

Awareness and Use of Online Databases and E-journals by Medical Science Students at the University of Lagos, Nigeria.

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Abstract

This study investigates the awareness and use of online databases and e-journals by medical science students at the University of Lagos, Nigeria. The study adopted survey design and questionnaire was used as tool for data gathering. The study population was comprised of two-hundred (200) undergraduate medical students who were purposely chosen as sample of the study. The data collected were analyzed using frequency distribution, simple percentages, and charts. The findings show that the students were largely aware of the availability of online databases and e-journals which were mostly used for the purpose of study and research work. The study also revealed that majority of the respondents were using PUBMED more than other available e-journal resources. It is interesting to also note that majority of the respondent indicated a fairly high level of familiarity with search options for accessing online database and e-journals.

Keywords: Online database, Electronic journals, Medical, Students, PUBMED, Nigeria.

Introduction

The advances and proliferation of the internet technology during the past few decades have brought fundamental changes in the way information is gathered, stored, organized, accessed, retrieved and consumed (Okorie and Agboola, 2012). Hence, libraries have shifted from traditional information provider to electronic information resource services, as print medium is increasingly giving way to the virtual and electronic form of materials (Sharma, 2009). E-Databases also known as online databases have become an established component of electronic resources in many academic libraries' collections which are accessible over the internet network for multiple users at the same time (Duragappa, Beerappa & Sheshadri, 2017). Online databases have grown to be an important part of

the information resources provided by many universities in many countries. In fact, it has become a valuable and up to date source of information for student and researchers; therefore it is indispensable to learning, teaching and investigating for the university communities (Kwadzo, 2015). Most libraries are now offering dozens, even hundreds, of online databases and many are currently building substantial collections of full text journals and continue to increase access so as to support teaching, research and community development (Upadhyay and Chakraborty, 2008). There are various types of these databases such as bibliographic, full-text, directory, numeric and multimedia of which often contain journal articles, or references to such articles, e-books, reference sources, conference papers and reports among others (Kwadzo, 2015).

Online databases and e-journals have altered use patterns of academic health sciences libraries over the past decades as more users' access online resources remotely and fewer patrons enter the physical library. Various online resources such as PubMed, Cochrane Library, HINARI, BioMed Central, and evidence based tools etc are now available to increase and ease access to health information (Anyaku, 2015). The development of health online databases have allows students and medical professionals throughout the developed world immediate access to hundreds of e-journals at the touch of a button, and delivers round the-clock access to high quality research articles from scholarly peer-reviewed publications and conference papers which they can use as sources in class research projects (Achampong and Pereko, 2010: Dudley, (2011).

As the medical learning resources on the internet and online database have been improving and increasing exponentially over the last decade in terms of quantity, quality as well as accessibility, the question of whether these resources are really being utilized in an optimum manner is still debatable. This is because concerns have been expressed with respect to students' ability to search information using electronic search engines and online databases, because it require users awareness, accessibility and skills for the usage (Baldwin, Gadd and Balatsoukas, 2010) . This applies to both medical students as well as to the teaching faculty (Amin, Kaliyandan and Wadani, 2011). It is against this backdrop that, this study seeks to assess the awareness and use of online databases and e-journals among medical undergraduate students at the University of Lagos, Nigeria.

Statement of Problem

University libraries spend large amounts of money on providing information resources to satisfy the teaching, learning and research needs of its faculty and students. Students in the universities are expected to maximally utilize both print and electronic information resources provided by their University as one of the major sources for meeting their information need. The University under studied subscribed to number of online database and e-journals. Some of them are free while others are been paid for. As universities spend substantial amount of money on subscription of these databases, it is only appropriate and economical that these databases are optimally utilized to contribute to the academic achievement of students and faculty and also to get value for money (Kwadzo, 2015). While usage statistics record the frequency of use of online journals and databases, they tell little about how users are finding and utilizing the online resources of an academic health sciences library (De Groote, Shultz and Blecic, 2014). Therefore, it is important to ascertain the knowledge and searching skills of the students in order to discover needed skills to enable them effectively navigate through the online database and retrieve the most accurate information over the shortest time.

Objectives of the Study

- To ascertain the awareness and use of available online databases e-journals by the medical students.
- To find out the purpose of use of online databases and e-journals by the students;
- To investigate the ICT search skill of the students on the use of online databases and e-journals.
- To examine the method of search strategies used to access online databases and e-journals.
- To know the problems faced by medical students in using online databases and e-journals.

Significance of the Study

The performance of students in any university system depends to a large extent on their ability to exploit available information resources. This study will improve understanding of how student make use of available online databases and e-journals at the University of Lagos. The study will also benefit the library administrators of the university to know if electronic resources provided are being adequately utilized, the challenges and what additional electronic resources to select to maximize the benefit to users within limited budget. It also hopes to add to the existing knowledge on how students

currently make use of the online database information resources to aid them in their studies. Finally, it may encourage new directions for research on electronic information literacy in Nigeria for students, librarians, policy formulators, and policy implementers.

Review of Literature

Most universities libraries provide online databases and e-journals to their users to support teaching, learning, research and community development. The existing literature published shows that different studies have been conducted on the use of online database among student in different settings. Amin, Kaliyadan and Wadani (2011) studied online bibliographic databases among both medical students and faculty at College of Medicine, under King Faisal University, Al Ahsa. The findings revealed that majority of the students were aware of online bibliographic databases and the most used one are PubMed and MDconsult. However, in spite of easy access to the online databases, the proficiency of use was low among medical the students. Similarly Sohail and Alvi (2014) studied the use of web resources (e-journals and e-databases subscribed by UGC-Info-net consortium) by the students of medical sciences at Aligarh Muslim University, India. The findings shows all the students were aware of web resources and mostly make use of them.

Mernkratoketal (2008) conducted a study on the use of online databases among Suranaree University students. The results revealed that, the main purpose of using the online database was to search for information for their reports class assignments and theses. Some of the respondents' students reported not using the online database because they primarily did not know how to gain access to the database. Other reasons were that they did not know how to retrieve the online database, and they were familiar with using other types of information resources respectively. The computer and the computer network were found to be the major problems of the online database use. Sinh and Nhung(2012) investigated users' searching behavior in using online databases at Vietnam National University, Ho Chi Minh City. They reported that key words or subjects were used the most when searching. The ability to search and use online database resource efficiently depends on basic computer skills and literacy skills of the students. In this regard, Kumar (2016) conducted a study to ascertain the computer literacy level of medical students of Govt. Medical College, Chandigarh. The results indicated that most medical students have some average or advance knowledge on the basic use of computer software. The computer awareness among medical students is encouraging but still need to be improved, as most of the students responded that they are computer literate.

In a similar vein, Achampong and Pereko(2010) surveyed computer skills and the training of medical students in a Ghanaian medical school. The study found out that medical students have high interest in the use of computers for their studies and research and suggest that internet is used as a tool. The knowledge and use of database was however low as compared to the other basic software programs. Roy, Kumar and Satija (2012) investigated challenges faced by the searchers of online database in selected central university libraries in India. The findings revealed that all the users mentioned that they needed some help for search query formulation, selection of search terms, and they expected the system to provide ‘suggested keywords and suggested search strategy’ features. Difficulties faced by the users in utilizing the retrieval features were related to the applications of the retrieval features. Similarly, Baro, Endouware and Ubogu (2011) found out that problems such as lack of skills to use the online information resources, lack of time, poor user education programmes, and slowness of server were mentioned by the students as some factors militating against the effective use of online information resources.

Methodology

The survey research design was adopted for the study. The study population consisted of undergraduate medical students of the College of Medicine, University of Lagos. Structured questionnaire was developed in the light of the objectives of the study and used for the data collection. The questionnaires were distributed to undergraduate students in the main College library. This library serves the entire medical community made up of undergraduate students (medical, dental, pharmacy, and basic medical sciences) and postgraduate students (MSc, MPhil, and PhD levels), resident doctors, nurses, medical laboratory technologists, health workers, and the academics (Ogunyade, 2003). A sample size of 200 respondents was purposively chosen as the respondents of the study.

Analysis and Interpretation of Data

All data were categorized and analyzed using tables, frequency, charts and simple percentage for data analysis.

Presentation of Data and Result: A total number of two hundred (200) copies of questionnaire were distributed to the respondents, and one hundred and seventy-eight (178) copies were retrieved back, out of which 161 representing (80.5%) were found useful for the data analysis.

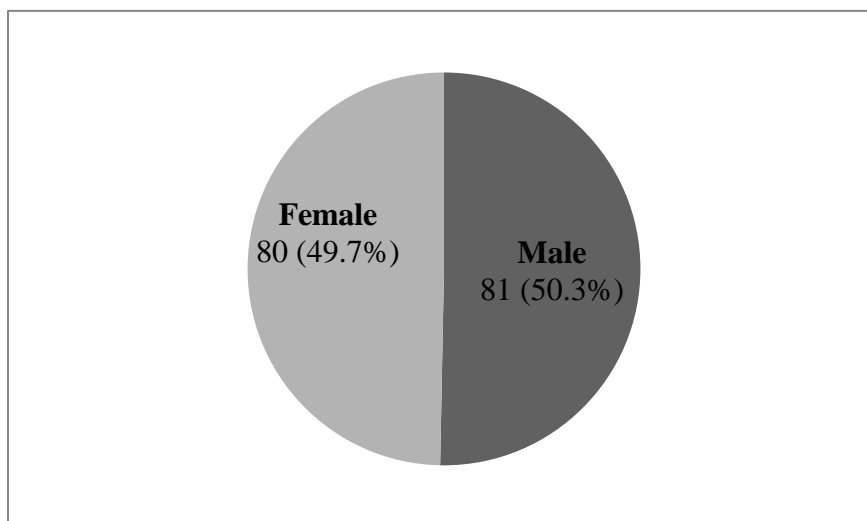


Figure no.1 Response Rate

Figure 1 revealed that, out of the total respondents 81 (50.3%) were male; while 80(49.7 %) respondents were female indicating that the males were more than the female. Based on this, analysis indicated that majority of the respondents were Male. According to McGinty and Moore (2008) gender issues have been in the forefront of impassioned public discussion regarding higher education. Gender is a relevant and possible factor influencing the use of electronic information resources and ICT, which has been widely identified (Waldman, 2003; Oyeniyi, 2013). Therefore, both gender were involved in the study and given equal chances without any form of discrimination.

Table 1: Age Group

Age bracket	Frequency	Percentage
Below 20	49	30.4
20-24	81	50.3
25-30	29	18.0
31 – above	2	1.2
Total	161	100

As Table 1 shows, those within the age range of 20-24 years constitute the highest number of respondents of the study with 81 (50.3%) followed by those below 20, 49 (30.4%). While those in the age bracket of 25-30 constitute 29 (18.0%) and the least age range of respondents were those within the age range of 31-above years with 2 (1.2%). The finding of the study shows that, majority of the respondents who fall between the age range 10-30 years were millennium generations children. The generation born between 1982 and 2000 has been identified as the millennial generation, and the implication of this finding on this study is that, they are particularly prominent using digital resources (Zickuhr, 2010).

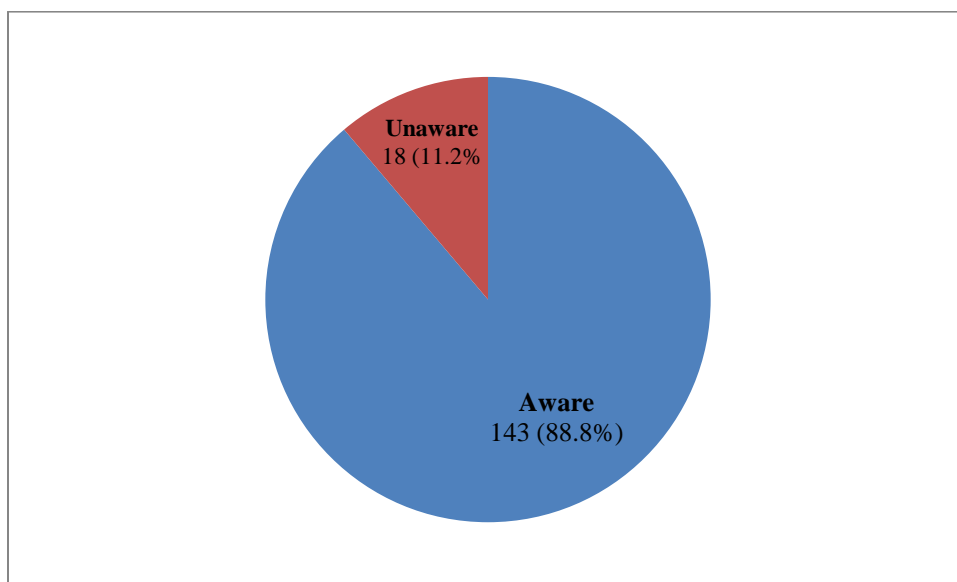


Figure no. 2 Awareness of online databases and e-journals

In response to the question on awareness level of the online database and e-journals, figure 2 indicated that, 143 (88.8%) responded positively and acclaimed that they are fully aware, 18 (11.2%) respondents said that they are not aware of the facility.

Table 2: Sources of awareness about the online databases and e-journals

Sources of Information	Frequency(n=161)	Percentage
Friends/ Colleagues	50	31.1
Library instruction	45	27.9
University website	33	20.5
Self-development	68	42.2
Serendipity	6	3.7
Others: (Lecturers, Project work, University orientation etc)	12	7.5

The respondents were asked about source of awareness of online databases and journals. It seems that the student became of aware different resources from many sources. Table 2 reveals that most of the respondents 68(42.2%) became aware of online databases and electronic journals through self-development, friends/colleagues 50(31.1%), library instruction 45(27.9%), university website 33(20.5%), others; (lecturers, project work, university orientation etc), 12(7.5%), and serendipity 6(3.7%).

Table 3: Usage of Online database and e-Journals

Usage	Frequency(n=161)	Percentage
Cochrane Library	18	11.2
Ebscohost	4	2.5
Hinari	13	8.1
Jaypee Digital	20	12.4
JSTOR	7	4.3
PubMed	90	55.9
Science Direct	69	42.9
Others	36	22.4

The use of online database and e-journals varied among the respondents under study. Table 3 shows that Pubmed 90(55.9%), and Science Direct 69(42.9%), were mostly used, followed by Jaypee Digital 20 (12.4%), Cochrane Library 18(11.2%), Hinari 13(8.1%), JSTOR and Ebscohost recorded the lowest usage rate with 4(2.5%).

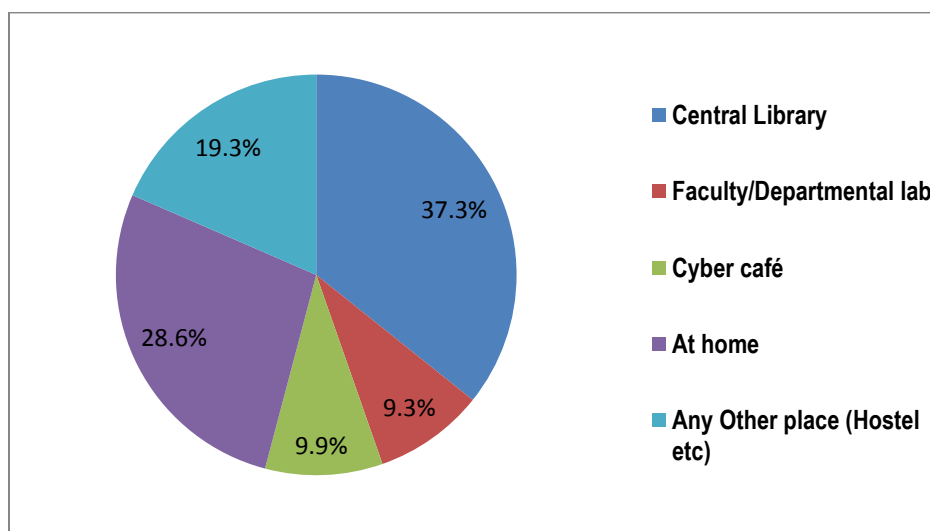


Figure no. 3 Place for Accessing of Online databases and e-journals

Figure 3 shows that majority 60 (37.3%) of respondents like to access online database and e-journals at the University Central medical library, 46(28.6%) access it at home, followed by 31 (19.3%) at any other places like hostels, etc. 16 (9.9%) at Cyber café, 15 (9.3%) at faculty/departmental lab.

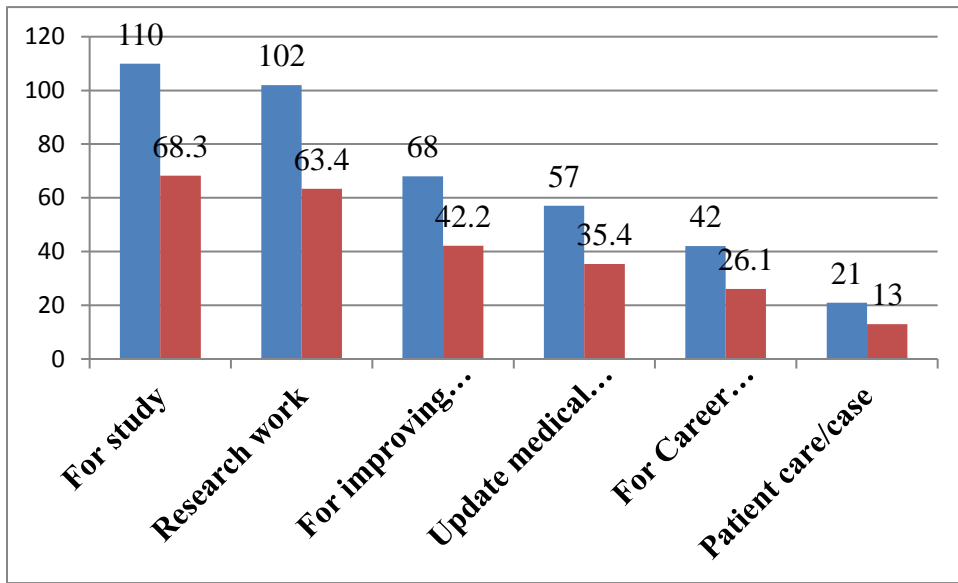


Figure no 4 Purpose of Using Online databases and e-journals

The respondents were asked to indicate the purpose for which they use online database and e-journals. Figure 4 shows that majority of the respondents 110 (68.3%) used them for study, 102 (63.4%) for research work, 68(42.2%) for improving knowledge, 57 (35.4%) update medical knowledge 42 (26.1 %) for career development, while the least 21(13.0%) used it for patient care/case.

Table 4: ICTs skills on the use of online database and e-journal

ICTs Skills	Frequency(n=161)	Percentage
Skilled in the knowledge of database of search	52	32.3
Skilled in formulating search queries	32	19.9
Skilled in online navigation techniques	38	23.6
Skilled in the use of electronic library tools(CD-ROM, OPAC etc)	11	6.8

To know the respondent skills to search different online databases and electronic journals, Table 4 shows that, 102 (63.4%) respondent reported that they are skilled in the use of computer, 52 (32.3%) responded that they were skilled in the knowledge of database search, 38 (23.6%) were skilled in online navigation techniques, 32 (19.9%) were skilled in formulating search queries, while 11 (6.8%) were skilled in the use of electronic library tools(CD-ROM, OPAC etc).

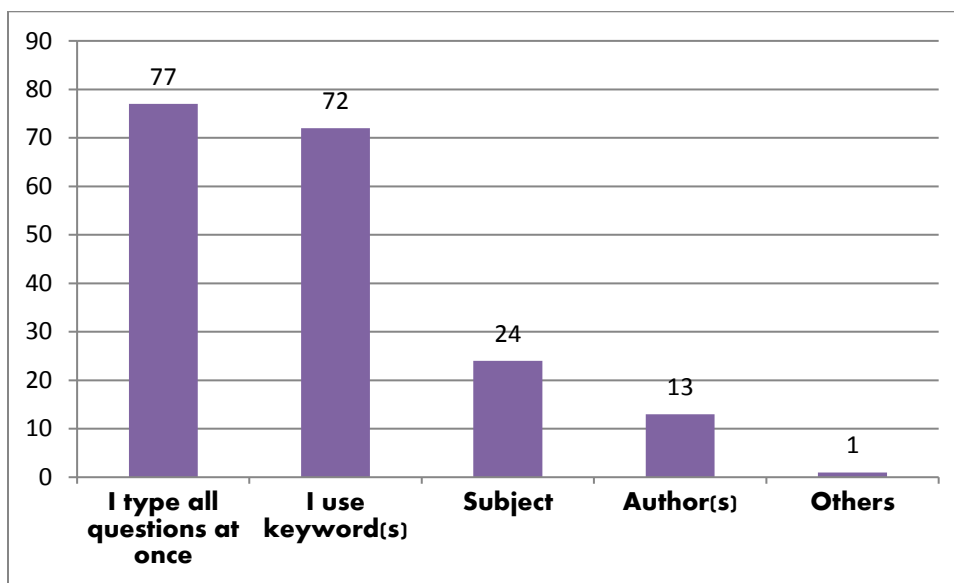


Figure 2: Search strategies for using online database and e-journal (n=161)

The respondents were asked to express their opinions on specific use of various search options. The answers to which are depicted in figure 2. It is seen that, 77 (47.8%) of the total response said, I type all my question/queries term at once; 72 (44.7%) said I use keyword(s) of my need; 24(14.9%) use subject, 13 (8.1%) use author(s), and 1(0.6%) others.

Table 5: Barriers in accessing online databases and e-journals

Barriers	Frequency (n=161)	Percentage
Inadequate computers	32	19.9
Frequent power outages	57	35.4
Login problems	60	37.3
Slow information download	68	42.2
Time factor	41	25.5
Internet connectivity problems	113	70.2
Inadequate searching skills	38	23.6
Information overload	47	29.1

Major barriers reported by the students on the effective use of the online database and e-journals as shown in table 5, are internet connectivity problems 113(70.2%), slow information download 68 (42.2%), login problems 60(37.3%), frequent power outages 57 (35.4%), information overload 47(29.1%), time factor 41(25.5%).

Discussions of Findings

Based on the analysis, findings show that respondents were largely aware of the availability of online databases and e-journals, as most of the student learned about their existence through self-development, friends/colleagues and library instructions. This result corroborates Kumar (2016) findings that maximum medical students are aware and use e-resources of library. The implication of this finding is that, awareness of online databases and e-journals can stimulate the usage, though this might be impeded when there is no means of accessing them. The findings of the study also shows that, the main purpose for using online databases and e-journals were for study, research work, improving knowledge, update medical knowledge, career development, and patient care/case. Therefore, the use of online database and e-journals among students was primarily influenced by their academic. This need may be attributed largely to their education pursuits and as well as the need to be widely informed as a medical student. These findings are consonance with that of Baro, Onyenania and Osaheni (2010) which revealed that the information needs that make the undergraduate students search for information, is academic information.

The usage of online databases and e-journals by the student varies. The findings also revealed that majority of the respondents were using Pubmed. Other resources were accessed by some more than others, but this was not done by the entire student, which most of them usually accessed at the central library and at home. This result further confirms the finding of Amin, Kaliyadan and Wadani (2011) that the most common online bibliographic database worldwide among medical students is Pubmed. Students who use e-resources are more likely to excel in their academic pursuits more especially in the technological age, due to the fact that current, scholarly and fast information are more accessible electronically.

The results also revealed that, majority of respondents were skilled in the use of computer. More so, about half of the respondents laid strongest supports to typing their question/queries term at once, while others use keywords of their search, subject and author. This shows that, the respondents in this

study indicated a fairly high level of familiarity with search options; although use was mainly concentrated on a few strategies which were likely determined by the ease of use such strategies. The ability to use electronic resources efficiently depends on basic ICT skills and how ability to define a research problem. In order to be able to be able to effectively make use of the growing range of electronic resources, undergraduate students are expected to acquire and possess adequate knowledge and the skills necessary to exploit them (Okello-Obura and Magara, 2008; Israel, 2018).

Finally, the study also finds out the major problems undergraduate students faced while using online database and e-journals are; internet connectivity problems, slow information download, login problems, frequent power outages, information overload, and time factor. This study confirmed the findings of Olayemi, Abolarinwa and Olayemi (2017) that slow internet connectivity and frequent power outages remain a serious challenge to the use of e-journal in the country.

Conclusion and Recommendations

The availability and accessibility to online database and e-journals has further provided leverage on provision of information resources to student and faculty members. The purpose of this study was to investigate the awareness and use of online database and e-journals by medical students at the University of Lagos, Nigeria. The study revealed that majority of the students are aware and using the resources. The findings also revealed that majority of the respondents were using Pubmed, which were mostly used for the purpose of their academic pursuit. The study also found that the students encountered various barriers in their use of online databases and e-journals, the critical ones are being the internet connectivity problems, slow information download, login problems, frequent power outages. Based on the finding, this study recommends the following:

1. The library needs to continually create awareness and campaign to users who are still unaware of the availability online databases and e-journals.
2. There should be promotion of on-screen help, printed guides and training for the less popular electronic resources to facilitate ease of use of online database and e-journal resources.
3. In order to increase use of online database and e-journals by the students, the lecturers should create the awareness and give more assignment that will warrant the students to use them.
4. There is need to increase the bandwidth of the internet connection so as to solve the problem of internet connectivity problem and slow information download.

5. The University library should provide an inverter or solar energy system to complement the power supply and stand-by generator as to avoid frequent shut down of system when power go off.
6. The library staff should endeavor to assist users who lack adequate skills in the use of online database and e-journals so to encourage the use.

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