



# Awareness and Usage Patterns of Electronic Information Resources by the Social Science and Engineering Students of Ekiti State University, Nigeria

Bamidele Olawale and Awoyemi, Olubunmi O  
University Library, Ekiti State University, Ado-Ekiti, Nigeria.

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## ABSTRACT

This research work investigated the relationship between awareness and usage patterns of electronic information resources among undergraduate students of Ekiti State University, Nigeria. The study adopted a descriptive survey research design. The population was made up of undergraduate students in the faculties of the social sciences and engineering in Ekiti State University, Nigeria. Data were collected using questionnaire designed to elicit response from respondents and analysed using descriptive statistics method of frequency count and percentage. However, out of four hundred (400) copies of questionnaire administered to the students, three hundred and fifty (350) were returned which represents 87.5% response rate for the study. Findings revealed that there is low awareness of some e-resources such as CD-ROM, databases and OPAC among the respondents which could possibly influence their usage of e-resources. The study concluded that e-resources are widely used in the surveyed university, and that awareness about e-resources could possibly lead to increase usage. Good internet connectivity will go a long way to further encourage users to use the e-resources for which the university library has subscribed. However, it was recommended that subscriptions to e-resources should reflect the priorities and preferences of users as well as increasing the level of awareness of the availability of new e-resources and additions of new databases for users of the library among other recommendations.

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## Introduction

The advent of technology has introduced the use of electronic resources in several institutions all over the world. Tertiary institutions have made it their topmost responsibility to supply both the traditional form of library materials as well as electronic resources for students in order to boost their academic as well as make them more acquainted with the use of recent technologies. These electronic resources are usually very expensive to purchase and even more expensive when they are purchased in order to meet the growing population of an academic system (Hahn, 2014).

Electronic Information Resources refer to those materials that require computer access, whether through a personal computer, mainframe, or handheld mobile device. They may either be accessed remotely via the Internet or locally. Some of the most frequently encountered types are: E-journals, E-books, Full-text (aggregated) databases, Indexing and abstracting databases, Reference databases (biographies, dictionaries, directories, encyclopaedias, etc.), Numeric and statistical databases, E-images, E-audio/ visual resources (IFLA, 2012).

According to AACR2 (2005) updates, an electronic information resource is: "Material (data and/or programme(s)) encoded for manipulation by a computerised device. This material may require the use of a peripheral directly connected to a computerised device (e.g. CD-ROM drive) or a connection to a computer network (e.g., the Internet)".

Electronic information resources can be defined as the electronic representation of information which can be accessed via electronic system and computer network (Johnson, Evensen, Gelfand, Lammers, Sipe & Zilper, 2012).

Awareness is knowledge about something that exists or understanding of a situation or subject at the present time based on information or experience (Ani & Ahiauzu, 2008). It can also be seen as knowledge or perception of a situation, fact, consciousness, recognition, realization, grasp and acknowledgement concern about and well-informed interest or familiarity in a particular situation or development (Akpojotor, 2016).

Gakibayo, Ikoja-Odongo and Okello-Obura (2013) emphasized that academic libraries were an integral part of universities and had a critical role to play in supporting the core mission of the university that is teaching, learning and research. For example, e-resources made available by university libraries to university communities; staff, students and other authorised users are for activities that support the university mission. University libraries invest in these e-resources, as they want to get a good return on investment through adequate use of the resources.

The use of electronic resources has given rise to new modes of organising the educational environment of tertiary institutions, new concepts of the teaching process and recasting the role played by the participants in education process.

Electronic resources are very important and useful to undergraduate students because it supports high quality information service network which provides access to a full range of learning and teaching materials in various formats (Mcharazo, 2006).

In their efforts to improve and support learning, teaching, and research activities of the university, universities in Nigeria have subscribed to a number of online library information resources such as open access databases, e-journals, e-books and electronic databases all over the world. Although all these resources are available in some if not in all of these universities, it is not certain whether students are aware that they are available and whether they are fully and effectively utilising them.

Therefore, this study investigated the awareness and usage patterns of Electronic Information Resources by the social science and engineering students of Ekiti State University.

#### **Statement of the Problem**

Library electronic resources facilitate research and play a complementary role to print library resources. Based on this important contribution to academic world, the university under study subscribed to a number of e-resources. Some of them are free while others have been paid for. Despite the fact that such electronic resources are made available for students through the deployment of e-library, it has been discovered that they are not making full use of these resources. If the university has invested money on e-resources it is expected that those resources are fully utilised. It is on this note that the researchers investigated if students in the faculties of the social sciences and engineering are aware of these electronic information resources and to what extent are these resources been used. Also, it is vital to provide convenient ways for users to find the information they need.

Though university administration and the library are improving e-resources usage to a satisfactory level, it has not been achieved so far, as evidenced by previous surveys; Quadri, (2013); Adepoju, (2014) and user statistics of the e-resources of the university library. All these facts proved that there are problems with users' awareness of available electronic information resources which should be investigated in order to improve usage.

#### **Objectives of the study**

The general objective of this study is to examine the awareness and usage pattern of electronic information resources by the social science and engineering students of Ekiti State University, Nigeria; while the specific objectives of the study are to:

- i. investigate the awareness of electronic information resources by the social science and engineering students of Ekiti State University.
- ii. ascertain the electronic information resources available to the social science and engineering students of Ekiti State University
- iii. determine the level of usage of electronic information resources by the social science and engineering students of Ekiti State University
- iv. find out the benefits derived from electronic resources utilisation by the social science and engineering students of Ekiti State University

#### **Research Questions**

- i. What is the level of awareness of electronic information resources by the social science and engineering students of Ekiti State University?

- ii. What are the electronic information resources available to the social science and engineering students of Ekiti State University?

- iii. What is the level of usage of electronic information resources by the social science and engineering students of Ekiti State University?

- iv. What are the benefits derived from electronic resources utilisation by the social science and engineering students of Ekiti State University?

#### **Literature Review**

Ojo and Akande (2005) in a survey of 350 respondents examined students' access, usage and awareness of electronic information resources at the University College Hospital (UCH) Ibadan, Nigeria. The study revealed that the level of usage of the electronic information resources is not high. A major problem however identified is lack of information retrieval skills for exploiting electronic resources, thus making the level of usage of resources by medical students very low.

Singh et.al (2008) conducted a survey of the awareness and usage of online journals by students of Jamia Millia Islamia University. The survey was to determine the extent, to which users are aware and make use of online journals. The study found out that majority of the respondents are aware of the availability of online journals, 60% of them want to use online version of journals whereas a few want to use printed journals, majority of the respondents use online journals for their research work. However, it was found that users faced problems when using online journals, they are also interested to undergo training for using online journals.

Abinew and Vuda (2013) survey on acceptance and use of electronic library services in universities. Respondents were asked about their awareness of the available e-library resources to indicate their answers by way of saying "Yes", "No" and "To some extent". Majority of the respondents (57.97%) responded "To some extent" to indicate that they have only limited awareness about the existence of e-libraries resources and didn't know well and in detail, 20.65% of respondents do not know anything about the existence of the e-library services at all, only 21.38% of the respondents were well aware of the existence of the e-library services. They also found in the same study that there is no significant difference in awareness of e-library services that existed between universities, academic staffs and students, and among streams (faculties/colleges/institutions)

According to Dadzie (2015), e-resources are convenient to use since users are able to access information from the library, internet cafe, and offices or at times from the comfort of their own homes at any time of the day. As Banwell et al (2014) stated, the main benefit of e- resources to users was perceived ease of access and timeliness. E-Resources provide access to current information as these are often updated frequently. Users prefer access to information which is up to date, wide in scope and available everywhere (Renwick, 2015). Current information is very important for researchers in dynamic disciplines such as medicine and computer sciences. Hence, e-resources are an invaluable research tool for researchers.

Badu and Markwei (2015) made a review of the Internet resources that can be accessed and used by academic staff to aid their research in Ghanaian universities. They conducted a study that explored the extent of awareness and use of the Internet resources by academic staff in the University of Ghana.

It was found that most academic staff (69.9%) were aware of the relevant Internet resources but the frequency of use of these resources in their research was quite low. It was found that the use of library for research was still prevalent among the academic staff than the Internet use. The main reason for non-use of the Internet by some respondents was due to lack of training in Internet use which resulted in inadequate skills to access and use the Internet resources by the respondents. This may also explain why the frequency of use of the Internet resources was found to be low among those that used them. Thus, staff training was recommended by the authors for effectiveness and efficiency on the use of Internet resources by academic staff in the University of Ghana.

A study conducted by Dadzie (2015) investigated e-resources access and usage at Asheshi University College, Ghana. The study found that general computer usage for information access was high because of the university's state of the art IT infrastructure. Usage of some internet resources was also very high while the use of scholarly databases was quite low. The low usage was attributed to inadequate information about the existence of these library resources. The study also recommended the introduction of information competency across the curriculum and introduction of a one unit course to be taught at all levels, and the provision of personal computers on campus.

Prangya and Rabindra (2013) opined that awareness is core to usage of electronic information resources. Where materials are in closed access, users' ease of access to such e-resources is by far reduced, but where they are in open access (not subscription-based), students' find them, and make do with them for whatever reasons they need them for.

Eke (2006) surveyed the extent of awareness and use of ICTs by students in tertiary institutions in Imo State, Nigeria; in which one polytechnic, one college of education, and two universities, were used in the survey. The findings showed that while 50% of the respondents were using the computers and the Internet, it was found that access to ICTs was the major problem against use.

Another study conducted by Ahmad and Panda (2013) was carried out to find whether the faculty members of universities were aware of and fully utilise the library databases and other e-resources within and outside the libraries. Results revealed that majority of the faculty members were aware of and used e-resources. The study confirmed some lack of knowledge and use of library specific resources such as e-theses, patents and CD-ROM databases. It was also found that all faculty members agreed that e-resources were very useful and important to their work. Many studies have shown an inverse relationship between electronic journal usage and age, more recently the results of Zhang, Ye and Liu (2011) indicated that by now, users of all ages have switched to the electronic format not only in terms of usage but also by preference. According to Deng (2010) the awareness and the quality of the available e-resources were the two important factors for the effective and efficient use of e-resources.

Ani (2010) investigated the extent and level of internet access as well as the use of electronic resources by undergraduate students in three Nigerian Universities.

Ani's findings have revealed that undergraduate students use the internet extensively. However, access to the internet. However, due to the poor infrastructure the majority of the respondents relied on private, commercial internet services, and cybercafés.

It was also found that internet education for the respondents is needed for the use of electronic resources and databases. The results show that most of the students use this technology for course related reading and research needs even they are new users of the internet.

Weingart and Anderson (2000) reported that since electronic resources occupy no traditional shelf space, the best way to create awareness for their availability in libraries is for libraries to inform users of each new resource as it is acquired, provide training opportunities for library users and the mechanics of remote access to resources. Kidd (2002), Voorbij (1999) and Tenopir (2003) reported that electronic resources reveal differences in use, the most heavy users being from the areas of science and technology because they adopted the use of electronic journals and other digital library resources.

Shuling (2007) analysed the use of e-resources in Shaanxi University of Science and Technology in China. The study found that nearly 80% of respondents knew little about e-resources. Nearly half of the respondents use both printed and e-resources. The study also found that the reason for using printed periodicals are that academics were teaching and preparing for their lessons and improving their teaching skills; they have little time to do scientific research; and networks were not available at home because they could not afford them. Nisha & Ali (2013) did a survey study on use and awareness of online journals and databases among students at B.H.U., the result showed that there is low level of awareness of e-resources among the respondents.

Baro et.al (2011) focused on awareness and use of online information resources by medical students at Delta State University in Nigeria. The result revealed that majority of the students are not aware of and do not use the online information resources such as MEDLINE, HINARI, CINAHL databases, NUC virtual library as sources of information to retrieve materials related to medical literature. This could be the result of lack of training for information literacy skills and ineffective user education programmes in the medical libraries and medical schools to equip the medical students with necessary skills to use the medical databases and other online information resources. Problems like lack of skills, lack of time, poor user education programmes and slowness of server were mentioned by the respondents as factors militating against the effective use of online resources.

Swain and Panda (2009) and Madhusudhan (2010) found that e-sources were being used and could be good substitutes for conventional resources if the access was fast and more computers were installed to provide better services. Both studies found that Google was the most widely used search engine for locating information electronically. Electronic resources have the potential for enhancing student's learning, as the resources provide teachers and students with vast quantities of information in an easily accessible non sequential format (Aina, 2014).

Deng (2010) conducted a study to investigate the extent to which e-resources were utilised in higher education in Australia. The study intended to explore the patterns and trends of accessing and using e-resources in a university library in order to help university libraries to manage their resources better, the study revealed that the usage of e-resources is now common in a university environment. It showed that the use of e-resources was very much dependent on the user and the purposes of using e-resources.

Awareness and the quality of the available e-resources were the two important factors for the effective and efficient use of e-resources. Those findings shed light on the use of e-resources and helped university libraries understand the perception and experience of users in using e-resources, leading to more effective and efficient use of e-resources.

A study conducted in Nigeria by Egberongbe (2011) found that e-resources such as bibliographic databases, e-newspapers and e-magazines were not used very much. It was also observed that groups of users were not getting proper encouragement by university management to participate in training programmes. The results of this study revealed that e-resources were preferred by some respondents because they were more useful, time saving, easy to use, more informative and less expensive.

Ansari and Zuberi, (2010) investigated the use of e-resources among academics at University of Karachi. The study showed that an internet connection was available to the departments. A majority of the academics had computer skills that facilitated the use of e-resources, although many had little knowledge of e-resources, not a positive aspect of the findings. Lack of knowledge and facilities were found to be the main reasons for not using e-resources.

### Methodology

The study adopted a descriptive research survey method and data were generated through the use of questionnaire which was administered on 400 students randomly selected from the faculties of the social sciences and engineering of Ekiti State University, Nigeria. Items in the questionnaire focused on the awareness of electronic information resources, frequency of use of electronic information resources, available electronic resources, level of usage of these resources and benefits derived from using electronic resources. Convenience and purposive sampling technique were adopted to select two faculties. Data gathered were analysed using frequency count and percentages. Out of four hundred (400) copies of questionnaire administered to the students three hundred and fifty (350) were returned which represents 87.5% response rate for the study.

### Presentation and Discussion of Results

Below is the comprehensive analysis of data and findings based on the responses received from the respondents through the use of questionnaire.

Out of the four hundred (400) copies of questionnaire distributed, three hundred and fifty (350) copies (87.5%) were returned with valid responses, while fifty (50) copies (12.5%) were not returned at all

This section present findings on the distribution of the respondents by faculty and gender. 57.1% of the respondents were from the faculty of the Social Sciences while the remaining 42.9% were from the Faculty of Engineering.

**Table 1. Distribution of Respondents by Faculty and Gender.**

S/N	Item	Frequency	Male	Female
1	SOCIAL SCIENCES	200(57.1%)	80(40.0%)	120(60.0%)
2	ENGINEERING	150(42.9%)	98(65.3%)	52(34.7%)
	Total	350(100%)	178(50.9%)	172(49.1%)

From the social sciences, 40.0% of the respondents were male and 60.0% were female, while 65.3% male and 34.7% female were from the faculty of engineering.

**Table 2. Frequency of Use of Electronic Resources.**

S/N	Option	SOC. SC	ENGR	Total	Percentage
1	Daily	64	55	119	34%
2	Weekly	55	37	92	26%
3	Twice a week	60	48	108	31%
4	Monthly	21	10	31	9%
	Total	200	150	350	100%

Findings on the frequency of use of electronic resources shows that 34% of the respondents utilise electronic resources daily, while 26% used them weekly. Also, 31% of them agreed that they use electronic resources twice a week and only 9% used them once in a month.

**Table 3. Distribution of Responses on the Benefits Derived from E-Resources Utilisation.**

S/N	E- Resources	Yes	Percentage	No	Percentage
1	Access to a wider range of information	319	91%	31	9%
2	Faster access to information	332	95%	18	5%
3	Access to current information	347	99%	3	1%
4	Improved academic performance due to timely information	340	97%	10	3%
5	Easier access to information	342	98%	8	2%
6	Access to information is round the clock	345	99%	5	1%
7	Cost of access to electronic information resources is cheap	280	80%	70	20%

Findings on the benefits derived from the use of electronic resources revealed that 91% of the respondents supported the assertion that it gives access to a wider range of information, while 95% of them agreed that it allows for faster access to information, 99% of the respondents were of the opinion that e-resources gives access to current information, also, 97% of them believed that electronic resources can lead to improved academic performance and 98% of the respondents supported the view that easier access to information is possible in an electronic environment. 99% of the respondents agreed with the assertion that access to electronic resources is round the clock. Finally, 80% of the respondents were of the opinion that access cost to e-resources is cheap. This is in tandem with the positions of Banwell et.al, (2004) and Renwick, (2005) that the benefits of e-resources to users includes perceived ease of access, timeliness, access to current information as these are often updated frequently. They also stated that users prefer access to information which is up to date, wide in scope and available everywhere.

Findings on the awareness of electronic resources revealed that 90% of the respondents were of the opinion that they have heard of electronic information resources before, while 75.1% of them agreed that they know what electronic information resources are. 84% of the respondents had used electronic information resources before and only 42.5% were aware that the university library provides access to electronic information resources.

**Table 4. Distribution of Respondents Based on their Awareness of E-Resources.**

S/N	Option	SOC. SC Yes	ENGR Yes	Percentage of Yes	SOC. SC No	ENGR No	Percentage of No
1	I have heard of electronic information resources before	175 (87.5%)	140 (54.0%)	315 (90.0%)	25 (12.5%)	10 (46.0%)	35 (10.0%) 350 (100%)
2	I know what electronic information resources are	140 (70.0%)	123 (82.0%)	263 (75.1%)	60 (30.0%)	27 (18.0%)	87 (24.9%) 350 (100%)
3	I have used electronic information resources before	158 (79.0%)	136 (90.7%)	294 (84.0%)	42 (21.0%)	14 (9.3%)	56 (16.0%) 350 (100%)
4	I am aware that my University Library provides access to electronic information resources	80 (40.0%)	69 (46.0%)	149 (42.5%)	120 (60.0%)	81 (54.0%)	201 (5.5%) 350 (100%)

**Table 5. Awareness of Electronic Resources Available in EKSU Library.**

S/N	Option	SOC. SC. Yes	ENGR. Yes	Percentage of Yes	SOC. SC. No	ENGR. No	Percentage of No
1	CD-ROM Databases	69(35%)	50(33%)	119(34%)	131(65%)	100(67%)	231(66%) 350(100%)
2	Internet Services	180(90%)	125(83%)	305(87%)	20(10%)	25(1%)	45(13%) 350(100%)
3	E-Mail Services	185(93%)	140(93%)	325(93%)	15(7%)	10(7%)	25(7%) 350(100%)
4	E- Journals	120(60%)	93(62%)	213(87%)	80(40%)	57(38%)	137(13%) 350(100%)
5	E- Books	135(68%)	118(79%)	253(72%)	65(32%)	32(21%)	97(28%) 350(100%)
6	On-line Databases	150(75%)	110(73%)	260(74%)	50(25%)	40(27%)	90(26%) 350(100%)
7	OPAC	45(23%)	60(40%)	105(30%)	155(77%)	90(60%)	245(70%) 350(100%)
8	Open access resources	159(80%)	119(79%)	278(79%)	41(20%)	31(21%)	72(21%) 350(100%)
9	E-Newspapers	128(64%)	110(73%)	238(68%)	72(36%)	40(27%)	112(32%) 350(100%)
10	E-Theses	118(59%)	90(60%)	208(59%)	82(41%)	60(40%)	142(41%) 350(100%)

This agrees with the position of Emmanuel Baro et al (2011) that majority of the students are not aware of and do not use the online information resources. It is pertinent to note that when undergraduate students are aware of e-resources they will make adequate use of them for academic and research purposes. It is also important that for the students to make use of the resources, they ought to be skilled in information and communication technologies (ICTs) applications in order to gain independent use of various electronic information resources around the globe.

Findings on the available electronic resources revealed that 67% of the respondents were of the opinion that CD-ROM Databases were not available for use, while 87% of them agreed that they have access to internet services, this is in line with the findings of Zhang, Ye and Liu (2011) in their study of the relationship between electronic journal usage and age, it was indicated that users of all ages have switched to the electronic format not only in terms of usage but also by preference. 93% of the respondents had no problem accessing their E-Mails and 62% said yes to the availability of electronic journals in the University library. 72% of the respondents agreed that E-Books are available, 74% said yes to the availability of On-line databases and 30% of the respondents believed that OPAC is available in their institution. 79% of the respondents agreed that they use open access resources, and 68% of them read electronic newspapers. Lastly, 59% of the respondents use e-theses. This aligns with the position of Dadzie (2005) in his investigation of e-resources access and usage at Asheshi University College Ghana. He found out that general computer usage for information access was high because of the university's state of the art IT infrastructure.

#### Conclusion and recommendations

Academic libraries are an integral part of universities and had a critical role to play in supporting the core mission of the university that is teaching, learning and research. E-resources made available by university libraries to university communities; staff, students and other authorised users are for activities that support the university mission.

One may therefore conclude that the study has shown that e-resources are widely used in the surveyed university, and that awareness about e-resources could possibly lead to increased usage. Good internet connectivity will go a long way to encourage users to use the e-resources for which the university library has subscribed. It is anticipated that the results outlined in this paper, together with the recommendations, will be useful for those in decision-making capacities and provide insight for librarians who manage these resources. It is further expected that this paper will assist administrators of university libraries in developing a more robust understanding of the electronic information needs of students and intensify their efforts to create awareness on the available electronic collections for effective usage.

The above results offered significant insight into the level of use of electronic information resources available in the surveyed university. This study showed that most users were aware of the availability of e-resources in the library. Based on the findings, the following recommendations are suggested.

- ❖ Subscriptions to e-resources should reflect the priorities and preferences of users.
- ❖ Librarians should increase the level of awareness of the availability of new e-resources and additions of new databases for users of the library.
- ❖ Regular training programmes particularly the use of CD-ROM and OPAC should be organised for students for effective use of e-resources.
- ❖ Problems associated with slow connectivity should be improved upon by upgrading the bandwidth

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