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Awareness and Use of Electronic Information Resources by Students in Nigeria Polytechnics

Bello Sani Manzo
bellosani82@yahoo.com

S. Kannan
SRM University, Haryana, skannslatha1967@gmail.com

Introduction

The application of Information Communication Technology (ICT) in libraries has increased access and use of information. ICT has help in timely information delivery in libraries. Specifically, the advent of electronic publishing has open the corridors for information appearing in electronic format such as the online and offline databases, e-books, e-journals and the Internet resources. The integration of these resources into library collections, means that users of the library can access the resources from remote areas. This signifies their benefit over prints information sources which requires the user to be present in the library to utilized the resources.

Electronic information resources/e-resources have been defined by various scholars to mean electronic version of prints information medias that are either converted into digital or generated electronically. E-resources are becoming popular because they offer full-text search, multimedia information, and reference link for easy access and use (Kannan,2014). In today information environment, e-resources such as the e-books, e-journals, CD-ROMs, etc. are moderately replacing the importance of print collections (Swaminathan & Raja, 2017).

Academic libraries all over the world were making a significant effort to acquire, store, promote and provide access to electronic information resources to the academic community. Availability of e-resources involves acquiring and providing means in which library user can get access to necessary documents to satisfy his/her needs (Nwachukwu, Lucky, & Salam, 2014) and it increase user perception towards the use of the resources (Ibrahim, 2017). However, the importance of providing e-resources in academic and research libraries cannot be overemphasized. It is central to the library fulfilling its mission and goals especially in an electronic environment in which e-resources are dominating collections in most libraries.

In the 21st century, digital/electronic resources and web based resources are becoming pervasive and more prominent. This result to libraries providing access than ownership of information. Therefore, for libraries to provide access to the resources and meet their objective of satisfying the information need of users, they need to promote their services through appropriate marketing strategies. This will make user aware of the resources and services available in their libraries. Awareness is the knowledge or perception of a situation or fact which in turn lead to an understanding of the situation. It is the ability to know or become conscious of events. Awareness of e-resources is consistent with the student's level of understanding of the existence of the resources in their libraries which result in proper access and use. Students level of awareness to e-resources was reported as one of the determining factors that motivate use. Though there are discrepancies in the literature regarding students level of awareness or familiarity with e-resources available in their libraries or access online through the Internet. While some studies report high awareness level, others indicated low level of awareness among students. According to Akuffo & Budu, (2019) some institution has provided adequate technological infrastructure and promotes use of e-resources, others have not maximized the adoption of ICT nor create awareness program.

In the electronic environment, users in many institutions of learning make use of e-resources to satisfy their information need. They no longer depend on printed material only, instead, they also use e-resources to meet their information need (Katabalwa, 2016). It has now become charge on the part of libraries to adequately promote the usage by studying their available e-resources and conduct user analysis and use different chain of communication to disseminate the message (Das, 2014). This will aid in providing prompt services to the library users. However, there is a widely view that e-resources in tertiary institutions of learning are under-utilized due to low awareness

level. Optimum utilization of information resources by users depends on the awareness and skills of the intended users as awareness increased use of library resources especially in the academic environment (Ankrah & Atuase, 2018, Isibika & Kavishe, 2018).

The use of e-resources was found to be prevalent in most tertiary institutions of learning as it accelerates academic teaching and learning. Researchers have conducted studies on the awareness, use and preference to e-resources among graduate's and postgraduate's students in Universities. Very little effort was made to examine students in polytechnics and Nigeria in particular.

Objectives of the Study

The specific objectives were to:

1. Examine the types of E-facilities available in Nigeria polytechnic libraries.

2. Find out the types of electronic information resources available for students in Nigeria polytechnic libraries.

3. Examine the extent of awareness of electronic information resources among students in Nigeria Polytechnic libraries.

4. Determine the extent of utilizing electronic information resources by the students in Nigeria polytechnic libraries.

5. Find out the purpose of using electronic information resources by students in Nigeria polytechnics

Research Questions

1. What types of E-facilities are available in Nigeria polytechnic libraries?

2. What are the types of electronic information resources available in Nigeria polytechnic libraries?

3. What is the extent of awareness of electronic information resources among students in Nigeria Polytechnic libraries?

4. What is the extent of utilization of electronic information resources by students in Nigeria Polytechnic libraries?

5. For what purpose the students utilized electronic information resources?

Hypothesis

Ho1. There is no significant relationship between availability and use of e-resources among students in Nigeria Polytechnics.

Ho2. There is no significant relationship between awareness and use of e-resources among students in Nigeria Polytechnics.

Significance of the Study

1. Findings of the study will reveal available electronic resources and how they are utilized in Nigerian polytechnic libraries.

2. Result of the study will help library management and the institutions to know student's status in using e-resources, and awareness level so as to improve the services.

3. The result of the study will add to the existing literature on librarianship with special reference to electronic information resources utilization in Nigerian polytechnics.

Scope of the Study

The study covers six federal and state polytechnics that cut across the 6 geopolitical zones of Nigeria. Specifically, data were collected from ND and HND students. The study covers e-resources awareness, availability, usage, and purpose of using.

Review of Related Literature

Researchers have conducted a number of studies on awareness, availability and use of digital/electronic information resources across the globe. Some of these studies were reviewed and reported under this section.

Quadri, Adetimirin, & Idowu, (2014) Conducted a study on the availability and utilization of e-resources by the undergraduate's students in selected private university libraries in Ogun State, Nigeria. The findings revealed that the Internet was readily available. The majority of the respondents used the e-resources for assignment and research/project. Kumar & Anjaiah, (2017) investigate students use of e-resources in Kakatiya institute of technology, India. Findings of the study reveal that the students are aware of e-resources and utilized the resources mainly for project work, self-improvement, and reading for exam purposes. The study further reveals that e-journals are the most used e-resource, follows by Internet, e-databases, and e-books. The least used e-resources among the students are the library OPAC. Similarly, Haruna, Oni, & Akpoduado, (2018) Examine the use of prints and electronic resources by students of Auchi polytechnic. Findings of the study reveal that despite lack of a well functional e-library, the majority of the students preferred electronic resources to print format. It was further reveal that the students are confronted with the problems of interrupted power supply, low bandwidth, and in proper automation of some library functions in providing electronic services to the users, although the students made use of prints information sources to meet their information needs. The study recommends that the library

management should embark on restructuring and reorganizing of the e-library section to enable the students have undeniable access to e-resources in diverse format. Irokah & Ndulaka, (2018) studied the use of e-resources by students of Abia State Polytechnic. and reveal that the majority of the students have low awareness of e-resources in the library. The students mostly use the e-resources weekly for the purpose of research, although they were confronted with the challenges of a power outage, low Internet connection and lack of time.

Natarajan, (2017) Conducted a study on the use of electronic resources and services provided at the Social science library of Jimma University, Jimma. It has been found that usage of e-journals is increasing due to awareness among the students. Owing to easy access available at various places in the university, students access these resources at hostels and departments more as compared to the library. The study by Mole, (2017) on academic utilization of online information resources by undergraduate students in the University of Nigeria, Nsukka, reveals that very few students were using a number of online information resources that includes google books, Wikipedia, e-newspapers, and document available in the University library website. The students use online information resources for the purpose of doing assignment, writing projects and keeping self-up to date on social events. Moyo, (2017) carried out a study on the awareness and use electronic library resources at the University of South Africa. The study target third-year students in the school of arts. Findings of the study show that the library has a number of initiative to promote and encourage the use of e-resources, although about 50% of the respondents were unaware of the availability of the library e-resources. They use EIR for a number of purposes to include study and research. The result of the study further established that the respondents have basic ICT skills and lack advance information search and retrieval skills which are essential to effectively use EIR.

Chohda, (2015) Examine the use of e-resources in Panjabi University library Chandigarh and revealed that 80% of respondents are aware of the availability of e-resources. It is found that respondents 38.67% explore electronic books followed by 32% electronic Journals. It is observed that 73.33% of respondents are satisfied with e-resources which are available in the library. Togia & Tsigilis, (2017) investigate electronic information resources awareness and use by Education Graduate Students in Aristotle University of Thessaloniki. Result from the study show that the majority of the users (89.7) were women and they use the available e-resources and services provided by the University library. Finding further indicate that 43.3% use computers at least two to three times a week and were intermediate users of computers. This led to low usage of e-resources such as e-journals, e-books, OPAC and abstract/index databases. Most of the respondents (43.6%) reported that they became aware of the existence of e-resources through friends and colleagues who had already used it, and only 18.8% became aware through the library.

Gakibayo, Odongo, & Obura, (2016) examine electronic information resources utilization by students in Mbarara university library. Findings show that the majority of the respondents 92% are aware of the e-resources in the library and became aware through colleagues (54.1%), 22% faculty notice board, 12% emails from the library, 10% workshops and seminars, and 17.2% from other sources. The study further shows that the Internet search engines were the most used e-resources with 63% responses, e-books 13.5% responses, CD-ROM 11.6 %, electronic journal 7.5%, and database with 5.6% responses. On frequency usage of the resources, 38.9% of the respondents use the e-resources once a week, 29.5% once to five times a week, 24.7% use the e-resources less than once a month and 6.8% use the e-resources more than once a day.

Tlakula & Fombad, (2017) carried out a survey on the use of electronic resources by undergraduate at the University of Venda. The study finds out that the level of EIR usage by the students is elementary and limited to SABINET and EBSCOhost. They also lack awareness of different electronic resources as they confused with web-based Internet resources with electronic resources. The study further reveals that undergraduate level of skills and training on the use of electronic resources is generic as training is mainly a one-off orientation in the first year.

Sharma & Sharma, (2018) investigate the extent of availability of e-resources and their use in private engineering Colleges libraries in UP, India. The aim of the study is to find out availability, utility, effectiveness, and use of CD-ROMs databases, e-journals, and online databases. Findings of the study reveal that all the Colleges libraries acquired CD-ROMs databases, online databases, and e-journals. It was revealed that there is low utilization of e-resources among users of the libraries.

Madondo, Sithole, & Chisita, (2017) examine the use of electronic information resources by undergraduate students of the faculty of management and administration at Africa university Ature, Zimbabwe. The study established that there was low usage of electronic information resources by undergraduate students due to socio and technical challenges. Based on the findings, the study concludes that students lacked adequate hands-on skills required to retrieve information from subscribed electronic information resources.

The review of the literature shows that a number of studies were conducted on awareness and use of e-resources among students. It is however noticed that some studies indicate high awareness level and use, others reported low level of use due to lack of awareness.

Methodology

The study adopted descriptive survey design whereby quantitative and qualitative data were collected from the participants. Considering the nature of the study which spans across Nigeria polytechnics, descriptive survey research design is more appropriate. The population of the study consists of 51,661 students and 12 e-resources librarians from 12 polytechnics in Nigeria. Random and non-random sampling technique were used to determine the sample for the study. Specifically, multistage cluster sampling, proportionate simple random sampling, and judgmental sampling were considered. A total of 1033 students were sampled from the total student's population using proportionate allocation of the sample into the strata (12 Institution). The questionnaire and interview schedule were used as an instrument for data collection. The instrument was validated by expert from three institutions that were not included in the study. They were requested to make constructive comments regarding measurement items, wording, and sentence structure. There suggestions and comments were effected which made the instrument valid. The questionnaire for students was pilot tested with 40 students from polytechnic that was not included in the study sample. The Statistical Package for Social Sciences (SPSS) software version 24 was used to analyzed the responses of these 40 students to access the reliability of the measurements items. The Cronbach alpha for all the Likert scale questions were above the threshold of 0.7 which indicates that the questionnaire was reliable. Descriptive statistics using frequency count and percentage were used to analyzed the data and the hypotheses were tested with the Spearman Rho correlation procedure at the fixed probability level of 0.05. Thematic data analysis was used to analyze the qualitative data from the interview.

Data Presentation, Analysis and Discussion

This section presents the statistical analysis of the data collected on the awareness and use of electronic information resources by students in Polytechnic Libraries of Nigeria. Two groups (students and e-resources/system librarians) of respondents were involved in the study. The analysis of the data is discussed in line with the research objectives and questions. The responses to students are presented in tables of frequencies and percentages. The interview response of the system librarians was reported thematically in a narrative style. The hypotheses of the study were tested with the Spearman Rho correlation. Out of 1033 questionnaire distributed, 919 were returned and considered valid for analysis.

Descriptive analysis of the demographic data of the participants

The socio-demographic characteristics of the students and Librarians involved in the study were gender, age and academic discipline for the students while that of Librarians include gender, age and educational qualification. Where the two groups have a common variable, they are presented together in a table.

Table 1: Classification of the respondents by gender (N=919/N=8)

Gender	Students		E-resources Librarians	
	Frequency	Percent	Frequency	Percent
Male	490	53.3	8	100
Female	429	46.7	0	0
Total	919	100	8	100

(**Source:** Field data, 2020)

Table 1 indicates that 53.3% of the students were males while 46.7% were females. Of the librarians, all of them 100% were male. Table.2 shows the age classification of the respondents.

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Table 2: Distribution of the respondents by their age groupings (N=919//N=8)

Age Range	Students		E-Resources Librarians	
	Frequency	Percent	Frequency	Percent
16-21years	237	25.8	0	0
22-26years	432	47	0	0
27-30years	213	23.1	0	0
31years and above	37	4	8	100
Total	919	100	8	100

(**Source:** Field data, 2020)

Table 2 indicated that 25.8% of the students were between 16 and 21years of age while (47.0%) were between 22 and 26 years' age bracket. Students who were between 27 and 30 years were 23.1% of the total involved in the study. Only 4.0% of the students were above 30years. The table showed that all the Librarians were above 30 years. Figure 1 showed the distribution of the students by their field of discipline in their respective institutions.
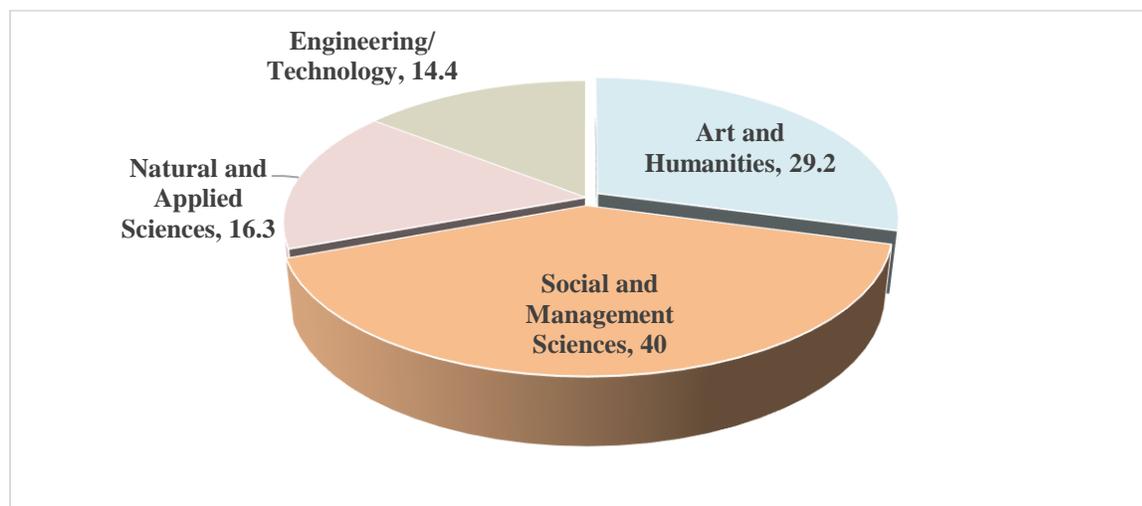

Fig. 1: Percentage distribution of the students by their disciplines

From indications in Figure.1, 29.2% of the students involved in the study were in Arts and Humanities, 40.0% were in Social and Management Sciences and 16.3% were in Natural and Applied Sciences. Only 14.4% were in Engineering/Technology as their fields of specialization in the respective institutions. This was implied that the study covered students in all the disciplines available in the Polytechnics across the six geopolitical zones.

Table 3. showed the highest qualifications of the Librarians involved in the study.

Table 3: Distribution of Librarians by highest educational qualifications

Qualification	E-resources Librarians	
	Frequency	Percent
HND/Degree	5	62.5
Masters	3	37.5
Doctorate	0	0
Total	8	100

(**Source:** Field data, 2020)

Among the Librarians as indicated in Table 3, the data reveals that 62.5% had HND or first degree and 37.5% has master's degree. The expressed qualifications implied that the librarians had the requisite education to provide the required information on the utilization of electronic information resources by students in Polytechnic Libraries of Nigeria.

Assessment of electronic information resources available in Nigeria polytechnic libraries

To find out the types of electronic information resources available in the polytechnic libraries, a list of associated facilities required for effective e-information resources utilization were provided for which the opinions of the students on their adequacies in the libraries was solicited. Table 4 shows the opinions of the students on the types of e-facilities available in the libraries

Table 4: Opinions of students on the extent of e-facilities available in the libraries

Facilities	Highly Adequate		Adequate		Moderately Adequate		Adequately low	
	F	%	F	%	F	%	F	%
Desktop/Laptops computers	269	29.3	258	28.1	196	21.3	196	21.3
Printers	244	26.6	301	32.8	208	22.6	166	18.1
Scanners	212	23.1	282	30.7	218	23.7	207	22.5
Photocopying machines	263	28.6	272	29.6	221	24.0	163	17.7
Software's/Operating Systems	191	20.8	282	30.7	227	24.7	219	23.8
Networking connectivity	202	22.0	288	31.3	171	18.6	258	28.1
Internet Connection	235	25.6	284	30.9	197	21.4	203	22.1
Databases	199	21.7	298	32.4	197	21.4	225	24.5
Power backup	195	21.2	237	25.8	259	28.2	228	24.8
Supporting staff	183	19.9	322	35.0	214	23.3	200	21.8
FRID and Barcodes	105	11.4	128	13.9	231	25.1	455	49.5
Firewall/Restrictions,	147	16.0	249	27.1	266	28.9	257	28.0
Antivirus	232	25.2	232	25.2	201	21.9	254	27.6

(**Source:** Field data, 2020)

As indicated by percentage responses for highly adequate and adequate in table 4, items like Desktop/Laptops computers, Printers, Scanners, photocopying, machines and Software's/Operating Systems were adequately available in the libraries. Other e-components required for e-information resources also rated as adequate by the students were Network connectivity, Internet Connection, Databases, Supporting staff and Antivirus. The ratings for these items were generally indicative of their availability in the libraries by the students. But the students did not agree that the libraries have effective Power backup for complementary supply of light or that there were RFID and Barcodes along with Firewall/Restrictions in the libraries. From the observation of the table and the graph, there enough evidence that the libraries have the necessary facilities for effect use of e-information resources in the libraries.

Table 5: Opinions of students on the extent of e-information resources available in the libraries

Availability of E-Resources	Highly available		Available		Moderately Available		Not Available	
	F	%	F	%	F	%	F	%
E-Books	252	27.4	327	35.6	136	14.8	204	22.2
E-Journals	249	27.1	281	30.6	157	17.1	232	25.2
E-Conference Proceedings	154	16.8	269	29.3	197	21.4	299	32.5
E-Thesis and Dissertation	142	15.5	296	32.2	154	16.8	327	35.6
Institutional Repository	172	18.7	271	29.5	193	21.0	283	30.8
CD-ROMs	225	24.5	312	33.9	145	15.8	237	25.8
DVDs and CDs	218	23.7	293	31.9	185	20.1	223	24.3
Offline Databases	226	24.6	280	30.5	183	19.9	230	25.0
Online Databases	247	26.9	308	33.5	161	17.5	203	22.1
Internet Access	276	30.0	277	30.1	142	15.5	224	24.4

(**Source:** Field data, 2020)

Among the information resources perceived by the students to be adequately available in the libraries as indicated in Table 5 with percentages for highly adequate and adequate were E-Books, E-Journals, CD-ROMs, DVDs and CDs. Others were Offline Databases, Online Databases and other information that could be accessed through Internet Access. E-Conference Proceedings, E-Thesis and Dissertation and Institutional Repository were not adequately available in the libraries as expressed by the students. The findings of the study support that of Quadri, Adetimirin, & Idowu, (2014), who report that e-books, e-journals, databases and Internet connection were available for students. The study disagres with that of Haruna, Oni, & Akpoduado, (2018), who reports non avaialbility of EIR and lack of functional e-library for students.

Awareness of electronic information resources among students in Nigerian Polytechnic libraries

To determine the extent of awareness, a number of items were raised on which the students' responses were solicited. Table 5.7 showed the extent of the awareness of different EIR expected to be available in the institutions' libraries.

Table 6: Opinions of students on familiarity with EIR in the polytechnic libraries

E-resources	Very much familiar		Familiar		Moderately familiar		Not familiar	
	F	%	F	%	F	%	F	%
E-Books	171	18.6	249	27.1	215	23.4	284	30.9
E-Journals	160	17.4	240	26.1	246	26.8	273	29.7
E-Conference Proceedings	111	12.1	189	20.6	230	25.0	389	42.3
E-Thesis and Dissertation	89	9.7	183	19.9	215	23.4	432	47.0
Institutional Repository	118	12.8	178	19.4	253	27.5	370	40.3
CD-ROMs	253	27.5	252	27.4	198	21.5	216	23.5
DVDs and CDs	282	30.7	238	25.9	184	20.0	215	23.4
Offline Databases	192	20.9	268	29.2	192	20.9	267	29.1
Online Databases	230	25.0	264	28.7	214	23.3	211	23.0
Internet Access	312	33.9	250	27.2	144	15.7	213	23.2
Others			1	0.1	1	0.1	916	99.8

(**Source:** Field data, 2020)

Table 6 revealed that awareness of e-resources available in the Polytechnics libraries among the students was relatively low. For example, 18.6% and 27.1% of the students were of the view that they were very much familiar and familiar with e-books in the libraries of the polytechnics. Though 23.4% were of the view that they were moderately familiar with the libraries e-books but 30.9% of the students who constituted the largest single opinion were not familiar with the libraries e-books. The level of awareness for e-journals in the libraries were not better among the students. For those who were very familiar with the e-journals, it was 17.4% while those who were familiar was 26.1%. Of the total, 26.8% were only moderately familiar and 29.7% were not familiar with their existence in the libraries.

The level of awareness with E-Conference Proceedings was very low as indicated in the table. Among the overall students involved in the study, 42.3% were not aware or familiar with their

availability in the libraries. Only 12.1% and 20.6% of the students said they were very much familiar and familiar with their existence in the libraries respectively and 26.8% said they were only moderately familiar with their availability in the polytechnics' libraries. The awareness of e-Thesis and Dissertation was very low among the students. Though 9.7% and 19.9% said they were very much aware or familiar with their existence in the libraries but 47.0% of the students were not aware or familiar with their presence in the libraries. For Institutional Repository, 12.8% were very much familiar with their availability and 19.4% said they were familiar with them while 27.5% said they were moderately familiar with them. But 40.3% of the students were not aware or familiar with their availability in the libraries.

Awareness of e-storage devices in the libraries among the students was relatively high on a comparative basis. As indicated in the table. Most students were either very much familiar with their existence or familiar with them in the libraries. These included, CD-ROMs, DVDs and CDs. Others with relatively high awareness and familiarity were Online Databases and Internet Access as indicated in Table 6.

From the general observation of the expressed awareness or familiarity with the e-resources among the students, it could be concluded that extent of awareness of electronic information resources among students in Nigeria Polytechnic libraries was relatively low. Findings of the study is in line with the study of Irokah & Ndulaka, (2018) and Moyo, (2017), who reported limited awareness of the existence of EIR among students. However, the finding of this study contradicted the report of Natarajan, (2017), and Chohda, (2015) who reported that there is increasing awareness of EIR among students.

Table 7: Distribution of students by sources of awareness of e-resources of the libraries

Sources of awareness	Yes		No	
	Freq.	Percent	Freq.	Percent
Library orientation	525	57.1	394	42.9
Guidance by the library staff from time to time	354	38.5	565	61.5
Lecturers	449	48.9	470	51.1
Colleagues/ Friends	393	42.8	526	57.2
E-resources sensitization workshop/conference/seminars	222	24.2	697	75.8
Learned by myself	365	39.7	554	60.3
An internal memo, leaflets, Flyers	168	18.3	751	81.7
New arrival list from the library	211	23.0	708	77.0
Alert service by email/phone from the library	171	18.6	748	81.4

(**Source:** Field data, 2020)

From Table 7, 57.1% of the students who were aware or had the knowledge of e-resources in the libraries obtained it from Library orientation conducted for them and this was the major single source of the students' awareness of the e-resources in the libraries. Others sources includes guidance by the library staff from time to time (38.5%), Lecturers (48.9%), Colleagues/ Friends (42.8%), E-resources sensitization workshop/conference/seminars (24.2%), Learned by myself (39.7%), An internal memo, leaflets, Flyers (18.3%), New arrival list from the library (23.0%) and Alert service by email/phone from the library (18.6%).

From observations of the expressed opinion, apart from the Library orientation, individual self-learning was the second most important source of such knowledge of the e-resources among the students. Findings of this study contradict earlier studies such as Togia & Tsigilis, (2017), Gakibayo, Odongo, & Obura, (2016).

Sources of Training

Training enhances one ability to effectively exploit EIR. The nature of EIR requires one to undergo training program for better access and use of the resources. On whether the students have personally received training in the use of e-resources 58.9% said yes while 41.1% said they have

not received such training. Table 8 showed the sources of training on e-resources by some of the students who obtained it.

Table 8: Distribution of students by their sources of training on e-resources

Source of Training on e-resources	Yes		No	
	Frequency	Percent	Frequency	Percent
Workshop/seminar organized by the Central Library	321	34.9	598	65.1
Department/College library	225	24.5	694	75.5
Academic staff	196	21.3	723	78.7
Colleagues and Friends	248	27.0	671	73.0
Trial and error	149	16.2	770	83.8
From computer training school	317	34.5	602	65.5
Others	10	1.1	909	98.9

(**Source:** Field data, 2020)

Table 8 revealed that most students did not have any formal training on the use of e-resources. The very few who obtained such training either received it from Workshop/seminar organized by the Central Library (34.9%), Department/College library (24.5% Academic staff (21.3%), Colleagues and Friends (27.0%), Trial and error (16.2%) or from computer training school (34.5%). There were some (1.1%) who obtained such raining from other unspecified sources.

The issue of awareness was extended to e-resources librarians. They were asked to state whether their libraries conduct user sensitization campaign on the existence of e-resources and services and to state the strategies they used to promote e-resources usage among the students. About 5 (62.5%) of them state that their library engaged in creating awareness on EIR among the students only 3 (37.5%) states that their library does not have such program. On the strategies they used to promote e-resources typical responses were:

During orientation program at the beginning of every session.

By posting news alerts on the noticeboard and internal memo.

By sending mail to all directors and HODs for proper communication to the entire teaching staff who will in turn inform their students.

This response indicates that the libraries promotes e-resources to the students during orientation and by posting news alert on the noticeboard. This is in tandem with the study of Benny, (2015) who reveal that commonly used methods for creating awareness to users includes internal memo, leaflets and fliers. The findings also support the study of Tlakula & Fombad, (2017) who revealed that students became aware and received training on the use of e-resources duing orientation in the first year. For those that mention not having the program on cretaing awarenesss to the students states their reasons as follows:

We don't have enough manpower to handle such program

Creating awareness on specific gadgets likes e-resources is sometimes difficult, because you have train them on how to use it, and that's a challenge because of so many factors like staffing level and expertise, infrasturucture etc.

Assessment of electronic information resources utilization by students in Nigeria Polytechnic libraries

To determine the extent to which electronic information resources were being utilized by students in Nigeria polytechnic libraries, some selected e-resources were selected on which the students expressed their regularity of usage. Apart from the regularity of use, purposes of utilization of the e-resources were assessed. Table 9 showed the distribution of the students by regularity of utilization of the available e-resources in the libraries.

Table 9: Opinion of students on their regularity of e-resources utilization in Nigeria Polytechnic libraries

E-Resources	Very Often		Often		Rarely		Never	
	F	%	F	%	F	%	F	%
E-Books	150	16.3	190	20.7	182	19.8	397	43.2
E-Journals	168	18.3	208	22.6	170	18.5	373	40.6
E-Conference Proceedings	145	15.8	197	21.4	166	18.1	411	44.7
E-Thesis and Dissertation	129	14.0	171	18.6	170	18.5	449	48.9
Institutional Repository	144	15.7	182	19.8	152	16.5	441	48.0
CD-ROMs	161	17.5	165	18.0	145	15.8	448	48.7
DVDs and CDs	145	15.8	235	25.6	123	13.4	416	45.3
Offline Databases	130	14.2	221	24.2	190	20.8	374	40.9
Online Databases	183	19.9	218	23.7	160	17.4	358	39.0
Internet Access	191	20.8	240	26.1	140	15.2	348	37.9
Others	4	0.4			1	0.1	914	99.5

(**Source:** Field data, 2020)

Table 9 revealed that most students do not regularly use the available e-resources in the Polytechnic libraries. In the table for example, only 16.3% and 20.7% of the students said they very often and often utilize the libraries' e-books respectively while 19.8% and 43.2% said they rarely and never used the e-books. For e-journals, 40.6% of the students never use them and 18.5% rarely utilize them in the libraries. Only 18.3% and 22.6% said they very often and often utilized them respectively. E-Conference Proceedings did not fare better as 44.7% of the students never utilize them in the libraries and 18.1% rarely use them. Only 15.8% and 21.4% of the students were of the view that they very often and often utilized them in the libraries. For e- Thesis and Dissertation, 48.9% of the students never use them and 18.5% rarely used them. Only 14.0% and 18.6% said they very often and often utilize them respectively. This pattern of response goes for Institutional Repository, CD-ROMs, DVDs and CDs, Offline Databases and Online Databases in the polytechnic libraries. Internet Access was the only exception, where 20.8% and 26.1% of the students were of the opinion that they very often and often utilize in the libraries. Even at that,

37.9% of the students were of the view that they never use the internet services of the libraries while 15.2% were of the opinion that they rarely use the services. The generally observation here is that the utilization of e-resources in the polytechnics libraries by students was relatively low. This finding is consistence with the study of Madondo, Sithole, & Chisita, (2017), Mole, (2017) Sharma and Sharma, (2018) etc. who reported low usage of EIR among the students.

Table 10 showed a distribution of the students by purposes for using e-resources of the libraries.

Table 10: Opinion of students on purposes for utilization of e-resources in the libraries

Purpose of E-resources use	Yes		No	
	Freq.	%	Freq.	%
Research / Projects/ Conference & Seminar Papers	551	60.0	368	40.0
To prepare assignments	537	58.4	382	41.6
To prepare for the examination	502	54.6	417	45.4
To find notes/facts for the lectures	420	45.7	499	54.3
Current awareness	444	48.3	475	51.7
Entertainment/ Leisure	308	33.5	611	66.5
Job-related purpose	336	36.6	583	63.4
Knowledge acquisition	539	58.7	380	41.3
To learn online (online education)	414	45.0	505	55.0
Others	1	0.1	918	99.9

(**Source:** Field data, 2020)

Table 10 revealed that the most outstanding purposes of utilizing the e-resources of the libraries by students was for Research / Projects/ Conference & Seminar Papers. The percentage (60.0%) rating for this purpose could be a general expression which did not reflect the extent of utilization observed in Table 9. The next rated purpose for the use of the e-resources was general acquisition of knowledge with 58.7% of the students and was followed by assignment preparation with examination preparation coming fourth in the ranking. These four purposes had more than 50% of the total students involved in the study. Others like finding notes/facts for the lectures, Current

awareness, online education, Job-related purpose and Entertainment/ Leisure were rated lower than 50% of the students involved in the study. The indications from the expressed opinion revealed that most students use the e-resources basically for research project, general acquisition of knowledge, assignment preparation and preparation for examination. The findings here are in agreement with Kumar & Anjaiah, (2017) who investigated students use of e-resources in Kakatiya institute of technology, India and reported that the students are aware of e-resources and utilized the resources mainly for project work, self-improvement, and reading for exam purposes.

The issue of utilization of e-resources was also extended to e-resources librarians as the managers and providers of EIR services in their libraries. This is to solicits their opinion regarding usage of the EIR. Their opinion on the usage of EIR among the students varies. Their responses were:

There is increasing use of EIR among the students especially those that were writing projects. I mean older students.

The level of usage of EIR is low as expected. You see we have a database containing e-books and e-journals but appeared students not utilizing them due to lack of awareness and skills in using the resources.

You know some students were not skillful in using computers, therefore the level of use I can say is low.

Some students fail to use the e-library because they were not finding the desired information. the offline databases we have lacks representative information that will solve the students' information needs.

The usage of EIR is worrisome. A number of factors hindered smooth usage. So the level of use is very low or below expectation.

The level of using EIR such as e-books and Internet resources is increasing among the students. Most students now realize the importance of EIR so they are in the process of adopting.

Test of Hypothesis

The hypotheses formulated to test the relationship between students' awareness, availability, along with utilization of the e-resources of Nigerian Polytechnics libraries are tested here at the fixed probability level of 0.05. The hypotheses were tested as follows:

Null hypothesis I: There is no significant relationship between availability and use of e-resources among students in Nigerian Polytechnics libraries.

The scores on the availability of e-resources examined in Table 5 and that for utilization assessed in Table 9 were used for the test of this hypothesis. The test was conducted with the aid of the Spearman Rho Correlation procedure. This was necessary because of the scoring nature adopted in the instrument. The summary of the test is presented in Table 11.

Table 11: Correlation between availability and use of e-resources among students in Nigerian Polytechnics libraries

Variables	N	Mean	Std. Dev.	Std. Error	r-calc	Df	p-value
Availability	919	2.62	0.842	0.028	0.548	917	0.000
Usage	919	2.01	0.888	0.029			

The result of the test revealed that availability of e-resources is significantly correlated with their utilization by students in Nigerian Polytechnics libraries. This is indicated in Table 11 with an observed correlation coefficient (r-calc) of 0.548 obtained at 917 degree of freedom (Df) and a p-

value of 0.000 (p < 0.05). In other word there is significant relationship between availability and use of e-resources among students in Nigerian Polytechnics libraries. These observations provided enough evidence for rejecting the null hypothesis.

Null hypothesis II: There is no significant relationship between awareness and use of e-resources among students in Nigerian Polytechnics libraries.

This hypothesis was tested with the scores on awareness of e-resources by students in Table 6 and their utilization of the e-resources in Table 9. The result of the Spearman rho correlation procedure used for the test is summarized in Table 12.

Table 12: Correlation between awareness and use of e-resources among students in Nigerian Polytechnics libraries

Variables	N	Mean	Std. Dev.	Std. Error	r-calc	df	p-value
Awareness	919	2.46	0.775	0.026	0.208	917	0.000
Usage	919	2.01	0.888	0.029			

Table 12 revealed that the two variables were positively and significantly correlated. The observed correlation coefficient (r-calc) obtained at Df = 917 was 0.208 and the p-value for the test was 0.000 (p < 0.05). Based on these observations, the null hypothesis that there is no significant relationship between awareness and use of e-resources among students in Nigerian Polytechnics libraries is therefore rejected. In other words, students' awareness is significantly correlated with their utilization of e-resources in Nigerian Polytechnics libraries.

Findings of the study

The major findings of the study were:

1. There is enough evidence that the libraries have the necessary E-facilities for effect use of e-information resources in the libraries.

2. Students were of the view that some e-resources like e-books, e-journals among others were available in the libraries.

3. The awareness of electronic information resources among students in Nigerian Polytechnic libraries is relatively low.

4. The utilization of e-resources by students in the polytechnics libraries was relatively low.

5. The indications from the expressed opinion revealed that most students use the e-resources basically for research project, general acquisition of knowledge, assignment preparation and preparation for examination.

Conclusion

The study found that provision of e-resources in the libraries were inadequate. It also found that awareness of e-resources among students in Nigerian polytechnic libraries was not adequate. Among others, the awareness was found to correlate with utilization of e-resources by students in the libraries. A well-planned library instruction program will serve as a motivating factor for students to use e-resources. This kind of training will invariably have a positive effect on the users to learn the necessary skills for proper use of the resources. Students' have to be aware of the program and the existence of the resources and services in the library or accessible through consortia in a form of e-books, e-journals, CD-ROM databases, online and offline databases. In

view of the development in the use of ICT for most educational requirement in contemporary times, the lack of adequate awareness of e-resource is a setback for educational development not just at the polytechnic level but the nation at large. These findings would be useful to the polytechnics authority for policy formulation that could encourage provision and utilization of e-resources among students in the institutions. The finding could provide a base for National policy on use of e-resources among students of polytechnic by the National Board for Technical Education (NBTE) and other organizations interested in improving use of e-resources in the country.

Recommendations

The following recommendations are made based on the findings and conclusion reached in this study:

1. There is need for improvement in the provision of ICT infrastructural facilities in the polytechnic to encourage utilization of e-resources among students.

2. There is the need for polytechnic libraries to acquire and made available more e-resources such as the e-thesis, subscription to online journals and create an institutional repository that will aid the students in their learning processes.

3. There is a need of periodic enlightenment through library orientation among students on the use of e-resources available in the polytechnics' libraries.

4. There is the need for the libraries to come up with more strategies that will encourage the students to use e-resources in collaboration with teaching staff.

5. Funding for e-resources should be improved through budgetary allocation by the respective institutional authorities.

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