Awareness, Accessibility and Use of Electronic Information Resources by Students of Public Polytechnics in Lagos State, Nigeria

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Introduction

Electronic information resources are transforming the world information system landscape via digital information access and use. Smart libraries otherwise known as modern or digital libraries are harnessing the potentials of this new information order by providing users with wide range of current information across the globe through the digital information environment. Indeed, libraries are usually saddled with the responsibility of providing information resources in print and non-print media to achieve the core value of higher education. The polytechnic libraries are good examples of academic libraries that are responsible in the provision of all necessary resources for education in teaching, learning and research for existing and potential seekers of knowledge in diverse disciplines and also for self-improvement (Suwan & Panda, 2013).

The main purpose of polytechnic libraries is to provide clienteles with relevant information resources (Kont, 2010). Thus, polytechnic libraries provide information resources such as print (books and reference sources) to include dictionaries, encyclopedias, almanac, directories, indexes and abstracts among others and some in electronic formats in order to meet the demands of today's sophisticated library users who are otherwise known as digital natives. It is very clear that today's 21st century polytechnic library services provision is highly sophisticated and predominated by the dynamic of electronic information resources (EIRs) so as to meet up with the diverse information needs of patrons across the globe (Nwafor, Okoro & Nwadike, 2018).

Electronic information resources are digital versions of information contents in prints stored electronically and made accessible with the use of electronic systems as well as through computer networks which can be accessed from anywhere and without time and geographical limits. It refers to information materials whose contents are in electronic format accessible via electronic devices. Thus, the American Library Association (ALA) defined electronic information resources as "sources of information programmed to be accessed by automated devices". Electronic information resources have long been recognized as ease to access and utilized information materials among students in advancing their academic activities across the globe. Electronic information resources (EIRs) are information materials that exist in modern libraries which were either digitized from print information resources or created electronically (born digital) and retrieval is only through the aid of electronic information systems. Basically, EIRs are e-books, e-journals, e-reference sources, e-newspapers, e-theses, e-dissertations, e-databases and CD-ROMs, flash drives, graphics,

images, maps, movies, music, sounds, the internet and other digital networks that are considered as alternatives to written information resources (IFLA, 2012). Therefore, electronic information resources are non-print information resources that are available in computer readable format and accessible either offline or online.

Libraries are outcomes of decisions reached by high intellectuals who out of research of the immediate and remote environment formulated or used existing theories to forage, acquire, process and store relevant data that can be retrieved through shelf browsing, using the card catalogues, punched cards and OPACS in both the traditional setting and also through virtual access environment (Ridwan, Tor-Shiekuma & Mohammed, 2019). Fundamentally, there is a renewed realization that the electronic, digital or online environment would enable libraries to provide a much richer set of information resources to a wider audience, and capable of removing the barriers of distance issues and time which adversely affects traditional library information services of the past millennium with basically print-based collections (Ternenge & Kashimana, 2019). As a result, EIRs have become the lively information substance to modern libraries currently having the potentials of satisfying our present day students' information needs, likewise those of the modern time teachers and researchers with minimum risks, efforts and time (Adeleke & Emeahara, 2016).

Hence, academic libraries including those in polytechnics in Nigeria are dramatically transforming into 'digital and virtual libraries' to serve as platforms or environment where print books, journals and magazines are transformed through digitization processes into e-books, e-journals, and e-magazines for the purpose of achieving increased information access and utilization globally. EIRs have tremendously enhanced information generation, access, storage and dissemination globally, thereby giving rise to a number of options to the user community to handle varieties of information sources conveniently and effortlessly (Obinyan, 2016). Indeed, EIRs benefits in modern education and library environment is inexplicable.

In our present world, characterized as the digital era, EIRs have proven to be indispensable information materials with greater ease of sharing and disseminating knowledge without serious barriers and discriminations. For students to effectively explore the benefits of EIRs in academic libraries such as the polytechnics, it is expected that they are aware of its availability and could also have access to them among other salient factors that could enhance their effective use among students. Awareness is the ability to know the existence of something or an object in a certain environment for possible use. In this context,

it connotes information or knowledge about the availability of electronic information resources in the institutional library. When students are aware of available EIRs, they can access and use the resources for the benefit of bridging information gap 24/7 without any form of barrier as experienced in print format. Awareness of EIRs increases access to appropriate, reliable, accurate and use of information materials or products at the disposal of libraries by clienteles in tertiary institutions of learning (Obinyan, 2016). Thus, being equipped with these relevant information, the individual has the capability of spurring and enhancing innovations among students in the course of learning and as well as increases timeliness in meeting research objectives and other scholarly activities.

Infact, students of today depend greatly on EIRs for information in advancing their studies and research, scholarly collaborations with colleagues and other counterparts across the globe for intellectual growth and advancement. It was advocated that intellectual custodians such as librarians or libraries must engage in the organization of awareness campaign, training and capacity building programmes for the purpose of enlightening library clienteles on the best and easy ways of having access to desired information in digital formats so as to maximize the use of library collections and services (Deans & Durrant, 2016). Preliminary studies had shown that there is a relationship in the quality of academic output that is traceable to the level of awareness and accessibility to electronic information resources globally. Today, most library users tend to acknowledge and appreciate information materials in electronic formats far more than those in print formats especially when such desired information is readily available and accessible for use electronically.

Accessibility of information resources is one of the major concern and functions of libraries. Kulkari (2019) succinctly defined https://www.sciencedirect.com/science/article/pii/S0970389617301131 - !accessibility as "…the extent to which a product, device, service, or environment is available and navigable for persons with disabilities, or for persons with other special needs or functional limitations. Digital accessibility, the focus of the present round table, centres on access to technology products, resources, and services across hardware and software". Users' accessibility of desired information resources is an important concept in library practices especially those relating to EIRs in most recent times. According to Obinyan (2016), "information resources may be available in a library and even identified bibliographically as relevant to one's subject of interest, but the user may neither be able to access them nor lay hands on them". The more accessible information resources are, the more likely they are to be used. Library patrons

tend to use information resources that require the least effort to access especially those in electronic format otherwise referred to as EIRs. Users of EIRs have incited several motivations for its use; these include: speed, easy search function, ease of use, flexibility, convenience, and portability (Aregbesola & Oguntayo, 2014).

Other benefits of EIRs use to students of polytechnic include is the ability to access current or up-to-date information. EIRs can be downloaded on smart devices like Android phones in different formats PDF (portable document format), PowerPoint and the likes which makes it easy to access and use information wherever. Indeed, EIRs are becoming the answer to the expectations of the 21st century users. Thus, it was advocated that for libraries to achieve effective use of available electronic information resources, there must be awareness and accessibility of such materials especially the EIRs in our modern day library practices (Okello & Ikoja, 2010).

In Nigeria, vocational and technical education was designed to enhance national development through advanced technologies. Fortunately, polytechnic education is a key technical education, which was conceived as a system of education aimed at imparting on beneficiaries various forms of skills for self-reliance and economic development of the nation through technology education. According to Obinyan (2016), the primary objectives of polytechnics and colleges of technology in Nigeria as outlined by National Board for Technical Education (NBTE) in 1979 and 1984 respectively are to: provide full-time and part-time course and training in Technology, Applied Sciences, Commerce, Management, Natural and Agricultural Production and distribution; provide appropriate opportunities for research and development in Technology and Applied Sciences. This is to ensure that existing technology may be improved or new inventions made; and undertake production of goods and services to generate economic growth for the country and to advance technological reliance (Bamigboye, Odunlade, Agboola & Sunday Oluwafemi Emmanuel, 2019).

Polytechnic students usually pursue careers in vocational and technical education. The students are expected to understand and comply with course requirements and course expectations as articulated in their various course syllabi. Specifically, information needs of polytechnic students are related to teaching and learning activities to include: assignments, practical experiences, examinations, projects, and other academic tasks such as drawings, designs, fabrications, term-paper writing, seminar presentation, project writing, classroom assessment and examinations (Nwone & Mutula, 2019). For polytechnic students to be able to carry out their various academic tasks, it is expected that they make use of a variety of

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information resources especially those in the electronic medium to meet their information needs either within or outside their polytechnic library environment. It is also expected that they are aware of their existence or availability, and could also have access to them for use. Unfortunately, reports abounds in existing literature that students underutilize available library resources including those in digital formats or EIRs due to several factors. This circumstance could be due to awareness and accessibility issues that requires empirical evidence for future management use in advancing polytechnic education in the country. Thus, this study investigates awareness, accessibility and use of EIRs by students of public Polytechnics in Lagos State, Nigeria.

Objectives of the Study

The following specific objectives were used to guide study:

1. To investigate the level of awareness of electronic information resources (EIRs) among students of Yaba College of Technology and Lagos State Polytechnic libraries.
2. To examine the mode of access to EIRs among students in Yaba College of Technology and Lagos State Polytechnic.
3. To investigate the frequency of use of EIRs among students in Yaba College of Technology and Lagos State Polytechnic
4. To examine the challenges of use of EIRs among students in Yaba College of Technology and Lagos State Polytechnic.

Research Questions

i. What is the level of awareness of electronic information resources (EIRs) among students of Yaba College of Technology and Lagos State Polytechnic libraries?
ii. What are the mode of access to EIRs among students in Yaba College of Technology and Lagos State Polytechnic?
iii. What are the frequency of use of EIRs among students in Yaba College of Technology and Lagos State Polytechnic?
iv. What are the challenges in use of EIRs among students in Yaba College of Technology and Lagos State Polytechnic

Literature Review

Related literature to this study are reviewed under the following subheadings.

Electronic Information Resource in academic libraries

Globally, electronic information resources (EIRs) are becoming most valuable and appreciated study and research materials/tools for students' learning in higher institution of learning. Of-course in any academic setting or academy, issues of EIRs are not only dominating scholarly activities, but increasingly gaining prominence among scholars' research engagements. Indeed, researchers and students of higher learning have come to realize the importance of EIRs in their academic pursuit and productivity. Thus, it was established that "electronic information resources (EIRs) provides access to timely information, especially for students who now depend greatly on the EIRs for the advancement of their academic activities (Suwan & Panda, 2013). Indeed, EIRs was further acknowledged by them as vital and treasured information materials among patrons and it is presently serving as leveraging tools for libraries especially when considering the increasing high costs of print journal publications and associated subscription difficulties.

Additional benefits of Electronic information resources (EIRs) includes providing easier access to information contents regardless of time and distance/place, enabling innovation in teaching, increasing scientific discoveries, creating new fields of enquiry, increasing computer-literacy among scholars and students, promotes up-to-date information consciousness among staff and students in their varying fields of study, accommodates multiple users at the same time through information shareability potentials, and decreasing the time spent searching for information in print formats challenges" (Bhukuvhani, Chiparausha & Zuvalinyenga, 2012). Indeed, it has been reported that EIRs give users prompt access to information at the right time of need. In addition, the use of electronic information resources helps users and students alike to be well-informed and up-to-date in their respective academic areas unlike print information resources that are not updated regularly. Electronic information resources use makes learning much easier, faster and better for users in the pursuit of their academic endeavor for the purpose of academic advancement.

Awareness, Accessibility and Use of EIRs in libraries

Existing literature has shown that substantial number of works/studies have been conducted to project the importance of awareness, accessibility and use of EIRs among young adult students in tertiary institutions. For instance, "the study on the use of electronic information resources by postgraduate students of University of Cape Coast with the objectives of determining postgraduate students' awareness of electronic information resources in the library and the frequency of EIRs usage among students. Their study however revealed that most of the postgraduate students were aware of the e resources available in the library and as well make use of them in the pursuit of their academic programmes. Their study also showed that most postgraduate students rather preferred to access information from Google scholar, and other web based databases more frequently than the databases in the library (Odunewu & Aluko-Arowolo, 2018).

Moreover, the investigation on the use of EIRs by undergraduate students of the Ghana Institute of Management and Public Administration (GIMPA) aimed at revealing students use of electronic information resources pattern and frequency. The study was targeted at the 300 level students of the institution to evaluate their level of awareness, usage, access, perceived usefulness as well as challenges faced in the use of EIRs via survey method which employed a structured questionnaire in data collection for the study. Their findings revealed that, though students do not fully utilize electronic information resources to support their academic pursuit, a significant number of them do access electronic information resources when on campus and off campus and mostly used electronic devices such as laptops, ipad, desktop computers, and mobile phones (Akussah, Asante & Adu-Sarkodee, 2015).

In Nigeria however, the study of Aina (2014) on awareness, accessibility and use of electronic databases among academic staff of Babcock University, Nigeria revealed that just about 17% of the total respondents of their study are frequent users of electronic information resources in the library; and that majority of the respondents rarely or never use the electronic information resources. Their study data analysis further revealed that only Academic Journal, Ebscohost, and JSTOR, were frequently utilized with 38 (44.7%), 40 (47.1%) and 36 (42.4%) respectively. The study also showed that the electronic databases were not frequently utilized. The databases reflected in this case includes: SAGE 23 (27.1%), World Bank Open Knowledge Repository 31 (36.8%), and the International Research Journal and National Virtual Library with 25 (29.4%) each" in Babcock University Library digital platforms.

Challenges of Use of Electronic Information Resources

The use of electronic information resources is not without challenges. There are various documented challenges germane to the use of electronic information resources in virtually all types of libraries. These challenges cut across a plethora of factors which include; institutional, infrastructural, technical, policy, behavioral and others. Moreover, "it was further revealed that challenges such as budget cuts, low internet bandwidth, lack of up-to-date Information Technology (IT) infrastructure, inadequate searching skills, shortage of staff and high cost of subscription fees posed many of the threats to access to and use of e-resources in the institutions' libraries (Kumar, 2019; Ternenge & Kashimana, 2019). They noted that the most common problems with e-resources are low internet connectivity, lack of awareness of 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.

Other factors that may affect the utilization of e-resources according to Kumar (2019) include inadequate competence use of e-resources on the part of users, such as lack of requisite knowledge for information search, negative attitudes, poor practices and inadequate and limited infrastructure among others.

Methodology

The study adopted descriptive survey research design. The population of the study consists of 5,263; made up of 1,748 students at HND in Yaba College of Technology and 3,515 in Lagos State Polytechnic, in seven and eight schools in the two polytechnics respectively which are heterogeneous in nature in line with the data obtained from the official website of National Board for Technical Education as at November 12, 2019; as well as the Polytechnic Libraries Registered Users Records at Circulation Unit for the 2018/2019 academic year of the two institutions under study.

Multistage sampling technique was used in the study through a purposive and proportionate sampling technique to draw up four schools each from the institutions under study, and then 10% of each strata was then selected to arrive at approximately 526 sample size.

A self-structured and validated questionnaire was used to elicit data/responses from the study population. Data was collected online via Google form following the outbreak of the COVID 19 pandemic especially through the assistance of students' class leaders or

representatives in each departments of the selected schools/faculties of the institutions targeted for the study.

The instrument for the study was thus administered online targeting 526 respondents. However, only three hundred and ninety-one (391) responses were received from the respondents: while 176 was returned from Yaba College of Technology, the remaining 215 came from the students of Lagos State polytechnic, Ikorodu. These represents 85.31% response rate and were the basic data for the analysis of research findings.

Using various descriptive statistical tools like frequency counts and simple percentages, the returned instruments were analysed to proffer answers to the study research questions as presented below:

Analysis and Interpretation of Research Results

The study research results are represented on the following tables in line with the study research questions.

Research Question 1: What is the level of awareness of electronic information resources (EIRs) in public polytechnic libraries, Lagos state?

Table 1: Awareness of EIRs

S/No	Item	FUW	FAW	NOW	Mean	Std, Dev.
1.	CD ROM Databases	197 (47.8%)	125 (32%)	79 (20.2%)	2.12	.714
2	Electronic Reference Sources (E-Dictionary, e-encyclopedia etc)	162 (41.4%)	140 (35.8%)	89 (22.8%)	2.13	.755
3	Online Databases (Google Scholar, J.stor)	158 (41.4%)	134 (34.3%)	99 (25.3%)	2.09	.768
4	Off-Line Databases (Encarta, Britannica encyclopedia)	154 (39.4%)	134 (34.3%)	109 (27.9%)	2.05	.778
5	E-Book	166 (42.5%)	122 (31.2%)	103 (26.3%)	2.05	.758
6	E-Journals	151 (48.6%)	131 (33.5%)	109 (27.9%)	2.06	.782
7	Internet Access	122 (41.2%)	165 (42.3%)	104 (26.6%)	2.16	.816
8	Computer System	112 (28.6%)	178 (45.8%)	100 (25.6%)	2.20	.821

9	Online Public Access Catalogue	185 (42.2%)	118 (30.2%)	108 (27.6%)	2.03	.761
10	Open Source Software	182 (48.5%)	107 (27.4%)	102 (26.4%)	2.01	.732

Key: Full Aware (FUW), Fairly Aware (FAW), Not Aware (NOW). Source: Field work, 2020

The Table 1 reveals the items that the students were fully aware of EIRs with highest rates range between 160 to 200 were CD ROM Databases 197 (47.8%), Online Public Access Catalogue 185 (42.2%), and Open Source Software 182 (48.5%), while the students were fairly aware of the availability of Computer System with rate 178 (45.8%). However, majority of the study participants were found not to be aware of the availability of Off-Line Databases (Encarta, Britannica encyclopedia) at the rate of 109 (27.9%) respondents. The mean table reflects the highest score of Computer system (2.20) as the EIRs with high level of awareness among students of public polytechnic in Lagos state.

Research question 2: What is the mode of access to EIRs among students in public polytechnics in Lagos State?

Table 2: Mode of access to EIRs among undergraduate students

S/No	Item	(AU)	(SU)	(RU)	(NU)	Mean	Std. Dev.
1.	Internet Protocol (IP) Address Based	102 (26.1%)	149 (35.1%)	64 (16.4%)	76 (19.4%)	2.71	1.058
2	Online Access (Personal Subscription)	120 (30.7%)	141 (38.1%)	70 (17.9%)	80 (15.3%)	2.82	1.035
3	Local Area Network (LAN) Library Environment	88 (22.5%)	138 (35.3%)	85 (21.7%)	80 (20.5%)	2.60	1.050
4	Off-Line Access	80 (20.5%)	145 (37.1%)	86 (22%)	80 (20.5%)	2.58	1.032
5	Personal laptops	122 (31.2%)	107 (27.4%)	74 (18.9%)	88 (22.5%)	2.67	1.139
6	Tablet	87 (22.3%)	126 (19.4%)	76 (19.4%)	102 (26.1%)	2.51	1.104
7	Iphone	102 (26.1%)	103 (26.3%)	70 (17.9%)	116 (29.7%)	2.49	1.170
8	Android Phones	207 (52.9%)	80 (20.5%)	48 (12.3%)	56 (14.4%)	3.12	1.102
9	Library computer system	89 (22.8%)	130 (33.2%)	69 (17.6%)	103 (26.3%)	2.52	1.111

Always Use: (AU); Sometimes Used; (SU) Rarely Used; (RU) Never Used (NU). Source: Field work, 2020

The table 2 reveals that majority of the students' mode of access to electronic information resources is Android Phones 207 (52.9%), and the students' access mode is through Internet Protocol (IP) Address Based 149 (35.1%). While on a rarely used access mode is Off-Line Access 86 (22%), however, majority of the respondents never used I-phone 116 (29.7%) as mode of access to electronic information resources by undergraduate students in public polytechnic libraries, Lagos state. The mean column reflects Android phone (3.12) as the often used mode of access to EIRs.

Research question 3: What is the frequency of use of EIRs among undergraduate students in public polytechnic libraries, Lagos state?

Table 3: Frequency of use of EIRs among undergraduate students

S/No	Item	DL (%)	TW (%)	OW (%)	TM (%)	OM (%)	NR (%)	Mean	Std. Dev.
1.	CD ROM Technology	58 (17.1)	76 (19.4)	59 (15.1)	42 (10.7)	46 (11.8)	110 (28.1)	3.30	1.850
2	Electronic Reference Sources (E-Dictionary, e-encyclopedia etc)	89 (22.8)	80 (20.5)	74 (18.9)	50 (12.8)	31 (7.9)	110 (28.1)	3.58	1.793
3	Online Databases (Google Scholar, J.stor)	60 (15.3)	66 (16.9)	56 (14.3)	46 (11.8)	37 (9.5)	89 (22.8)	3.57	1.907
4	Off-Line Databases (Encarta, Britannica encyclopedia)	69 (17.6)	74 (18.9)	59 (15.1)	41 (10.5)	46 (11.8)	97 (24.6)	3.38	1.803
5	E-Book	69 (17.6)	74 (18.9)	74 (18.9)	40 (10.2)	41 (10.5)	93 (23.8)	3.52	1.825
6	E-Journals	103 (26.3)	76 (19.4)	63 (16.1)	38 (9.7)	40 (10.2)	71 (18.2)	3.87	1.839
7	Internet Access	103 (26.3)	76 (19.4)	63 (16.1)	38 (9.7)	40 (10.2)	71 (18.2)	3.87	1.839
8	Computer System	103 (26.3)	76 (19.4)	63 (16.1)	38 (9.7)	40 (10.2)	71 (18.2)	3.87	1.839
9	Online Public Access Catalogue	68 (17.4)	69 (17.8)	73 (18.7)	41 (10.5)	46 (11.8)	94 (24)	3.46	1.825
10	Open Source Software	63 (16.1)	70 (17.9)	67 (17.1)	51 (13)	40 (10.2)	100 (25.6)	3.40	1.820

Daily (DL), twice a week (TW), once a week (OW), twice a month (TM), once a (OM), never (NR). Source: Field work, 2020

The table 3 reveals that majority of the respondents use E-Journals, Internet Access and Computer System with same rate of 103 (26.3) Daily, while majority use Electronic Reference Sources (E-Dictionary, e-encyclopedia etc.) twice in a week 80 (20.5) and majority use Online Public Access Catalogue 73 (18.7) and E-Book 74 (18.9) once a week respectively. However, most respondents use Open Source Software 51 (13) and Electronic Reference Sources (E-Dictionary, e-encyclopedia etc.) 50 (12.8) respectively, however, most respondents never used CD ROM Technology 110 (28.1). The mean column reflects Internet Access, E-Journals, and Computer System (3.87) as the highest frequently used EIRs.

Research question 4: What are the challenges encountered by undergraduate students in the use of EIRs in public polytechnic libraries, Lagos state?

Table 4: Challenges encountered by students in the use of EIRs

S/No	Item	Always	Some-times	Rarely	Never	Mean	Std. Dev.
1.	Infrastructure: library furniture	90 (23%)	164 (41%)	71 (18.2%)	66 (16.9%)	2.71	1.003
2	Slow internet connectivity	92 (23.5%)	166 (42.5%)	85 (21.7%)	48 (12.3%)	2.77	.946
3	Poor power supply	92 (23.5%)	142 (36.3%)	92 (23.5%)	65 (16.6%)	2.67	1.014
4	Lack of information literacy skills	53 (13.6%)	156 (39.9%)	94 (24%)	88 (22.5%)	2.45	.985
5	Unfriendly attitude of library staff	60 (15.3%)	156 (39.9%)	82 (21%)	94 (23.8%)	2.47	1.017
6	Difficult mode of access to the internet	76 (20.2%)	159 (40.7%)	87 (22.3%)	66 (16.9%)	2.64	.987
7	Rigid library rules and regulations	69 (17.8%)	157 (40.2%)	83 (21.3%)	82 (21%)	2.54	1.011
8	Complex database language	55 (14.1%)	170 (43.5%)	91 (23.3%)	75 (19.2%)	2.52	.957

Always (AW) Sometimes (SM) Rarely (RY) Never (NR). Source: Field work, 2020

The table 4 shows that majority of the respondents (between 90 to 95) agreed that Infrastructure: library furniture 90 (23%), slow internet connectivity 92 (23.5%) and Poor power supply 92 (23.5%) are challenges encountered by students in the use of electronic information resources. While Complex database language was a major sometimes 170 (43.5%) challenges encountered by students in the use of electronic information resources and majority that Lack of information literacy skills 94 (24%) is rarely a challenge and

unfriendly attitude of library staff 94 (23.8%) is never a challenge encountered by students in the use of EIRs. The table 4 item 2, reveals slow internet connectivity (2.77) as the most challenges encountered by students of public polytechnics in Lagos state in the use of EIRs.

Discussion of Findings

The study established that the students were fully aware of EIRs whose highest rates range between 160 to 200 were CD ROM Databases (47.8%), Online Public Access Catalogue (42.2%), and Open Source Software (48.5%), while the students were fairly aware of the availability of Computer System with (45.8%) rate. Although it was discovered that a considerable number of the study respondents were not aware (unaware) of the available Off-line Databases in their institutions' libraries which includes Encarta and Britannica Encyclopedia Databases with about 27.9% of the participants, the current study findings conforms with Suwan and Panda (2013) study' outcome that students were considerably aware of EIRs availability in academic libraries.

Moreover, this study findings are in agreement with that of Nwafor, Okoro, and Nwadike (2018) research outcome and perception who claimed that the status of current awareness of library materials and services among students is questionable especially on the nature of EIRs collections in academic libraries; while noting that access to knowledge promotes both individual and societal development. On the contrary, this current study' major findings negate that of Nwafor, Okoro, and Nwadike (2018) research outcome of their study on awareness, accessibility and use of electronic databases in Babcock University library which shows that only about 17% of their study participants frequently utilize EIRs in Babcock University library with specific indications of low usage of e-books and e-journals as well as electronic bibliographic databases as a result of inadequate awareness of e-resources provided by the library.

The study further established that majority of the study respondents' mode of access to electronic information resources is by android phones (52.9%), and through Internet Protocol (IP) Address Based (35.1%), while they rarely do so through Off-Line mode (22%). However, majority of the respondents never used iphone (29.7%) as mode of access to electronic information resources by students in public polytechnic libraries, Lagos state. "Therefore, android is the most use access to electronic information resources and through IP address, this is supported that students do access electronic information resources when on campus and off campus and mostly used electronic devices such as laptops, ipad, desktop

computers, and mobile phones and also supported by study on Access to and use of electronic information resources in the academic libraries of the Lesotho library consortium" (Reitz, 2004).

Furthermore, on the frequency of use of electronic information resources by undergraduate students in public polytechnic libraries, Lagos state, majority of the respondents E-Journals, Internet Access and Computer System with same rate of (26.3) Daily, while majority use Electronic Reference Sources (E-Dictionary, e-encyclopedia etc.) twice in a week 80 (20.5) and majority use Online Public Access Catalogue (18.7) and E-Book (18.9) once a week respectively. However, most respondents use Open Source Software 51 (13) and Electronic Reference Sources (E-Dictionary, e-encyclopedia etc.) (12.8) respectively, however, most respondents never used CD ROM Technology (28.1). This finding closely aligns with the study outcome of Bakar and Jaafar (2017) on EIRs usage among postgraduate students of the "University of Cape Coast, who found that postgraduate students rather preferred to access EIRs from Google scholar and other web based-databases more frequently than those in libraries"; and that only a few number of them could frequently seek and retrieve information from library e-resources' platforms.

On challenges issues encountered by students in the use of EIRs in the surveyed polytechnics, the study established the following: difficulties in accessing EIRs in libraries due to several reasons ranging from slow internet connectivity to inadequate user' enlightenment programmes among others as factors militating against effective usage of EIRs in polytechnic libraries. However, library staff unfriendly attitude towards students/users was rarely found to be a hindering factor towards the use of EIRs in polytechnic libraries.

Conclusion and Recommendations

Electronic information resources allow libraries to provide access to information beyond what is available within the four walls of the library and to serve patrons beyond those who are physically available in the library. With this benefit inherent in EIRs, libraries in public polytechnic in Lagos state are taking up this responsibility as majority of the respondents were aware of electronic information resources in the library and specifically access these resources with their android phone. However, effective use of EIRs among students was hindered due to some challenges encountered such as Infrastructural decay that

cuts across: library furniture, slow internet connectivity and Poor power supply among others.

On the basis of the study findings above, the following recommendations were considered.

1. Public polytechnic libraries' management in Lagos state must not relent in organizing users' education campaign programmes directed towards awareness creation especially about available EIRs in their libraries.

2. Majority of the students' mode of access to EIRs is through Android Phones. Therefore, the library management should regularly subscribe to electronic information resources databases and software that are mobile device compliance and android/smartphone application enabled.

3. The polytechnics' library management should make additional efforts to acquire more EIRs that are relevant to the disciplines of students in the polytechnics and efforts should equally be made in acquiring up-to-date: E-Journals, broad Internet Access bandwidth, sufficient Computer System and Electronic Reference Sources (E-Dictionary, e-encyclopedia etc.) that would enhance increase in the library users' strength in use of library resources.

4. Management of the public polytechnic libraries in Lagos states should also ensure that Internet facilities with high bandwidth and uninterrupted electricity supply, coupled with ICT devices that are in good working conditions e.g. Desktop computers, Laptops are provided for students' use in the polytechnic libraries. This will encourage the polytechnic students to choose polytechnic library centres as a major place of access and use of EIRs..

5. The librarian need to be commended as majority of users rarely lack information literacy skills as a challenge to use of EIRs. Finally, the library management should continuously increase awareness of EIRs through regular user education to increase access and use among students; and by all means reduce all challenges towards the use of the EIRs in their libraries.

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