

**Influence of Information and Communication Technology Skills as correlates of undergraduates' use of Electronic Information Resources in Federal University Lokoja**

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**Abstract**

Electronic information resource is germane source needed for academic exercise of undergraduate students. The study raised four research objectives; concerning information and communication technology skills as correlate of undergraduates use of electronic information resources in Federal University Lokoja, Nigeria. Descriptive survey research design was adopted for the study. The population of the study consisted of 459 undergraduates' students purposively sampled from three departments with 400 level undergraduate students, where one each were selected from the three faculties. However, out of 459 questionnaires distributed, a total of 425 were duly returned representing 93% respondents. Findings revealed that electronic databases were the highest type of electronic information resource used, closely followed by online reference work. However, E- book management system (calibre) was the least utilize types of electronic information resources known to the respondents. The findings from the study revealed that most of the undergraduate students possessed low ICT skills in the study area. The findings further showed that the lecture hall and home were the major points where undergraduates in Federal University Lokoja accessed and use electronic resources more than the university library. Frequent downtime of server and lack of search skills were the major constraints to use of electronic information resources by undergraduates in Federal University Lokoja. It is recommended amongst others that there is need for library management in the study area to promote library services by raising awareness about the library offerings through various channels, such as social media, newsletters, and campus events. Also, the library management should implement a robust monitoring system to promptly identify and address any potential issues before they result in server downtime.

**Keywords:** Electronic Information Resources, Information and Communication Technology Skills, Undergraduate Students, Utilization.

## **Introduction**

The emergence of Information Communication Technology (ICT) has brought about significant developments to the education sector which include the application of computers for information processing. The advent of ICT has brought about tremendous changes in university communities. People in the sector have taken up new dimensions influenced by technology such as the electronic resources (Electronic information resources). Information resources, encompassing a diverse array of academic materials such as textbooks, scholarly articles, online databases, and multimedia content, serve as the bedrock for cultivating intellectual growth and academic excellence among university students (Kumar & Sharma, 2019). The pervasive integration of ICT tools and platforms has revolutionized the access and consumption of these resources, providing students with an unprecedented scope to augment their academic pursuits (Nash et al., 2022). This evolution aligns with the findings of previous research, which posits that students' ability to navigate and effectively utilize ICT significantly contributes to their academic success (Smith & Caruso, 2020).

Dafiaghor (2012) submitted that Electronic information resources entail information resources that must be used with electronic devices such as personal computers (PCs), laptops, palmtops, tablets, DVD, VCD, CD-players, projectors, i-pods, i-phones, i-pads, the Internet, WAN/LAN networks, and so on. On the other hand, electronic information resources such as electronic journals, electronic books, electronic magazines, electronic newspapers and electronic theses among others are electronic information resources that could be useful for academic and research activities. Electronic information resources motivate undergraduates to learn as these resources permit undergraduate learners opportunity to search, acquire, share, download academic materials and disseminate such on subjects of interest. Electronic information resources encourage searching multiple of files timely. Interestingly, these resources are updated more often than printed tools.

It is pertinent to mention that university documentation centre and libraries have invested a huge sum in infrastructural facilities to provide e-resources to the undergraduates in Nigerian universities, despite various benefits of e-resources and its positive effect on undergraduates performance in universities, it is noted that undergraduates are yet to harness the opportunities provided by the e-resources and even where these facilities are put in place, the undergraduate are not making use of the valuable e-resources due to lack of skills required to navigate the technology (Omosekelimi et. al., 2015)

Kinengyere et.al. (2012) reported that the development from print to electronic media has provided users with new tools and applications for information seeking and retrieval. Electronic information resources benefits facilitate access to and use of information resources that with restriction to users as a result of location, funds;

information obsolescence. They also provide links to other resources that may be of benefit to users.

Electronic information resources have ease of use, manipulation and update, usually at no extra cost to the users. Several electronic information resources are available for subscriptions, worldwide, especially Nigerian markets through open access while others are closed access which requires that university library managements subscribe so they can access them. Electronic information resources provide the 21<sup>st</sup> century undergraduate students advantages that were not available to previous generation of students.

Gakibayo, Odongo & Obura, (2013) stressed that in Ogun state, electronic information resources available for service provision in university libraries are EBSCOHOST, HINARI, JSTOR, OARE, AGORA, and Science direct. IEE is the most commonly available Electronic information resources available in the three university libraries surveyed (Isiakpona and Ifijeh, 2012). Emphasising that no tertiary institution in the 21<sup>st</sup> century can rely only on ,printed information resource to accomplish their set goals. In other words, electronic information resources are being acquired in tertiary institutions in relation to discipline and curricular needs. Also, universities are able to provide 24 hours service through electronic information resources. The service permits flexibility of search and user's convenience of multiple access to users, full-text searches and fast delivery of information. Through digital libraries, undergraduates can have access, locally to electronic information through the Internet.

Millawithanachchi (2012) pointed out that information centres, ICT centres, documentation and media centres are making frantic efforts to satisfy the undergraduates information needs have been marred by under-utilization. Based on this, the study wanted to X-ray the causes of the underutilization of the e-resources. Emwanta and Nwalo, (2013) reported that these resources can be accessed on the World Wide Web (www), over the library networks and from stand-alone terminals. Electronic resources have the ability to enhance teachers' effectiveness and learning. This is because electronic information resources afford the major stake holders in education, teachers and students, access to enormous quantity of resources information in an easily accessible non-sequential format. Ajayi, Shorunke and Aboyade (2014) posited that the provision of electronic information resources in the right quantity as a major input for appreciable information services.

Electronic information resources should be accessible when they are available. In a study by Quadri, Adetimirin and Idowu (2014), it was reported that the quantity of electronic information resources provided for users of libraries in universities and the degree to which they are being utilised define the level of information services delivery of university libraries. Therefore, the availability and skilful utilisation of electronic information resources by students translate into meaningful use by the users. Rahman (2010) therefore declared that technological development in library/research in the 20th

century via the emergence of electronic information resources was intended to make access to literature more direct, convenient and timely for the user(s), thereby making the library a growing organism and the researchers and others to repeatedly accommodate the changes inherent in the use of constantly changing technology.

In the last twenty years, a remarkable improvement was recorded in collection development activities and practices in university libraries. Consequent upon this, undergraduates are now considering convenience, timely and fast response as they move from using print and physical resources to electronic in various university campuses; due to the immense benefits of electronic information resources to teaching, learning and research.

### **Statement of the problem**

ICT skills in this digital age is concerned germane in organization especially libraries since it promotes access, increase usability and efficiency, and create new ways for students to use the available Electronic Information Resources (EIR) in University Library. The utilization of Electronic Information Resources (EIRs) has become inevitable for students in this digital age, due to the amount of scholarly resources that are available in EIRs. Effective use of these EIRs depends on Information Communication Technology Skills (Adamu, 2023). However, despite the effort put by Directorates of General studies, Federal University Lokoja in teaching undergraduate students relevant ICT skills as well as university library conducting regular sensitisation, orientation and user education programmes for student on the use of electronic information resources that are available in the library, and the utilization information appears to be below expectation. Also, with the inestimable advantage and benefits of e-resources, it is assumed that the undergraduates in Federal University Lokoja, Nigeria do not utilize the e-resources for their academic and research endeavours.

The challenges confronting e-resources utilization have been reported by many scholars. Godwin, Dalhatu and Ayodele (2021), found that lack of search skills, irregular subscription of internet databases as the major constraints to electronic information resources utilization by postgraduate students at Nasarawa State University, Keffi. Adeleke and Nwalo (2017) study found that utilization of EIRs by students were low due to factors such as locating the most appropriate information, few computers with internet facilities. Students must acquire ICT skills to explore them, and this will assist students to effectively search, utilize and have access to needed information. There is the paucity of research with concerns to ICTs skills and utilization of Electronic Information Resources among undergraduate student. To the best of the researchers' knowledge there is no such studies in Federal University Lokoja at present thus the need to fill the empirical knowledge gap.

### **Objectives of the study**

This study investigated the correlation between ICT skills and the use of electronic information resources by undergraduate in Federal University Lokoja. Specific objectives of the study are: -

- i. to examine types of electronic information resources use by undergraduate students in Federal University Lokoja;
- ii. to investigate the level of skill in ICT possessed by undergraduate students in Federal University Lokoja.
- iii. to examine the access points to electronic information resources, use by the undergraduate students in Federal University Lokoja
- iv. to identify constraints to Electronic information resources usage by undergraduates in Federal University Lokoja

### **Scope of the study**

The study focuses on the ICT skill as correlate of undergraduates' use of electronic information resources in Federal University Lokoja. The respondent scope of the study was limited to only 400 level undergraduates in Federal University Lokoja because they were considered to have adequate knowledge about the topic for investigation.

### **Significance of the study**

The findings of this study will contribute to the development of evidence-based strategies to enhance students ICT skills and promote effective utilization of electronic information resources in the university. The findings will enable librarians organize appropriate trainings that will equip the undergraduate students to maximize the utilization of the electronic resources in the university and justify the huge cost of acquiring the subscription for the databases.

The study will also contribute to literature in LIS particularly as it relates to ICT skills and students' utilization of electronic resources.

### **Literature Review**

In a study of electronic information resources carried out by Okogwu (2020) of the university library in South East Nigeria, the following types of electronic resources were identified to include EBSCOHOST, MEDLINE, OARE, AGORA, AJOL JSTOR, Nexus, e-books, and e-journals especially free online resources. Haruna, Ahmed, Alhassan and Onwukanjo (2021) conducted a survey on influence of electronic information resources on the achievement of sustainable development goals in Ahmadu Bello university e-library. The results revealed that HINARI, JSTOR, AOL, AGORA, Science direct, EBSCHOST, internet, CD-ROM, OPAC, e-theses & dissertation, e-institution repository, e-book, e-newspaper, e-journals were the types of electronic information resource available in the e-libraries. In the same vein, Abubakar and Yar adua (2021) study use of electronic information resources in academic libraries in Katsina State, Nigeria. The study discovered that e-books, CD-ROMs, e-mails, e-magazines, online database, e-journals, e-references, e-manuscripts, e-dissertation, e-conferences, online database, are the available types of electronic information

resources available in academic libraries. Amidu, Jibril and Ayodele (2021) investigated electronic resources utilization as a correlate of research output of postgraduate students in Nasarawa State University Keffi, Nigeria. The findings of their study indicated that CD-ROM, internet, TEAL, e-journals, e-books, science direct, Ebscohost and Jestor were available in the university under study. In a similar study conducted by Victor and Theresa (2021) in Makurdi, the scholars found variety of electronic information resources available in university under study. They include e-news, electronic books and journals, bibliographic databases, library website pages, e-theses, etc. Also, Ejomafuvwe (2017) carried out a study titled, *the determinant of the use of electronic information resources by Library and Information Science postgraduate Students in Public Universities in South- South and South West Nigeria*. The study revealed that e-book, e-journal, e-thesis/dissertation, online database, CD-ROMs, OPAC, e-encyclopaedia, e-newspaper and e-article, were the types of electronic information resource present in the study area.

In Nigeria, some reports have provided insight into the level of ICT skills possessed by students. Yusuf, Lois, Goyol and Abdulmalik (2023), in Lokoja, reported that Polytechnic librarians possesses ICT skills in smart phone, tablets and computer and online collaboration skills. Moreover, Adamu (2023) investigated into level of national diploma students' information literacy skills, Hadejia. The study reveals that students reveal high level of skills in the five constructs of information literacy. Uno et. al., (2021) showed that staff of Nigerian law school library, Bwari, Abuja have high level of ICT skills with 23 respondents' representing 76.67%. A research carried out by Bamigboye, Bankole, Ajiboye and George (2013) showed that majority of respondents were in various areas of ICT; running programmes, searching for files on computer system, connecting the computer and its peripherals, downloading files from the internet, presenting PowerPoint, using web search engines.

Sambo et. al., (2021) conducted a study on utilization of electronic information resources. The findings discovered that the postgraduate students in MAUTECH point of access to electronic information resources include university library, university ICT centre, through the use of private subscribe data plan. Similarly, in the research conducted by Afuffo & Budu (2019) stated that postgraduate students mostly utilized access to information from google scholar, and other web-based databases more often than the databases in the library.

Adelekeand (2017) investigated the availability, use and constraints to use of electronic information resources by postgraduate students at the university of Ibadan. The findings of the study showed that issue of locating the most suitable information, power supply, few computers with internet facilities and challenges with speed and capacity were the main constraints to electronic information resource utilization by the respondents under the study area. In a study conducted by Sambo, Quadir and Ibrahim (2021)), power outage, network/connection constraints, lack of information search skills were among the bottlenecks associated with the use of electronic information resources. Ejomafuvwe (2017) lack of search skills, irregular subscription of subject



databases and poor ICT facilities, inadequate networked computers, erratic power supply and download delay were the challenge faced by PG students in the use of electronic resources by Library and Information Science M.Sc Students in Public Universities in South- South and South West Nigeria. Furthermore, Victor and Akaaka (2021) found out that constraints of electronic information resource include poor internet facilities, poor power supply, inadequate facilities for using e-resources in my library, lack of awareness of electronic resources, strict policies on electronic resource usage. In a similar study carried out by Ankrah and Atuase (2018) in Ghana, the result of their findings revealed that access problem, search and retrieval problems, and personnel related problem were the challenges being encountered by postgraduate students of Theological University.

### **Methodology**

The study adopted descriptive survey research design. The population of the study consisted of 459 undergraduates purposively sampled from three departments with 400 level undergraduate, where one each were selected from the three faculties. The departments are English and Literary Studies, Computer Sciences and Economics. However, out of 459 questionnaires distributed, a total of 425 were duly returned representing 93% respondents The Justification for this choice of three departments is based on the fact that the constitutes the dominant users of ICT in the study area. A structured questionnaire consisting of two parts was used to gather relevant information. The first part consisted of items that measured personal and demographic variables. The second parts consisted of types of electronic information resources available, point of access to electronic information resources, level of their ICT skill possessed, and the constraints to the use of electronic information resources. Data collected for this study were analysed using descriptive statistics such as frequency counts, percentages.

### **Result and Discussion of Findings**

The responses obtained are presented in tables. The findings are discussed mainly on the basis of the set objectives of the study.

**Table 1:** Types Electronic Information Resources used by the Undergraduate in Federal University Lokoja

<i>Electronic information resources</i>	<i>Frequency</i>	<i>Percentage</i>
<i>Electronic Databases</i>	108	25.4
<i>Online Reference Work</i>	97	22.8
<i>E-Journals</i>	55	12.9
<i>Full Text Articles</i>	45	10.6
<i>Electronic Books</i>	35	8.2
<i>CD-ROMs</i>	35	8.2
<i>E-Research Report</i>	20	4.8
<i>E-granery</i>	8	1.9
<i>E-book management system (Calibre)</i>	2	0.5
<i>Online Cataloguing</i>	20	4.7

<i>Total=</i>	425	100
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It is obvious from Table 1 that electronic databases with 108(25.4%) was the highest. This is closely followed by online reference work 97 (22.8%). However, E- book management system (calibre)2 (0.5%) was the lowest utilize types of electronic information resources known to the respondents. This corroborates Abubakar and Yar adua (2021) who discovered that e-books, CD-ROMs, e-mails, e-magazines, online database, e- journals, e-references, e-manuscripts, e-dissertation, e-conferences, online database, are the available types of electronic information resources available in academic libraries.

**Table 2:** Level of ICT skills possessed among undergraduates in Federal University Lokoja

Statement	Very High	High	Low	Very Low
I can connect computer and its peripherals (mouse, keyboard, monitor)	77 (18.1%)	248 (58.4%)	43 (10.1%)	57 (13.4%)
I can search for files on the computer system	67 (15.8%)	37 (8.7%)	98 (23%)	223 (52.5%)
I can backup file into various media types	82 (19.3%)	16 (3.8%)	102 (24%)	225 (52.7%)
I can use CD-ROMs based software	69 (16.2%)	92 (21.7%)	111 (26.1%)	153 (36%)
I can analyze EIRs obtained from the internet	50 (11.8%)	70 (16.4%)	195 (45.9%)	110 (25.9%)

Table 2 revealed the level of ICT skills possess by undergraduate students in the study area. Majority of the respondents, 327 (76.9%) affirmed that they could back up file into various media, while 98 (23.1%) view it as low. Closely followed, by 325 (76.5%) respondents who agrees that the connection of computer and its peripherals (mouse, keyboard, monitor) is low, but 100 (23.5%) of the respondents indicated high. Also, 120 (28.2%) respondents perceive that analyzing of EIRs obtained from the internet is low while 303 (71.8%) of them affirmed it to be high. This finding is in disharmony with Adamu (2023) findings where the revealed that students of national diploma information literacy skills in Hadejia have high level of skills in the five constructs of information literacy. This is in disagreement with what was obtained in the study of Bamigboye, Bankole, Ajiboye and George (2013) which revealed that majority of respondents were competent in various areas of ICT; running of programmes, search for files on computer system, connect the computer and its peripherals, downloading files from the internet, present PowerPoint, use web search engines.

**Table 3:** Point of Access to Electronic Information Resources

Access Point	Frequency	Percentage
Lecture Rooms	180	42.4



At Home	136	32
Cyber Café	71	16.7
University Library	38	8.9
Total=	425	100

Information on points of electronic information resources access by the respondents as presented in Table 3 revealed that 180 respondents (42.4%) and 136 respondents (32%) had access to electronic information resources in the lecture rooms and home respectively. Other points of access as attested to by some of the respondent were the cyber café 71 (16.7%) and university library 38 (8.9%). The implication drawn from the foregoing is that the lecture rooms and home were the major points where undergraduates in Federal University Lokoja accessed and use electronic resources more than the university library or cyber cafés. This finding corroborates the findings of Sambo, Quadir and Ibrahim (2021) who discovered that the postgraduate students in MAUTECH point of access to electronic information resources include university library, university ICT centre, through the use of private subscribe data plan. The findings of this study were in disharmony with the study of Afuffo & Budu (2019) which stated that postgraduate students mostly utilized access to information from google scholar, and other web-based databases more often than the databases in the library.

Table 4: Constraints Associated with the use of Electronic Information Resources by Undergraduates of Federal University Lokoja

Constraints	SA	A	D	SD
Frequent downtime of server	387 91%	30 7.1%	8 1.9%	_____
Lack of skills to effectively access electronic information resources	230 54.1%	107 25.2%	53 12.5%	35 8.2%
Inadequacy of available electronic information resources	200 47.1%	123 28.9%	42 9.9%	60 14.1%
Unavailability of electronic information resources	220 51.8%	125 29.4%	56 13.2%	24 5.6%
Coverage on electronic information resources is not suited to my needs	225 52.9%	145 34.1%	55 13%	_____
Lack of training on electronic information resources	206 48.5%	102 24%	57 13.4%	60 14.1%

Table 4 showed that majority of the respondents (417 or 98.1%) agreed that frequent downtime of server is the major constraints hindering effective utilization of electronic information resources by undergraduates in the study area. In the same vein, 345 (81.2%) agreed that lack of training on electronic information is another challenge faced by undergraduates. Lack of training on electronic information resources is the least challenge faced by undergraduate students while using electronic information resources in the study area. It could be inferred from the results that frequent downtime of server and lack of search skills were the major constraints to the use of electronic information resources by undergraduates in Federal University Lokoja. The findings were in line with Sambo, Quadir and Ibrahim (2021) who found that power outage, network/connection constraints, lack of information search skills were among the bottlenecks associated with the use of electronic information resources. Also, Ejomafuvwe (2017) findings discovered that lack of search skills, irregular subscription of subject databases and poor ICT facilities, inadequate networked computers, erratic power supply and download delay were the challenge faced by PG students in the use of electronic resources by Library and Information Science M.Sc Students in Public Universities in South- South and South West Nigeria. This is contrary to what was found in the study of Victor and Akaaka (2021) which revealed that the constraints faced by undergraduates of Benue state university Makurdi, in the utilization of electronic information resources include poor internet facilities, poor power supply, inadequate facilities for using e-resources in my library, lack of awareness of electronic resources, strict policies on electronic resources usage.

### **Conclusion and Recommendation**

It could be concluded that proper and comprehensive computer skills is a pre-condition for using the internet as this is a prerequisite to the use of electronic information resources among undergraduates in the Federal University Lokoja.

Based on the above findings, the following recommendations were made;

1. Library management should develop mobile application for e-book management system (Calibre) and e-granery to make them accessible on smartphones and tablets. This allows undergraduates to access the information on -the-go, increasing their convenience and usage. Conduct workshops, seminars or training sessions to educate undergraduate students about the benefits and features of caliber and e-granery.
2. Training and re-training of ICT skills for undergraduate should be given adequate attention by University Management in order to improve the utilization of electronic information resources in the study area. Also, there is a need for integration of ICT as a course in the curriculum for all undergraduates in the Federal University Lokoja.
3. There is the need to promote library services by raising awareness about the library offerings through various channels, such as social media, newsletters, and campus events. This will help undergraduates understand the value of electronic information resources as well as view university library as germane access point. Also, there is the need for the university library under study to

invest in digital resources and online databases. This will allow students to access materials remotely, reducing the need for physical visit to the library.

4. Regular maintenance and monitoring by establishing a proactive maintenance schedule to perform routine checks, updates and patches in the study area. This is to implement a robust monitoring system to promptly identify and address any potential issues before the cause downtime. University management should organize training sessions and workshops to enhance students search skills for electronic information resources.

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