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# PREDICTORS FOR THE ADOPTION AND UTILIZATION OF E-RESOURCES BY UNDERGRADUATE STUDENTS IN UNIVERSITY OF IBADAN

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## Abstract

This study examined predictors for the adoption and utilization of electronic information resources by undergraduate students in University of Ibadan. Five research questions and three null hypotheses guided the study. The study adopted descriptive survey research design. Population of the study comprised 15158 undergraduate students of 2019/2020 academic session. A sample size of 340 undergraduate students was drawn using multi-stage random sampling technique across the seventeen faculties in University of Ibadan. A self-design questionnaire titled “Questionnaire on Predictors for the Adoption and Utilization of Electronic Information Resources by Undergraduate Students” was used to collect data from the respondents. Out of 340 copies of the questionnaire distributed, 326 copies were filled and returned giving a response rate of 95.9% response rate. Data collected for the five research questions were analyzed using frequency counts and percentages while PPMC and multiple regression were used to test the three null hypotheses of the study. The study found that CD-ROM databases, e-journals, e-books, e-newspaper, e-magazines, e-reference resources, and online databases were the major electronic information resources available for use. The study also found that majority of the respondents had positive perception of the usefulness and ease of use of electronic information resources thus majority of them used these resources regularly. However, inadequate computers in the library, epileptic power supply, poor Internet connectivity, and limited subscribed titles were major challenges undergraduate students encounter while using the electronic information resources. The study established that perceived usefulness and perceived ease of use strongly predict the adoption and utilization of electronic information resources among undergraduate students in University of Ibadan. The study recommends that the university management should install adequate networked computers in each department so that students could have access to and use these resources effectively. Equally, the university library management should provide an inverter and battery system to the library to ensure regular power supply.

**Keywords:** *University Library; EIR Utilization; ICT; Perceived Usefulness; Perceived Ease of Use; Undergraduate Students; University of Ibadan.*

## Introduction

The importance of university libraries in supporting the teaching, learning, and research activities of both the students and lecturers cannot be overemphasized. This is because university

libraries were established to enrich the knowledge of users through the provision of vital information resources and services. In recent times, libraries mainly acquire print information resources and users need to physically visit the library before

accessing these resources. However, the growth of Information and Communication Technologies (ICTs) in this 21<sup>st</sup> century had brought tremendous changes to the way university libraries acquire information resources and render their services to library users. This new development allowed libraries not only to acquire printed information resources but also relevant electronic information resources into their collection which provide quick access to various learning resources in electronic form (Kenchakkanavar, 2014). The concept of Electronic Information Resources (EIRs) can be described as the information documents that are stored in electronic format, in computer or computer-related facilities such as CD-ROMs, flash drives, digital libraries, or the Internet (Sahabi et al., 2020). This means that EIRs are information resources in digital format that can be accessed electronically. There are different EIRs the university library subscribes to for students and other community of users. These resources include audio-visual resources, instructional audio tapes, instructional video tapes, VCD/DVD, e-books, e-journals, e-reference materials, CD-ROM, e-mail e-news, Internet, e-databases, such as AGORA, HINARI, OARE, AJOL (Aramide & Bolarinwa, 2010; Ternenge & Kashimana, 2019).

The advantage of EIRs over printed information resources abound. For example, Ukachi (2013) informed that EIRs make information available and provide faster access to information than information accessible via printed media. The researcher explained further that these resources serve as motivators for learners, as they allow them to deliver, obtain, transfer and circulate information resources on any topic of interest. Similarly, Sahabi, Askia, and Unobe (2020) noted that EIRs help to develop access, increase usability and efficiency, and create new ways for students to use the available information in the university library. Furthermore, information resources that are available in electronic format create opportunities for global access to information, enhance speed of service, increase the number of users served, increase the quality of information provided, and offer new opportunities for undergraduate students to find relevant information (Venkatesh, 2008). These potential benefits electronic information resources offer, enable the university library to embrace them.

Even though these resources are important to the library, they also offer students the chance to access relevant and current information from different subject areas. Thus, Aina *et al.* (2014) stated that these resources help students to gain quick access to more information globally for their academic achievement. Despite the huge financial investment universities spend on the acquisition of electronic information resources, studies have shown that these resources face a battle with users' acceptance (Mollel & Mwantimwa, 2019). To determine what encourage an individual's intention to either adopt or reject an Information System, different acceptance models such as the Technology Acceptance Model (TAM), Unified Theory of Acceptance and Use of Technology (UTAUT) among others have been developed with some construct that can be used to predict the users' behaviours towards the adoption of these technologies. Most importantly, these models have tried to establish the rationale behind technology diffusion and acceptance in organizations, with special emphasis on e-resources, e-learning, and e-services (Izuagbe *et al.*, 2016).

The Technology Acceptance Model (TAM) has perceived usefulness (PU) and perceived ease of use (PEOU) as the constructs. Perceived Usefulness refers to the gain in performance that an individual believes he/she can win when using the technology (Khayati & Zouaoui, 2013). In the same vein, Davis (1989) cited in Khayati and Zouaoui (2013) described Perceived Usefulness as a measure of confidence exercise by the user that the technology will enhance the work. The researcher explained further that the use of the Perceived Usefulness dimension contains three parts: implementation, productivity, and time-saving. Hence, it is believed that e-resources would enable the users to improve not only their academic performance but also their general productivity and effectiveness. Thus, the perceived usefulness of electronics is assumed to predict the adoption and usage of electronic information resources by the students. Another important factor that seems to predict the adoption and usage of electronic information resources by undergraduate students is Perceived Ease of Use (PEOU). Davis (1989) described perceived ease of use as the level at which the user believes that

using the system will save energy. This means that in considering the adoption and utilization of electronic information resources, users consider the speed of access to needed resources, the ability to search using multiple files simultaneously, and the ability to access documents from outside the library (Okello-Obura, 2010; Chiemeka et al., 2007). Based on this, it can be deduced that the perceived usefulness and ease of use have the potential to predict the adoption and utilization of electronic information resources by undergraduate students. It is against this background therefore that this study sought to examine the predictors for the adoption and utilization of electronic information resources by undergraduate students in University of Ibadan.

### Statement of the Problem

Electronic Information Resources (EIRs) are important information resources that contribute immensely to the academic achievement of students. The use of these resources has become inevitable for undergraduate students in this digital age as it has provided them with an avalanche of information and research materials available in electronic formats. Despite the numerous benefits these resources offered to students, it has been observed that the utilization of these resources by undergraduate students in Nigeria is very low compared to students in other developed countries as evidenced in studies by Okwilagwe and Ogbomo, 2012; Oyedapo and Ojo, 2013; Owolabi et al., 2016; Ternenge and Kashimana, 2019; and Sahabi et al., 2020. Although many empirical studies had been carried out on the availability and utilization of e-resources by students, none seems to have examined predictors for the adoption and utilization of electronic information resources among undergraduate students in University of Ibadan using the Technology Acceptance Model (TAM). This study was therefore designed to examine predictors for the adoption and utilization of electronic information resources by undergraduate students in University of Ibadan.

### Objectives of the Study

The broad objective of this study was to examine predictors for the adoption and utilization of electronic information resources by undergraduate students in University of Ibadan. Specifically the study sought to:

- i. identify electronic information resources available for use by undergraduate students in University of Ibadan;
- ii. determine the frequency of use of available electronic information by undergraduate students in University of Ibadan;
- iii. ascertain the perceived usefulness of electronic information resources available to undergraduate students in University of Ibadan;
- iv. determine perceived ease of use of electronic information resources available to undergraduate students in University of Ibadan; and
- v. identify challenges undergraduate students in University of Ibadan encounter in the use of electronic information resources.

### Research Questions

The study will answer the following research questions:

- i. What electronic information resources are available for use by undergraduate students of University of Ibadan?
- ii. What is the perceived usefulness of electronic information resources available to undergraduate students in University of Ibadan?
- iii. What is the perceived ease of use of electronic information resources available to undergraduate students in University of Ibadan?
- iv. What is the frequency of use of available electronic information by the undergraduate students in University of Ibadan?
- v. What challenges do undergraduate students in University of Ibadan encounter while using electronic information resources?

### Hypotheses

The following hypotheses was tested at a 0.05 level of significant

- $H_{01}$  There is no significant relationship between perceived usefulness and utilization of electronic information resources by undergraduate students in University of Ibadan.
- $H_{02}$  There is no significant relationship between perceived ease of use and utilization of electronic information resources by undergraduate students in University of Ibadan.

H<sub>03</sub> Perceived usefulness and ease of use will not jointly predict the adoption and utilization of electronic information resources by undergraduate students in University of Ibadan

### Review of Related Literature

Adeleke and Nwalo (2017) defined electronic information resources as those resources in which information is stored electronically and which are accessible through electronic systems and networks. Over the years, these resources have become a very important tool in the academic work of students. According to Omoike (2013) undergraduate students make use of different electronic information resources such as e-books, e-journals, and electronic reference materials like e-encyclopedias, and e-theses/dissertations, CD-ROM databases, e-mail and e-news among others for their academic work. Many researchers from different parts of the world had carried out studies on the use of electronic information resources. For example, Owolabi et al. (2016) evaluated the utilization of electronic information resources by undergraduates in faculties of Education and Social Sciences in University of Ibadan. The study adopted a descriptive survey design with a study population of 1872 undergraduates in faculties of Education and Social Sciences in University of Ibadan. A sample of 200 respondents was drawn from each faculty using simple random technique. Data collected were analyzed using the SPSS software, frequency distribution, and percentages. The study found that Internet services, e-mail services, online databases, electronic databases, and cybercafés were the available electronic information resources often used by undergraduate students in University of Ibadan while academic purposes/course work, completing an assignment, communicating with friends and colleague, online application/registration and source for materials for project writing were their purposes for using electronic information resources. The study also found that inadequate power supply, poor network/internet connectivity, and limited access to computer terminals were challenges students encountered when using electronic information resources.

Similarly, Sahabi et al. (2020) investigated the use of electronic information resources by

undergraduates in Ahmadu Bello University Library, Zaria. The study adopted a survey research design with a study population of 4,189 undergraduate students who registered with the university library between 2017-2019 academic sessions. A sample of 838 respondents was selected using Wimmer and Dominick's formula. Data collected was analyzed using the frequency distribution and percentages. The findings revealed that most of the undergraduates of Ahmadu Bello University Library, Zaria used electronic information resources for research and academic purposes. In another study carried out by Alegbeleye et al. (2019) on electronic information resources used by undergraduate students of Kaduna State University (KASU), Kaduna. A survey research design was adopted to carry out the study. The instrument used for data collection was a questionnaire. A total of 74 questionnaires were administered, out of which 54 were duly filled and returned. The study found that majority of the respondents had used electronic journals, with 70.3% of them using electronic information resources for class assignment purposes. Majority of the respondents used e-journals frequently. The study found that most of them used the internet search engines mainly to complete their class assignment.

Daramola (2016) assessed the perception of undergraduate students of the Federal University of Technology, Akure on the use of e-resources in the library. A total of 180 undergraduate students were randomly selected from students who visited the e-resources section of the University within a period of eight months in 2015 (January – August). A structured questionnaire was used to collect data from the respondents. Data collected were analyzed using frequency counts and percentages, The study revealed that the undergraduate students that visited the e-resources unit of the university were relatively young with a mean age of 22 years; male students visited the e-resources more than the female students. The e-resources in FUTA library were mainly used by male students that cut across most of the faculties in the university. The major reasons for utilizing the e-resources were for class assignment and research purposes. The E-resources frequently used were e-journals, e-books, and e-magazines. Although the students have a positive perception about the e-resources, the most significant

challenge faced by the students was insufficient computers in the e-library. This was corroborated in another study earlier carried out by Adeniran (2013) on the usage of electronic resources by undergraduates at the Redeemer's University library, Mowe, Nigeria. A total of 256 students in 200 levels and above who used the library during the period of the study formed the population for the study. The survey research method was adopted for the study. A questionnaire was used as a data collection instrument. Frequency counts and simple percentages were used in analyzing the data collected. The study revealed that majority of the respondents does not use the available electronic information resources in Redeemer's University regularly. Technical problems were the major challenge associated with the use of electronic information resources in that study. Another study by Adeoye and Olanrewaju (2019) examined the use of library electronic information resources by undergraduate students at Lead City University, Ibadan. The researcher adopted a descriptive survey design and the population for the study was 2,171 undergraduates from faculties of Law, Arts and Education, Social and Management Sciences, and Basic Sciences. A sample of 217 respondents was selected. Data were analyzed using frequency counts and percentages.. The study revealed the availability of electronic information resources. The majority of the respondents (53%) Strongly Agree and (29%) Agree respectively with the usefulness of Electronic Information Resources in their academic tasks, 36% of the respondents Agree while 38% strongly Agree respectively that overall, they found Electronic Information Resources easy to use. Respondents however view slow internet access as a major challenge. Also, Bhatt and Rana (2011) also observed that the most common problem with e-resources are low-speed connectivity, lack of awareness about statutory provision for accessing e-resources by the institutions, technical problems, and unavailability of sufficient e-resources, doubts in permanency, high purchase price and lack of legal provision. A similar study by Ankrah and Atuase (2018) revealed that poor internet connection,

power outages in the library, insufficient skills, limited subscribed titles, as well as inadequate computers are hindrances to effective access and use of electronic resources in academic libraries.

### Methodology

A descriptive survey research design was adopted for this study. The population of the study comprised all undergraduate students in University of Ibadan. As of the 2019/2020 academic session, the total number of undergraduate students across all the seventeen faculties in University of Ibadan stands at 15,158 (*Academic and Planning Unit, 2021*). To determine the sample size of the study, a multi-stage random sampling technique was used. Firstly, the study divided University of Ibadan into a homogenous group known as strata, and in each stratum (faculty) the study purposively selected twenty samples from each faculty to have an equal representation of each faculty. From this, a total of 340 undergraduate students were drawn as sample of the study. A self-designed questionnaire titled "Predictors for the Adoption and Utilization of Electronic Information Resources among the Undergraduate Students' Scale" with the acronym of (PAUEIRUSS) was used to collect data from the respondents. This questionnaire was divided into two parts, that is, part A and B. Part A contained items on demographic information of the respondents such as gender, age, and academic level of study of the respondents while Part B was subdivided into five (5) sections to gather data on the five research questions of the study. Three hundred and forty (340) copies of the questionnaire were personally administered by the researcher with the help of research assistance across the 17 faculties in University of Ibadan. Out of which 326 copies of the questionnaire were filled and returned which gives a 95.9% response rate. Data collected on the five research questions of the study was coded in IBM-SPSS version 26 and was analyzed by using descriptive statistics of tables, frequencies, and percentages while Pearson Product Moment Correlation (PPMC) and multiple regressions were used to test the hypotheses.

## Data Presentation and Analysis

### Demographic Information of the Respondents

Table 1: Demographic Information of the Respondents

Gender	Frequency	Per cent
Male	207	63.5
Female	119	36.5
Total	<b>326</b>	<b>100.0</b>
Age		
16-20	125	38.4
21-25	177	54.3
26-30	18	5.5
31-35	6	1.8
Total	<b>326</b>	<b>100.0</b>
Academic Level of Study		
100	31	9.5
200	72	22.1
300	129	39.6
400	94	28.8
Total	<b>326</b>	<b>100.0</b>

Results in Table 1 revealed the demographic information of the respondents. The results showed that out of 326 respondents, 207(63.5%) were male while 119(36.5%) were female. This means that the majority of the respondents were male. In the same vein, the results on the age range of the respondents revealed that majority of the respondents 177(54.3%) were within the age range of 21-25 years. This is closely followed by the respondents that fall within the age range of 16-20 represented by 125(38.4%). Next to this are

the respondents that fall within the age range of 26-30 represented by 18(5.5%) while 6(1.8%) respondents fall within the age range of 31-35. Based on the academic level of study of the respondents, the results confirmed that the majority of the respondents 129(39.6%) were in the 300 level while 94(28.8%) were in the 400 level. Next to this are the respondents in the 200 level represented by 72(22.1%) while the least respondents were in the 100 level represented by 31(9.5%).

**Research Question 1: What electronic info rmation resources are available for the use of undergraduate students in University of Ibadan?**

Table 2: Electronic Information Resources Available to Undergraduate Students

S/N	Items	Available	Not Available
1	E-conference proceedings	16 (4.9%)	310 (95.1%)
2	CD-ROM database	324 (99.4%)	2(0.6%)
3	E-newspaper	294 (90.2%)	32 (9.8%)
4	Online database	208 (63.8%)	118 (36.2%)
5	E-magazine	216 (66.3%)	110 (33.7%)
6	E-reference resources	72 (22.1%)	254 (77.9%)
7	E-book	305 (93.6%)	21 (6.4%)
8	E-thesis and dissertation	22 (6.8%)	304 (93.2%)
9	E-journals	311 (95.4%)	15 (4.6%)

results in Table 2 revealed the information resources that were available for the use of the respondents. The results showed that majority of respondents claimed that CD-ROM databases, e-journals, e-books, e-newspapers, e-magazines, e-

reference resources, and online databases were the major electronic information resources available for use in University of Ibadan.

**Research Question 2: What is the perceived usefulness of electronic information resources available to undergraduate students in University of Ibadan?**

Table 3: Perceived Usefulness of Electronic Information Resources Available to Undergraduate

S/N	Statements	SA	A	D	SD
1	EIR would enable me to accomplish tasks more quickly	215 (66.0%)	84 (25.7%)	12 (3.7%)	15 (4.6%)
2	EIR would improve my academic performance	179 (54.9%)	93 (28.5%)	36 (11.1%)	18 (5.5%)
3	EIR would enhance my effectiveness in academic activities	206 (63.2%)	99 (30.3%)	7 (2.2%)	14 (4.3%)
4	Using EIR would meet my course-related need	119 (36.5%)	135 (41.4%)	47 (14.4%)	25 (7.7%)
5	EIR would support critical aspects of my academic activities	142 (43.5%)	126 (38.7%)	38 (11.7%)	20 (6.1%)
6	EIR would allow me to accomplish more work than would otherwise be possible	129 (39.6)	110 (33.7%)	52 (16.0%)	35 (10.7%)
7	Overall, I find EIR useful in my academic activities	186 (57.0%)	117 (35.9%)	13 (4.0%)	10 (3.1%)

**Note: SA+A= Agree while SD+D=Disagree**

The results in Table 3 revealed the perceived usefulness of electronic information resources available to undergraduate students in University of Ibadan. The result showed that 299 (91.7%) agreed that EIR would enable them to accomplish a task more quickly while 27 (8.3%) disagreed with this statement. In the same vein, the result confirmed that 272 (83.4%) agreed that EIR

would improve their academic performance while 54 (16.6%) disagreed with this statement. Also, the result showed that 305 (93.5%) agreed that EIR would enhance their effectiveness in academic activities while 21 (6.5%) disagreed with this statement. Similarly, the result also revealed that 254 (77.9%) agreed that using EIR would meet their course-related needs while 72 (22.1%) disagreed with this statement.

Furthermore, the result showed that 268 (82.2%) agreed that EIR would support the critical aspects of their academic activities while 58 (17.8%) disagreed with this statement. The results also revealed that 239 (73.3%) agreed that EIR would allow them to accomplish more work than would otherwise be possible while 87 (26.7%) disagreed

with this statement. Finally, the result confirmed that 303 (92.9%) agreed that they find EIR useful in their academic activities while 23 (7.1%) disagreed with this statement. From this analysis, it could be deduced that majority of the respondents perceived that EIR is useful in their academic activities.

**Research Question 3: What is the perceived ease of use of electronic information resources available to undergraduate students in University of Ibadan?**

Table 4: Perceive Ease of Use of Electronic Information Resources Available to Undergraduates

S/N	Statements	SA	A	D	SD
1	I perceived that learning to use EIR would be easy for me	98 (30.0%)	128 (39.3%)	64 (19.6%)	36 (11.1%)
2	I don't make errors when using EIR	111 (30.0%)	197 (60.4%)	10 (3.1%)	8 (2.5%)
3	I find it easy to retrieve the EIR that I need	218 (66.9%)	88 (27.0%)	9 (2.7%)	11 (3.4%)
4	It is easy for me to remember how to use EIR	164 (50.3%)	91 (27.9%)	47 (14.4%)	24 (7.4%)
5	I perceived that EIR is rigid and inflexible to interact with	41 (12.6%)	52 (15.9%)	110 (33.8%)	123 (37.7%)
6	I find out that it does not take a lot of effort to become skilful at using EIR	136 (41.7%)	117 (35.9%)	28 (8.6%)	45 (13.8%)
7	Overall, I find the EIR easy to use	215 (66.0%)	69 (21.1%)	31 (9.5%)	11 (3.4%)

Results in Table 4 showed the perceived ease of use of electronic information resources available to undergraduate students in University of Ibadan. The results revealed that 226 (69.3%) agreed that learning to use EIR would be easy for them while 100 (21.7%) disagreed. Furthermore, the result showed that 308 (90.4%) agreed that they do not make errors when using EIR while 18 (5.6%) disagreed with this statement. Also, the study confirmed that 306 (93.9%) agreed that they find it easy to retrieve the EIR that they need while 20 (6.1%) had a contrary view. In the same vein, the result showed that 255 (78.2%) agreed that it is easy for them to remember how to use EIR while

71 (21.8%) disagreed. The result equally revealed that 93 (28.5%) agreed that they perceived that EIR is rigid and inflexible to interact whereas 233 (71.5%) disagreed with this statement. The analysis also showed that 253 (77.6%) agreed that they find out that it does not take a lot of effort to become skilful at using EIR but 73 (22.4%) disagreed with this statement. In all, the result confirmed that 284 (87.1%) generally perceived that they find the EIR easy to use while 42 (12.9%) disagreed with this statement. Thus it can be deduced that the majority of the respondents perceived that EIR was easy to use.

**Research Question 4: What is the frequency of use of available electronic information by undergraduate students in University of Ibadan?**

Table 5: Frequency of Use of Electronic Information Resources by Undergraduate Students

Frequency of Use of EIR	Frequency	Per cent
Regularly	149	46.7
Occasionally	87	26.7
Rarely	76	23.3
Never	14	4.3
<b>Total</b>	<b>326</b>	<b>100.0</b>

Results in Table 5 showed the frequency of use of electronic information resources by undergraduate students in University of Ibadan. The results revealed that out of 326 respondents, majority of the respondents 149(46.7%) used the available electronic information resources regularly while

87(26.7%) used these resources occasionally. Furthermore, the results revealed that 76(23.3%) respondents rarely used electronic information resources while 14(4.3%) respondents claimed that they never use electronic information resources.

**Research Question 5: What challenges do undergraduate students in University of Ibadan encounter while using electronic information resources?**

Table 6: Challenges that Undergraduate Students Encountered while Using EIR

S/N	Challenges	Yes	No
1	Poor Internet connectivity	287 (88.0%)	39 (12.0%)
2	Inadequate computers in the library	315 (96.6%)	11 (3.4%)
3	Limited subscribed titles	211 (64.7%)	115 (35.3%)
4	Lack of assistance from the library staff	72 (22.1%)	254 (77.9%)
5	Lack of ICT skills to access and use EIR	54 (16.6%)	272 (83.4%)
6	Insufficient relevant EIR	21 (6.4%)	305 (93.6%)
7	Epileptic power supply	308 (94.5%)	18(5.5%)

The results in Table 6 identified challenges undergraduate students in University of Ibadan encountered while using electronic information resources. The results showed that inadequate computers in the library, epileptic power supply,

poor internet connectivity, and limited subscribed titles were major challenges undergraduate students in University of Ibadan encounter while using electronic information resources.

**Testing of Hypotheses**

$H_0$  There is no significant relationship between perceived usefulness and utilization of electronic information resources by undergraduate students in University of Ibadan.

Table 7: Perceived Usefulness and Utilization of Electronic Information Resources

Variables	Mean	SD	DF	R-cal	P-value	Remark
Perceived Usefulness	32.49	3.621				
Utilization of EIR	26.71	1.502	324	3.241	.001	Sig.

Source: Field Survey (2021) ( $P < 0.05$ )

Results in Table 7 showed the relationship between perceived usefulness and utilization of electronic information resources. The results confirmed that there is a positive significant

relationship between the perceived usefulness of electronic information resources and utilization. This is because the r-cal is 3.241 and the p-value is 0.001 which is lesser than the level of

significance which is 0.05. Therefore, the null hypothesis of the study which stated that there is no significant relationship between perceived usefulness and utilization of electronic information resources by undergraduate students

$H_{02}$  There is no significant relationship between perceived ease of use and utilization of electronic information resources by undergraduate students in University of Ibadan.

Table 8: Perceived Ease of Use and Utilization of Electronic Information Resources

Variables	Mean	SD	DF	R-cal	P-value	Remark
<b>Perceived Ease of Use</b>	28.01	5.732				
			324	4.828	.001	Sig.

**Utilization of EIR** 22.35 3.831

Source: Field Survey (2021) ( $P < 0.05$ )

Results in Table 8 showed the relationship between perceived ease of use and utilization of electronic information resources. The results revealed that there is a strong significant relationship between perceived ease of use of electronic information resources and utilization. This is because the r-cal is 4.828 and the p-value is 0.001 which is lesser than the level of significance which is 0.05. Therefore, the null hypothesis of the study which stated that there is no significant relationship between perceived ease of use and utilization of

electronic information resources by the undergraduate students in University of Ibadan was REJECTED. This, therefore, means that there is a strong relationship between perceived usefulness and utilization of electronic information resources.

$H_{03}$  Perceived usefulness and ease of use will not jointly predict the adoption and utilization of electronic information resources by the undergraduate students in University of Ibadan

Table 9: Joint Contribution of Perceived Usefulness and Ease of Use on the Utilization of Electronic Information Resources by the Undergraduates

R	R Square	Adjusted R Square	Std. Error of the Estimate
.290	.846	.610	9.2012
Analysis of Variance (ANOVA)			
Model	Sum of Squares	DF	Mean Square
Regression	432.112	2	135.731
Residual	2542.510	173	12.702
Total	2974.622	175	710.5

Source: Field Survey (2021) ( $P < 0.05$ )

The result in Table 9 provides a summary of the result of the multiple regression analysis for the joint contribution of perceived usefulness and ease of use on the utilization of electronic resources of the participants. The result showed that all these variables significantly predict the adoption and

utilization of electronic information resources of the undergraduate students. This is because the two variables (perceived usefulness and perceived ease of use) jointly exert 61% influence on the utilization of electronic information resources for undergraduate student.

Table 10: Relative Extent of Influence of the Predictors on Usage of Electronic Information Resources

Model	B	Standard of Error	Beta	T-value	P
Constant	28.823	10.322		9.63	.001
Perceived Usefulness	0.374	0.291	0.401	5.89	.001
Perceived Ease of Use	0.102	0.117	0.241	3.52	.001

Source: Field Survey (2021) ( $P < 0.05$ )

The result of the analysis in Table 10 revealed that each of the predictors had a significant influence on the utilization of electronic information resources of the students. The result showed that perceived usefulness had the most significant influence ( $\text{Beta} = 0.401$ ;  $t = 5.89$ ;  $P < .001$ ) while perceived ease of use is the next with ( $\text{Beta} =$

0.241;  $t = 3.52$ ,  $P < .001$ ). It can be deduced from these results that differences exist in the utilization of electronic information resources of the students based on their perception of the usefulness and ease of use of electronic information resources. This is confirmed by the difference in the T-Value that each of them obtained.

### Discussion of Findings

The use of electronic information resources in the academic achievement of students has become an invaluable tool in this 21<sup>st</sup> century in which globalization of education is done through the use of Information and Communication Technologies (ICTs). The use of these resources offered many bits of helps to students, in the sense that they help the students to be knowledgeable and conversant in their respective chosen academic careers. Therefore, the first findings of the study revealed that CD-ROM databases, e-journals, e-books, e-newspapers, e-magazines, e-references resources, and online databases are the major electronic information resources available for use in University of Ibadan. This finding is in agreement with the work of Ternenge and Kashimana (2019) who found that e-journals, e-newspapers, Online Public Access Catalogue (OPAC), CD-ROM databases, e-magazines, e-books, online databases, e-research reports, virtual library online, science direct online and Ebscohost reference databases were the types of electronic information resources available in Francis Sulemanu Idachaba Library University of Agriculture, Makurdi, Benue State, Nigeria. The reason for the availability of these resources in the academic library may be subjected to the fact that these resources are very paramount for the students to thrive in their academic pursuits. Furthermore, the study found that undergraduate students in University of Ibadan have a positive perception of the usefulness of electronic information resources. This is because the majority of the respondents perceived that

electronic information resources would enhance their effectiveness in academic activities. This finding is in line with the work of Mollel and Mwantimwa (2019) who postulated that electronic information resources are believed to enable users to improve not only their academic performance but also their general effectiveness and productivity.

On the perception of the respondents about the ease of use of electronic information resources, the study found that the majority of the respondents had positive perceptions of the ease of use of electronic information. This is because the majority of the respondents perceived that electronic information resources are easy to use compared to print information resources. This finding corroborates the work of Negahban and Talawar (2009) who reveal that the use of EIR is necessary for users mainly because they provide better, faster, and easier access to information than information accessed through print media. In the same vein, the study found that undergraduate students in University of Ibadan use electronic information resources regularly. The reason for this may be connected to the benefit they derived from using these resources which contributed positively to their academic performance. This finding contradicts the work of Adeniran (2013) who reported that the majority of the respondents do not use the available electronic information resources in Redeemer's University Library regularly. The poor usage of these resources may be connected to the technical problem that students claimed they encountered when they

want to use these resources or they had negative perceptions about the usefulness and ease of use of electronic information resources.

Challenges undergraduate students in University of Ibadan face in the use of electronic information resources include inadequate computers in the library, epileptic power supply, poor internet connectivity, and limited subscribed titles. This finding is in line with the study of Ankrah and Atuase (2018) who reported that poor internet connection, power outage in the library, insufficient skills, limited subscribed titles, as well as inadequate computers are hindrances to effective access and use of electronic resources in academic libraries. These challenges are common in most developing countries. To ensure maximum use of electronic information resources by the students and other researchers, these challenges must be addressed by the library management so that the users will have full access and use these resources effectively. The result of the first null hypothesis which stated that there is no significant relationship between perceived usefulness and utilization of electronic information resources by the undergraduate students in University of Ibadan was rejected. This is because the result showed that there is a strong relationship between perceived usefulness and utilization of electronic information. This means that the benefit that undergraduate students perceived that would be derived from electronic information motivate them to adopt and use these resources. The second null hypothesis which stated that there is a significant relationship between perceived ease of use and utilization of electronic information resources by the undergraduate students in University of Ibadan was also rejected. This is because the study found that there is a positive relationship between perceived ease of use and utilization of electronic information resources. The result thus showed that there is a strong relationship between the availability of electronic information resources and their usage. This means that if the student perceived that they can easily locate, retrieve and use these resources without any stress or difficulty, they will be motivated to adopt and use them and vice-versa. This finding collaborate the finding of the study by Salaam (2008) who opined that electronic resources are flexible in searching, and can be accessed remotely at any time compared to paper-based information resources.

Regarding the combined influence of perceived usefulness and perceived ease of use on the adoption and utilization of electronic information resources, the study found that all the two predictors (perceived usefulness and ease of use) significantly influence the adoption and utilization of electronic information resources among the undergraduate students. This finding supports the work of Ketikidis et al. (2012) as well as Mollel and Mwantimwa (2019) who reported that perceived usefulness and ease of use are important predictors of actual use of technology and systems through behavioural intention to use. It also showed that perceived usefulness contributed mostly to the observed significance. The implication of this is that one may postulate that the higher the level of perceived usefulness of electronic information resources by the students, the higher the positive adoption and utilization of the electronic information resources by them. Therefore, by having a positive perception of the usefulness of electronic information resources, students can use these resources for research, project writing, complement lecture note, do their assignments, and in writing term papers among others.

### Conclusion and Recommendation

Electronic information resources (EIRs) are important tools that enable undergraduate students to excel in their academic pursuit. This is because, these resources give access to quality information irrespective of place and time, and students can use these information resources to do some of their academic activities such as project writing, completing class assignment, research work, and complementing lecture notes among others. Most importantly, it should be noted that in adopting and utilizing electronic information resources among undergraduate students, perceived usefulness and perceived ease of use of these resources are key factors. The implication of this is that, the higher the students have a positive perception about the usefulness and ease of use of electronic information resources, the higher they will adopt and utilize them. Based on the findings, the following recommendations were made:

- i. The university management should install adequate networked computers in each department so that students could have access to and use these electronic information resources effectively.

- ii. Both the university and library management should make effort to improve the Internet bandwidth and connectivity in the university to enable the students have easy and quick access to electronic information resources.
- iii. The university management should provide an inverter and battery system to the library to ensure a regular power supply.
- iv. The library management should acquire and subscribe to more relevant electronic resources for the use of students.

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