Botswana: implication for library use. *Malaysian Journal of Library & Information Science* 13 (1): 59-76.

Ternenge,T. S. and Kashimana, (2019),
Availability, Accessibility, and Use of
Electronic Information Resources for
Research by Students in Francis
Sulemanu Idachaba Library University
of Agriculture, Makurdi. Library
Philosophy and Practice (ejournal).2352.

Thanuskodi, S. (2012). Use of E-resources by the students and researchers of Faculty of Arts, Annamalai University. *International Journal of Library Science*, 1 (1) 1 – 7.