UNDERGRADUATES' AWARENESS AND USE OF ELECTRONIC INFORMATION RESOURCES IN SELECTED PRIVATE UNIVERSITIES IN OYO STATE, NIGERIA

SOLOMON ADEOLU OLANIYI
Librarian II
T.Y. Danjuma Library,
Ajayi Crowther University, Oyo, Oyo State.
sa.olaniyi@acu.edu.ng
07065947747
&
FISAYO ADESOLA ADEKUNLE
Librarian II
University Library,
Lead City University, Ibadan, Oyo State.
adekunle.fisayo@lcu.edu.ng solomonking2011@gmail.com
07035644769

ABSTRACT

An incredible positive effect could be perceived on the undergraduate students' academic endeavours as a result of their utilisation of electronic information resources (EIRs). Nevertheless, observations and empirical proofs have revealed that the utilisation of some of the EIRs by some undergraduate students is low. Conceivably, this observation might not be unrelated with the awareness associated with the knowledge of EIRs which could upset their utilisation by the undergraduates. Hence, the study investigates the influence of awareness on the use of EIRs by the undergraduate students of Ajayi Crowther University, Oyo and Lead City University, Ibadan, Nigeria. Descriptive survey research design of the correlational type was used and the study population included all the 9,563 undergraduates of Ajayi Crowther University, Oyo and Lead City University, Ibadan, Nigeria. The multistage random sampling technique was used to select a sample size of 221 and the questionnaire was the data collection instrument. Results established that majority 197(98.5%), 190(71.2%) of the respondents indicated a high level of awareness of E-books and E-news respectively. Most 195(97.5%) of the undergraduate students also agreed that they used EIRs for learning. Finding showed that there is a significant relationship between awareness and use of EIRs by the respondents (r(199) = .445**, p<.05). It was suggested that in a bid to sustain a satisfactory level of awareness towards the utilisation of EIRs by

the undergraduate students, libraries should constantly engage students with regular literacy programmes so as to ensure effective use and justify investment on EIRs.

Keywords: Awareness, Electronic information resources, Undergraduates, University

Introduction

Globalisation of the educational sector has brought about the increase in the establishment of private universities around the world (Ajayi, Adetayo, Gbotoso & Salvador, 2021; Yusuf, Hanafi & Taslikhan, 2017). Universities, including private have the permission of the Nigeria/National University Commission NUC to admit students, including undergraduates into various courses and programmes as approved by the commission. According to Olaniyi and Oyewole (2018), undergraduates are students pursuing their Bachelor degree in different disciplines and are important stakeholders in most universities; because they constitute a significant group of learners in most universities. However, as basic requisite for the award of Bachelor certificate at the end of their programmes, these students, among many other things, engage in academic activities including project writing, seminar presentation, examination and continuous assessment for which they need information sources (Olaniyi, 2022). The information resources, which are either in the print or electronic format, are the information bearing objects or materials that are capable of meeting the information needs of its users. More so, the advancement in Information and Communication Technology (ICT) has given way to changes in teaching, learning and research activities in Nigerian universities, most especially, as private universities had also resulted in the emergence of electronic information resources (EIRs).

EIRs are the electronic version of the hard or print formats which is a significant part of library collection in this digital era. These information materials which are either available online or offline, are accessible with the aid of computer and other smart devices such as iPad, laptop and Smartphone in the library or at home for the purpose of teaching, studying and or researching. EIRs also include databases (online and offline), e-journals, e-books, e-newspapers, e-research reports and e-lecture notes. In recent times, due to the limitations of print information resources, the electronic information sources are getting more patronage and also becoming a major information source with unique and outstanding benefits to users and libraries. These includes providing unlimited and easy access to current and relevant information, removing space problem and strengthening collaborative efforts in research (Yebowaah & Plockey, 2017). With the availability of EIRs, users could have access to numerous and myriad of resources and be satisfied depending on their needs. Electronic resources could be more useful and beneficial due to inherent capability to manipulate and search, provide information access and acquiring information resources, savings in storage and maintenance etcetera. Also, with the use of the Internet, easy accessibility to remote databases and full text online resources is made possible. This new trend has changed the expectations of users and opportunities to have quick access to information in different formats without restriction of space and time (Kumar, 2009).

Students, including undergraduates now have timely access to numerous and quality information in diverse field of study at the right time through the click of a button.

However, in spite of the numerous benefits, investment and capital expended on subscription to electronic information resources and facilities, it has been observed that the utilisation of electronic information resources among the undergraduate students seems to be low. Finding of Uwandu (2022) also indicated that the students' extent of use of electronic information resources was low. The result could definitely turn out like this, if certain factors which are expected to facilitate the use of EIRs were missing. Nevertheless, such factor could not be unconnected with the level of awareness of EIRs. Awareness is the state of being informed and having knowledge about something such as

the EIRs. Awareness is very important for people to make informed decisions, most especially the undergraduate students. This is because their level of awareness could influence their use of EIRs maximally. Thus, the study attempts to investigate the extent of awareness and use of EIRs in private universities in Oyo State, Nigeria.

Statement of the problem

The EIRs form an integral part of information sources and has become more essential for learning, teaching and research activities in this digital era. However, in view of the inherent benefits of the EIRs to undergraduate students, several studies have shown that EIRs were not maximally utilised by the undergraduates. This could be as a result of its low-level awareness among the undergraduate students in universities. Those undergraduate students, who were not aware of the availability of the electronic resources, its quality and variety, owing to inadequate knowledge would not be able to use the available ones as expected. Even if the EIRs is readily available, it does not translate to use until it comes to the awareness and knowledge of those who should benefit from its numerous advantages such as the undergraduate students. Hence, the need to investigate the influence of awareness on the use of electronic information resources among the undergraduate students of private universities in Oyo State, Nigeria.

Research Questions

The following research questions were raised to guide the study.

1. What is the level of awareness of electronic information resources by the undergraduate students of private universities in Oyo State, Nigeria?
2. What are the purposes of use of electronic information resources by the undergraduate students of private universities in Oyo State, Nigeria?
3. What is the frequency of use of electronic information resources by the undergraduate students of private universities in Oyo State, Nigeria?
4. What are the challenges to use of electronic information resources by the undergraduate students of private universities in Oyo State, Nigeria?

Hypothesis

The study will test the following hypothesis at 0.05 level of significance:

1. There is no significant relationship between awareness and use of electronic

resources by undergraduate students of private universities in Oyo State, Nigeria.

Review of Related Literature

The rapid development of digital technology has transformed access to information across various fields, including academia. In higher education, EIRs, such as online journals, databases, e-books, and digital libraries have become essential tools, enabling students to access a wealth of knowledge beyond the constraints of physical libraries. This shift is particularly significant in private universities, where investment in technology and digital infrastructure often facilitates easier access to these resources. However, despite the availability of EIRs, the extent of awareness and usage among undergraduates varies and is influenced by factors such as digital literacy, training, institutional support, and personal motivation. This literature review explores existing research on the awareness and utilisation of EIRs among undergraduates, aiming to highlight patterns, challenges, and strategies for enhancing student engagement with these invaluable academic tools. The first section of the review of related literature will focus on awareness of EIRs, the next section will concentrate on the use of EIRs, while the last section will focus on awareness and use of EIRs.

Awareness of Electronic Information Resources

Awareness of EIRs is crucial in modern academic environments, where digital access to information significantly enhances research, learning, and knowledge acquisition. EIR includes databases, e-journals, e-books, and online libraries, providing students and researchers with extensive resources that are often more current and accessible than traditional print media. Awareness of these resources enables users to harness their potential, aiding in academic success and fostering a culture of self-directed learning. However, varying levels of awareness among students, influenced by factors like digital literacy, training programmes, and institutional outreach, can impact the effective use of these resources. Even when EIRs are available to meet the varying information needs, information users, such as undergraduates' states of consciousness or knowledge of EIRs remains sacrosanct.

Adelaja (2024) examined the level of awareness and use of electronic library resources at the University of Ibadan and the finding revealed that majority of the undergraduates at the University of Ibadan were aware of the various EIRs. A 2023 study by Johnson _et al._ explored EIR awareness among undergraduates in North American universities and found that around 75% of students reported familiarity with major databases, such as JSTOR, ProQuest, and EBSCOhost. However, the study highlighted a gap in understanding specific, subject-oriented resources, with students in humanities reporting lower awareness compared to those in sciences and engineering (Johnson _et al._, 2023). In contrast, a study by Lian and Wei (2024) surveyed students in Asian universities, revealing a discrepancy in EIR awareness based on institutional access and training. The study found that students with dedicated library orientation programmes had a 40% higher awareness level of EIR compared to students who did not receive such training. This underscores the importance of structured EIR orientation in enhancing students' awareness and usage.

Fasugba and Udoudoh (2022) assessed EIRs on postgraduate engineering students' academic activities in federal universities in South-west, Nigeria. Their survey showed that the respondents were aware of Online Databases, CD-ROMs, Web Public Access Catalogue, e-scripts, e-monographs, e-government papers, e-theses/dissertations, e-magazines, e-conference papers, e-newspapers, e-journals and e-books. Adenariwo (2022) investigated the awareness and usage of e-resources among undergraduates in Fountain University, Osun State, Nigeria. The survey revealed that most of the respondents confirmed their awareness of e-resources through the library, seminars, classmates and discussions with friends. Yemi-Peters, Abdulrahman, Oladokun and Ufedo (2022) investigated the awareness and access to electronic information resources by students at Kogi State University, Anyigba, Nigeria. Their survey revealed that most of the respondents were aware of e-resources such as online databases, e-books, e-journals, e-newspapers and e-projects, CD-ROM and e-magazines. Bhardwaj and Sharma (2022) assessed the use of electronic information resources. The findings reveal that 100% of respondents were aware of the e-resources in JMI, DU, JNU and IP universities. However, their finding revealed a difference in the fact that most of the respondents in central universities in Delhi (CUD) were aware of e-books.

Overall, while each study highlights the generally high awareness of EIRs, the findings underscore the importance of library, seminars, classmates and discussions with friends as crucial in shaping the depth and diversity of students' EIRs' awareness. This review suggests that an optimal approach to increasing EIRs' awareness should involve a mix of institutional support, targeted training programmes, and peer-based learning opportunities, adapted to specific academic needs and contexts.

Use of Electronic Information Resources

The use of EIRs has become integral to academic research and learning, offering students quick access to a wealth of knowledge and diverse materials that support their studies. EIRs, including online databases, e-journals, e-books, and digital repositories- provide access to up-to-date information that is often unavailable in traditional library collections. As universities increasingly invest in digital infrastructures, students are presented with the tools needed for efficient and extensive research. However, the extent to which students use these resources can vary, influenced by factors such as their familiarity with digital tools, the accessibility of resources, and the level of institutional support.

Several factors impact EIRs' usage among students, including academic discipline, year of study, and digital literacy. According to a 2023 study by Adeyemi and Thompson, students in graduate programmes showed higher usage rates of EIRs than undergraduates, attributing this trend to the higher research demands in graduate studies (Adeyemi & Thompson, 2023).

Additionally, digital literacy emerged as a key factor, with students having strong digital skills exhibiting more frequent and efficient use of EIR. Further research in 2024 by Martínez and Gomez examined the role of faculty encouragement in EIR usage. Their

findings suggest that students who received course assignments requiring specific EIR had a more in-depth understanding and greater frequency of use, indicating that course integration of EIR is a strong motivator (Martínez & Gomez, 2024). Similarly, Fasugba and Udoudoh (2022) assessed electronic information resources on postgraduate engineering students' academic activities in Federal Universities in South-West, Nigeria. Their survey showed that most of the respondents utilised Online Databases, CD-ROMs, Web Public Access Catalogue, e-scripts, e-monographs, e-government Papers, e-theses/dissertations, e-magazines, e-conference papers, e-newspapers, e-journals and e-books for their academic activities. Adelaja (2024) examined the level of awareness and use of electronic library resources at the University of Ibadan and the finding indicated that most of the undergraduates at the University of Ibadan used e-journals, e-books and other EIRs frequently.

Adenariwo (2022) investigated the awareness and usage of e-resources among undergraduate at Fountain University, Osun State, Nigeria. The survey revealed the frequency of use of EIRs as indicated by the respondents. It ranged from daily, weekly and monthly for course work/study material while some of the respondents utilised e-resources daily, weekly and occasionally for current information. The survey further showed that some of the respondents utilised e-resources daily, weekly and monthly for assignments completion, while some of the respondents also utilised the Research4life e-database daily. Yemi-Peters, Abdulrahman, Oladokun and Ufedo (2022) examined the awareness and access to electronic information resources by students at Kogi State University, Anyigba, Nigeria. The result of their survey revealed that most of the respondents utilised e-projects, CD-ROM, e-books, e-journals, online databases and e-magazines. Their findings further reveal that inadequate computers, erratic power supply, low Internet bandwidth, and poor Internet connectivity were the major constraints when using e-resources.

Bhardwaj and Sharma (2022) assessed the use of EIRs and its findings revealed that majority of the respondents at DU and JNU utilised e-theses respectively while most of the respondents also utilised e-theses at JMI. However, the finding also revealed that e-newspaper was more utilised and trendier at JMI and DU than JNU. Their finding also revealed that all the respondents utilised search engines in central universities in Delhi (CUD), most of them utilised e-books while majority of them was recorded at JMI as the highest number of respondents among all the four universities who utilised e-resources for study and research. Overall, while students are clearly engaging with EIRs, these findings suggest that sustained investment in digital infrastructure, targeted training could further enhance EIRs' usage, ensuring that students have both the access and skills necessary for effective academic engagement.

Awareness and Use of Electronic Information Resources

Awareness and use of EIRs are essential for academic success in today's digital age, providing students and researchers with convenient access to a vast array of scholarly materials. Resources like online databases, e-journals, e-books, and digital libraries support a range of academic activities, from coursework to in-depth research. While awareness of these resources enables students to recognize the tools available to them, effective usage relies on access, familiarity, and digital literacy.

This section examines existing studies on students' awareness and usage patterns of EIRs, highlighting key factors that influence engagement and identifying potential barriers to optimal use. Adelaja (2024) investigated the level of awareness and use of electronic library resources at the University of Ibadan. The finding revealed that most of the undergraduates at the University of Ibadan were aware and made use of EIRs frequently.

Ruzegea and Msonde (2021) investigated university students' e-resource usage. Their survey revealed that more than average of the undergraduate respondents was aware of e-resources while all the postgraduate respondents were aware of e-resources such as; HINARI, Institution Repository, Google Scholar, Wikipedia and Emerald. However, the findings revealed differences in the utilisation as about an average of the undergraduate respondents utilised online journals and e-books on a weekly basis, while a percentage below average indicated postgraduate respondents' utilisation of online journals and e-books monthly.

Fasugba and Udoudoh (2022) assessed electronic information resources on postgraduate engineering students' academic activities in federal universities in South-west, Nigeria. Their survey showed that most of the respondents were aware of and utilised Online Databases, CD-ROMs, Web Public Access Catalogue, e-scripts, e-monographs, e-government papers, e-theses/dissertations, e-magazines, e-conference papers, e-newspapers, e-journals and e-books for their academic activities. Adenariwo (2022) investigated the awareness and usage of e-resources among undergraduate in Fountain University, Osun State, Nigeria. The survey revealed that almost all the respondents confirmed their awareness of e-resources through different means.   The findings further revealed that; half of the respondents utilised e-resources daily, weekly and monthly for course work/study material, current information and assignments completion. Yemi-Peters, Abdulrahman, Oladokun and Ufedo (2022) investigated the awareness and access to electronic information resources by students at Kogi State University, Anyigba, Nigeria. The result of their survey revealed that most of the respondents who were aware of e-resources such as online databases, e-books, e-journals, e-newspapers and e-projects, CD- ROM and e-magazines also utilised them for different purposes.

Despite the advantages of EIRs, students face notable challenges, particularly regarding access and usability. In a comprehensive 2023 survey, Clark _et al._ noted that limited access to institutional subscriptions remains a barrier, particularly for students in less-funded universities. Furthermore, issues related to user interface complexity were cited as a deterrent, with students preferring resources with simpler, more intuitive designs (Clark _et al._, 2023). A study by Ngugi _et al._ (2024) focused on students in African universities, finding showed that infrastructural issues like Internet connectivity significantly affect EIRs access and usage. The study reported that over 60% of students experienced challenges due to unstable Internet, which limited their ability to access essential resources remotely.

While several studies have explored the awareness and usage of EIRs among university students in Nigeria, there is a notable gap in research focusing specifically on undergraduates in private universities, particularly in Oyo State. Existing studies, such as

those by Adelaja (2024) and Ruzegea and Msonde (2021), predominantly examine public universities or broader regional contexts, leaving a void in understanding the unique factors influencing EIRs' usage in private institutions. These universities often have distinct resource allocation strategies, institutional priorities, and student demographics, which could affect both the awareness and effective utilisation of EIRs. As such, there is a need for targeted research that investigates the usage patterns and engagement with digital academic resources in private universities in Oyo State.

This study seeks to fill this gap by focusing specifically on the undergraduates of selected private universities in Oyo State, Nigeria. By examining how students' awareness of EIRs influences their usage patterns, academic engagement, and overall academic outcomes, this research aims to provide insights into the challenges and opportunities for optimising EIRs' use within these institutions. The findings of this study will contribute to a better understanding of the local context, informing strategies for improving students' access to and engagement with electronic resources, ultimately supporting their academic success.

Methodology

The descriptive survey research design of the correlational type was used for this study. The undergraduates of Ajayi Crowther University, Oyo and Lead City University, Ibadan, Nigeria numbering 9,563 constituted the population of the study spread across over 20 faculties across the two universities. The sampling technique used was the multistage technique. At the first stage, the balloting technique was used to select four homogenous faculties at random across the two institutions. For the second stage, one department that has the highest population of students in each of the four faculties was purposively selected. Lastly, a sampling fraction of 7% was used to arrive at a sample size of 221. A self-developed questionnaire constructed based on the review of the relevant literature was the data collection instrument. Data was analysed with the use of the Statistical Product and Service Solutions (SPSS) and presented in form of descriptive statistics of frequency counts, percentages and correlation analysis.

Response Rate

A total of 221 copies of the questionnaire were distributed to undergraduates in Ajayi Crowther University and Lead City University. However, 200 copies were duly filled and used for analysis. The response rate was 90% with 98(49%) valid responses from Ajayi Crowther University and 102 (51%) valid responses from Lead City University. The result implied that majority of the undergraduates who participated in the study were from Lead City University.

Data Analysis

Data were analysed based on their relationship to the specific areas of the study using descriptive statistics such as simple percentages, frequency counts and correlation analysis.

Demographic Information of the Respondents
Table 1: Demographic Distribution of the Respondents

Demographics	Frequency	Percentage(%)
Level of Study		
100 Level	73	36.5
200 Level		25.5
300 Level	36	18.0
400 Level	26	13.0
500 Level	14	7.0
Total	**200**	**100**
Gender		
Female	147	73.5
Male	53	26.5
Total	**200**	**100**
Age Range		
15 to 20 years	133	66.5
21 to 25 years	62	31.0
26 to 30 years	5	2.5
Total	**200**	**100**
Religion		
Christian	165	82.5
Muslim	33	16.5
African Traditional Religion	2	1.0
Total	**200**	**100**

Table 1 shows that respondents from 100 level were 73(36.5%), 200 level 51(25.5%), 300 level 36(18.0%), 400 level 26(13.0%), and 500 level 14(7.0%) of the total respondents, respectively. Results showed that 147(73.5%) respondents were female while 53(26.5%) were male, while those with age range of 15 to 20 years were 133(66.5%), 21 to 25 years 62(31.0%) and 26 to 30 years were 5(2.5%) of the total respondents respectively. Furthermore, another 165(82.5%) were Christians, 33(16.5%) Muslim and 2(1.0%) were of the African Traditional Religion. It could be inferred from the results that: 100 level respondents had the highest percentage; majority of whom were female; just as those within the age range 15 to 20 years had the highest percentage, while majority of them were Christians.

Research Questions

RQ1: What is the level of awareness of electronic information resources by the undergraduate students of private universities in Oyo State, Nigeria?

Table 2: Level of Awareness of EIRs among the Respondents

S/N	Item Description	VHA (%)	HA (%)	LA (%)	A (%)	NA (%)	$\overline{X}$	S. Dev.	Rank
1	E-books	121 (60.5)	36 (18.0)	19 (9.5)	21 (10.5)	3 (1.5)	4.25	1.09	1
2	E-journals	88 (44.0)	56 (28.0)	23 (11.5)	24 (12.0)	9 (4.5)	3.95	1.20	5
3	E-databases	74 (37.0)	51 (25.5)	34 (17.0)	26 (13.0)	15 (7.5)	3.71	1.28	8
4	E-dictionaries	102 (51.0)	47 (23.5)	12 (6.0)	31 (15.5)	8 (4.0)	4.02	1.24	3
5	E-encyclopaedias	77 (38.5)	59 (29.5)	28 (14.0)	29 (14.5)	7 (3.5)	3.85	1.18	9
6	E-newspapers	97 (48.5)	39 (19.5)	23 (11.5)	29 (14.5)	12 (6.0)	3.89	1.31	7
7	E-magazines	104 (52.0)	39 (19.5)	24 (12.0)	22 (11.0)	11 (5.5)	4.01	1.25	4
8	E-news	114 (57.0)	41 (20.5)	11 (5.5)	24 (12.0)	10 (28.8)	4.12	1.24	2
9	E-discussions	64 (32.0)	56 (28.0)	29 (14.5)	27 (13.5)	24 (12.0)	3.55	1.37	10
10	E-images/sounds	80 (40.0)	71 (35.5)	14 (7.0)	19 (9.5)	16 (8.0)	3.90	1.25	6
11	E-theses/dissertations	45 (22.5)	42 (21.0)	42 (21.0)	36 (18.0)	35 (17.5)	3.13	1.40	11
	N=200, Average mean=3.85, Weighted mean=3.00						**3.85**	**1.25**	

Key: Very High Awareness (VHA=5), High Awareness (HA=4), Lowly Awareness (LA=3), Awareness (A=2), Not Awareness (NA=1)

Table 2 presented results on the awareness of EIRs. Findings showed that 197(98.5%) of the respondents were aware of e-books while 3(1.5%) never as supported with ($\overline{x}$=4.25; std. dev.= 1.09) followed by 190(71.2%) of those aware of e-news while 10(28.8%) of them were never with the statement ($\overline{x}$=4.12; std. dev.= 1.24). In addition, 196(96.0%) of others were aware of e-dictionaries while 8(4.0%) were never as supported ($\overline{x}$=4.02; std. dev.= 1.24); just as 189(94.5%) were aware of e-magazines with 11(5.5%) that were never as supported ($\overline{x}$=4.01; std. dev.= 1.25). Finally, 74(59.2%) of them were aware of e-journals while 9(4.5%) were never as supported (=3.95; std. dev.= 1.20). The table above showed that the weighted mean of 3.85 was greater than the criterion mean of 3.00 (3.85 > 3.00). It implies that there was a high level of awareness of EIRs among the respondents.

RQ 2: What is the purpose of using electronic information resources by the undergraduate students of private universities in Oyo State, Nigeria?

Table 3: Use of Electronic Information Resources by the Respondents

S/N	Item Description	SA (%)	A (%)	D (%)	SD (%)	$\overline{X}$	S. Dev.	Rank
1	I use e-information resources for learning	158 (79.0)	37 (18.5)	2 (1.0)	3 (1.5)	3.76	.56	1
2	I use e-information resources for examination preparation	147 (73.5)	49 (24.5)	3 (1.5)	1 (0.5)	3.71	.51	2
3	I use e-information resources for assignment completion	150 (75.0)	43 (21.5)	6 (3.0)	1 (0.5)	3.71	.54	3
4	I use e-information resources for knowledge update	124 (62.0)	68 (34.0)	8 (4.0)	0 (0.0)	3.65	.81	5
5	I use e-information resources for group discussion	86 (43.0)	96 (48.0)	18 (9.0)	0 (0.0)	3.34	.63	10
6	I use e-information resources for project writing	149 (74.5)	40 (20.0)	9 (4.5)	2 (1.0)	3.68	.60	4
7	I use e-information resources for seminar presentation	107 (53.5)	78 (39.0)	14 (7.0)	1 (0.5)	3.45	.64	8
8	I use e-information resources for term papers preparation	116 (58.0)	70 (35.0)	9 (4.5)	5 (2.5)	3.49	.70	7
9	I use e-information resources for writing of articles	118 (59.0)	71 (35.5)	7 (3.5)	4 (2.0)	3.51	.66	6
10	I use e-information resources for augment lecture notes/course materials	98 (49.0)	84 (42.0)	11 (5.5)	7 (3.5)	3.37	.75	9
	N=200, Average mean=3.56, Weighted mean=2.50					**3.56**	**0.64**	

Key: Strongly Agree (SA=4), Agree (A=3), Disagree(D=2), Strongly Disagree (SD=1)

Table 3 presents results on the purpose of using electronic information resources Findings showed that 195(97.5%) respondents agreed that they used the resources for learning ($\overline{x}$=3.76; std. dev.= 0.56), followed by 196(98.0%) who used them for examination preparation (=3.71; std. dev.= 0.51). Also, 193(96.5%) agreed that they used the resources for assignment completion ($\overline{x}$=3.71; std. dev.= 0.54); 189(94.5%) for project writing ($\overline{x}$=3.68; std. dev.= 0.60); and 192(96.0%) for knowledge update ($\overline{x}$=3.65; std. dev.= 0.81). The table above showed that the weighted mean of 3.56 was greater than the criterion mean of 2.50 (3.56 > 2.50). It implies that there were different purposes of using electronic information resources by the respondents.

RQ 3: What is the frequency of use of electronic information resources by the undergraduate students of private universities in Oyo State, Nigeria?

Table 4: Frequency of Use of Electronic Information Resources among the Respondents

S/N	Item Description	VO (%)	O (%)	RO (%)	N (%)	$\overline{X}$	S. Dev.	Rank
1	E-books	93 (46.5)	68 (34.0)	30 (15.0)	9 (4.5)	3.23	.86	1
2	E-Journals	42 (21.0)	87 (43.5)	64 (32.0)	7 (3.5)	2.82	.80	8
3	E-databases	51 (25.5)	72 (36.0)	62 (31.0)	15 (7.5)	2.80	.90	11
4	E-dictionaries	83 (41.5)	74 (37.0)	35 (17.5)	8 (4.0)	3.16	.85	2
5	E-encyclopaedias	57 (28.5)	72 (36.0)	47 (23.5)	24 (12.0)	2.81	.98	10
6	E-newspapers	69 (34.5)	61 (30.5)	50 (25.0)	20 (10.0)	2.90	.99	6
7	E-magazines	76 (38.0)	51 (25.5)	51 (25.5)	22 (11.0)	2.91	1.04	5
8	E-news	76 (38.0)	61 (30.5)	44 (22.0)	19 (9.5)	2.97	.99	3
9	E-discussions	59 (29.5)	68 (34.0)	51 (025.5)	22 (11.0)	2.82	.98	9
10	E-images/sounds	79 (39.5)	61 (505)	36 (18.0)	24 (12.0)	2.97	1.02	4
11	E-theses/dissertations	46 (23.0)	61 (30.5)	52 (26.0)	41 (20.5)	2.85	3.21	7
	N=200, Average mean=2.93, Weighted mean=2.50					**2.93**	**1.14**	

Key: Very Often (VO=4), Often (O=3), Rarely Often (RO=2), Never (N=1)

Table 4 presents results on the frequency of uses of EIRs and findings showed that 191(96.5%) used e-books often ($\overline{x}$=3.23; std. dev.=0.86), followed by 192(96.0%) often used e-dictionaries ($\overline{x}$=3.16; std. dev.= 0.85) and another 181(90.5%) whose often e-news ($\overline{x}$=2.97; std. dev.=0.99). Also, 176(88.0%) of the respondents were often uses e-images/sounds. In addition, 178(89.0%) of them often uses e-magazines ($\overline{x}$=2.91; std. dev.= 1.04). The table showed that the weighted mean of 2.93 was greater than the criterion mean of 2.50 (2.93 > 2.50). It implies that the frequency at which the respondents used EIRs varied.

RQ 4: What are the challenges to the use of electronic information resources by the undergraduate students of private universities in Oyo State, Nigeria?

Table 5: Challenges to the Use of Electronic Information among the Respondents

S/N	Item Description	SA (%)	A (%)	D (%)	SD (%)	$\overline{X}$	S. Dev.	Rank
1	Lack of information and communication technology skills)	70 (35.0)	52 (26.0)	38 (19.0)	40 (20.0)	2.76	1.13	10
2	Computer phobia	29 (14.5)	61 (30.5)	56 (28.0)	54 (27.0)	2.32	1.02	11
3	Slow Internet network	92 (46.0)	67 (33.5)	30 (15.0)	11 (5.5)	3.20	.89	1
4	Erratic power supply	83 (41.5)	73 (36.5)	29 (14.5)	15 (7.5)	3.12	.92	2
5	Lack of relevant electronic information resources	59 (29.5)	70 (35.0)	61 (30.5)	10 (5.0)	2.89	.89	5
6	Slow downloading	75 (37.5)	80 (40.0)	32 (16.0)	13 (6.5)	3.08	.89	3
7	Lack of access to computer and other devices that can access the Internet	61 (30.5)	70 (35.0)	46 (23.0)	23 (11.5)	2.85	.98	8
8	Lack of information retrieval skills	55 (27.5)	82 (41.0)	46 (23.0)	17 (8.5)	2.88	.91	7
9	High cost of Internet access	73 (36.5)	65 (32.5)	46 (23.0)	16 (8.0)	2.98	.95	4
10	Insufficient training	56 (28.0)	76 (38.0)	46 (23.0)	22 (11.0)	2.83	.96	9
11	Low level of awareness of relevant information resources	56 (28.0)	81 (40.5)	47 (23.5)	16 (8.0)	2.89	.90	6
	N=200, Average mean=2.89, Weighted mean=2.50					**2.89**	**0.94**	

Key: Strongly Agree (SA=4), Agree (A=3), Disagree(D=2), Strongly Disagree (SD=1)

Table 5 presented results on the challenges of using EIRs. Findings showed that 159(79.5%) agreed that low Internet network ($\overline{x}$=3.20; std. dev.= 0.89); 156(78.0%) indicated erratic power supply ($\overline{x}$=3.12; std. dev.= 0.92); 155(77.5%) for slow downloading ($\overline{x}$=3.08; std. dev.= 0.89), while high cost of Internet access ($\overline{x}$=2.98; std. dev.= 0.96), 129(64.5%) for lack of relevant EIRs ($\overline{x}$=2.89; std. dev.= 0.89), were the identified challenges. The table showed that the weighted mean of 2.89 was greater than the criterion mean of 2.50 (2.89 > 2.50). It implies that there were challenges to the use of electronic information resources by the respondents.

Research Hypothesis: There is no significant relationship between awareness and use of EIRs

Table 6: PPMC on the Relationship between Awareness and Use of EIRs

Variable	N	Mean	Std. Dev.	Std. Dev.	R	P	Remark
Use of electronic information resources	200	35.67	3.51				
					.445**	.000	Sig.
Awareness	200	42.38	9.99	199			

Correlation is significant at 0.05(2-tailed)

Table 6 shows that there is a significant relationship between awareness and use of EIRs (r(199) = .445**, p<.05). The mean for Awareness were obtained as 42.38 and Standard deviation 9.99. Further, the mean and standard deviation for Use of EIRs were obtained as 35.67 and 3.51, respectively. Although, the result confirms that a positive relationship exists between them, such a relationship is significant one. Therefore, the hypothesis is rejected, which implied that there is a significant relationship between awareness and use of EIRs among the undergraduates of Ajayi Crowther and Lead City Universities in Oyo State, Nigeria

Discussion of the Findings

The study revealed that majority of the respondents are from 100 level. Result showed that 147 (73.5%) respondents were female while 53 (26.5%) were male. The result showed that majority of the respondents are age range of 15 to 20 years. Result showed that majority of the respondents. Findings showed that the level of awareness of EIRs among the respondents was high. To substantiate the result, Adelaja (2024) examined the level of awareness and use of e-library resources at University of Ibadan and the finding showed that majority of the undergraduates at the University of Ibadan were aware of the various e-resources. Contrariwise, the finding of Otuza (2023) revealed that most of the final year undergraduates of Clifford University, Abia State, Nigeria were not aware of certain types of EIRs.

The result showed that respondents agreed that they used EIRs for learning, examination preparation, assignment completion, project writing and knowledge update. This is in line with the survey conducted by Osinulu (2020) affirmed that relevant information needs, research activity and assignments completion were the most notable purposes of using EIRs among the undergraduate students of the College of Health Sciences in Olabisi Onabanjo University, Nigeria. Findings showed that respondents often use of e-books, e-dictionaries, e-news, e-images/sounds and e-magazines. To corroborate this result, Otuza (2023) found out that e- journals, Internet search engines and e-book were highly utilised by the final year undergraduate students of Clifford University, Abia State, Nigeria.

The study also revealed that respondents agreed that slow Internet network, erratic power supply, slow downloading, high cost of Internet access, lack of relevant EIRs were the challenges to the use of electronic information. In support of the result, the findings of Igbinovia and Odelami (2022), Otuza (2023), and Adelaja (2024) affirmed that most of the undergraduates encountered Internet connection/network disruptions, information overload, power supply interruption and inadequate search skills in the use of EIRs.

Conclusion

The study established a significant level of awareness among undergraduates regarding the availability of EIRs, which suggests that students are well-informed about the various digital resources accessible through their universities, such as online databases, e-journals, e-books, and digital libraries. Furthermore, the findings revealed that these

resources are utilised for multiple academic purposes, including coursework, research, and assignment completion, indicating that students are leveraging EIRs to support diverse academic activities.

Recommendations

Based on the findings, this study recommends that:

1. The undergraduate students, irrespective of their different disciplines should value the use of the electronic information resources for all their academic activities so as to complement the available print information resources.

2. As much as the undergraduate students need to use EIRs for group discussion, they should use more of electronic information resources for other academic and relevant purposes.

3. university libraries should encourage undergraduate students to make more effective use of electronic information resources so as justify the value of continual heavy investment on subscription.

4. The undergraduate students should be encouraged to make use of the electronic information resources when there is data subscription, and the Internet/network is in uptime.

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AUTHORS' PROFILES

Solomon Adeolu Olaniyi is currently a doctoral student, who holds BLIS and MLIS from the highly-esteemed University of Ibadan, Nigeria. He has worked at different sections of the library including Acquisitions, Cataloguing and Classification sections. He teaches the Use of Library and Information Communication and Technology. He is currently the Serials Librarian at the T.Y. Danjuma Library, Ajayi Crowther University, Oyo. He, as a Scholar of the University of Ibadan was awarded MLIS scholarship. He is a Certified Librarian of Nigeria (CLN), member of the NLA and, presently a Librarian II. His interests include Organisation of Knowledge, Information Literacy and Library Management.

ADEKUNLE, Fisayo Adesola is a Certified Librarian of Nigeria and an accomplished information professional with a robust academic background and extensive experience in librarianship. He holds a Bachelor and Master degrees in Library and Information Studies from the prestigious University of Ibadan. Currently a Librarian II and serving as the Readers' Service Librarian at Lead City University, Ibadan, Adekunle has worked across various sections of the library, showcasing his versatility and expertise with specialities in ICT in librarianship, digital librarianship, library management and administration, and information literacy. He has significantly contributed to library operations, including cataloguing, automation, user education, and research support services. Before joining Lead City University, Adekunle worked in various capacities, including as School Librarian at Strong Tower Academy and as an Administrator/Librarian at O-PhysioClinics Ltd., further demonstrating his ability to adapt and excel in diverse environments. As a certified member of the LRCN, Adekunle has co-authored scholarly publications on topics such as theft and vandalism in libraries and the impact of ICT on job performance in university libraries. His research interests focus on leveraging ICT tools to enhance library services and academic performance. Passionate about continuous learning and professional development, Adekunle has participated in workshops and conferences on repositioning libraries for national development. His extracurricular interests include traveling, networking, and conducting research.