

**Investigating the Use Electronic Resources in the Teaching and Learning of Library and Information Science in Kwara State University, Malete, Kwara State, Nigeria**

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**Abstract**

*This study was piloted on the impact of electronic resources on effective library management in Kwara State University, Malete Nigeria. The study adopted simple random sampling technique to select two hundred and seventy-eight (278) undergraduate students from the population of one thousand, four hundred and two (1402) in the Department of Library and Information Science, Kwara State University, Malete, Kwara State.. Data collected from the study were analysed using SPSS and frequency tables and percentage distribution used to present the results. The study established that Computer, E-mails, Internet, Online databases, CD-ROM databases, Electronic journals and e-Books are the major types of electronic resources available for teaching and learning of library and information science while the purposes of use of electronic resources included; research work, assignment, examinations and projects, easy availability of updated data and quick access to information. However, low bandwidth, poor level of computer literacy, unreliable power supply, inadequate facilities and inadequate networked computers were the major problems affecting the use of electronic resources for teaching and learning of library and information science. The study concluded that digital databases, online journals and e-books give the students more information and connect them globally, The study, therefore, recommended that the provision of Internet facilities, provision of high and stable bandwidth, training of students and lecturers on use of ICT, and the need to make online learning through use of electronic resources interactive to sustain the interest of users in the use of electronic resources.*

**Keywords:** *Electronic Resources, Library and Information Science, Teaching and Learning*

**Introduction**

The world is changing rapidly into and a global village which necessitated the sway of electronic resources (e-resources) in all aspects of human life. E-

resources provided real world frameworks for teaching and learning in the today's society (Sampath, 2018). Oak (2016), sees e-resources as a system in which information are stored electronically and made accessible through electronic systems. Information Communication Technology grounded education to be contingent on availability of web and other complimentary facilities. The wave of change prompted by emerging technologies has a remarkable effect on how information is stored, accessed, retrieved, and disseminated, extending to users' information-seeking behavior (Anyim, 2019). Presently, electronic resources have been identified as the primary source of information in the universities, especially for researchers, including students and teaching staff (Ternenge et al., 2019). Effective teaching and learning programs require the application and deployment of electronic resources in conducting problem-solving research since research dominates students' activities as the bedrock of learning and professional development (Anyim, 2019). Electronic resources encompass all materials that contain information that can be accessed through digital or online means by the support of computer technologies.

The information contained in electronic resources is not different from what is contained in printed versions except on the mode of access, storage, and dissemination. Anyim (2018) defines electronic resources as contents of the information in a format that could be accessed through a computer or machine which in some cases require internet connections; these include CD-ROMs, electronic books (e-books), electronic journals (e-journal), electronic indexes, digital reference materials, online databases, and other e-collection. The use of e-resources in learning and teaching by undergraduates has become indispensable in this digital age where globalization of education is made possible through ICT. In today's information society where there is exponential growth in information accessible through ICT especially the Internet.

### **Statement of the Problem**

In Nigeria, the university system is advancing as new technologies are being introduced into teaching, learning and research activities. University libraries are saddled with the responsibility of supporting the mission of the university through the provision of information resources in different formats such as print, electronic format, and other non-print format. While the provision of electronic resources in libraries no doubt has numerous advantages as it enables easy and speedy access to current information at the right time and in the right place, it also presents a lot of challenges. Literature has revealed that electronic resources are grossly underutilised despite the huge investment made by university libraries to ensure their provision. It is observed that considerable investments are being tailored toward acquiring electronic resources in Nigerian universities bringing up the issue of the extent of usage and users' satisfaction with these resources in these libraries. It was revealed that practical uses of electronic resources are not up to the worth in comparison to investments made in acquiring these resources. The underutilisation of electronic resources could be attributed to low computer

self-efficacy which could hinder the zeal for making use of computer-based technologies. It is against this background that this study investigated the influence of electronic resources on the teaching and learning of library and information science in Kwara State University, Nigeria.

### **Research questions**

1. What are the types of e-resources available to undergraduate students of the Department of Library and Information Science in Kwara State University, Malete, Kwara State, Nigeria?
2. What are the major purposes of use of e-resources by undergraduate students of the Department of Library and Information Science in Kwara State University, Malete, Kwara State, Nigeria?
3. What are the major factors that influence the use of e-resources by undergraduate students of the Department of Library and Information Science in Kwara State University, Malete, Kwara State, Nigeria?
4. What are the major problems affecting the use of e-resources by undergraduate students of the Department of Library and Information Science in Kwara State University, Malete, Kwara State, Nigeria?
5. What are the possible solutions to the use e-resources by undergraduate students of the Department of Library and Information Science in Kwara State University, Malete, Kwara State, Nigeria?

### **Literature Review**

#### **Concept of Electronic Resources**

Shim et al (2011) define e-resources as those resources that users access electronically via a computing network from inside the library or remote to the library. According to Tsakonas et al. (2016) e-resources are information resources provided in electronic form, and these include resources available on the Internet such as e-books e-journals, online database, CD-ROM databases and other computer –based electronic networks, among others. Electronic resources as materials consisting of data and/or computer programs encoded for reading and manipulation by a computer, such as a CD-ROMs drive or remotely via network such as the Internet by use of a peripheral device directly connected to the computer. Electronic resources available for use by librarians include; the CD-ROM databases, electronic mails, Online Public Access Catalogues (OPACs) and Internet facilities.

Electronic resources simply referred to as e-resources are information stored in electronic format in computer or computer related facilities (CD-ROMs, digital libraries or the Internet). Adeleke and Nwalo (2017) defined electronic resources as resources in which information is stored electronically and which are

accessible through electronic systems and networks and are used to supplement printed information sources in the university libraries. Different types of e-resources that are considered in this study are: e-journals, e-books, online databases, e-conference proceedings and CD-ROM databases, including online databases that are commonly used by academic staff in Nigerian universities for their research are EBSCOHOST, AGORA, HINARI, MEDLINE, JSTOR and OARE.

A number of these e-resources (online databases/digitized local journals) are accessible via the National Virtual Library ([nigerianvirtuallibrary.com](http://nigerianvirtuallibrary.com)) which is run by National Universities Commission. The AACR2 Rule 9.0A1 refers to electronic resource as a combination of data and programmes. The data include text, images, graphics, maps, music, graphics, moving images etc., and the programmes are the instructions that process the data and make them available for use (AACR2 Rule 9.0A1, cited in Lang, 2008). Electronic resource according to AACR2 (2002) is any encoded work that can be accessed remotely via computer networks or directly via carriers such as discs and cassettes, by inserting them into a computer or computerized device.

### **Types of Electronic Resources Available for Teaching and Learning**

Sukula (2010) submit that various types of e-information resources used in higher institution libraries are: database; e-journal; e-books, e-news; e-image; e-music and sound collection; data/GIS; academic commons; e-reference and subject guides. Electronic information resources provide access to information that might be restricted to the user because of distance (Sabouri, et al 2010). Amori (2013) opines that e-information resources such as ejournal, e-book, CD ROM databases, online databases and web-based resources when effectively utilized constitute an important input in the information services in libraries. They help in providing relevant information required by librarians, which if properly utilized can help in improving research productivity. However, Ireyefoju (2012) states that the provision of einformation resources in the right quantity has been regarded as a major factor for high information services provision. There are several types of electronic information resources that are available for use and they will be discussed briefly; they are; internet, electronic journal, online databases, CD-ROM databases, e-books, Online databases, e-mails and Bulletin boards system.

Internet has provided a wider access to global information resources such as online databases, e-journals e-prints and other sources of digital information, these resources are not effectively utilized due to varying factors. Huang (2015) emphasizes the effects of the Internet as an effective teaching tool in university education and proposed that many university lecturers publish their course materials via the internet. According to Missen et al. (2005), the Internet poses African Universities to gain equal footing with their sister institutions in the more developed countries. The Internet is very useful as a communications tool in the Universities among librarians and library users. It is the most efficient means of

electronic document delivery (Al Fadhli & Johnson, 2016). Internet is useful for education and can supply many beneficial opportunities to find different resources. However, a basic rule should be considered while using the internet for successful learning and research, that is, how the resources should be properly accessed by the librarians. The Internet helps transfer information between different points therefore this facility makes the Internet a very powerful information system. Internet network has eliminated the physical limits, and the number of existing educational resources has increased so that it is possible to publish paper in any place where the internet is accessible.

### **Purposes of Using E-resources by Undergraduate Students**

The importance and wide-ranging scope of e-information resources for general communication, information retrieval and instructional delivery to support teaching and research activities in tertiary educational institutions is acknowledged worldwide. Gakibayo, Odongo and Obura (2013), reveal that ICTs have brought a tremendous change in nature, boundaries and structure of information. Consequently, perceived usefulness of the internet is considered to be an important influence on the use of electronic information resources. Ellis and Oldman (2015) note that through the use of electronic resources, researchers and students; now have access to global information resources, particularly the Internet for their scholarly intercourse. Candela Olle and Angel Borrego (2010) analyzed Librarians' perceptions on the use of electronic resources at Catalan academic libraries and found that academics' perceptions of the usefulness of bibliographic management software have increased dramatically during the last few years, especially among PhD students.

In study done by Sivathaasan and Velnampy (2013), on the use of e-resources and academic performance of university teachers, the study reported that usage of e-information resources has a strong positive association with academic performance ( $r = 0.623$ ,  $p < 0.01$ ) and it has an impact on academic performance at the rate of 38.8% ( $R^2 = 0.388$ ). Tenopir (2013) revealed that 200 recent research publications focus on the use of e-library resources and were published between 2010 and 2013 in the report for the council on library and information resources. The study uses a variety of research methods, including observation, surveys, interviews, experiments and transaction log analysis. The finding shows that both faculty and students use electronic resources and most readily adopt them if the sources are perceived as convenient, relevant, and time saving to their natural work flow. Ojo and Akande (2015) in a survey of 350 respondents examined student's access, usage and awareness of e-resources at the University College Hospital (UCH) Ibadan, Nigeria. The study reveals that the level of usage of the e-resources is not high. A major problem however identified is lack of information retrieval skills for exploiting e-resources, thus making the level of usage of resources by medical students very low. Ray and Day (2018). in their study, found that 83% of students surveyed felt that using this source saved them time and found it relatively easy to use. Two thirds of those surveyed stated that if

the CD-ROM was busy, they would wait for it to become free rather than use the print resources.

### **Factors that Influence the Use of E-resources in Teaching and Learning**

Tekkol and Demirel (2018) examined the influence of self-directed learning skills based on university type, gender, field and year of study, academic success, university entrance score, income level, and the desire to pursue a graduate degree in Kastamonu University, Kastamonu, Turkey. Directed Learning Skills Scale developed by Askin was used to gather data for the study. Self-directed learning skills were found not to vary based on university, year of study, income level. The results further indicated a moderate positive relationship between self-directed learning skills and lifelong learning tendencies.

Coşkun (2018) examined students' metacognition thinking skills based on screening model. The study was carried out among 407 students of faculties of physical education and sports, education science and letters, business administration, theology, engineering, forestry and agriculture at Kahramanmaraş Sutcu Imam University, Turkey. The result of correlation analysis conducted indicated that the university students have higher levels of metacognitive thinking ability with their thinking skills, reflective thinking skills, decision making skills and alternative evaluation sub-dimensions. The author submitted that students' level of metacognitive thinking skill and class level have been on the increase with Faculty of Theology students' possessing the highest level of metacognitive thinking skills.

Quadri, Adetimirin, and Idowu (2014) emphasize that e-resources have enormous influence on information services provided to students. Their examination of two private universities (Babcock and Redeemer) has revealed that most of the students use e-resources for assignments, research and projects, and this has resulted in improved class activities and collaboration. This finding is consistent with the view of Olofinniyi et al. (2012) that mobile phones, tablets and i-pads affect the study pattern of students all over the world. With the use of these devices, students now easily connect to the Internet, e-learning platforms as well as to social media platforms.

### **Problems Affecting the Use of E-resources for Teaching and Learning**

Benzie (2015) opined that understanding the pedagogical, psychological, and cognitive barriers to the successful use of e-information technology may be a vital precondition for improving the utilization of computers and other technological aids in the developmental process. The barriers are categorized as external and internal barriers (Keengwe, & Onchwari 2018). According to Snoeyink and Ertmer (2014), the former include lack of equipment, unreliability of equipment, lack of technical support and other resource-related issues. The later include both institution level factors, such as organizational culture and lecturer level factors,

such as beliefs about teaching and technology and openness to change. The use of e-information resources provides a better platform and more opportunities for librarians because it has advantages over the print resources. Some of the advantages of accessibility and use of e-information resources when compared with print information resources includes the conservation of space and time. The librarians can have quick access to available information by making a combination of likely key words related to his/her search.

The speed in retrieval of needed information is a major merit that e-information resources have over print resources. Other advantages of e-information resources include currency, the ease of use and multiple accesses. Despite the availability of these resources and their benefits to university education, their effective uses in universities are being hampered by varying factors. Inadequacy of facilities for use was mentioned as one of the biggest problems users faced, leading to congestion, Low bandwidth leading to poor uses of the resources. Ani (2015) identifies three influencing factors which included staffing/human capacity building in ICT, level of computerization and level of infrastructure. In implementing e-information resources use, a lot of challenges. Okojie (2018) identified provision of electric power supply as very essential. ilola (2013) found that poor electricity supply greatly hindered the use of einformation resources. This was represented by 117(46.8%) of the respondents and poor internet connectivity was another hindrance which greatly affected the use of e-information resources, this was confirmed by 100(40%) of the respondents. It was also gather that electricity was needed for resources to be accessed at any time from any part of the world, and the web servers that host locally digitized contents and proxy server that provide authentication and remote access of digitization and uploading of content and maintenance of the software also depended on the availability of electricity.

### **Research Methodology**

The study adopted the descriptive survey research design. The descriptive survey research design was adopted because it enables researchers to collect large amounts of data about the influence of e-resources on learning of library and information science in Kwara State University, Nigeria.

### **Population of the Study**

The population for this study consists of all the undergraduate students of library and information science department in Kwara State University, Malete. According to the annual report of the University, the total number of students of library and information science in Kwara State University, Malete across the four (4) level as at 2022/2023 academic session is 1,081. See Table 3.1.

**Table 3.1: Population of the Study**

S/N	Level	Population
1.	100L	375
2.	200L	273
3.	300L	239
4.	400L	194
	TOTAL	1081

### **Sampling Method**

Simple random sampling technique was adopted to select the sample population for this study. From all the levels, a total of 278 respondents were drawn.

### **Sample size**

S/N	Level	Population	Sample size
1.	100L	375	72
2.	200L	273	69
3.	300L	239	69
4.	400L	194	68
	TOTAL	1081	278

The Instrument that was used for data collection in this study was the questionnaire. The questionnaire was a closed ended questionnaire. Descriptive statistics including frequency, percentages and mean were used in presenting the results of the analysed data.

### **Presentation of Results and Discussion of the Findings**

This research work was specifically carried out to assess the influence of e-resources on the teaching and learning of library and information science in Kwara State University, Nigeria. In order to achieve this purpose, five research



questions were raised. In response to the first question, the result showed that majority of the respondents use Computer, E-mails, Internet, Online databases, CD-ROM databases, e-journals and e-books as types of e-resources available for teaching and learning of library and information science. This finding is consistent with the findings of Ekwelem, Okafor and Ukwoma (2017) that reported computer networked facilities, online library catalogues, the Internet, the world wide web and digital libraries as e-resources that are available and can be accessed electronically and Tsakonas et al. (2006) who reported e-resources as information resources provided in electronic form which included, resources available on the Internet such as e-books, e-journals, online database, CD-ROM databases and other computer-based electronic networks, among others. Amori (2003) opines that e-resources such as e-journals, e-books, CD-ROM databases, online databases and web-based resources, when effectively utilised constitute an important input in the information services in libraries.

In response to the second research question, the grand score of the respondents who strongly agree that they appreciate the results provided by the use of electronic resources for personal studies, research work, assignments, examinations and projects, as well as easy availability of updated data and quick access to information. This finding agreed with findings from the study of Ellis and Oldman (2015) which established that through the use of e-resources, researchers and students; now have access to global information resources, particularly the Internet for their scholarly intercourse.

In response to the third research question, the result showed that most respondents stated that Industrial attachment (vestibule), Coaching, Supervisor's training and Seminar as the factor that influence the use of electronic resources in teaching and learning. This finding is in line with of Gakibayo, Odongo and Obura (2013), which revealed that ICTs have brought a tremendous change in nature, boundaries and structure of information. Consequently, perceived usefulness of the internet is considered to be an important influence on the use of electronic information resources.

Responding to the fourth research question, the results indicated that the problems affecting the use of electronic resources for teaching and learning of library and information science, include low bandwidth, poor level of computer literacy, unreliable power supply, inadequacy of facilities and networking computers. This finding is was consistent with that of Snoeyink and Ertmer (2014), which reported lack of equipment, unreliability of equipment, lack of technical support and other resource-related issues as major problems hindering the use electronic resources for teaching and learning of library and information science. This finding corroborated results from Damilola (2013) studies which reported find that that poor electricity supply greatly hindered the use of electronic information resources and the study of Moahi (2007) that identified lack of time and inadequate publications skills as part of the problems hindering the use of

electronic resources utilisation for teaching and learning of library and information science in Kwara State University, Malete, Kwara State.

Result on the fifth research question, revealed increased time of accessing the e-library/e-resources, adequate power supply, alternative power (solar & inverter), training of e-library users, improve internet connectivity and a distributed access to e-resources, and awareness of creation as possible solution to the use of electronic resources in the teaching and learning. This study is in line with Okojie (2008) who reported provision of electric power supply as very essential for electronic resources utilisation for teaching and learning of library and information science in Kwara State University, Malete, Kwara State. .

### **Conclusion**

The study concluded that the impact of electronic resources on the learning of Library and Information Science has been profound. The availability of digital databases, online journals, and e-books has expanded access to a wealth of information, enabling students to explore diverse perspectives and stay updated with the latest research. Additionally, electronic resources have fostered collaborative learning through online forums and virtual communities, connecting students globally. However, challenges such as poor power supply, low bandwidth, poor level of computer literacy, unreliable power supply, inadequacy of facilities and networking computers are major challenges confronting effective utilisation of electronic resources for teaching and learning of library and information science in Kwara State University, Malete, Kwara State.

### **Recommendations**

University management should engage in orientation on the purposes of electronic resources utilisation for teaching and learning to undergraduate students of library and information science in Kwara State University

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