

Levels of Awareness and Use of Electronic Information Resources by Pharmacy Undergraduate Students at the University of Ibadan, Nigeria

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Abstract

The emergence of electronic resources has cut the barrier to valuable e-resources which until now were difficult to access especially by scholars in the developing nations of the world. The study, therefore, examines awareness level and electronic information resources usage: a case study of pharmacy undergraduate students of University of Ibadan, Nigeria. The study adopted the descriptive survey method and the population consisted of 421 students. The simple random sampling technique was adopted for the study and sample fraction of 50% was used to select the sample size from each of the levels. This therefore, gave a total of 212. The data were collected using a questionnaire and analyzed with Statistical Package for Social Sciences (SPSS) version 23. Findings indicated that e-mail 87 (48.6%) and e-dictionary/e-encyclopaedias 82 (45.8%) were very readily available to the undergraduate students. Assignments 134 (74.9%) and laboratory experiment 103 (57.5%) were the main purposes respondents use EIRs. EIRs used daily were e-dictionaries/encyclopedias 75 (41.9%), e-mails 64 (35.8%) and e-books 64 (35.8%). Undergraduates were highly aware of e-mails 113 (63.1%), e-dictionaries/encyclopedias 109 (60.9%) and e-books 95 (53.1%). 79 (44.1%) of respondents strongly agreed that Power failure and inadequate technological infrastructure 74 (41.3%) are constraints faced in the use of electronic information resources by undergraduates. The study concluded that EIRs are very expensive and thus it is important for university administration to be informed about their extent of use and problems associated with use, so that the necessary actions are taken to ensure efficient and effective use. The utilisation of electronic information resources is a sine qua non to information acquisition by undergraduates in university libraries. The Electronic Information Resources particularly the Internet and e-journals are important sources of information for university undergraduate students.

Keywords: Awareness, Electronic Information Resources, Undergraduates, Use

Introduction

The emergence of Electronic Information Resources (EIRs) has brought changes to all academic activities in Nigerian Universities (Osinulu, 2020). EIRs are becoming crucial in academic libraries because of the unique benefits to users and libraries providing unlimited and easy access to current information, obliterating space problem and promoting collaborative efforts in research (Yebowaah and

Plockey, 2017). The integration of EIRs has improved the quality of academic library services.

In recent times, EIRs have been identified as the major sources of information dissemination in academic institutions. Generally speaking, electronic information resources play vital role in all areas of human endeavours in academic libraries and the academic world has increasingly become more dependent on them (Abubakar and Mamman, 2020).

Therefore, Electronic Information Resources (EIRs) are electronic version of print formats which is a crucial part of library collection in the digital era. They are materials requiring computer access using desktops or handheld mobile devices such as iPad, laptop and Smartphone in the library or at home for the purpose of teaching, studying and or research (Osinulu, 2020). Electronic Information Resources (EIRs) include databases (online and offline), E-books, E-journals, E-newspapers, E-research reports and E-lecture notes. Electronic information resources form an integral part of library's collection and is becoming essential information requirement for learning, teaching and research activities in the digital era. In recent times, electronic information resources have been identified as the major sources of information dissemination in academic institutions. Generally speaking, electronic information resources play vital role in all areas of human endeavors in academic libraries and the academic world has increasingly become more dependent on them (Abubakar and Mamman (2020).

Recently, in view of the inherent benefits of EIRs, several studies have appraised awareness and use of electronic information resources (EIR) among undergraduates. Jogan (2015) in a study on use and impact of electronic resources in Institute of Technology, Delhi found that the usage of electronic journals is increasing due to awareness among the undergraduates. On the other hand, Bamidele (2015) asserted that most undergraduates who are the major users of the library are unaware of the quality and variety of information available in academic libraries owing to inadequate knowledge. Provision of electronic information resources is like a lifeline support that is adding values to learning and academic library services (Osinulu, 2020). Therefore, it should be of grave concern to academic libraries considering the huge investments by way of subscription to electronic information resources. To this end, this study will examine levels of awareness and use of electronic information resources by pharmacy undergraduate students at the University of Ibadan, Nigeria.

Statement of the Problem

Studies found that majority of undergraduates failed to optimally utilise electronic information resources
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especially in the libraries, despite the numerous advantages of electronic information resources to support learning, research, and others, as there were reports of low use of EIRs among undergraduates. This apparently could be a product of insufficient or total lack of awareness of the resources (Daramola, 2016; Mawere and Sai, 2018). Again, it was reported that the efforts of libraries and other information centers in using electronic information resources to satisfy the diverse information needs of undergraduate students have been marred by underutilisation. These also were attributed to lack of information and retrieval skills to exploit the information resources, a negative perception of EIRs caused by low awareness, and low level of utilisation among undergraduate students. In the same vein, it has been observed that most undergraduate students have not fully embraced the opportunities offered by the availability of EIRs for numerous academic-related tasks. It was found further that undergraduate students are eager to use electronic EIRs but were constrained by poor network connectivity and erratic power supply (Gurikar and Gurikar, 2015). However, under-utilisation, low awareness, inadequate infrastructure and facilities remain recurrent problems in the Nigerian university libraries, despite that EIRs is increasingly being embraced in academic libraries worldwide and adding value to learning as well as providing revolutionary library services. This is the gap in knowledge that this study intends to fill.

Literature review

Awareness level of electronic information resources by undergraduates

Several empirical studies have investigated level of awareness of electronic information resources by undergraduates. For example Dukper, Sakibu and Arthur (2018) reported a low level of awareness of electronic resources among students with 61% unaware of the availability. Similarly, Finding from the study of Osinulu (2020) showed that less than average of the respondents were aware of the availability of e-Books 84(48.3%), e-journals 74 (42.5%) and Internet 70 (40.2%) as just a very few attested to their awareness of electronic databases 49(28.2%), theses/dissertations 41 (23.6%) and CD-ROM 34 (19.5%) while e-books 90 (51.7%); e-journals 100(57.5%), Internet 104 (59.8%), electronic databases 125 (71.8%), theses and dissertations 133

(76.4) and CD-ROM 140 (80.5%) respondent were not aware. Findings from the study further established that majority of the respondents 86, representing 49.4% indicated low level of awareness of electronic information resources. On the other hand, 64 representing 36.8% affirmed moderate/average level of awareness of electronic information resources in the library while only 24 representing 13.8% indicated high level of awareness. The implication of this is that there is a low level of awareness of EIRs among majority of the students. Mawere and Sai (2018); Daramola (2016) in their separate studies reported low level of awareness of electronic information resources among the undergraduates in tertiary institutions.

Use of electronic information resources by undergraduates

The result from the study of Osinulu (2020) on the purpose of use of electronic information resources by the respondents revealed that finding relevant information 122(70.1%), research activity 114(65.5%) and completing assignments 101(58.0%) topped the list of purposes for which the respondents surveyed used electronic information resources as affirmed by majority of the respondents. In addition, 38 (21.8%) of the respondents use e-resources twice in a week, followed by 30 (17.2%) once in a week, 43 (24.7%) occasionally while 66 (37.9%) never used the resources at all. It can be deduced that there are more non-users of electronic information resources in the library. This finding validates that of Dukper, Sakibu and Arthur (2018) that regardless of the availability of a wide range of resources the frequency of use was abysmally low.

In a separate study in Ghana, Akuffo (2019) and Ankrah and Acheampong (2017) revealed that students use electronic resources for research and assignments. However, Daramola (2016) reported low use of electronic resources among undergraduates in the Federal University of Technology, Akure, Nigeria. Dukper, Sakibu and Arthur (2018) reported that 37% of the respondents in their study used the electronic resources once a week and 31% used it twice a week. Mandale (2019) examined the use of e-resources in Ayurved Medical College Libraries in Maharashtra. It was revealed that on daily basis, students use e-journal at an average of 12 hours per week.

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Challenges faced in the use of electronic information resources by undergraduates

Previous studies have identified factors responsible for low use of EIRs by undergraduates in academic libraries. Gurikar and Gurikar (2015) posited that more users are eager to use electronic resources but were constrained by poor network connectivity and erratic power supply. The internet is the most preferred medium of access to electronic information resources. From the study of Osinulu (2020), results revealed that a little above average of the respondents surveyed 110(53.2%) indicated inadequate provision of computers, just as about average number of the respondents surveyed (86. 49.4%) indicated erratic power supply as a problem hindering their use of electronic information resources. Also, using the benchmark of 2.17 as decision rule, it can be inferred from the result that inadequate provision of computers (= 2.84), erratic power supply (= 2.51), poor network (= 2.43) and slow Internet speed (= 2.39) are major constraints to the use of electronic information resources among the respondents. The implication is that inadequate provision of computers and erratic power supply were the major constraints in the use of electronic information resources among students of Obafemi Awolowo College of Health Sciences, Sagamu. These findings affirmed the results of previous studies (Yebowaah and Plockey, 2017).

In a study by Oghenetega (2014), it was found that student' low usage of digital information resources was due to non-availability of online databases, lack of formal training in internet skills, slow bandwidth and slow server. Other issues associated with low use of electronic resources among undergraduates in previous studies include lack of awareness, ineffective marketing strategy and inadequate training, (Daramola, 2016, Mawere and Sai, 2018), lack of competence, poor infrastructure, low level of access and use of free online resources, uncooperative attitude of staff and loss of password (Yebowaah and Plockey, 2017). In order to alleviate these constraints to ensure maximum use of e-resources, library management should put in place mechanisms to ensure that e-resources are fully accessed and utilised by users (Abubakar and Mamman, 2020).

Research Questions

The following research questions were raised to guide the investigation:

1. What are the types of electronic information resources that available to the undergraduate students?
2. What are the purposes of the use of electronic information resources by undergraduate students?
3. How often do undergraduate students use electronic information resources?
4. What is the level of awareness of electronic information resources by undergraduate students?
5. What are the constraints to the use of electronic information resources by undergraduate students?

Methodology

The survey research design was used for this study. The population for the study comprised Pharmacy undergraduate students across levels at the University

of Ibadan, with a population of 421. The random sampling technique was adopted for the study. A sample fraction of 50% was used to select the sample size from each of the levels. This, therefore, gave a total of 212. Random sampling technique gave information for each and every unit of the population with greater accuracy. The instrument used to collect data was a questionnaire titled awareness and utilisation of electronic information resources by undergraduate students. Data analysis was carried out by using tables and simple percentages to show the general demographics of the respondents as well as analysis of data concerning the research questions.

Results and discussions

Questionnaire administration and response rate

Table 1 presented information on questionnaire administration and response rate. Findings showed that a total number of two hundred and were (212) copies of the questionnaire were administered to respondents. One hundred and eighty (180) copies were duly filled and returned giving 85% response rate

Table 1: Questionnaire administration and return rate

Faculty of Pharmacy	Distribution	Return Rate	%
100	45	40	89%
200	51	40	78%
300	31	25	81%
400	45	40	89%
500	40	35	88%
Total	212	180	85%

Demographic characteristics of the respondents

Table 2 presented results on the demographic characteristics of the respondents. Findings revealed that 42 of the respondents were in 100 level (23.5%), 42 were in 200 level (23.5%), 23 respondents were in 300 level (12.8%), 39 were in 400 level (21.8%) while 33 were in 500 level (18.4%) with a total of 179 respondents (100%). It also revealed the age

categories of the respondents. 101 respondents were aged 16-20 (56.4%), 73 were aged 21-25 (40.8%), 3 were aged 26-30 (3%) while 2 respondents did not indicate their ages (1.1%). 85 respondents were males (47.5%) while 93 respondents were females (52.0%). 130 respondents were Christians (72.6%), 37 were Muslims (20.7%) and 12 were of other religions (6.7%).

Table 2: Demographic characteristics of the respondents

Demographic Information	Frequency	Percentages
Level		
100	42	23.5
200	42	23.5
300	23	12.8
400	39	21.8
500	33	18.4
Age		
16-20	101	56.4
21-25	73	40.8
26-30	3	1.7
Not indicated	2	1.1

Gender		
Male	85	47.5
Female	93	52.0
Religion		
Christian	130	72.6
Muslim	37	20.7
Other religions	12	6.7

Electronic information resources available to undergraduates

Table 3 indicated that e-mail 87 (48.6%) and e-dictionary /encyclopaedias 82 (45.8%) were very available to undergraduates. Also, e-journals and e-newspapers were readily available to undergraduates with response rates of 85 (47.5%) and 72(40.2%). Meanwhile CD-ROMs databases and e-bibliographies were not available to undergraduates with a response rate of 40 (22.37%) and 27 (15.1%)

Table 3: Electronic information resources available to undergraduate students

ELECTRONIC INFORMATION RESOURCES	VRA(4)	RA(3)	NRA(2)	NA(1)
CD-ROM databases	37 (20.7%)	39 (21.8%)	63 (35.2%)	40 (22.3%)
e-bibliographies	32 (17.9%)	49 (27.4%)	71 (39.7%)	27 (15.1%)
e-books	71 (39.7%)	72 (40.2%)	31 (17.3%)	5 (2.8%)
e-dictionaries/encyclopedias	82 (45.8%)	74 (41.3%)	17 (9.5%)	6 (3.4%)

e-journals	42 (23.5%)	85 (47.5%)	36 (20.1%)	16 (8.9%)
e-magazines	56 (31.3%)	63 (35.2%)	43 (24.0%)	17 (9.5%)
e-mails	87 (48.6%)	67 (37.4%)	16 (8.9%)	9 (5.0%)
e-newspapers	60 (33.5%)	72 (40.2%)	34 (19.0%)	13 (7.3%)
e-serials	23 (12.8%)	64 (35.8%)	63 (35.2%)	29 (16.2%)
Research reports	42 (23.5%)	63 (35.2%)	52 (29.1%)	22 (12.3%)

Purposes of use of electronic information resources by undergraduates

Table 4 established that assignments 134 (74.9%) and laboratory experiment 103 (57.5%) were the main purposes respondents use EIRs. Others were learning 98 (50.3%) and exam preparation 97 (54.2%) Meanwhile, workshop 15 (8.4%) and symposium 12 (6.7%) were not reasons why undergraduates use EIRs.

Table 4: Purpose of electronic information resources use by undergraduates

Purpose of EIRs use	SA(4)	A(3)	D(2)	SD(1)
Assignment	134 (74.9%)	37 (20.7%)	6 (3.4%)	2 (1.1%)

Course material generation	97 (54.2%)	66 (36.9%)	15 (8.4%)	1 (0.6%)
Group discussion	73 (40.8%)	88 (49.2%)	17 (9.5%)	1 (0.6%)
Exams preparation	97 (54.2%)	73 (40.8%)	7 (3.9%)	2 (1.1%)
Project writing	0 (0%)	105 (58.7%)	68 (38.0%)	6 (3.4%)
Laboratory experiment	103	65	9 (5.0%)	2

	(57.5%)	(36.3%)		(1.1%)
Learning	98 (50.3%)	71 (39.7%)	8 (4.5%)	2 (1.1%)
Professional growth	90 (50.3%)	75 (41.9%)	11 (6.1%)	3 (1.7%)
Research	85 (47.5%)	73 (40.8%)	14 (7.8%)	7 (3.9%)
Seminar	72 (40.2%)	78 (43.6%)	21 (11.7%)	8 (4.5%)

Symposium	49 (27.4%)	82 (45.8%)	36 (20.1%)	12 (6.7%)
Workshop	41 (22.9%)	78 (43.6%)	45 (25.1%)	15 (8.4%)

Frequency of electronic information resources used by undergraduates

Table 5 revealed the frequency of electronic information resources use by the respondents. Electronic Information Resources used daily were e-dictionaries/encyclopedias 75 (41.9%), e-mails 64 (35.8%) and e-books 64 (35.8%). Electronic Information Resources used occasionally include CD-ROM databases 88 (49.2%), e-bibliographies 88 (49.2%), Theses and Dissertations 78 (43.6%), e-serials 74 (41.3%), e-magazines 71 (39.7%), OPAC 70 (39.1%), and Research reports 70 (39.1%).

Table 5: Frequency of electronic information resources used by undergraduates

ELECTRONIC INFORMATION RESOURCES	Daily	Weekly	Monthly	Occasionally	Never
CD-ROM databases	20 (11.2%)	19 (10.6%)	15 (8.4%)	88 (49.2%)	37 (20.7%)
e-bibliographies	17 (9.5%)	31 (17.3%)	12 (6.7%)	88 (49.2%)	31 (17.3%)
e-books	64 (35.8%)	25 (14.0%)	23 (12.8%)	54 (30.2%)	13 (7.3%)
e-dictionaries/encyclopedias	75 (41.9%)	30 (16.8%)	21 (11.7%)	46 (25.7%)	6 (3.4%)

e-journals	30 (16.8%)	43 (24.0%)	24 (13.4%)	68 (38.0%)	13 (7.3%)
e-magazines	42 (23.5%)	39 (21.8%)	16 (8.9%)	71 (39.7%)	11 (6.1%)
e-mails	64 (35.8%)	39 (21.8%)	23 (12.8%)	48 (26.8%)	5 (2.8%)
e-newspapers	41 (22.9%)	47 (26.3%)	18 (10.1%)	61 (34.1%)	12 (6.7%)
e-serials	16 (8.9%)	35 (19.6%)	35 (19.6%)	74 (41.3%)	18 (10.1%)
OPAC	10 (5.6%)	29 (16.2%)	31 (17.3%)	70 (39.1%)	39 (21.8%)
Research reports	10 (5.6%)	32 (17.9%)	34 (19.0%)	70 (39.1%)	33 (18.4%)
Theses and Dissertations	10 (5.6%)	25 (14.0%)	28 (15.6%)	78 (43.6%)	37 (20.7%)

Awareness level of electronic information resources by undergraduates

Table 6 investigated that undergraduates are highly aware of e-mails 113 (63.1%), e-dictionaries/encyclopaedias 109 (60.9%) and e-books

95 (53.1%). They are also moderately aware of e-bibliographies 53 (29.6%). They were aware of theses and dissertations 61 (34.1%) and research reports 58 (32.4%). They were however not aware of OPAC 39 (21.8%).

Table 6: Awareness level of electronic information resources by undergraduates

ELECTRONIC INFORMATION RESOURCES	HA(4)	MA(3)	A(2)	NA(1)
CD-ROM databases	58 (32.4%)	53 (29.6%)	40 (22.3%)	27 (15.1%)
e-bibliographies	52 (29.1%)	53 (29.6%)	50 (27.9%)	23 (12.8%)

e-books	95 (53.1%)	39 (21.8%)	33 (18.4%)	11 (1.6%)
e-dictionaries/encyclopedias	109 (60.9%)	45 (25.1%)	21 (11.7%)	4 (2.2%)
e-journals	80 (44.7%)	55 (30.7%)	33 (18.4%)	10 (5.6%)
e-magazines	88 (49.2%)	55 (30.7%)	26 (14.5%)	8 (4.5%)
e-mails	113 (63.1%)	37 (20.7%)	20 (11.2%)	8 (4.5%)
e-newspapers	89 (49.7%)	45 (25.1%)	30 (16.8%)	13 (7.3%)
e-serials	53 (29.6%)	50 (27.9%)	51 (28.5%)	23 (12.8%)
OPAC	39 (21.8%)	48 (26.8%)	51 (28.5%)	39 (21.8%)
Research reports	46 (25.7%)	56 (31.3%)	58 (32.4%)	18 (10.1%)
Theses and Dissertations	37 (20.9%)	53 (29.6%)	61 (34.1%)	27 (15.1%)

Constraints to electronic information resources used by undergraduates

Table 7 affirmed that 79 (44.1%) of respondents strongly agreed that power failure and inadequate technological infrastructure 74 (41.3%) were constraints faced in the use of electronic information

resources by the respondents. Furthermore, they also agreed that lack of time 82 (45.8%) and ineffective searching skills 81 (45.3%) are constraints in the use of electronic information resources. Undergraduates disagree that being overwhelmed by the results 67 (37.4%) or low bandwidth 61 (34.1%) are constraints faced in their use of EIRs.

Table 7: Constraints to electronic information resources used by undergraduates

Challenges of EIRs Use	SA(4)	A(3)	D(2)	SD(1)
Inadequate knowledge to use them	59 (33.0%)	60 (33.5%)	43 (24.0%)	15 (8.4%)
Inadequate technological infrastructure	74 (41.3%)	72 (40.2%)	21 (11.7%)	12 (6.7%)
Ineffective searching skills	47 (26.3%)	81 (45.3%)	38 (21.2%)	12 (6.7%)
Irrelevant information	52 (29.1%)	63 (35.2%)	52 (29.1%)	12 (6.7%)
Lack of searching skills	41 (22.9%)	69 (38.5%)	49 (27.4%)	19 (10.6%)
Lack of time	40 (22.3%)	82 (45.8%)	41 (22.9%)	16 (8.9%)
Limited access to computer	42 (23.5%)	63 (35.2%)	59 (33.0%)	15 (8.4%)
Low bandwidth	34 (19.0%)	67 (37.4%)	61 (34.1%)	17 (9.5%)
Overwhelmed by the results	29 (16.2%)	67 (37.4%)	67 (37.4%)	16 (8.9%)
Power failure	79 (44.1%)	69 (38.5%)	24 (13.4%)	7 (3.9%)
Unfamiliarity of EIRs	52 (29.1%)	72 (40.2%)	40 (22.3%)	15 (8.4%)

Discussion of findings

From the study, it was established that Internet and e-mails were readily available for use, e-books and e-

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journals were also available for use by respondents for their academic activities, and the major academic purposes for which the students used EIRs were for learning, personal research/development, assignment,

and for project preparation/theses. These agree with the findings of Osinulu (2020) that relevant information 122(70.1%), research activity 114(65.5%) and completing assignments 101(58.0%) are major academic purposes for which the respondents surveyed used electronic information resources. Internet and e-mails were used daily by respondents. Respondents in the study were highly aware of e-mails, e-dictionaries/encyclopaedias, and e-books. On the contrary, Dukper, Sakibu and Arthur (2018) reported a low level of awareness of electronic resources among students with 61% unaware of the availability. Lack of time, ineffective searching skills, inadequate technological infrastructure, personal Internet facility are the constraints majority of the respondents in the study faced in the use of EIRs. Previous studies found that lack of awareness, ineffective marketing strategy, inadequate training, lack of competence, poor infrastructure, low level of access and use of free online resources, uncooperative attitude of staff and loss of password were the major constraints faced in the use of EIRs by the undergraduates students (Daramola, 2016; Yebowaah and Plockey, 2017; Mawere and Sai, 2018).

Conclusion

Electronic resources are very expensive and thus university administration needs to be informed about their extent of use and problems associated with use, so that the necessary actions are taken to ensure efficient and effective use. The utilisation of electronic information resources is a sine qua non to information acquisition by undergraduate students in the university libraries. The electronic information resources particularly the internet and e-journal are important sources of information for the university undergraduate students at University of Ibadan. This is evident in the study as the students continuously used these resources for various activities like assignments, research/projects, term papers and class works usually on a daily basis and sometimes.

The study also concluded that the internet is readily available in the university libraries. In addition respondents affirmed the Internet was highly utilised and the level of utilisation of e-journal was average. More so, the Internet and e-journal were used daily, OPAC was used once a week and CD-ROM was occasionally used as indicated by the respondents. The

availability and use of Electronic Information Resources have no doubt contributed meaningfully to the information acquisition for class work and research needs of the students. It is therefore important to note that as undergraduate students, there is always the need to consult and use e-resources for information, academics and research needs.

Finally, the respondents are aware of electronic information resources, they do not fully utilise them to support their academic pursuits due to poor level of information literacy skills, and inadequate technological infrastructure. However, few students had not participated at all in information literacy skills training organised by the library. Results from the study also showed that, a significant number of students do access electronic resources when on campus and off campus and mostly used electronic devices such as laptops, iPad, desktop computers, and mobile phones. The findings indicated that students used the electronic resources to: complete assignments, write project work, research, and up-date themselves on new information in their fields of study. Some of the major problems respondents indicated using electronic resources include; inadequate computers in the library, poor internet connectivity, power outages, insufficient search skill, and low bandwidth.

Recommendations

Consequent to the findings of this study, the following recommendations were made:

1. The university administration should show interest in ascertaining the functionality of newly established methods of learning and research to see how well they are going in view of the university's Electronic Information Resources goals and the general ICT policies of Nigeria.
2. University libraries should organise constant awareness programmes such as, orientation, talks/seminars and workshops in the university libraries which should be tailored to inform undergraduates of the use of not just the Internet but all the EIRs available in the library. Also, library staff should give out fliers and equally put posters and bill boards at strategic places to inform undergraduates about the different types of electronic resources in the libraries.

3. University lecturers should encourage undergraduates' library electronic information resources use by constantly giving the students' assignments that require the use of current electronic information resources in their libraries. The resultant effect of this is the frequent use of library electronic information resources for learning and research by undergraduates.

4. The university libraries should be more involved in assisting undergraduates to acquire the skills for information retrieval from electronic information resources by guiding them during the search process. Also, emphasis should be on different search strategies that can enhance the appropriate retrieval of information for students' work.

5. University management should endeavour to introduce courses on the use of electronic information resources in the academic curriculum so that the undergraduates would be conversant with them and thereby frequently use the electronic information resources in their libraries.

6. University librarians should organise in-house training and short-term courses, for library staff, on the use of electronic information resources to efficiently assist undergraduates in access and retrieval of information.

Suggestions for further study

The following are the suggested areas for further study; information retrieval skills and use of library electronic information resources by university undergraduates in Nigeria; availability and utilisation of electronic resources by university lecturers; and factors militating against the use of electronic information resources by undergraduate students.

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