

# ***Digital Information Resources Access and Utilization in Ethiopian Civil Service University Library***

***Kibru Sileshi\****

*This study assessed access and utilization of electronic information resources in the Ethiopian Civil Service University Library. Significant investment has been made in digital information resources in the University Library and yet it was not researched whether these electronic information resources are utilized or underutilized. The study aiming at ascertaining this state of affairs. The study employed survey method. The population of the study comprises 5132 postgraduate students. A sample of 400 postgraduate students was selected using simple random sampling techniques. Data were analyzed using descriptive statistics. Based on the findings, the extent of accessibility and utilization of electronic information resources were fraught with a range of problems. Lack of IT (Computer) knowledge, inadequate computers in the library, poor internet connection, and lack of relevant electronic resources in various disciplines were problems encountered by students. Mostly accessed and utilized resources were electronic journals and the majority of students used electronic resources for research work. Lack of guidelines and electronic collection development rules and regulations, inadequate budget, lack of skilled technical staff, and unaware of the existence of electronic resources by students were major challenges. The study recommends improvement in appropriate user education for students, hiring skilled technical staff, availing computer facilities, enhancing Internet connectivity, and subscribing relevant electronic resources.*

**Keywords:** *Digital Information Resources, Access, Utilization, Electronic Resources (E-Resources), Postgraduate Students.*

\* MSc in Information Science, Library and Documentation Directorate

Ethiopian Civil Service University, Tel: +251-911-360664 (Mobile)

Email: [kibusileshi@yahoo.com](mailto:kibusileshi@yahoo.com), Addis Ababa, Ethiopia

***JADS Vol 7, No. 1, June 2020 Issue; DOI: <https://doi.org/10.56302/jads.v7i1.3115>***

## **Introduction**

The 21st Century has experienced a remarkable proliferation of electronic resources (E-Resources) which has tremendously changed the information-seeking attitude of students and researchers globally. E-Resources, in most universities, is an integral part of the electronic library and stand as vital academic resources that support teaching, learning, and research activities (Zhang Y. and Liu, 2011). The term electronic resources are seen by Sharma (2009) as library information materials that are in electronic form which include electronic books (e-books); electronic Journals (e-journals); electronic newspapers (e-newspapers); as well as Internet resources. E-Resources also consist of databases, magazines, archives, theses, conference papers, government papers, scripts, and monographs in an electronic form (Deng, 2010).

According to Graham (2003) the term “electronic resources” appear not to be used

consistently; they may be referred to as electronic information resources, electronic library resources, digital resources, digital materials, and soft library resources. In a study carried out by Dadzie (2005) on electronic resources, access, and usage at Ashesi University College, Ghana, she noted that electronic resources were invaluable research tools.

In academia, E-Resources are dominating the research activities of researchers; researchers have realized the importance of such resources (Hadagali, Kumbar, Nelogal, and Bachalapur, 2012). E-Resources provide accurate and timely information, especially for students who depend greatly on the electronic resources for information to advance research and collaboration with other researchers around the world for intellectual growth (Ukpebor, 2012).

The goal of postgraduate study in any university is for further development of graduate students with the spirit of enquiring knowledge through training and research in an atmosphere of intellectual independence and individual creativity with a strong sense of group cooperation (Lateef, Omotoso and Owolabi, 2013). Ndubuisi and Udo (2013), in an empirical study of motivation, challenges, and strategies in the use of electronic information resources by postgraduate library users in South-East Nigeria Federal Universities, revealed that postgraduate students were motivated to use electronic resources in their university libraries because they found them to be more informative, easy to access and use, saves time, more useful and less expensive.

Lefuna (2017) also identified that, in recent times, electronic resources have been identified as the major sources for information dissemination in the universities, especially for researchers. Electronic libraries (E-Library) are often used as a synonym for virtual libraries and digital libraries (Barshaev et al, 2015). E-Resources take several forms including electronic journals, electronic books, electronic theses, electronic data archives, electronic manuscripts, electronic maps, electronic magazines, electronic newspaper, electronic research reports, electronic bibliographic database, World Wide Web (WWW), search engines, and others. Of all these, electronic journals are the most important to students and academics because they contain articles that may not be found in any other publication (Kumar & Reddy, 2014).

As far as the use of digital resources is concerned, different researches revealed that developing countries are presented with significant challenges of their own, hence warranting and making research relevant. Such challenges include the cost of implementation, internet connectivity challenges, shortage of technological devices

such as computers, lack of trained personnel, lack of local online databases, and limited bandwidth (Adeniran 2013; Chitanana, Makaza & Madzima 2008; Legris, Inghamb & Collettec 2003; Mittal & Bala 2013; Mosha & Bea 2014; Okello-Obura 2010).

In spite of the perceived availability of electronic resources in universities and their benefits to university education, their effective utilization by postgraduate library users in Nigeria appears to be hampered by different factors (Ndubuisi and Udo, 2013). In a study conducted by Ojo and Akande (2005), they drew a conclusion from their research that the level of usage of electronic information resources among students was low.

Today, it is very common to find electronic resources in most university libraries in Ethiopia, including the Ethiopian Civil Service University Library (ECSUL). However, based on the national level librarian meeting discussion hosted by Addis Ababa University library in Ethiopia, it was pointed out that their availability does not necessarily equate to their utilization. A lot of researches have been carried out in the area of access and utilization of electronic resources in African University libraries. However, as far as the knowledge of the researcher is concerned, there is no research output in this area in the Ethiopian context. Accessibility and utilization of electronic information resources is a key to the success of postgraduate studies in any institution and the library plays the central role in making information available and accessible. It is, therefore, necessary to find out if the Ethiopian Civil Service University Library is performing its primary responsibility of providing E-Resources to meet its user's information needs, learning, and research. This research, therefore, would examine factors affecting access and utilization of digital information resources at the Ethiopian Civil Service University Library.

## Problem Statement

In developing countries, there is an increasing need to enhance the quality of education and academic performance at the university level through the provision of some form of robust informative resources. An electronic resource is one of such robust informative resources which are today a welcome innovation all over the world as they are easily available over the internet and electronic applications (Okello-Obura and Ikoja-Odongo, 2010).

In today's global economy, successful societies are those that develop, disseminate, and apply knowledge and adapt flexibility to ever more rapidly changing circumstances. Higher educational institutions have to be at the center of these changes where libraries are transforming rapidly to meet the demands of the electronic age. Academic libraries in Africa do not provide the same information delivery methods as those in developed countries. Chisenga and Rorissa (2001) point out the great disparity in the access, adoption, and use of ICTs in academic libraries. Magara (2002) in Uganda pointed out that power unreliability, management attitude, and poor ICT skills of the libraries as a problem. Rosenberg (2005) identifies the challenges to access and use of digital services to lack of library software standardization.

As far as the knowledge of the researcher is concerned, there is no previous research in this title, in the Ethiopian context. Ethiopian Civil Service University Library was able to take advantage of these developments to facilitate the process of teaching-learning and research activities. In spite of the perceived availability of electronic resources in ECSUL and their benefits to university education, their effective utilization by students is not well known yet.

The utilization of electronic information resources is key to the success of students' academic activities most especially in the

areas of research. In any institution, the library plays a vital role in making information available and accessible. To render such effective library services to the university community, academic libraries are investing hugely into the acquisition of electronic information resources such as e-books, e-journals, and subscriptions to scholarly databases to facilitate teaching, learning, and research. The true value of this huge investment will only be realized through the productive utilization of these resources. Xie (2006) stated that millions of dollars have been invested in the development of e-libraries despite they are still underutilized. Similarly, significant investment has been made in electronic resources and accompanying computer-based technology to ensure access to electronic resources in the Ethiopian Civil Service University Library too. It is important to find out their extent of accessibility and utilization. If some electronic resources are not being used or underused, it may be important to know this in order to make a recommendation regarding the possibilities of improving usage of the resources of canceling subscriptions.

Information from library statistics, register records, and information obtained from the preliminary survey are evident that, there is low use of E-Resources in ECSUL. Besides, according to the ECSU Library annual users' satisfaction survey of 2019, the low use of electronic resources was revealed, which attract the attention of the researcher. Low usage of the electronic resource is a challenge to library management since a lot of money is being spent on purchasing or subscribing to various electronic resource packages. Therefore, it is necessary to know why there is low usage of electronic resources at the Ethiopian Civil Service University Library. Hence, the study investigated factors inhibiting access and

utilization of digital resources in the Ethiopian Civil Service University Library.

## Objectives of the Study

The study focused on achieving the following specific objectives.

1. To explore the extent of accessibility of electronic information resources by students in ECSUL.
2. Evaluate the extent of utilization of electronic information resources by students in ECSUL.
3. To find out the problems encountered by students while accessing and using the electronic information resources in ECSUL
4. Recommend strategies that would help mitigate the problems.

## Literature Review

In this section, relevant literature related to the accessibility and utilization of electronic information resources by postgraduate students is reviewed.

### Technology Acceptance Model (TAM)

Technology Acceptance Model is the most influential, empirically tested, widely used model of technology acceptance. It was developed by Davis in the year 1993 and its concept is derived from the Theory of Reasoned Behavior (TRA) proposed by (Priyanka & Kumar, 2013). The basic concept of TRA is that individual behaviors are determined by their intentions to execute those behaviors. These intentions are in turn influenced by two factors, their attitudes, and beliefs about the consequences of the behavior; that is, what the important people in the life of these individuals will think about their behaviors. TRA has been successfully used to predict the choices made by people in diverse situations (Dillon & Morris, 1996).

The purpose of TAM is to predict user acceptance of technology by using two

technology-related factors, perceived usefulness, and perceived ease of use. Perceived usefulness (U) in TAM is the extent to which a user believes that the use of a system will enhance his or her performance. Perceived ease of use (EOU) is the extent to which a user believes that using the system will be effortless. According to TAM, both U and EOU significantly influence a person's attitude towards using the system (A). Behavioral intentions (BI) to use the system is determined by A and U. one of the main differences between TAM and TRA is that perceived usefulness directly influences the intention to use technology. Beliefs do not play any role in the intention to use a system.

Davis et al. (cited in Dillon and Morris, 1996) explained that in a job situation, an employee's intention to use a system will be strictly based on the impact of the system on his or her work performance, irrespective of his or her attitude towards the system. In other words, an employee may dislike a system but may use it based on the perceived increase in his or her job performance. This study adopts TAM as a theoretical framework because according to Dillon and Morris (1996), the diffusion theory offers little information on the factors that influence user acceptance. It rather focuses on characteristics that influence individual decisions in adopting technology, such as a compatibility and perceived complexity and the strategies used to market the technology to specific groups and organizations. TAM has been successfully tested on a wide variety of technologies including information systems computer applications. The TAM theory is therefore appropriate for investigating the access and use of digital resources by postgraduate students of the Ethiopian Civil Service University.

### Concept of Electronic Resources

Adeleke & Nwalo (2017) defined electronic information resources as “resources in which

information is stored electronically and which are accessible through electronic systems and networks”. Different types of E-Resources that are used in this study are: e-journals, e-books, online databases (such as EBSCOHOST, JSTOR) electronic thesis, and dissertation and Online Public Access Catalogue (OPAC).

The Library of Congress identifies four categories of electronic resources in a library (AACR2 Rule 9.0A1, cited in Lang, 2008).

1. “Acquire” electronic resources that are received through licenses or other agreements, and acquisition processes such as gifts, copyright deposits, exchange, ISSN requests etc.;
2. “Collect” electronic resources which are permanently owned by the library and for which the library has permanent ownership;
3. “Link” electronic resources which are remotely accessed through links from the library's web resources, and,
4. “Archive” electronic resources which are a permanent digital repository managed and maintained by the library or for the benefit of the library (Library of Congress Collection Policy, 2008).

Amankwah (2014) also indicates that electronic resources include full-text documents, resources available on the internet such as e-journals, Online Public Access Catalogues (OPAC), and other computer-based electronic networks. For the purposes of this study, electronic resources refer to e-books, e-journals, e-thesis and dissertation, OPAC, and academic databases subscribed by the Ethiopian Civil Service University Library.

### Types of Electronic Information Resources

The various types and forms of e-resources in academic libraries are; e-databases, e-journals, e-data archives, e-manuscript, e-maps, e-books, e-magazines, e-thesis and dissertation, WWW, e-newspapers, e-

research reports, and e-bibliographic databases (Ankrah & Atuase, 2018). Different types of electronic resources that are used in this study are: e-journals, e-books, online databases, e-thesis, and dissertation.

### E-Resources Accessibility

Access is a general term used to describe the degree to which resources, services, product, and the environment is accessible by as many people as possible. It can be viewed as the ability to access information with little or no stress. According to Aguolu & Aguolu (2002), resources may be available in the library and even identified bibliographically as relevant to one's subject of interest, but the user may not be able to lay hands on them. One may identify citations in indexes, but may not have access to the resources containing the relevant articles.

The more accessible information resources are, the more likely they are to be used. Readers tend to use information resources that require the least effort to access. According to the New York Library Association Report on Training and Technology (2004), libraries and their parent organizations need to create an environment that is supportive of the new Information Technology and should provide sufficient access to resources for training and delivery of information. Osundina (2004) studied the relationship between accessibility and library use in institutions in Nigeria and notes that the problem of users is not the question of wanting to use the library, but whether or not the library can provide for their needs and whether there will be access to the information provided. Aguolu & Aguolu (2002) revealed that efforts are being made worldwide to promote access to information in all formats. He grieved that

the attendant features of underdevelopment such as power failure, machine breakdowns, lack of spare parts, and technicians. which intermittently stall the performance of modern gadgets of information storage and transfer in developing countries.

### **Utilization of Electronic Information Resources**

The advent of electronic information resources has been a blessing to libraries and information centers. The significant changes associated with electronic information resources are the shift towards end-user searching, leading to big increases in the total number of searches carried out. Amankwah (2014) suggested that to utilize the growing range of electronic information resources, users must acquire and practice the skills necessary to exploit them using a variety of online databases. Kiondo (2004) reported that currently, libraries in institutions of higher learning have realized the potentials of electronic information resources in higher learning and teaching, hence more institutions are embracing it to enhance the quality of education. This is due to the fact that library automation is making profound changes to the teaching and learning environment, as the librarians make available to the user community a wide range of academic and scholarly information.

According to Schutte (2004), the utilization of electronic information resources and services has led to the shift from an emphasis on the book and journal collection to an emphasis on information services or from ownership to access. He further argues that the shift has been necessitated by new trends in the provision of higher education and developments in electronic information storage and their accessibility over computer networks. The use of online electronic information resources and retrieval systems require a basic knowledge of computing and searching skills. Aguolu & Aguolu (2002) observed that the use of electronic

information resources is also influenced by students' use of the library.

The more a student uses the library the more familiar he/she becomes with its resources including its electronic information resources. In a study conducted by Luambano et al (2004), it was found that the users of academic libraries are increasingly utilizing electronic information resources as more access points are made available. Most of the studies investigating the impact of electronic information resources reported that users must have the requisite skills to effectively exploit the electronic information resources available. Waldman (2003) found out that the use of E-Resources was influenced by factors such as the computing skills of academics. There is a significant relationship between computing skills and the use of Electronic information resources in the library including an online public access catalog (OPAC).

### **The Problems Encountered by Students in Accessing and utilizing E-Resources**

In order for academic libraries and information Centers to improve their e-resource services, it is imperative to better understand the impediments users encounter in accessing these resources. Bhatt & Rana (2011) also identified that the most common problems with e-resources are low Internet connectivity, lack of awareness about statutory provision for accessing e-resources by the institutions, technical problems, unavailability of sufficient e-resources, doubts in permanency, high purchase price, and lack of legal provision. A similar study by Shukla and Mishra (2011) revealed that the majority of research scholars have the problem of low internet connectivity. Madhusudhan (2010) averred the slow access speed of the internet as the most common problem. He also added that it takes too long to view or download pages and find it difficult to get relevant information. He

further indicated that huge information is retrieved and the students cannot make use of e-resources effectively due to the lack of proper IT knowledge.

The literature review for this study also found that the availability of E-Resources, discipline, and institutional factors affect the use of the resources by students and researchers. One other obstacle to the use of a library's resources and in particular, its electronic resources, is that they are not seen as being easily accessible. A study conducted by Bashorun, Tunji & Adisa (2011) also showed that low usage is reported for e-books, bibliographic databases, and e-journals. These attitudes may be the result of a lack of awareness about the e-resources provided by the library. There are issues like a large mass of irrelevant information. Other problems are download delay, failure to find information, lack of search skills, high cost of access, power outages, unavailability of some websites, inaccessibility of some websites, and difficulties in navigating through e-resources. Oduwole & Akpati (2003) also indicated a lack of ICT and power outages as constraints to the use of electronic resources. In the same vein, Watts and Ibegbulam (2006) discovered the inadequate ICT infrastructure and unaffordable online access as well as the absence of in-depth ICT skills as key problems. This is due to the fact that much is not invested in the provision of electronic resources which are pivots in research processes. In support of this view, libraries are therefore charged to put in place adequate mechanisms to enable effective and efficient access and use of e-resources.

The researcher tried to incorporate domestic research works so as to identify the gap created. However, as far as the knowledge of the researcher is concerned there is only one research work is conducted in the Ethiopian context. Addisalem (2016), did research on the use of electronic information resources by postgraduate students at the University of

South Africa (UNISA) regional learning center in Ethiopia, the majority of respondents reported that Internet availability and electricity supply determined their use of electronic resources. His research also revealed that lack of information retrieval skills, lack of information literacy skills, lack of accessibility of the Internet, poor Internet connection, power failures, and the distance between respondents and the Akaki Branch Library are major challenges that hinder respondents not to use e-resources effectively.

### **Review of Related Empirical Studies**

As it is mentioned earlier, as far as the knowledge of the researcher is concerned, there is no research output in this area in the Ethiopian context. Hence, the research gap is not identified based on previous local research works. However, based on international experiences, the following empirical studies are reviewed.

Ankrah & Atuase (2018) conducted a study on the use of electronic resources by postgraduate students of the University of Cape Coast. The cross-sectional survey design was used for the study. The total population for this study was 915 postgraduate students with a sample size of 275 which is 30% of the total population. Simple random sampling was used to sample the respondents. Quantitative analysis including frequencies, percentages, tables, and charts was used as a data analysis technique. The finding revealed that most of the postgraduate students were aware of the e-resources in the library. the respondents identified poor internet connection as the most significant constraint for ineffective access to e-resources. 183 (72.6%) respondents were of the view that poor internet connectivity was the major challenge they faced in accessing e-resources. Another 165 (65.5%) claimed insufficient skills hindered their ability to access e-resources while 157 (62.3) respondents indicated that they could not

access e-resources effectively due to limited subscribed titles. A total of 143 (56.7%) respondents said they did not have effective access to e-resources in the library because of inadequate computers.

Similarly, Eden & Egbe (2016) examined the extent of availability and utilization of electronic resources by postgraduate (PG) students in the University of Calabar (UNICAL) Library. Five research questions and a single hypothesis were formulated to guide the study. A descriptive survey was adopted and the population of the study was two thousand, seven hundred and twenty-six (2,726), while a sample of four hundred (400) postgraduate library users were selected through stratified sampling; two hundred postgraduate students each from the Faculty of Education and Faculty of Science. The questionnaire was the main instrument used for data collection. Data collected were analyzed using descriptive statistics such as simple percentages and frequency count. Pearson Correlation Coefficient (r) was the statistical analysis technique adopted to test the hypothesis under study at a 0.05 level of significance. Three hundred and eighty-two duly filled questionnaires were received, giving an overall response rate of 95.5 percent.

The result of the analysis revealed that electronic resources were available in UNICAL Library and Postgraduate students utilized them. The University Library had e-journals, e-books, access to databases, and Internet resources. Databases that were accessible at the time of this research was: Science Direct, Nigerian Virtual Library, HINARI, OARE, AJOL, SAGEOPEN, and TEEAL. The majority of postgraduate students in the University of Calabar often made use of the electronic resources in the University Library. However, online databases were underutilized. Electronic journals were the most often used electronic resources by postgraduate students. The problems postgraduate students encountered

while accessing and using electronic resources were: lack of computer skills, slow network, inconsistent internet connectivity, power outage, and mass of irrelevant information. The University Library had e-journals, e-books, and access to databases and Internet resources. E-journals were the most often used electronic resources. Lack of computer skills, slow network, inconsistent internet connectivity, power outage, and irrelevant electronic information resources was the problems postgraduate students encountered while accessing and using electronic resources in UNICAL Library.

This paper critically examined the concept of electronic resources, types of electronic resources, accessibility, utilization as well as problems encountered by students in accessing and utilizing the electronic information resources in the Ethiopian Civil Service University Library. Both local and international publications concerning the aforementioned topics were reviewed. The paper ended by taking into account relevant empirical studies as related to the variables of the current research study. From the review, it is clear that all of the empirical studies were undertaken from different geographical locations except Ethiopian Civil Service University, Ethiopia were reviewed. In the empirical studies difference that existed between the reviewed studies and the present study were noted. Therefore, it is clear that where variables matched, the geographical locations varied. This has created a gap in knowledge that the present study has intended to fill.

## Methodology

Issues herein included research design, location, target population, sample and sampling procedures, data collection instruments, and data analysis. Ethical issues are also discussed accordingly. The study adopted a descriptive survey research design. It used both quantitative and qualitative approaches. It is conducted in the Ethiopian

Civil Service University Library which is located in Addis Ababa, Ethiopia. The population of the study comprised of Five Thousand One Hundred Thirty-Two (5132) Postgraduate students who are registered and active in the Ethiopian Civil Service University at the time of this study (2020). To select the respondents, the overall sample-sized for this study was 400 registered students of the University. This is determined using Taro Yamane's (1967) formula. Hence simple random sampling is used to draw the sample from the population of the study so that each member of the population is given the equal or independent chance of being selected.

The questionnaire was administered to postgraduate students of the University. It comprised closed and open-ended questions to ensure that the respondents give comprehensive answers to the questions. In addition, Focus Group Discussion was held with the library director, deputy director, and Digital Library Section Coordinators to clarify the issues raised in the questionnaire. The quantitative data collected was analyzed using descriptive statistics and SPSS software version 25. Descriptive statistics of frequency counts, simple percentages, and mode scores were used to analyze data generated by the research questions. The qualitative data was analyzed by sorting, classifying, and arranging data which was examined in relation to combined thematic analysis.

To assure the reliability and validity of the research, the researcher used a valid data collection instrument the questionnaire that contained relevant information to the study. Pre-testing was conducted to identify items characterized by difficulties and ambiguity. Regarding ethical considerations, a letter of introduction was provided using formal consent for the study. The principle of voluntary participation in the study has strictly adhered. Participants were well informed about the purpose of the study that

it is purely academic and assure confidentiality. All references cited in the study were appropriately referenced.

## Results and Discussion

The results of the study are presented below. A total of four hundred (400) questionnaires were administered randomly to ECSU postgraduate students to collect primary data, three hundred twelve (312) copies representing 78% were returned and found useable. Statistics of sampled Colleges showed that the College of Finance Management and Development (CFMD) had the highest response rate. Table 1 below shows the distribution of respondents according to their Sex, Age, Degree of Study, and Sampled Colleges. The majority of the respondents were male constituting (83.4%) while the remaining (16.6%) of the respondents were female.

From the age range of respondents, the majority of them (58.2%) were within the age range of 30-40 years. The second majority was the age range of fewer than 30 years, followed by the age range of 41-50 years. The least were respondents that were greater than 50 years of age constituting (6%). The distribution of respondents according to their degree of the study showed that the majority of them (98.7%) were MA students, followed by Ph.D. students which constitute (1.3%).

Out of the three colleges of the University, the College of Finance Management and Development (CFMD) had the majority of respondents (46.2%) while College of Leadership and Good Governance (CLGG) and College of Urban Development and Engineering (CUDE) had (39.5%) and (14.5%) respondents respectively.

Table 1: Distribution of Respondents

S. No	Items	Variables	F	%
1.	Sex	Male	256	83.4
		Female	51	16.6
2.	Age	Less than 30	96	30.9
		30-40	181	58.2
		41-50	32	10.3
		Greater than 50	2	6
3.	Degree of Study	PHD	4	1.3
		MSc. / MA	307	98.7
4.	College	CFMD	140	46.2
		CUDE	44	14.5
		CLGG	119	39.3

**Research Question 1:** To what extent are E-Resources accessible to students at the Ethiopian Civil Service University Library?

From the table below, items E-Journals, E-Books, and Online Databases are accessible by students while, item E-Thesis and Dissertation was not accessible therefore, the extent of accessibility was low.

In relation to accessibility, students were asked from which location they accessed the University Library information resources.

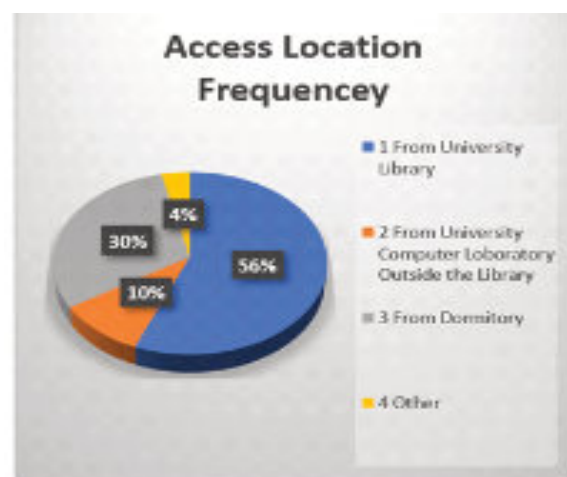
Table 2: The extent of accessibility of electronic information resources by postgraduate students at Ethiopian Civil Service University.

S. No	Item Statement	Very Great Extent		Great Extent		Low Extent		Very Low Extent		I Do not Know		Mean	Remark
		F	P	F	P	F	P	F	P	F	P		
1.	E-Journals	37	17.8	115	58.0	57	29.2	26	8.7	17	5.7	2	Great Extent
2.	E-Books	36	13.1	110	37.8	14	23.3	32	17.8	18	5.3	2	Great Extent
3.	E-Thesis and Dissertation	16	13.3	37	18.4	37	30.8	41	18.4	27	9.8	3	Low Extent
4.	Online Databases, such as JSTOR, Annual Reviews, EBSCO Host, etc.	38	15.7	58	19.4	35	27.6	48	15.3	34	11.6	2	Great Extent

Accordingly, the majority of respondents (56%) indicated that they accessed the resources from University Library, followed by (30%) respondents who access the library information from their dormitory, (10%) of respondents replied that they access the resources from University computer

laboratories outside the library, while (4%) of respondents replied from other location.

Figure 1: Accessibility Location



The researcher conducted Focus Group Discussion (FGD) with Library Director and Digital Library Section coordinator. In relation to accessibility, the participants reported that the library does not have collection development rules and regulations, which may create hindrance to make resources properly accessible to actual users.

On the other hand, infrastructure availability is the major means to make E-Resources accessible. Regarding the type of infrastructure available at ECSU Library, the informants further noted availability of computer laboratories, wired and wireless Internet services, Local Area Network, and Online Access Catalog as the main library infrastructure.

This finding agrees with the report of Quadri, Adetimirin, and Idowu (2014) who found out that electronic information resources, such as e-journals and e-books were accessible by students in academic libraries to a great extent. This also compares with Ibrahim (2006) who reported that electronic information resources are highly accessible by students with the highest frequency in the two MTN Universities.

This study finding showed that the majority of respondents frequently used electronic

resources, which is comparable to similar studies (e.g. Egberongbe, 2011; and Sharm, 2009).

**Research Question 2.1:** To what extent are digital resources Utilized at the Ethiopian Civil Service University Library?

The study on the usage of electronic resources in the Ethiopian Civil Service University Library by postgraduate students revealed that the majority of the respondents (90.4%) were aware of the existence of electronic resources in the Ethiopian Civil Service University Library, and made use of them while the remaining (9.3%) did not make use of the electronic resources.

On the frequency of use of electronic resources, the majority of the respondents (48.8%) indicated that they often made use of electronic resources, followed by (28.2%) of respondents who very often made use of electronic resources. The remaining (13.7%) and (8.9%) of respondents indicated that they are not very often used and rarely used electronic information resources respectively. The findings showed that the postgraduate students frequently used electronic resources in the Ethiopian Civil Service University Library.

Responding to the purpose for using electronic information resource in Ethiopian Civil Service University Library, the result revealed that the majority of the respondents (63.3%) indicated that, they made use of e-resources for reviewing various literature, followed by 47.9% of the respondents who made use of them for getting general information, 31.8% of respondents use them for getting the answer for specific questions, while 27.7% of respondents made use of them for exams preparation. The findings of this research question show that the majority of respondents were aware of the availability of different types of information resources in the library. This finding is consistent with Okiki (2012). However, this result contradicts the findings of Togia and Tsigilis

(2009), who reported that most students were not aware of certain electronic resources at Aristotle University of Thessaloniki. They indicated that 43.4% of the respondents were not aware of ERIC, the largest digital source of literature in education.. This finding does not agree with the work done by Bayugo and Agbeko (2007). They conclude that majority of students at the University of Ghana were unaware of the two full-text electronic resource databases (HINARI).

Table 3: Utilization of E-Resources by Postgraduate Students in Ethiopian Civil Service University

S. No	Items	Variables	F	%
1.	Usage of E-Resources	Yes, I use E-Resources	281	90.4
		No, I don't use E-Resources	29	9.3
2.	Purpose of Using E-Resources	Research Work	177	56.9
		Exam	86	27.7
		For Reviewing Literature	197	63.3
		General Information	149	47.9
		Obtaining Answer for Specific Questions	98	31.5
3.	Frequency of Using E-Resources	Very Often	82	28.2
		Often	142	48.8
		Not Very Often	40	13.7
		Rarely	26	8.9
4.	E-Resources Often Used	E-Books	96	30.9
		E-Journals	133	42.8
		E-Thesis and Dissertation	92	29.6
		Online Databases	36	11.6

**Research Question 2.2:** To what extent did students utilize digital information resources at the Ethiopian Civil Service University Library?

Table 4 shows the extent of utilization of electronic information resources by postgraduate students in the Ethiopian Civil Service University Library. E-Journals, E-Books, and E-Thesis and Dissertation are utilized by students while item 4 (Online Database) is not utilized by students therefore, the extent of utilization is low.

**Table 4:** Utilization of E-Resources (Item Type) by Postgraduate Students in Ethiopian Civil Service University.

S.No.	Item Statement	Very Great Extent		Great Extent		Low Extent		Very Low Extent		I Do Not Know		Mode	Remark
		F	P	F	P	F	P	F	P	F	P		
		1.	E-Journals	70	24.2	111	38.4	63	21.8	26	9.0		
2.	E-Books	42	14.9	93	33.1	92	32.7	37	13.2	17	6.0	2	Great Extent
3.	E-Thesis and Dissertation	34	12.1	95	33.9	85	30.4	35	12.5	31	11.1	2	Great Extent
4.	Online Databases, such as JSTOR, Annual Reviews, EBSCO Host, etc.	40	14.2	66	23.5	81	28.8	50	17.8	44	15.7	3	Low Extent

Source: Field Survey, 2020

As the Table shows, postgraduate students to a high extent utilized the available e-resources, especially e-journals, e-books, and e-thesis and dissertation. This finding agrees with that of Akpojotor 2016 who investigated the awareness and usage of electronic information resources among postgraduate students and reported that postgraduate students highly used electronic information resources. Similarly, the finding agrees with that of Quadri, Adetimirin, and Idowu (2014) whose study on availability and utilization of library electronic resources by undergraduate students reported that there was a high level of utilization of e-journals and the internet.

This finding disagrees with that of Urhiewhu (2014) who studied the availability and use of digital information resources (DIRs), by undergraduate students and reported to a low extent. The finding also disagrees with that of (Adeleke and Nwalo, 2017), whose study on availability, use, and constraints to use of electronic information resources by

postgraduate, and reported a low level of usage of electronic resources. This research finding has also collaborated with different

other researches. Heterick (2002) reported high utilization of e-journals and e-books because most library users relied on them for information to do assignments, write up term papers and dissertations.

**Research Question 3:** What are the problems encountered by students while accessing and utilizing the electronic information resources in Ethiopian Civil Service University?

Results from table 5 above showed a mode of response to problems encountered by students while accessing and utilizing the electronic information resources in the Ethiopian Civil Service University Library. From the above table, lack of IT (Computer) knowledge, inadequate computers in the library, poor Internet connectivity, and lack of relevant E-Resources in various disciplines are the problems encountered by students with Mode 2, 1, 2, and 2 respectively.

**Table 5:** Problems encountered by students while accessing and utilizing the electronic information resources in the Ethiopian Civil Service University Library

S.No.	Item Statement	Strongly Agree		Agree		Disagree		Strongly Disagree		I Do Not Know		Mode	Remark
		F	P	F	P	F	P	F	P	F	P		
		1.	Utilizing E-Resources are time consuming	45	15.7	89	34.1	102	35.7	32	11.3		
2.	Lack of IT (Computer) knowledge to effectively use the services	34	11.7	97	35.3	75	28.8	32	11.3	27	9.9	2	Agree
3.	Uncooperative staff to facilitate any access	39	13.5	75	28.5	85	31.7	51	17.8	42	14.8	3	Disagree
4.	Inadequate computers in the library	32	11.5	75	28.5	64	23.9	37	12.9	28	9.3	1	Strongly Agree
5.	Poor internet connection	35	12.1	97	35.9	71	24.1	31	10.3	19	6.1	2	Agree
6.	Limited subscribed titles	31	11.1	75	27.7	89	32.8	28	9.8	38	12.8	3	Disagree
7.	Power Outage	23	8.1	75	28.1	85	31.9	39	14.1	30	11.9	3	Disagree
8.	Lack of relevant E-Resources in various disciplines	38	13.4	32.5	11.8	85	31.8	48	17.8	30	10.4	2	Agree

Source: Field Survey, 2020

While Utilizing E-Resources are time-consuming, uncooperative staff, limited subscribed titles, and power outage are not problems encountered by the students.

The researcher asked FGD participants to mention additional issues which might be considered as mentioned as problems for students while they are accessing and using E-Resources. Accordingly, responses from the participants generally showed budget problems to subscribe E-Resources, especially E-Books as a major problem. On the other hand, while other E-Resources are subscribed students were not part of the decision-making process, even the faculties also were not active actors of the decision-making process. Besides, shortage of computer laboratories, shortage of professionally skilled manpower, and lack of awareness of e-resources availability among the University community were further reported as key problems hindering

users from access to and use of E-Resources by the FGD participants.

As displayed in table 5 above, respondents showed that they encountered various challenges when accessing and using E-Resources at ECSU Library. The result of this study concurs with the work of Gakibayo et al (2013) who found that some students did not effectively utilize E-Resources because they lacked computer skills. Chimah and Nwokocha (2013), who studied motivation, challenges, and strategies in the use of electronic information resources by postgraduate library users reported different challenges including an insufficient computer, slow internet connectivity, and lack of ICT skills.

This finding agreed with the report by Ankrah and Atuase (2018) that poor internet connection, insufficient skills, as well as inadequate computers are a hindrance to effective access and use of electronic resources in academic libraries. The finding also compares with that of Eden and Egbe (2016) who also reported that inconsistent internet connectivity, lack of computer skills, and irrelevant information resources were the problems students encountered while accessing and using electronic resources in the University of Calabar Library (see also Madhusudhan, 2010)). This may serve as an obstruction to learning and research work, especially to postgraduate students. The availability of computer systems in the library is necessary since it would enhance the usage of e-resources and make electronic information accessible to students who might not be able to afford computers. However, inadequate computers in the ECSU library was a major limitation for postgraduate students conducting their research work.

## Conclusion

Based on the results of the findings, it can be concluded that majority of electronic information resources are to a great extent

accessible and utilized by students in the Ethiopian Civil Service University Library. However, students have encountered problems while accessing and using available electronic information resources. University researchers didn't upload their research work and past exam paper to be available for students to access and use online. The library didn't have an E-Resource collection of development rules and regulations. Besides, students were not part of the decision-making process while E-Resources were procured by the library.

The effective access and utilization were hampered by a range of problems including lack of IT (computer) knowledge to effectively use the services, poor Internet connection in the dormitory, lack of relevant e-resources in various disciplines, and inadequate computers in the library were the problems encountered by students while accessing and using electronic information resources. In addition, the study further revealed that major challenges in the library were inadequate budget and lack of skilled technical staff.

## Recommendations

Based on the above findings, the following recommendations are forwarded:

- User education (appropriate regular training and orientation) should be organized for students for better use of electronic information resources in the library. The current awareness campaign is a must for every academic library because it can facilitate awareness among students, lecturers, and researchers. This would influence their intention to use the resources and improve performance expectancy;
- Information literacy course/training should be included in the university curriculum or training program so as to regularly and continuously teach users how to know, locate, access, evaluate, use and communicate information; sufficient computer facility should be available in the library to give better

chance for library users to access electronic information resources; Library technical staff should be informed and trained so as to actively help students in accessing and using electronic information resources;

- The University Management should provide adequate funds for the subscription of relevant e-resources. The library should separate the E-Resource budget from monographs;
- Selection decisions for e-resources, especially for e-journals should be made with great care, taking into account the information needs of the academic community and collection relevancy, accessibility, usage, availability of full-text databases, and the overall cost of e-journals;
- The ECSUL is recommended that they must continuously review e-resources in light of the current interest of users, by conducting a need assessment about access to and use of e-resources; efforts should be made by the University Administrator and Library Management to improve and enhance internet connectivity problems to enable the students to have easy access to online e-resources;
- In order for ECSUL to be effective in influencing access to and use of e-resources, it is recommended that electronic collection development rules and regulation, guidelines and procedures for budget allocation, needs assessment, selection, collection maintenance, evaluation, and resource sharing be formulated and be implemented to enhance the efficient management of e-resource collection in the library;
- There should be some kind of mechanism for students to be part of the decision-making process in the procurement of e-resources.

## Acknowledgment

I would like to thank the Ethiopian Civil Service University for providing the financial assistance to conduct this study. My thanks are also due to Assistant Professor

Tesfyaie Teshome for providing some general advise in the process of this study.

## Funding

ECSU Funding

## Ethical Clearance

NA

## Reference

- AACR2 Rule 9.0A1. (2008). Library of Congress Collections Policy Statements Supplementary guidelines.
- Adeleke, D.S & Nwalo, K.I (2017). Availability, Use and Constraints to use of electronic information resources by postgraduate students at the University of Ibadan. *International Journal of Knowledge Content Development and Technology*. 7(4):51-69.
- Adeniran, P., 2013, 'Usage of electronic resources by undergraduates at the Redeemer's University, Nigeria', *International Journal of Library and Information Science* 5(10), 319-324.
- Addisalem (2016). The use of electronic information resources by postgraduate students at UNISA regional learning center in Ethiopia. South Africa University Press.
- Aguolu, C.C & Aguolu, I.E (2002). Libraries and Information Management in Nigeria. Maiduguri Ed-Linform Services.
- Akpojotor, L. O. (2016). Awareness and Usage of Electronic Information Resources Among Postgraduate Students of Library and Information Science in Southern Nigeria. *Library Philosophy and Practice*
- Amankwah, P.B (2014) Use of Electronic Resources by undergraduate students of Ghana Institute of Management and Public Administration (GIMPA). An unpublished dissertation submitted to the University of Ghana, Legion in partial fulfillment of the requirement for the award of Masters of Art in Information studies.
- Ankrah, E & Atuase, D (2018). The use of Electronic Resources by postgraduate students of the University of Cape Coast, *Library Philosophy and Practice (e-journal)*.

Baryshev, A. R., Babina, I.O, Zakharov, A. P., Kazantseva, P.V., & Pikov, O.N (2015). Electronic Library: Genesis, Trends from Electronic Library to Smart Library. *Humanities and Social Sciences* 6 (2015 8) 1043-1051.

Bashorun, M., Tunji, I.A., & Adisa, M.Y. (2011). User perception of electronic resources in the University of Ilorin, Nigeria. *Journal of Emerging Trends in Computing and Information Sciences*. 2(11): 554-562.

Bayugo SS, Agbeko KS (2007). Information seeking behavior of health sciences faculty at the College of Health Sciences, University of Ghana. *Information Development* 23(1):63-70.

Bhatt, S. & Rana, M. S. (2011). E-information usage among engineering academics in India with special reference to Rajasthan State. *Library Hi Tech*. 29(3): 496-511.

Chimah J. N & Nwokocha U. (2013). Empirical study of motivation, challenges, and strategies in the use of electronic information resources by postgraduate library users in South-east Nigerian Federal Universities. *Academic Journals*,5(11), 468-478.

Chisenge, J. (2001). Information and Communication technologies: opportunities and challenges for national and university libraries in eastern, central, and southern Africa.

Dadzie, P. S. (2005). Electronic resources: Access and usage at Ashesi University College. *Campus-wide Information Systems*, 22(5), 290-297.

Davis, F. D. (1993). User acceptance of information technology: System characteristics, use perception and behavioral impacts. *International Journal of Man-Machine Studies*

Deng, H. (2010). Emerging patterns and trends in utilizing electronic resources in a higher education environment: An empirical analysis. *New Library World*, 111 (3/4), 87-103.

Dillion, A. & Morris, M. (1996). User acceptance of new information technology: Theories and models.

Edem, N. B. & Egbe, N. (2016). Availability and Utilization 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), 60-69



- Egberongbe, H. S. (2011). The use and impact of electronic resources at the University of Lagos. *Library philosophy and practice*
- Ehikhamenor, F. A. (2003). Internet resources and productivity in scientific research in Nigerian universities. *Journal of Information Science*, 29(2): 102-116.
- Gakibayo, Anna, J. R. Ikoja-Odongo, & Constant, Okello-Obura. (2013). Electronic information resources utilization by students in Mbarara University Library. *Library Philosophy and Practice*.
- Hadagali, G. S., Kumbar, B. D., Nelogal, S. B. & Bachalapur, M. M. (2012). Use of electronic resources by post-graduate students in different universities of Karnataka State. *International Journal of Information Dissemination and Technology*, 2(3), 189-195.
- Heterick, B. (2002). Usability Evaluation of Digital Libraries. In *Digital Libraries: Philosophies, Technical Design Considerations, and Example Scenarios*, Stern, D. (Ed). New York: Haworth Press.
- Ibrahim, A. E. (2006) Use and User perception of electronic resources in the United Arab Emirates University. *Libri, Vol.54 pp 18-29*
- Kumar, M. A., & Reddy, V. P. (2014). Use of e-journals by research scholars in university libraries in Andhra Pradesh. *Library Philosophy and Practice (e-journal)*.
- Kiondo, E. (2004). An assessment of the levels of IT Investments, Electronic Resource Usage and Information Literacy Skills of Users. *International Journal of Librarianship*. 10(8): 89-95.
- Lateef, E. B., Omotoso, A. O & Owolabi, K. A. (2013). A Survey of postgraduate students' perception of university library resources in selected Nigerian universities. *International Research: Journal of Library & Information Science Vol.3 No.1, Apr. 2013*.
- Lefuma, S. (2017). Access to and use of Electronic Information Resources in the academic libraries of the Lesotho Library Consortium. Unpublished dissertation submitted to College of Humanities University of Kwazulu-Natal, South Africa.
- Legris, P., Inghamb, J. & Collettec, P., 2013, 'Why do people use information technology? A critical review of the technology acceptance model', *Information & Management* 40,191-204.
- Madhusudhan, M. (2010). Use of UGC infonet journals by the Research Scholars of University of Delhi. *Library Hi Tech*. 26(3): 369-386.
- Magara, E. (2012). Application of digital libraries and electronic technologies in developing countries: practical experiences in Uganda. *Library Review*, 51(5), 241-255.
- Mittal, P. & Bala, M., 2013, 'Use of e-resources in universities', *International Journal of Innovative Research in Computer and Communication Engineering* 1(6), 1360-1361. [ Links ]
- Mosha, G. & Bea, G., 2014, 'Barriers of using internet resources in higher learning institutions: A case of Mzumbe University in Morogoro Region in Tanzania', *Information and Knowledge Management* 4(8), 86-97.
- Ndubuisi, C.J. & Udo, N. (2013). Empirical study of Motivation, challenges and strategies in the use of electronic information resources by postgraduate library users in south-east Nigerian Federal Universities. *International Journal of Library and Information Science*, 5(11), 468-473.
- Oduwale, A.A. & Akpati, C. B. (2003). Accessibility and retrieval of electronic information at the University of agriculture Library, Abeokuta. *Electronic Library*. 52 (5): 228-233.
- Ojo, R. A. and Akande, S. O. (2005). Students Access, Usage and awareness of Electronic resources at the University College Hospital, University of Ibadan, Nigeria. *Lagos Journal of Library and Information Science* 3(1): 16 – 24.
- Okello-Obura C. and Ikoja- Odongo, J.R. (2010). Electronic Information Seeking among LIS Postgraduate students at Makerere University, Uganda. *Library Hi Tech News*, (1), 8-20.
- Okiki OC (2012). Electronic information resources awareness, attitude and use by academic staff members of University of Lagos, Nigeria. *Library Philosophy and Practice (e-journal)*.
- Osundina A, S (2004) "Building and Using a Tool to Assess Info and Tech Literacy," *Computers in Libraries: Priyanka, S. & Kumar, A. (2013). Understanding the Evolution of Technology Acceptance Model. International Journal of Advanced Research in Computer Science and Management Studies.*
- Quadri, G. O., Adetimirin A. E. & 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.
- Rosenberg, D. (2005). Towards the digital library in Africa. *Electronic Library*, 24 (3), 289-293.
- Sharma, C. (2009). Use and impact of e-resources at Guru Gobind Singh Indraprastha University (India): A case study. *Electronic Journal of Academic and Special Librarianship*. 10(1), 18-20.
- Schutte, C. (2004). Advantages and Utilization of Electronic Resources. *Library Trends*. 45 (3): 30-32.
- Shukla, P. & Mishra, R. (2011). Use of e-resources by Research Scholars of Institute of Technology, Banaras Hindu University, India. *International Refereed Research Journal*. 11(2)
- Togia A, Tsigilis N (2009). Awareness and use of electronic information resources by education graduate students: Preliminary results from the Aristotle University of Thessaloniki.
- Ukpebor, C.O. (2012). Availability and use of electronic resources in African universities: The Nigerian perspective. *PNLA Quarterly*, 76(3) (Spring 2012) 190-199.
- Urhiewhu, L.O. (2014). Availability and Use of digital information resources by undergraduates of Universities in Delta and Edo States, Nigeria. *International Journal of Advanced Research*
- Waldman, M. (2003). Freshmen's use of library electronic resources and self-efficacy.
- Watts, C. & Ibegbulam, I. (2006). Access to Electronic Healthcare Information Resources in Developing Countries: Experiences from the Medical Library, College of Medicine, University of Nigeria. *IFLA Journal* .32(1): 54-60.
- Xie, H. (2006), Evaluation of digital libraries: Criteria and problems from users' perspectives. *Library & Information Science Research*, 28(3), 433-452.
- Zhang, L., Ye, P., & Liu, Q. (2011). A survey of the use of electronic resources at seven universities in Wuhan, China. *Program: electronic library and information systems*, 45(1), 67-77