

Information Retrieval Skills and Use of Library Electronic Resources by University Undergraduates in Nigeria

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Abstract

There is an increase in provision of electronic resources in Nigerian university libraries, yet studies have revealed that there is low use of the resources by undergraduates and this is due to lack of information retrieval skills. Hence, the study, tried to find the impact of information retrieval skills on students' utilisation of electronic resources in university libraries in Nigeria. The study focused on ten universities in Nigeria. The descriptive research design was adopted and multistage sampling technique was used for the study. Three faculties were purposively selected from the universities while two departments each were randomly selected from the faculties. A questionnaire, (Information Retrieval Skills and Utilisation of Electronic Resources) was used. Two research questions were posed and two hypotheses tested at 0.05 level of significance. Informational retrieval skills, operational retrieval skills and strategic retrieval skills correlated significantly with students' utilisation of electronic resources for research. The data showed that undergraduates lacked requisite skills for the use of e-resources.

Keywords: Information Retrieval Skills, Library, Electronic resources, Undergraduates, Nigeria.

1. Introduction

Electronic resources are the bedrock of provision of accurate and timely information for better educational outcomes. They aid in the retrieval of huge amount of information for teaching, learning and research. Owing to information explosion and the emergence of new technologies, information needed by students are now, majorly found in electronic resources in university libraries, Information communication technology centres and computer laboratories. These technologies have brought an alternative to facilitate access to scholarly information from around the world which enhances learning. In this era of competitive research and knowledge acquisition, university students now patronise their university libraries to retrieve accurate and current information from electronic resources available in all subjects. However, the optimal use of electronic resources by students may depend on their information retrieval skills.

Information retrieval skills are crucial for retrieving information in this era of technology that most of the information needed for research can be retrieved from electronic sources. However, students' efforts to complement their work with electronic resources may be limited due to lack of skills. Therefore knowledge of skills is necessary to selectively retrieve accurate, relevant and up-to-date information stored in documents instead of all the information that may not be relevant for their school work. Skills acquisition is in fact, very crucial to the use of electronic resources because information in electronic forms can only be used if students possess the skill to retrieve the exact information needed for learning and research.

Brophy (1993) opined that libraries should reach a position where acquisition of information skills is considered as one of the key learning objectives for all students entering the university. Brophy (1993) further explained that this would enable the students to be fully equipped to cope with the information intensive world. Similarly, Ozoemelem (2009) argued that students must acquire and practice the skills necessary to retrieve information from electronic resources. To surmount the problem of retrieving information, students may require a combination of skills which include informational retrieval, operational retrieval and strategic retrieval skills to make the process of retrieving information a simple task. Van Dijk (2005) cited in Gui (2007) proposed a model in which informational, operational and strategic skills were used to distinguish different parts of digital skills.

According to Gui (2007), informational skills include those needed to navigate, select the appropriate information, evaluate the information and re-use information. These skills as well as informational retrieval skills entail being able to handle the changing contents of computer and information sources and knowing where

and how to look for the resources. Operational skills include the ability to operate computers, Internet connection and their basic applications (Gui, 2007). Also, for operational retrieval skills students need to learn to operate the computer and understand how the information systems are organised by learning the basic skills such as use of keyboard, mouse, and disk management. Learning the standard software (word processing, databases and others) and network applications such as Internet, electronic mail and others are also required for retrieval of information. For instance, McGuigan (2001) is of the opinion that the level of computing and Internet experience gained by students prior, to entering higher education might influence their readiness to use the library's electronic resources. Students also need to have strategic skills for retrieving information from electronic resources.

Strategic skills are defined by Van Dijk (2005) cited in Gui (2007) "as the capacities to use computer and network sources as the means of achieving particular and general goals of improving one's position in society". For strategic retrieval skills, students also need the ability to plan, create appropriate queries and search terms which would enable the students to retrieve information. Undergraduates' ability to develop their strategic retrieval skills would aid in retrieving relevant information from electronic resources for academic purposes and self enhancement. Although print resources in Nigerian university libraries are systematically being complemented by electronic resources, however use of these resources may be related to functions of factors such as, awareness of the existence of the resources by students and students' skills to manipulate the hardware and software prior to retrieving information. Thus, the main objective of this study is to investigate whether undergraduates' information retrieval skills would determine their use of library electronic resources.

RESEARCH QUESTIONS

1. How often do undergraduates' use electronic resources in their university libraries?
2. What is the level of undergraduates' information retrieval skills in terms of informational, operational and strategic retrieval skills?

HYPOTHESES

1. There is no significant relationship between retrieval skills (informational, operational and strategic) and undergraduates' use of library electronic resources.
2. The three retrieval skills do not have significant composite effect on undergraduates' use of library electronic resources.

LITERATURE REVIEW

In the past decade, advances in information communication technologies (ICT) and the concept of global village have made retrieval and use of electronic information resources easy for students. This is due to the fact that most of the documents to be consulted for educational outcomes are available in electronic resources like the Internet, CD-ROM, OPACs, electronic journals and electronic books. University students now retrieve vast amount of information for their literature from electronic resources. This opinion is corroborated by Adeyemi (2002) who explained that electronic literature is very useful for research students due to the vast amount of data it contains. The huge amount of information at their disposal enable students to have an in depth view of the research topic. Research and other academic activities require originality and this leads undergraduates to retrieve information for their work from remote computers around the world through the Internet. The Internet, which is an important resource for students, is regarded by Oyegade (2000) as the best source of information retrieval because it is the gateway to the globe. It has allowed different groups of people, especially researchers, to create channels of communication and self-expression. According to Thomas (2004), the Pew Research Center in 2001 reported that 94% of teenagers with access to Internet rely on online information for research tasks and 71% of them used the Internet as the major source for their most recent school projects. Fifty-eight percent (58%) of the students have used websites set up by the school or a class, 34% have downloaded a study guide while 17% have created a web page for a school project.

Electronic resources, are beneficial for teaching, learning and research, however lack of skill would probably inhibit students' retrieval of information from electronic resources. Therefore, skill is necessary for retrieval of relevant and up- to-date information for student's work. Kari (2004) explained that skills required to use

electronic resources are higher than the one required for searching printed sources and that students need to master certain skills to exploit and use the growing range of e-resources. Undergraduates therefore need skills such as, informational retrieval, operational retrieval and strategic retrieval skills for speedy retrieval of the exact information needed from electronic resources.

Undergraduates with informational retrieval skills should be able to recognise information need for learning and research, distinguish ways of addressing gap and locating information stored in electronic resources. Moreover, they should be able to perform literature searches, organise and communicate the information retrieved, satisfactorily in their research work. However, undergraduates need to be guided to acquire these skills so as to cope with the 'Information-rich environment'. Teh (1996) opined that information skills are needed to meet up with the hurried pace of information technology development. Giving credence to this view, Ahmed and Cooke (2008) indicated that utilisation of electronic resources and the improvement of information skills are important for end users. Also, Kari (2004) stated that information skill is necessary for students so as to equip them with knowledge to cope with information. Furthermore, Kari (2004) posited that students require adequate knowledge of information skills. Herring (2010) revealed that to effectively retrieve information students need to value and implement information retrieval skills effectively as this would have an effect on how they find and use information, concepts and ideas for their assignments.

Operational retrieval skill which is the ability to exhibit some level of competence in the use of computers and the network connections is very crucial for information retrieval. Therefore, students are expected to have frequent interactions with the systems' hardware and software to enhance competences required for information retrieval. Saunders (2008) asserted that information cannot be retrieved if one cannot operate the system. Lack of operational skills pose challenges for students to retrieve information to accomplish their research goals. Ahmed and Cooke (2008) revealed that respondents' had their computer skills improved to enhance their use of e-information sources. Okello-Obura and Magara (2008) stated that computer skills of students should be improved for accessibility and utilisation of e-resources. According to Mutshewa (2008), skill is improved through practice and frequent use of information retrieval system. Mutshewa pointed out that there is need for well-defined development programmes that could help people to be competent in the use of information retrieval system. Also, Oliver (1995) stated that users should have appropriate instructions and frequent activity with electronic information system.

Strategic retrieval skill is also significant in information retrieval. It assists in improvement of search skills. Students' improvement in search skills could speed up the whole information search process and equally contribute to a more effective and comprehensive search (Chu and Law, 2008). However, students might map out strategies to ascertain the process that would best retrieve the exact information needed for their goal. Vigil (1988) opined that strategy is significant in information retrieval and that using strategy is a two-fold process. The first process, he explained, is to know what to do while the second process is to know when to do it. Knowing what to do and when to do it are important in information retrieval for instance, for database search Aina (2004) suggested that the student can use a single term or a combination of terms but however explained that the combination of terms may be more appropriate. Selecting an appropriate strategy can help reduce the retrieval of unrelated literature. In addition, Adesanya (2002), Greaves (2002) and Aina (2004) explained that some search strategies such as, Boolean logic, truncation and proximity features are useful for retrieval of information.

METHODOLOGY

The study adopted the survey method. This method was adopted because surveys are usually used to study a population from which a sample is drawn. The population of this study was 400 level undergraduates in federal universities in Nigeria. The multistage sampling technique was used for the study. The total population of 400 level students in the selected departments in the ten universities was three thousand seven hundred and ninety-nine (3,799). A sample fraction of 65% out of the total population of three thousand, seven hundred and ninety-nine was used in selecting the respondents for this study. The Descriptive statistics of mean, standard deviation and percentage distributions were used to analyse the research questions while the hypotheses were tested with Pearson Correlation Coefficient and Multiple Regression analyses at 0.05 level of significance.

FINDINGS AND DISCUSSION

Table 1: Frequency of Undergraduates' Use of Library Electronic Resources

S/N	E-Resources	Daily	Twice a week	Once a week	Twice a month	Once a month	Occasionally	Never used	Mean	Std Dev.
1	CD-ROM	170 (6.9%)	132 (5.3%)	125 (5.1%)	202 (8.2%)	227 (9.2%)	945 (38.3%)	669 (27.1%)	2.69	1.80
2	The Internet	707 (28.6%)	334 (13.5%)	207 (8.4%)	215 (8.7%)	240 (9.7%)	531 (21.5%)	235 (9.5%)	4.40	2.20
3	Electronic catalogues (OPAC)	62 (2.5%)	73 3.0%)	154 (6.2%)	214 (8.7%)	237 (9.6%)	689 (27.9%)	1040 (42.1%)	2.27	1.56
4	E-journals	92 (3.7%)	111 (4.5%)	132 (5.3%)	264 (10.7%)	251 (10.2%)	712 (28.8%)	907 (36.7%)	2.47	1.67
5	E-books	156 (6.3%)	102 (4.1%)	103 (4.2%)	144 (5.8%)	252 (10.2%)	751 (30.4%)	961 (38.9%)	2.43	1.77
6	E-databases	98 (4.0%)	65 (2.6%)	80 (3.2%)	199 (8.1%)	247 10.0%)	785 (31.8%)	995(40.3%)	2.25	1.56
7	E-abstracts	70 (2.8%)	52 (2.1%)	86 (3.5%)	114 (4.6%)	188 (7.6%)	738 (29.9%)	1221 (49.5)	2.00	1.45

The Library is the power house of any university. The university library houses all the materials needed for learning, teaching and research. Presently, electronic resources are provided in university libraries for speedy retrieval of current information for students' work. However the result shows that the library e-resources were not used as frequently as they should be used by undergraduates. The level of use of library electronic resources by undergraduates shows that the Internet was mostly used ($x= 4.40$) followed by CD-ROM ($x=2.69$). E-abstracts ($x= 2.00$) were the least used by the students. Of all, the Internet was most frequently used. The results also revealed that majority of the respondents have never used some of these electronic resources such as e-catalogue and e-abstracts. This may imply that students lack the skill to use the electronic resources. Findings revealed that the Internet and CD-ROM were used more than the other e-resources. A higher percentage of the respondents utilised the Internet and CD-ROM on a daily basis. However, the respondents did not use electronic resources as often as they should considering the enormous amount spent on provision of electronic resources. Apart from the Internet and CD-ROM, the rest of the electronic resources listed were occasionally used. The result is in agreement with Dhanavandan, Esmail and Nagarajan (2012) who found that, majority of the students (32.6%) used e-resources once in a week; most of the faculties used e-resources twice a week and 11.5% of the respondents rarely used e-resources. This probably implies that undergraduates do not fully understand the various uses and importance of electronic resources in teaching, learning and research. It may also be an indication of the fact that some undergraduates may not be aware of the existence of the resources in their university libraries.

Table 2: Students' Knowledge of Information Retrieval Skills

S/N	Skills	Very Good (5)	Good (4)	Average (3)	Poor (2)	Very poor (1)	Mean	Std Dev.	Group Mean
A 1	Informational skills Definition of your needs for research.	694 (28.1%)	882 (35.7%)	361 (14.6%)	150 (6.1%)	382 (15.5%)	3.54	1.36	3.17
2	Locating information in e-resources.	481 (19.5%)	744 (30.1%)	606 (24.5%)	273 (11.1%)	365 (14.8%)	3.28	1.30	
3	Selecting articles with ease.	406 (16.4%)	681 (27.6%)	674 (27.6%)	264 (10.7%)	444 (18.0%)	3.13	1.31	
4	Summarizing materials in your own words.	507 (20.5%)	712 (28.8%)	606 (24.5%)	273 (11.1%)	371 (15.0%)	3.28	1.31	
5	Understanding terminologies used in databases.	212 (8.6%)	535 (21.7%)	838 (33.9%)	411 (16.6%)	473 (19.2%)	2.83	1.21	
6	Use of reference sources to increase familiarity of topics.	303 (12.3%)	591 (23.9%)	748 (30.3%)	395 (16.0%)	432 (17.5%)	2.97	1.26	
B 7	Operational Skills Use of mouse and keyboard.	845 (34.2%)	567 (23.0%)	416 (16.8%)	262 (10.6%)	379 (15.4%)	3.50	1.43	3.18
8	Copying information into your storage device such as flash drive and diskette	669 (27.1%)	514 (20.8%)	571 (23.1%)	307 (12.4%)	408 (16.5%)	3.29	1.41	
9	Retrieving information from flash drive or diskette.	673 (27.3%)	413 (16.7%)	605 (24.5%)	330 (13.4%)	448 (18.1%)	3.21	1.43	
10	Scanning images.	432 (17.5%)	502 (20.3%)	627 (25.4%)	468 (19.0%)	440 (17.8%)	3.00	1.34	
11	Access of on-line databases.	378 (15.3%)	495 (20.0%)	622 (25.2%)	411 (16.6%)	563 (22.8%)	2.88	1.37	
12	Download files from on-line databases.	421 (17.1%)	793 (32.1%)	557 (22.6%)	309 (12.5%)	389 (15.8%)	3.22	1.30	
C 13	Strategic Skills Use of Boolean operators (OR, AND, NOT).	114 (4.6%)	437 (17.7%)	610 (24.7%)	514 (20.8%)	794 (32.2%)	2.41	1.23	2.58
14	Combining two terms to retrieve information.	179 (7.2%)	471 (19.1%)	706 (28.6%)	548 (22.2%)	565 (22.9%)	2.65	1.22	
15	Use of truncation search techniques (\$, *, +) to retrieve information	96 (3.9%)	386 (13.6%)	602 (24.4%)	660 (26.7%)	775 (31.4%)	2.31	1.16	
16	Use of title search for electronic catalogue (OPAC) search.	150 (6.1%)	371 (15.0%)	538 (21.8%)	510 (20.7%)	900 (36.5%)	2.33	1.27	
17	Use of author search for electronic catalogue (OPAC) search.	100 (4.1%)	535 (21.7%)	669 (27.1%)	504 (20.4%)	664 (26.8%)	2.55	1.20	
18	Shelf search for electronic catalogue (OPAC) search.	118 (4.8%)	522 (21.1%)	590 (23.9%)	535 (21.7%)	704 (28.5%)	2.52	1.23	
19	Use of search engines such as Yahoo, Google, Alta Visa and Google scholar etc.	646 (26.2%)	626 (25.4%)	438 (17.7%)	279 (11.3%)	480 (19.4%)	3.27	1.45	

Information retrieval skills have been grouped as: a. Informational retrieval, b. Operational retrieval and c. Strategic retrieval. The result revealed that undergraduates' informational retrieval skills were generally little above average (weighted mean $X = 3.17$), this is out of a maximum obtainable score of 5.00. Furthermore, the respondents had knowledge of operational skills which was also a little above average ($X = 3.18$). For knowledge of strategic skills, they were on the average ($X = 2.58$). Comparatively, students had higher operational retrieval skills than informational retrieval and strategic retrieval skills. This result could mean that students retrieve information without adequate knowledge of the information they were looking for.

The result found that respondents' informational retrieval skills were slightly above average. This is worrisome because if informational retrieval skill is relegated to the second position, it may indicate that undergraduates access e-resources without actually knowing what they are searching for. If undergraduates are unsure of their search, they may end up with excess irrelevant materials. It may also lead to insufficient information for their work. The resultant effect of this would probably be poor research output. In addition, undergraduates who lack accurate information may not have a firm understanding of the background of the research topic. This argument is supported by Moore and St. George (1991), Solomon (1993) and Irving's (1995) study cited in Thomas (2004). The studies posited that students who lacked background knowledge of their topics were not able to pose appropriate research questions and they could not select appropriate search terms.

Also, the respondents' operational retrieval skills were found to be slightly above average. This result is not impressive because a high level of this skill is required to effectively retrieve information in electronic resources. This lends support to Saunders (2008) who affirmed that information cannot be retrieved if one cannot operate the system. Similarly Gui (2007) opined that students should not just learn to operate the computer but to also understand how the information systems are organised. This probably implies that if undergraduates have just the basic operational retrieval skills such as use of key board and mouse without learning the different software and network applications, they would not be able to fully retrieve required information from electronic resources. Furthermore, the result revealed that the respondents' strategic skills were also not very high. This result is not encouraging because respondents' strategic skills should be excellent so as to effectively search and retrieve quality scholarly materials for learning and research. Knowledge of strategic retrieval skill could lead to retrieving of appropriate or exact information needed by undergraduates for their work. Giving credence to this view, Chu and Law (2008) opined that possession of search skills could contribute to a more effective and comprehensive search. However these results, perhaps, suggest that students may not have been guided in learning the skills. With proper guidance, the level of their skills would consequently improve and use of e-resources would also improve. This is in agreement to Tenopir (2003) which stated that it is important to educate high school and college students on the best resources, search strategies and how to evaluate web resources. This is also in line with Bates (1979b) who indicated that users should be assisted in their searches by suggesting to them, strategies which they could use when their searches fail to produce the desired results.

Table3: Relationship Between Retrieval Skills and Use of Library Electronic Resources.

Variable	N	Mean	Std. Dev	r	Df	Sig	Remark
Use	2469	61.66	14.79				
Inf. Skills	2469	19.07	6.64	0.242	2468	0.000*	Significant
Oper. Skills	2469	19.13	6.96	0.214	2468	0.000*	Significant
Strat. Skills	2469	18.08	6.54	0.353	2468	0.000*	Significant

*Significant at $p < .05$

It is assumed that there is no significant relationship between retrieval skills and undergraduates' use of electronic resources in university libraries. The study attempted to find out the validity of the assumption. It was found, as presented in table 3, that there is a relationship between the two variables, retrieval skills (a. Informational retrieval, b. Operational retrieval and c. Strategic retrieval) and undergraduates' use of electronic resources in university libraries. The study found that the relationship between respondents' informational retrieval skills and use of electronic resources was positive, weak and significant ($r=0.242$; $p<.05$), which means that it did not have a high significance. This implies that if respondents' informational retrieval skills improve their use of electronic resources in university libraries will also improve. Hence, 1a is rejected. Therefore, there is significant relationship between informational retrieval skills and undergraduates' use of library electronic resources. Operational retrieval skills also, have weak, positive and significant relationship with respondents' use of electronic resources ($r=0.214$; $p<.05$) however, it is not a very strong significance. This means that as operational skills improve, use of library electronic resources also improves. Therefore, the null hypothesis for 1b is rejected because the table indicated that there is significant relationship between operational retrieval skills and undergraduates' use of library electronic resources. Furthermore, strategic retrieval skills of respondents have a slightly weak, positive and significant relationship with use of electronic resources ($r=0.353$; $p<.05$). 1c is

hereby rejected. This implies that increase in the strategic skills of respondents would lead to a corresponding increase in their use of library electronic resources. This means that there is significant relationship between strategic retrieval skills and undergraduates' use of electronic resources in university libraries. The null hypothesis is therefore rejected.

The result of the hypotheses revealed that informational retrieval, operational retrieval and strategic retrieval skills had positive, weak and significant relationship with use of electronic resources. This means that though the three retrieval skills had weak relationship with use of electronic resources, they would still be helpful for utilisation of the resources. The implication of this finding may be that undergraduates lack the knowledge of the three information retrieval skills and their relevance in learning and research. Undergraduates may require a high level knowledge of the three retrieval skills for effective and maximum use of electronic resources for their work. Fordjour, Badu and Adjei's (2010) stated that poor performance of students in the universities had been attributed to their inability to effectively retrieve information for academic work. With the speedy introduction of new electronic resources, undergraduates require adequate knowledge of informational retrieval, operational retrieval and strategic retrieval skills to meet up with the ever changing contents of electronic resources.

Table4: Summary of Multiple Regression of Retrieval Skills on Use of Library Electronic Resources

R	R Square	Adjusted R Square	Std. Error Of the Estimate
0.357	0.127	0.126	13.8315

ANOVA for the Regression of Retrieval Skills

Source of Variance	Sum of Squares	Df	Mean Square	F	Sig
Regression	68816.736	3	22938.912	119.905	0.000*
Residual	471577.59	2465	191.309		
Total	540394.32	2468			

*Significant at $p < .05$

As presented in table 4, there is a positive multiple relationship among the three retrieval skills put together and respondents' use of electronic resources ($R=0.357$). The three retrieval skills are therefore relevant towards the determination of undergraduates' use of library electronic resources. Also the adjusted R square value of 0.126 shows that 12.6% of the total variance in students' use of electronic resources is accounted for by the three retrieval skills which are, informational, operational and strategic skills. The remaining 87.4% is due to other factors and residuals. The Table also shows the tests for the significance of the R value. The ANOVA source test reveals that the F-ratio for the regression is significant ($F=119.905$; $P<.05$). This means that the R value of 0.357 is not due to chance. The null hypothesis is hereby rejected. Therefore, there is significant composite effect of informational retrieval, operational retrieval and strategic retrieval skills on undergraduates' use of library electronic resources in university libraries. In addition, there is a positive relationship among the three retrieval skills on undergraduates' use of library electronic resources. This indicates that informational retrieval, operational retrieval and strategic retrieval skills would jointly determine undergraduates' use of library electronic resources. Also, the regression of the skills indicated that 12.6% of the total variance in the respondents' use of electronic resources is accounted for by informational retrieval, operational retrieval and strategic retrieval while the remaining 87.4% is due to other factors and residuals. The implication of this is that for undergraduates to adequately use library electronic resources for learning and research, there should be an interaction of the three retrieval skills. For instance, knowledge of just one or two of the retrieval skills may not adequately assist in undergraduates' use of electronic resources. Similarly, Xie (2007) indicated that to effectively retrieve information that users have to interact with data/information, knowledge, concept/term, format, item/objects/site, process/status, location, system and human.

CONCLUSION

It is evident from the study that informational retrieval, operational retrieval and strategic retrieval skills are vital for use of library e-resources by undergraduates in universities. Also electronic resources are provided in the university libraries for accurate and fast retrieval of information but it is also noteworthy that due to lack of skills, undergraduates in the universities did not fully use the library electronic resources to retrieve information for their work. The e-resources provided in the university libraries were occasionally used. Therefore, for optimal use of electronic resources in university libraries, it is necessary for university management, curriculum planners and university librarians to settle some of these issues as this will equip undergraduates with lifelong skills needed in the society.

RECOMMENDATIONS

Based on the findings of this study, the following recommendations were suggested:

1. University libraries should organise constant awareness programmes such as, orientation, talks/seminars and workshops in the university libraries which should be tailored to informing undergraduates of the use of not just the Internet but all the e-resources available in the library. Also, library staff should also 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.
2. University lecturers should encourage undergraduates' library electronic resources use by constantly giving the students assignments that require use of the currently available electronic resources in their libraries. The resultant effect of this is frequent use of library e-resources for learning and research by undergraduates.
3. The university libraries should be more involved in assisting undergraduates to acquire the skills for information retrieval from e-resources by guiding them during the search process. Also emphasis should be on different search strategies that can enhance appropriate retrieval of information for students' work.
4. University management should endeavour to introduce courses on use of electronic resources in the academic curriculum so that the undergraduates would be conversant with them and thereby frequently use the e-resources in their libraries.
5. University librarians should organise in-house training and short term courses, for library staff, on the use of electronic resources so as to efficiently assist undergraduates in access and retrieval of information.

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