



Influence of Information Retrieval Skills of Undergraduate Students on their Effective Use of Electronic Resources in University Libraries in Benue State, Nigeria

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ABSTRACT

The purpose of the study was to determine the influence of information retrieval skills of undergraduate students on their effective use of electronic resources in university libraries in Benue State. Five research questions were raised and answered. The population for the study was 6,194 registered 200 level library users during 2017/2018 academic session. The sample size for the study comprises of 376 registered 200 level undergraduates who were composed using a multi-stage sampling procedure of purposive sampling, proportionate stratified random sampling and simple random sample. Data were collected through questionnaire. Data collected were analyzed using frequency counts, percentages, means and standard deviation to answer the research questions while Chi-square statistic was used to test the null hypothesis at 0.05 level of significance. Findings of the study revealed that, e-resources used by undergraduates in university libraries in Benue State were e-journals and internet resources. The study also revealed that undergraduate students lacked information retrieval skills such as the ability to select scholarly information, evaluation of search results, navigation from links, formulation of searches and using OPAC which significantly affect their use of e-resources in university libraries. It further revealed that undergraduates acquired information retrieval skills through general studies, manuals and handbooks, by friends, trial and error, by other students and prior experience before their enrolment into the university. The e-resources used to a high extent by the undergraduates were e-journals and internet resources while online databases, CD-ROM databases and OPAC were to a low extent used by the students. Finally, the study identified challenges hindering undergraduate students' use of e-resources to include: lack of information retrieval skills, slow internet connectivity, erratic power supply, lack of awareness of e-resources and lack of training/orientation for students. The study recommended that, university management should integrate information retrieval skills into course of study for students to acquire the needed skills, university libraries should double their efforts on user education programmes, proper training/orientation of students, enhancement of internet



connectivity, provision of alternative power supply to supplement the public power supply among others.

Keywords: University library, E-Resources, Information Retrieval Skills, Undergraduate Student

Introduction

Universities all over the world irrespective of the type and structure whether federal, state and private require information resources to achieve their different goals. Information resources therefore have become one of the most vital assets of every university system. The basic function of any university is to conserve the existing knowledge, transmit knowledge through teaching, and create new knowledge through research (Daramola, 2016). The branch of the university responsible for acquisition, organization, preservation and dissemination of its information resources to its users is the university library.

University libraries are devoted to the pursuit of knowledge and the development of manpower. Their main functions are to provide information resources and services to support learning, teaching, research and resources linkages for students and faculty members. Udoh and Ogunrumbi (2007) assert that their collections are influenced by their curriculum and the levels at which the courses are taught which include undergraduates and postgraduate programmes as well as other general programmes. This means a university cannot function without a well equipped library to provide needed information resources for its academic programmes. It is also in recognition of its importance that the National Universities Commission (NUC) considered university libraries as one of the fundamental requirements for accreditation of academic programmes in Nigerian universities (Nkamnebe, Udom & Nkamnebe, 2014).

In modern times, the content of libraries is no longer restricted to physical formats due to the presence of Information and Communication Technology (ICT) and other electronic-driven services. University libraries now provide information resources in both print and electronic format to facilitate access to large stock of library materials without geographical barriers across the globe. Israel and Edesire (2014) state that, changes that have occurred in the world of ICT are what have shifted the content of libraries' resources from printed to online information resources. Although university libraries in Benue State have not fully automated their resources and services, they are rather acquiring electronic resources to complement the paper-based resources because of their numerous advantages.

According to Mittal & Bala (2013), Electronic resources are characterised by their ability to store information electronically, provide multiple and concurrent access, provide ease of access across geographic boundaries and be accessible via electronic systems and networks which include online databases, e-journals, e-books, internet resources, CD-ROM and Online Public access catalogue (OPAC). In describing the importance of e-resources, Abubakar and Adetimirin (2015) submitted that apart from the fact that e-resources are easily retrievable in university libraries, they also meet users' information needs. The above submissions could be the reasons why many university libraries are shifting preferences towards e-resources, which are found to be more useful for their user population. This, of course is the major reasons why university libraries in Benue State are also providing e-resources to facilitate access to up-to-date information resources to their students.

It is however, worthy to note that the benefits university libraries reap from the investments in information technologies and e-resources are influenced by the extent to which library



users possess information retrieval skills needed to access it. The provision of access to e-resources only is not enough as its usage depends on variables such as ICT facilities available, information retrieval skills possessed by users among others. It is in this light that, Ani and Ahiauzu (2008) state that “the transition from print to electronic medium apart from resulting in a growth of electronic information has provided users with new tools and applications for information seeking and retrieval”.

Information retrieval skill is therefore defined as the ability and competences to find information in such a way that non-relevant data are excluded while relevant information is found (Fordjour, Badu & Adjei, 2010). Information retrieval skills are crucial for retrieving information because these resources in electronic formats have to be retrieved through electronic devices such as the use of computers, ipad and smart phones which required certain skills.

In Benue State, the three universities under study: the Federal University of Agriculture Makurdi, the Benue State University and the University of Mkar also provide access to e-resources for their undergraduate students. University libraries also provide authentication (usernames and passwords) to registered library users to use e-resources which are housed on the university library’s websites. The university libraries are also expected to create awareness of the availability of these resources as well as train their users through such programmes like library user education on basic skills, strategies and searching tools to enhance e-resources usage. These resources provide quick access to intellectual contents of experts without geographical barriers thus providing suitable materials that could support teaching, learning and research needs of undergraduates efficiently.

The researchers however, observed that these e-resources are not used by undergraduates in the university libraries in Benue State as they should. Although virtual librarians/system analysts and other library staff often times assist students in accessing these resources, but the efficiency should have been more if the students possess the needed skills to use e-resources independently. It is against this background that the researchers were interested in determining the extent to which undergraduates possess information retrieval skills needed for effective use of e-resources available in the university libraries in Benue State.

Research Questions

The following research questions were raised to guide the study:

1. What are the types of electronic resources used by undergraduate students in university libraries in Benue State?
2. To what extent do information retrieval skills possessed by undergraduate students in universities in Benue State influence their use of electronic resources?
3. What are the ways through which undergraduate students acquired information retrieval skills in the universities in Benue State?
4. To what extent do undergraduate students use electronic resources in university libraries in Benue State?
5. What are the challenges hindering effective usage of electronic resources in university libraries by undergraduate students in Benue State?



Statement of Hypothesis

The null hypothesis was formulated and tested at 0.05 level of significance.

Information retrieval skills do not significantly influence the use of e-resources by undergraduate students in university libraries in Benue state.

Review of Related Literature

The concept of electronic library according to Tella, Tella, Ayeni and Omoba (2007) evolved out of the need to overcome the challenges associated with the physical library and usher the information users, irrespective of their location and time, into the global world of electronic information resources. Madondo, Sithole & Chisita (2017) also note that factors that promote the use of electronic journals are timely availability, easy access and full text searching of the journals. In the same vein, Abubakar (2011) highlight that the global trend is now characterized with a fundamental shift from traditional information environment to an e-environment where emphasis is placed more on the acquisition of e-resources. The e-resources like e-books, e-journals, online databases, CD-ROM databases, OPAC and internet sources are gradually replacing the importance and use of printed materials. According to Egberongbe (2011), the basic aim of providing e-resources by university libraries in Nigeria is to ensure that students have access to first hand information characterized by being timely, up to date, access for multiple users, easy to access and, even remotely among others.

University libraries provide their library users with e-resources that are more comprehensive and scholarly than most websites provide. According to university of Chicago Library as cited in Omosekejimi, Eghworo and Ogo (2015) some of the e-resources that should be available at every university library's disposal include e-books, e-journals, Online databases, CD ROM databases, Online Public Access Catalogue (OPAC) and Internet Sources. It is expected that when access to e-resources are provided, undergraduate students should effectively use e-resources to achieve their academic excellence and enhance the quality of learning, teaching and research. Adeniran (2013) also concur that the use of e-resources had tremendous impact on the academic performance of the undergraduate students of redeemer's university. He however, emphasised the need for students to acquire more skills to enhance its usage.

Despite the provision of access to e-resources by the university libraries to aid the students' academic performance, previous studies such as Adekannbi (2016) and Tella, Anyin, Memudu, & Olaniyi (2017) among others have indicated that most undergraduate students have difficulties in using e-resources in Nigerian university libraries due to several factors among which is lack of information retrieval skills.

Information Retrieval Skills

Information retrieval is concerned with the exploitation and extraction of information and other contents of documents from different information sources (Echem & Udo-Anyanwu, 2018). The establishment of various large databases, which are mounted on computers and made available to anyone who wishes to search them, has a significant impact on the effectiveness and efficiency of retrieval of information. that is why Arua, Uzuegbu & Ugah (2014) stress that for undergraduate students to gain access to relevant information in an electronic environment represented by digital libraries, online databases, virtual libraries, the



students must be conversant with the assistive technologies and skills necessary for the purpose.

Cambridge University Press (2009) defined information retrieval as the finding of information materials (usually documents) of an unstructured nature (usually text) that satisfies an information need from within large collections (usually stored on computers). In the views of Ndubuisi and Udo (2013), information retrieval is based on a match between the words used to formulate the query and the words used to express concepts or ideas in a document require certain skills. Information retrieval skill is therefore, the ability to find information in such a way that non-relevant data (unwanted) are excluded while relevant information is found (Fordjour, et al 2010). A search may fail because the user does not correctly guess the words that a useful document would contain, so important information is missed. It could also be that the user's search terms may appear in retrieved documents that pertain to a subject other than the one intended by the user, so materials retrieved may not be useful.

According to Iwona in Israel and Edesiri (2014), for undergraduate students to utilize the growing ranges of e-resources they must possessed and practice the skills necessary to exploit them. Gakibayo, Ikoja-Odongo and Okello-Bura (2013) aver that large number of students leave universities without necessary skills to cope within the information based society. This is because they lacked information retrieval skills which are not only useful for their academic achievements but also for lifelong learning. The skills are important in the use of e-resources because of information explosion presently experienced as a result of series of developmental activities taking place globally.

To surmount the problem of retrieving information stored in digital devices, Gui (2007), proposed a model which is the combination of skills that include information (knowledge base skills), operation (computer skills) and strategic (search skills) retrieval skills to make the process of retrieving information a simple task. This model distinguishes different parts of digital skills that must be possessed by students to effectively and efficiently use in accessing e-resources for their information needs. Ekenna and Iyabo, (2013) suggest that the students can use a single term or a combination of terms but however explained that the combination of terms may be more appropriate.

In similar vein, Tyagi (2011) stress that the ability to use e-resources efficiently depends on basic computer skills, knowledge of what is available and how to use it, and ability to define a research problem. How undergraduate students attain the above skills and knowledge depends on many factors, such as their disciplines, academic status and ranks, age, access.

Studies have revealed that lack of information searching skills by students has been a significant factor hampering their use of computer and electronic resources. Gui (2007) advocated the need to teach information retrieval skills in institutions of higher learning as an urgent solution to this problem. According to him, 'intensive efforts must be made to teach information skills to meet up with the hurried pace of information technology development'. Similar views were expressed by Ahmed and Cooke (2008) who wrote that utilization of e-resources and the improvement of information skills requires continuous training programmes for end users. To further buttress this, Adekannbi, (2016) stress that poor information skills are at the root of students' search difficulties and poor performance in school. This is because when students fail to define their information needs, lacked computer and search skills, how can they access information stored in electronic format to address their information need? Information needs must be clearly define, source(s) of locating such



information must be known and information retrieved must be filtered to exclude irrelevant ones and finally put such information to use.

Ways undergraduate Students Acquire Information Retrieval Skills

Many university authorities have made frantic efforts to teach undergraduate students information retrieval skills through formal library instruction programmes. Library instruction is one of the formal methods of teaching information retrieval skills. It is a credit-earning course or a part of General Studies in many universities. In the universities under study, the skills are inculcated to undergraduate students through use of library and study skills. Obasuyi & Odion, (2015) state that at the University of Benin (UNIBEN), various methods are used to teach first year undergraduate students the use of the library such as orientation lectures, library instruction, individual instruction, library guided tour and library orientation.

In the view of Ogbuyi and Oriogu (2014), these skills can also be acquire by undergraduate students through formal computer/information technology programmes, they can also be acquire through assistance by friends/colleagues, computer/information technology books, self-learning by trial and error. Similarly, Okello-Obura and Magara (2008) also reported that the majority of their respondents at Makerere University in Uganda learnt to access e-resources and acquire database search skills through trial and error and self-taught.

According to Fordjour, Badu and Adjei (2010), “long experience of user education programmes has shown that teaching information retrieval skills to students should be embedded into the curriculum and done at a time when the user can understand its appropriateness”. This means the training should be base on the capabilities of the users. They further stated that “if students are aware that the skills required for using e-resources are not narrow-minded, and indeed provide them with valuable transferable lifelong skills, skills which employers will be looking for, they may be more likely to learn how to use them”.

Challenges in the Use of E-Resources

The complexity of e-resources which requires that one possesses knowledge base, computer and searching skills may pose a great challenge to its effective use by undergraduate students if they lacked the requisite skills. In other words, successful search and retrieval of information could be dependent on one’s level of information retrieval skills. Toyo (2017) observe that the effective use of e-resources in academic institutions are marred by a variety of factors such as difficulty in getting information due to poor retrieval skills, unfamiliarity with the library environment and resources as well as poor information literacy and evaluation skills. Studies such as Ndonoshiho (2010), Egberongbe (2011) and Akpojotor (2016) also identify lack of information retrieval skills for exploiting e-resources, thus making the level of usage very low by students. However, Gakibayo, et al (2013) discover that utilization of e-resources is not only affected by lack of computer skills and retrieval skills but also lack of enough networked computers, slow internet connectivity among others affects effective utilization of e-resources.

Literature revealed that accessibility and use of e-resources in Nigerian university libraries is faced with a number of challenges. Previous studies have shown that lack of information retrieval skills, lack of awareness of electronic resources, lack of constant power supply, poor telecommunications infrastructure, high cost of online databases subscription, inadequate



computers, lack of training and restricted access to e-resources are some major challenges plaguing the use of e-resources by undergraduate students' in Nigeria universities.

Research Method

The study adopted a survey research design. The survey research was used because of the characteristic of the respondents. The population of the study was 6,194 registered 200 level library users during 2017/2018 academic session in the university libraries in Benue state. The sample size for the study comprises 376 registered 200 level undergraduate students who were composed using multi-stage sampling procedure of purposive sampling, proportionate stratified random sampling and simple random sample. A self developed questionnaire was used for data collection. The descriptive statistics of frequency counts, percentages was used to answer research question one with two response options of 'Used' and 'Not Used', a benchmark of 50% was used. Hence any item with a percentage score of 50% and above was considered 'Used' while those below were considered 'Not Used'. For research questions two to five took the form of a continuum of 'High Extent', 'Moderate Extent', 'Low Extent' and 'No Extent', 'Strongly Agree', 'Agree', 'Disagree' and 'Strongly Disagree'. A mean value of 2.50 and above was considered 'High Extent/Agree' while those below 2.50 were considered 'Low Extent/Disagree'. Chi-Square statistics was used to test the null hypothesis at 0.05 level of significance. The decision for the hypothesis was that, a P-value < a-value (0.05) was considered 'significant' while P-value > a-value (0.05) was considered 'not significant'.

Results

This section presents the analysis of the data gathered from students through questionnaire. The results are presented in tables. A total of 376 copies of questionnaire were administered on the respondents. Out of this, 362 copies representing 96.27% were returned and found usable for the study.

Table 1: Frequency Counts and Percentages of the Electronic Resources Used by Undergraduates in University Libraries in Benue State

Types of E-resources	FREQUENCY		PERCENTAGE (%)		DECISION
	U	NU	U	NU	
Electronic Books (e-books)	122	240	33.7	66.3	Not Used
Electronic Journals (e-journals)	272	90	75.1	24.9	Used
Online Databases	55	307	15.2	84.8	Not Used
Compact Disc- Read Only Memory (CD-ROM) databases	111	251	30.7	69.3	Not Used
Online Public Access Catalogue (OPAC)	91	271	25.1	74.9	Not Used
Internet Resources	345	17	95.3	4.7	Used

Source: Field Work 2019

Key: Used (U), Not Used (NU)



Table 1 shows the e-resources used by the undergraduates in the university libraries in Benue state. Results as indicated on the table revealed that only e-journals 272(75.1%) and internet resources 345(95.3%) were identified by the students as e-resources used with mean scores which is above the benchmark of 50%. While e-books 122(33.7%), online databases 111(30.7%), CD-ROM 55(15.2%) and OPAC 91(25.1%) were used below the benchmark of 50% and were considered as e-resources not used by the students. The implication of this result is that undergraduate students used more of internet resources and e-journals. Internet resources here refer to all online information resources on popular public search engines such as Google, Yahoo and Bing that can be retrieved freely without any form of authentication by the users. The e-journals used could also be those found on popular public search engines.

Table 2: Mean and Standard Deviation of the Extent to which Information Retrieval Skills Possessed by Undergraduate Students Influence Their Effective Use of E-Resources

Information Retrieval Skills	Mean	Std. Dev	Decision
Definition of specific information needs	3.15	.83	High Extent
Locating information in e-resources	2.51	.91	High Extent
Selecting scholarly information articles with ease	2.38	.80	Low Extent
Evaluation of search results	2.21	.88	Low Extent
Operating computers to retrieve desired information	2.72	.87	High Extent
Navigating from one link to another to retrieve needed information	2.32	.80	Low Extent
Formulating searches using combination of keywords or concepts	2.24	.97	Low Extent
Using OPAC to search for specific library resources	2.24	.97	Low Extent
Grand Mean	2.47	.87	Low Extent

Source: Field Work 2019

Table 2 shows the information retrieval skills possessed by undergraduate students in university libraries in Benue State. Results as indicated on the table revealed that only three of the items with mean scores which is above the benchmark of 2.50 is accepted as the information retrieval skills possessed by the undergraduate students to a high extent. Others with mean scores range between 2.21 - 2.32 which are below the benchmark of 2.50 are information retrieval skills possessed by the undergraduate students to a low extent. The table also revealed high Standard Deviation values ranging from .80-.97 which shows that the undergraduate students in the three universities were homogenous in their responses. The grand mean of all the items was revealed to be 2.47 and SD= .87. This implied that the undergraduate students to a low extent possessed information retrieval skills needed to influence their use of e-resources in university libraries in Benue State.

Table 3: Mean and Standard Deviation of the Ways through which Undergraduate Students acquire Information Retrieval Skills in the Universities in Benue State

Ways of Acquiring Information	Mean	Std. Dev	Decision
Integrated into my course of study	2.12	.97	Disagree
Taught as GST Course (Use of library)	3.16	.98	Agree
Self-taught with manual and handbook	2.74	.88	Agree
Taught by friends	2.71	.78	Agree



Taught by family members	2.27	.99	Disagree
Taught by other students	2.52	1.00	Agree
Learnt at cyber cafe/information centre	2.34	.95	Disagree
Through trial and error	2.75	.93	Agree
Prior experience before enrolment in university	2.78	.92	Agree
Grand mean	2.60	.93	

Source: Field Work 2019

Table 3 shows the various ways through which undergraduate students acquired information retrieval skills in the universities in Benue State. Results as indicated on the table revealed that six (6) of the items with mean scores ranging between 2.52 – 3.16 which are above the benchmark of 2.50 were agreed to be the ways through which undergraduate students acquired information retrieval skills in the universities in Benue State. Others three items with mean scores below the benchmark of 2.50 were disagreed by the students as the ways through which they acquired information retrieval skills in the universities. The table also revealed high standard deviation values ranging from .78 – 1.00 which shows that the undergraduate students in the three universities were homogenous in their responses.

Table 4: Mean and Standard Deviation of the Extent to which Undergraduate Students in Universities in Benue State Use Electronic Resources

Electronic Resources	Mean	Std. Dev	Decision
Electronic Books (e-books)	2.31	.89	Low Extent
Electronic Journals (e-journals)	2.53	.96	High Extent
Online Databases	2.14	.90	Low Extent
Compact Disc- Read Only Memory (CD-ROM) databases	2.26	.87	Low Extent
Online Public Access Catalogue (OPAC)	2.19	.91	Low Extent
Internet resources	3.00	.83	High Extent
Grand Mean	2.41	.89	Low Extent

Source: Field Work 2019

Table 4 shows the extent to which undergraduates used e-resources in university libraries in Benue State. Results as indicated on the table revealed that only e-journals and internet resources with Mean scores of 2.53 and 3.00 which are above the benchmark of 2.50 were to a high extent the e-resources used by the undergraduate students in university libraries in Benue State. Others items with mean scores below the benchmark of 2.50 were to a low extent e-resources used by the undergraduate students. The table also revealed high Standard Deviation values ranging from .83 – .96 which shows that the undergraduate students in the three universities were homogenous in their responses. The grand mean of all the items was revealed to be 2.41 and SD= .89. This implied that the undergraduate students to a low extent used electronic resources in university libraries in Benue State.

Table 5: Mean and Standard Deviation of the Challenges Hindering Effective Use of Electronic Resources in University Libraries

Information Retrieval Skills	Mean	Std. Dev	Decision
Lack of information retrieval skills	3.48	1.04	Agreed
Lack of awareness of e-resources	2.67	.91	Agreed
Erratic power supply	3.34	.84	Agreed



Limited number of networked computers	3.11	.99	Agreed
Slow internet connectivity	3.07	.90	Agreed
Difficulty to identify relevant databases to meet my information needs	2.72	.82	Agreed
Lack of proper training and orientation programmes to students	2.54	.96	Agreed
Unavailability of e-resources relevant to my discipline	2.35	.79	Disagreed
Username and passwords of subscribed databases not easily released	2.86	.94	Agreed
Lack of encouragement from the lecturers to use e-resources	2.99	.88	Agreed
Grand Mean	2.91	.91	

Source: Field Work 2019

Table 5 shows the challenges hindering effective usage of e-resources in university libraries by undergraduate students in Benue State. Results as indicated on the table revealed that nine (9) of the items with mean scores above the benchmark of 2.50 were agreed as the challenges hindering effective usage of e-resources in university libraries by undergraduate students in Benue State. Only one item with a mean of 2.35 which is below the benchmark of 2.50 was disagreed by the students and considered not to be a challenge. The table also revealed high Standard Deviation values ranging from .79 – 1.04 which showed that the undergraduate students in the three universities were homogenous in their responses. The grand mean of 2.91 indicated that these identified challenges hindered effective use of e-resources by undergraduates in university libraries in Benue state.

Table 8: Chi-Square Test of the Influence of Information Retrieval Skills undergraduate students on the Use of Electronic Resources in University Libraries in Benue State

	Df	χ^2_{cal}	Sig	Alpha Level	Remark
Pearson Chi-square	21	389.102	.000	.05	Significant
Number of Valid Cases		362			

Df = Degree of Freedom; χ^2_{cal} = Chi-Square Calculated Value; Sig = P-Value

Table 6 shows the Chi-square calculated value of 389.102, degree of freedom df=21 and a sig (P-value=0.00) which is less than the alpha value ($\alpha=.05$). Since $P < .05$, the result is significant, therefore the null hypothesis is rejected. This implied that, information retrieval skills possessed by the undergraduate students significantly influence their effective use of electronic resources in university libraries in Benue State.

Discussion of Findings

Based on the findings derived from the results of the study, the following were discussed.

Research question 1 was on the types e-resources used by the undergraduate students in university libraries in Benue State. The findings revealed that only e-journals and internet resources were used above the benchmark of 50% while e-books, online databases, CD-ROM databases and OPAC were used below 50% and were considered to be e-resources not used



by the students. This finding corroborates with that of Ekenna and Iyabo (2013) whose study reported internet as one of the most commonly used e-resources by undergraduates. However, their report of high utilization of CD-ROM among students is at variance with this finding.

As shown on Table 2, the findings revealed that the undergraduate students to a low extent possessed information retrieval skills needed to use e-resources in university libraries in Benue State. The low information skills possessed by the students include ability to select scholarly information; evaluation of search results; navigating from links; formulating searches using combination of keywords and using OPAC to search for specific library resources. Similarly, the finding on Table 6 revealed that the low information retrieval skills possessed by the undergraduate students significantly affect their effective use of e-resources in university libraries in Benue State. This finding corroborates with that of Fordjour, et al (2010), who attributed student's poor performance in various universities to the inability of the students to effectively retrieve information for academic work. The finding however disagrees with that of Ekenna and Iyabo (2013) who reported that students possessed information retrieval skills to a high extent and the skills significantly correlate use of e-resources.

This finding as observed is worrisome because if students possess low information retrieval skills, it may indicate that undergraduates use 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 performance in their academic pursuit and research output. Information retrieval skills are very crucial in this information age where many students rely on e-resources to retrieve information to satisfy their research needs. It is therefore necessary that undergraduate students acquire information retrieval skills to use e-resources successfully.

Findings of the study as shown on Table 3 revealed that the undergraduate students acquire information retrieval skills in the universities in Benue State through General Studies, manuals and handbooks, friends, other students, trial and error and Prior experience before their enrolment into the university. This finding corroborates with that of Obasuyi and Odion (2015) who reported that various methods such as library tour, library orientation, orientation lectures, library instruction, individual instruction, class instruction have been used to teach library skills instructions in many universities worldwide. The finding also agrees with Ogbuyi, et al (2014) who reported that these skills can also be acquire by undergraduate students through formal computer/information technology programmes, through assistance by friends/colleagues, self-learning by trial and error. The finding is also similar with that of Okello-Obura and Magara (2008) also reported that the majority of their respondents at Makerere University in Uganda learnt to access e-resources and acquire database search skills through trial and error and self-taught.

Table 4 revealed that the electronic resources highly used by undergraduate students in universities in Benue State were only e-journal and internet resources while e-books, online database, CD-ROM databases and OPAC were to a low extent used by the students. This finding corroborates with that of Ekenna and Iyabo (2013) whose study reported internet as one of the most commonly used e-resources by undergraduates. However, the authors' report of high usage of CD-ROM among undergraduate students is at variance with this finding. This finding could be the reason why scholars advocated that as e-journals are fast becoming



more acceptable and its usage is increasing. The findings also agree with that of Echem and Udo-Anyanwu (2018) who reported that, students make use of the various information resources to a high extent. These resources could be only that of e-journal and internet resources. The finding in part agrees with that of Ekenna and Iyabo (2013) who reported that undergraduates lacked requisite skills for the use of e-resources and hence are not highly utilized. This could be skills in the use of e-books, online databases, OPAC and CD-ROM databases which are to a low extent used by the students in this study. The use of only e-journals and internet resources probably implies that there is underutilization of e-resources by undergraduate students. This finding is worrisome because the use of internet resources (popular public search engines) (95.3%) by students could be an indication that they lacked the requisite skills to navigate links to other e-resources on the web. It could also mean the students are not aware of e-resources subscribed by their university libraries that contain quality information that undergo peer review and are more scholarly for their information needs.

Finally, findings of the study as shown on Table 5 revealed that the challenges hindering effective usage of electronic resources in university libraries by undergraduate students in Benue State is not limited to lack of information retrieval skills but include slow internet connectivity, erratic power supply, limited number of networked computers, lack of awareness of e-resources, difficulty in identifying relevant databases, lack of proper training and orientation programmes to students, and lack of encouragement from the lecturers to use e-resources. This finding corroborates with that of Adeniran (2013) who study on the usage of e-resources by undergraduates at the Redeemer's University, Nigeria reported challenges affecting its use to include failure to find information, inadequate or lack of search skills, high cost of access, inaccessibility of some e-resources, and difficulties in navigating through e-resources. Corroborating on this, Toyo, (2017), Gakibayo, et al (2013) and Egberongbe (2011), concurred to these problems when they identified insufficient number of terminals available for use despite high demand and inadequate electricity supply; lack of information retrieval skills for exploiting e-resources, thus making the level of usage of e-resources by students very low.

Conclusion

Based on the findings of the study, the researchers established that, information retrieval skills are indispensable for effective use of e-resources by undergraduates in universities. However, the extent to which undergraduate students in the universities in Benue State possessed these skills is inadequate for their effective use of e-resources. The low information retrieval skills possessed by the students hinder them from accessing quality and scholarly information stored electronically to meet up with their academic expectations and life-long learning. The challenges hindering effective use of e-resources as identified is not limited to lack of information retrieval skills but several other factors such as erratic power supply, slow internet connectivity, limited number of networked computers, lack of awareness among others have led to low usage of e-resources in the university libraries in Benue State.

Recommendations

The study made the following recommendations based on the findings:

1. The university management should integrate information retrieval skills into course of study so that students will acquire prerequisite skills needed in the digital age since the libraries are shifting preference in creating access to information than the printed sources.



2. The university libraries should double their efforts on user education programmes especially the aspect of information retrieval so as to enhance effective use of e-resources. This can be achieved by organising faculty by faculty library orientation/training for students in the virtual libraries where they will be taught practically on how to retrieve e-resources for their academic purposes.
3. University libraries should organize constant awareness programmes on e-resources available on their library websites for the undergraduate students especially subscribed online databases, e-books, CD-ROM and OPAC services which students seem to have challenges in retrieving information.
4. University libraries should liaise with the university management to put in place adequate internet connectivity to enhance access to wide range of e-resources by the university students.
5. University libraries should provide alternative power supply to supplement the public power supply so as to enable the students have access to e-resources in their university libraries.

REFERENCES

- Abubakar, B.M. (2011). Academic libraries in Nigeria in the 21st Century. *Library Philosophy and Practice (e-journal)*. <http://digitalcommons.unl.edu/libphilprac/446>
- Abubakar, D. & Adetimirin, A. (2015). Influence of computer literacy on postgraduates' use of e-resources in Nigerian University libraries. *Library Philosophy and Practice (e-journal)*. <http://digitalcommons.unl.edu/libphilprac/1207>
- Adekannbi, J.O. (2016). Factors predicting retrieval skills among undergraduates of Nigerian Universities. *Asian Journal of Information Science and Technology* 6(2): 13-19.
- Adeniran, P. (2013). Usage of electronic resources by undergraduates at the Redeemer's University, Nigeria. *International Journal of Library and Information Science*, 5 (10): 319-324.
- Ahmed, K. & Cooke L. (2008). Health care personnel's use of e-information sources in Riyadh Governmental Hospitals. *Journal of Librarianship and Information Science*, 40(3): 207-219
- Akpojotor, L.O. (2016). Awareness and usage of electronic information resources among postgraduate students of library and information science in Southern Nigeria. *Library Practice Philosophy and (e-journal)*. <https://digitalcommons.unl.edu/libphilprac/1408>
- Ani, O. E. & Ahiauzu, B. (2008). Towards effective development of electronic information resources in Nigerian university libraries. *Library Management*. 29(6/7): 504-514
- Arua, U., Uzuegbu, A.D. & Ugah, A.D. (2014). Information literacy education for territory institutions. Umuahia, Nigeria: Zeh Communications
- Cambridge University Press (2009). *An Introduction to Information Retrieval*. Online edition Cambridge UP.



- Daramola, C.F. (2016). Perception and utilization of electronic resources by undergraduate students: The Case of the Federal University of Technology Library, Akure. *American Journal of Educational Research (e-journal)*, 4(5): 366-370
- Echem, M. & Udo-Anyanwu, A. J. (2018). Information retrieval tools and library physical environment as correlates of library utilization by students in Rivers State University Library, Nigeria. *Library Philosophy and Practice (e-journal)*. <https://digitalcommons.unl.edu/libphilprac/1772>
- Egberongbe, H. S. (2011). The Use and impact of electronic resources at the University of Lagos. *Library Philosophy and Practice*. <http://www.webpages.uidaho.edu/~mbolin/egberongbe.htm>
- Ekenna, M. & Iyabo, M. (2013). Information retrieval skills and use of library electronic resources by university undergraduates in Nigeria. *Information and Knowledge Management (online)*, 3(9). <http://www.iiste.org>
- Fordjour, R., Badu, E. & Adjei, E. (2010). The Prospects and challenges of information retrieval by university students: A Case study of postgraduate students of the University of Ghana, Legon. <http://ageconsearch.umu.edu/bitstream/9683/2/119.1>
- Gakibayo, A., Ikoja-Odongo, J. R. & Okello-Obura, C. (2013). Electronic information resources utilization by students in Mbarara University Library. *Library Philosophy and Practice (e-journal)*. <http://digitalcommons.unl.edu/libphilprac/869>
- Gui, M. (2007). Formal and substantial internet information skills: The Role of socio-demographic differences on the possession of different components of digital literacy. *Firstmonday*, 12 (9-3). <http://www.firstmonday.org/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/2009/188>
- Israel, O. & Edesiri, E. (2014). ICT skills and internet usage among library and information science students of Delta and Edo States, Nigeria. *International Journal of Library and Information Science*, 6(5): 98-107
- Madondo, T., Sithole, N. & Chisita, C.T. (2017). Use of electronic information resources by undergraduate students in the faculty of Management and Administration at Africa University, Mutare, Zimbabwe. *Asian Research Journal of Arts & Social Sciences*. http://www.journalrepository.org/media/journals/ARJASS_45/2017/Feb/Sithole222016ARJASS29633.pdf.
- Mittal, P. & Bala, M. (2013). 'A study of various types of e-resources used by research scholars', *International Journal of Research in Computer and Communication Technology* 2(3), 146-150.
- Ndubuisi, C. J. & Udo, N. (2013). Empirical study of motivation, challenges and strategies in the use of electronic information resources by postgraduate library users in South-



East Nigerian Federal Universities. *International Journal of Library and Information Science*, 5(11). <http://www.academicjournals.org/journal/IJLIS/article-full-text-pdf/C703BAB42588>.

- Nkamnebe, E.C., Udem, O.K. & Nkamnebe, C.B (2014). Evaluation of the use of university library resources and services by the students of Paul University, Akwa, Anambra State, Nigeria. *Library Philosophy and Practices (e-journal)*. <http://digitalcommons.unl.edu/libphilprac/1147>.
- Obasuyi, L. & Odion, F. (2015). Assessment of library Instruction and library literacy skills of first year undergraduate students of University of Benin, Nigeria. *The Information Manager*, 15(1&2): 33-45
- Ogbuiyi, D.C., Ogbuiyi, S.U. & Oriogu, C.D. (2014). Influence of computer literacy skills and online searching on undergraduates' use of academic materials in Babcock University Library, Illisan-Remo, Ogun State. *Journal of Humanities and Social Science*, 19(7): 49-53
- Okello-Obura, C. & Magara, E. (2008). Electronic information access and utilization by Makerere University in Uganda. <http://creativecommons.org/licenses/by/2-0>
- Omosekejimi, A. F., Eghworo, O. R. & Ogo, E. P. (2015). Usage of electronic information resources (EIRs) by undergraduate students of Federal University of Petroleum Resources Effurun. *Information and Knowledge Management*, 5 (4): 94-103
- Tella, A., Anyim, O.A., Memudu, S. A. & Olaniyi, O.T. (2017). Predictors of information retrieval effectiveness among library and information science undergraduates in Kwara State Universities. *Library Philosophy and Practice (e-journal)*. <https://digitalcommons.unl.edu/libphilprac/1626>
- Tella, A., Tella, A., Ayeni, C.O. & Omoba, R.O. (2007). Predictors of academic performance: self efficacy and use of electronic information. *University of Dar Es Salaam Library Journal*, 9(1): 69-83
- Toyo, O.D. (2017). Undergraduates' information literacy skills and the use of electronic resources in Delta State University, Abraka, Nigeria. *International Journal of Education and Evaluation*, 3(1): 27-36
- Tyagi, S. (2011). Use and awareness of electronic information sources at IIT Roorkee, India: A Case Study. *JLIS.it*, 2(1). <https://www.jlis.it/article/viewFile/4586/4482>
- Udoh, V.W. & Ogunrumbi, S.A. (2007). Autonomy and university libraries: An overview of the Nigerian situation. *Gateway Library Journal*, 83-91