

# Usage of Electronic Information Resources (EIRs) by Undergraduate Students of Federal University of Petroleum Resources Effurun

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## Abstract

This study is conducted to examine the usage of electronic information resources by undergraduate students at the Federal University of Petroleum Resources Effurun's library, Warri, Nigeria. 267 students in 200 level and above who used the library during the period of the study formed the population for the study. The survey research method was adopted for the study. A questionnaire was used as a data collection instrument. Frequency counts and simple percentages were used in analyzing the data collected. The study revealed that the use of electronic resources has tremendous impact on the academic performances of the undergraduate students of Federal University of Petroleum Resources Effurun; however, there is need for them to acquire more skills in the use of electronic resources.

**Keywords:** Library, Electronic Information resources, undergraduate students, Federal University of Petroleum Resources Effurun (FUPRE).

## 1. Introduction

In recent time, there has been the need of EIRs in academic libraries to meet up with the objective of their parent institution. Electronic information resources are invaluable tools for study, learning and research Togia and Tsigilis (2009). For any academic library to thrive in this information age, the library irrespective of the size of its collection must embrace Information Communication Technology. Online dictionary of library and information science (2004) defines electronic information resources as materials consisting of data and/or computer program(s) encoded for reading and manipulation by a computer, such as a CD-Rom drive or remotely via network such as the internet by use of a peripheral device directly connected to the computer. Shim et al (2001) defined Electronic information resources as those resources that users access electronically via a computing network from inside the library or remote to the library. Electronic resource as defined by AACR2, (2002) is any work encoded and made available for access through the use of a computer which includes electronic data available by:

- Remote access: (electronic resources) refers to the use of electronic resources via computer networks.
- Direct access (fixed media): (electronic resources) refers to the use of electronic resources via carriers (e.g., discs/disks, cassettes, cartridges) designed to be inserted into a computerized device or its auxiliary equipment.

The access to electronic information resources in academic libraries and among University students is rapidly increasing as a result of the massive adoption of information communication technology. Electronic Information Resources (EIRs) play vital roles in helping libraries in their quest to support the teaching and learning process at University level and to provide quality assistance to its users. As an emerging field, Information technology has been facilitated by providing electronic and internet resources for fulfilling the day to day academic and research requirements of the university students (Manoj Kumar, Gauri, and Bimal, 2011). Information technology has made a profound impact on availability and accessibility of electronic information resources and to provide a quick and comprehensive access to resources by using best possible tools and techniques is the ultimate aim of every library. The application of computers to information processing has brought several products and services to librarianship as a profession. Consequently, library services have undergone tremendous changes during these years, assuming new dimensions influenced by technology-driven applications. Libraries therefore have

witnessed a great transformation in recent years both in their collection development and in their service structures. Thus Libraries are using technology to improve the acquisition and management of scholarly information to strengthen and speed access to scholarly information not held locally. Electronic information resources are important research tools that complement the print-based resources in a traditional library setting, EIRs are easily accessible in the remote areas and solve storage problems and control the flow of information (MuniraNasreen Ansari and Bushra, 2010). Electronic information resources provide access to information that might be restricted to the user because of distance (Sabouri, et al 2010). The emergence of electronic resources has cut the barrier to valuable information resources which until now were difficult to access especially by scholars in the developing nations of the world. Commenting on the advantages of electronic information resources to students, lecturers and researchers, Dadzie (2005) writes that electronic resources are invaluable research tools that complement the print-based resources that are available in a traditional library setting. Their advantages, according to her include: access to information that might be restricted to the user due to geographical location or finances, access to more current information, and provision of extensive links to additional resources related contents, they contain current information because they updated frequently, they offer advanced search capabilities, they offer flexibility in the storage of the results, and they enable access to information without the restrictions of time and location. This rapid emergence and development of electronic information technologies therefore makes it possible to envision radically different ways of organizing the collections and services of the library as traditionally provided. A number of studies have been made with a view to proffering solutions to problems encountered in the use of electronic information resources. However, little or no efforts have been recorded in identification of influence and the usage of electronic information resources among undergraduate students' in Federal University of petroleum Resources Effurun. This is the gap which the researchers intend to identify. The purpose of study is to investigate the usage of electronic information resources among undergraduate students of Federal University of Petroleum Resources Effurun, Nigeria.

### **1.1 Objective of the Study**

The objective of this study is to:

1. Ascertain the level of undergraduate student's awareness of electronic information resources in FUPRE library.
2. To know the purpose of the use of these electronic information resources in FUPRE library.
3. To know the effect of these electronic information resources on students' academic improvement.
4. To know the challenges faced by students when using electronic information resources.

#### **1.1.1 Research Question**

This study should be able to answer the following research questions:

1. Are student aware of the availability of electronic information resources in FUPRE library?
2. What are the purposes for which the students make use of the electronic information resources available in FUPRE library?
3. What effect do these electronic information resources have on students' academic improvement?
4. What are the challenges faced by the student when using electronic information resources?

#### **1.1.2 Literature Review**

Although information gathering and use patterns in the traditional print environment have been researched into over the years, the electronic environment presents a new and relatively unexplored area for such study. Some early effects of the increasing availability of electronic resources are already apparent. The emergence of electronic information resources has tremendously transformed information handling and management in Nigerian academic environments and University libraries in particular (Ani and Ahiauzu, 2008). These dramatic changes include the way in which information is provided to the University communities. A number of electronic resources initiatives have been put in place to assist in the development training and use of electronic resources in a number of academic institutions (Egberongbe, 2011).

#### **1.1.3 Electronic Information Resources in Nigerian Academic Institutions**

In recent years, there have been a number of changes in the Tertiary education sector in Nigeria and in particular, academic institutions. The emergence of electronic information resources has tremendously transformed information-handling and management in Nigerian academic environments, and University libraries in particular (Ani and Ahiauzu 2008). These dramatic changes include the way in which information is provided to the

University Communities. A number of electronic resources initiatives have been put in place in Nigeria to assist in the development training and use of electronic resources in a number of academic institutions among who are the Morlenson Center for International Library Programs acting on behalf of MacArthur Foundation to support some selected granted university libraries; The Electronic Information for libraries Network (eiFL.Net) and MTN Foundation. Their fundamental objective has been to create interfaces with the global knowledge systems. These initiatives notwithstanding, some inadequacies in the development provision and utilization of electronic resources had been identified in a number of academic institutions. In a study carried out by Uzuegbu et al. (2012) on creating universal resource locator (URL) links on library computers desktop page: A panacea for Students' underutilization of subscribed electronic databases in academic institutions in Nigeria using Michael Okpara University of Agriculture Library Umudike (Mouau) as a case study, it was revealed that collection development of the library is rapidly growing. Apart from access to its modest collection of books, journals and periodicals, library users have access to electronic databases subscribed by MOUAU Library. The databases are AGORA, EBSCO Host, HINARI, OARE, NUC Virtual Library and Lan-TEEAL of 2005 CD and 2009 DVD versions. As also revealed in the study, unawareness of MOUAU students on the availability of electronic databases to a large extent is responsible for its underutilization. So also, Oduwole, et al. (2003), sought to know the electronic resources provided by Nigerian libraries. When asked what electronic resources they provide, Nigerian university libraries, he identified Online Public Access Catalog, CD-ROM, databases, electronic mail (e-mail) and Internet browsing. The study found that students constitute the major category of users of electronic services in the university libraries surveyed. In a survey of cyber cafes which are facilities established in the university environment to aid learning and research in Delta state, Adomi et al. (2003) reported that 77.8% of the customers/users cafes were students. Ojedokun and Owolabi (2003) reported that e-mail is the most used Internet resource by staff and students

#### 1.1.4 Types of Electronic Information Resources Available in the Library

The University of Chicago Library listed some of the electronic information resources that should be available at every academic library's disposal to include:

1. **CD ROM:** is a pre-pressed optical compact disc which contains data. The name is an acronym which stands for "**Compact Disc Read-Only Memory**". Computers can read CD-ROMs, but cannot write on the CD-ROM's which are not writable or erasable. Until the mid-2000s, CD-ROMs were popularly used to distribute software for computers and video game consoles. Some CDs, called enhanced CDs, hold both computer data and audio with the latter capable of being played on a CD player, while data (such as software or digital video) is only usable on a computer (such as ISO 9660 format PC CD-ROMs).
2. **Electronic Books:** Libraries now provides access to a variety of electronic books, as well as the other printed works (such as essays, poems, or historical documents). Some of these electronic books and texts are part of large, searchable databases.
3. **Electronic Journals:** Most academic libraries now have an offline E-Journals Database to help you find journal materials that is useful to users and an online versions of e-journals which the library subscribe to have access to current journal publication.
4. **Online Database:** Is a web based filing system designed to store information. It is a database accessible from a network, including from the Internet. Most academic libraries now subscribe to online databases of books and journals that are relevant to the University curriculum which will help to facilitate teaching and learning in the University environment.
5. **Online Sources:** Online sources are materials that are available online. It can be an online newspaper, magazine or television website such as NBC or CNN. Peer-reviewed journals, WebPages, forums and blogs are also online sources. Some other names for online sources are 'electronic' sources, 'web' sources and 'internet' sources. These are very useful electronic information resources which many libraries are now making available to satisfy the urgent needs of their user community.

### **1.1.5 Effect of Electronic Information Resources on Library Users in Academic Institution**

The emergence of electronic resources has cut the barrier to valuable information resources which until now were difficult to access especially by scholars in the developing nations of the world. Salaam (2008) attributed the popularity of electronic resources to flexibility in searching than their paper-based counterpart, and that they can be accessed remotely at any time. Tenopir (2003) in a major survey, analyzed the findings of over 200 studies on the use of electronic resources in libraries that were published between 1995 and 2003. The results revealed that, electronic resources have been rapidly adopted in academic spheres; however behavior varies according to the discipline. The importance and wide ranging scope of these electronic information resources for general communication, information retrieval and instructional delivery to support teaching and research activities in tertiary educational institutions and academic libraries in particular is acknowledged worldwide. The literature also shows that a number of relevant studies have been carried out on the use of e-resources by lecturers, research scholars and students worldwide. General user opinion towards the use of electronic resources, in particular CD-ROM, has been positive, with students enjoying using these sources and finding relatively few problems while using them (Ray and Day, 1998). This is clearly confirmed in the case of a survey undertaken at Oakland University by (Schulz and Salomon, 1990) into students' satisfaction with CD-ROMs. The study according to Ray and Day (1998) found out that 83% of students surveyed felt that using this source saved them time, and found it relatively easy to use. Two thirds of those surveyed stated that if the CD-ROM was busy, they would wait for it to become free rather than use the print tool.

According to Bar-Ilan, Peritz, and Wolman (2003) the most active users of electronic books and journals are the younger members of the teaching and research staff. In a related study, Bush (2004) showed that age was not an influential factor in whether the respondents read articles on paper or in electronic format. Brennan et al (2002) in studies that centered on how the adoption of electronic information resources has affected academics' information behavior revealed that faculty make fewer visits to the library and read more of electronic books and journals than in the print era. Most academics report use generic databases to locate information while a few rely on smaller discipline-specific databases. Corroborating this, Dilek-Kayaoglu (2008) in a research on use of electronic journals by faculty Students at Istanbul University, also revealed that majority of respondents supported the transition from print to electronic resources because of the numerous opportunity its presents to them. Studies have also been carried out on the use of electronic resources by teachers, students and research scholars of universities and research organizations. Seventy-eight percent (78%) of the respondents feel that the use of the OPAC, e-books, e-mail, e-reference sources, e-journals etc. has created high dependency value on their research work and they needed current article alert services and electronic document supply services (Madhusudhan, 2008). In the context of developing countries, Okello-Obura and Magara (2008) investigated electronic information access and utilization at the East African School of Library and Information Science, Makerere University, Uganda. Out of the 250 targeted students, 190 responded, giving a response rate of 76%. The study revealed that users derived a lot of benefits from electronic resources such as gaining access to a wider range of information and improved academic performance as a result of access to quality information. Uzuegbu et...al (2012) in his study asserts that for effective utilization of electronic databases, not only is computers and internet connection necessary, creating a usable interface is indispensable. Already, Ani, et al, Abdulmumin and Waldman agree that a computer database interface aids access and retrieval of information. Hence, a URL link is an interface that can help students overcome the problems of obtaining passwords, username, inputting error, among other things when making use of online databases. In effect, all the studies reviewed above are implemented on the assumption that the uptake of electronic resources is highly desirable to the students, lecturers and researchers in that it leads to increased productivity of work, learning, teaching and research.

### **1.1.6 Challenges of the use of electronic information resources**

Despite several advantages of electronic information resources and its positive effect on students academic performance in Universities, many University students are yet to harness the opportunities provided by these initiatives due to inadequate facilities or lack of maintenance culture and even where these facilities are in place, the potential users of these new information sources are not making use of the valuable electronic information resources owing to lack of awareness or lack of skills required to navigate the modern technology. Chandel and Saikia (2012) in their study on the challenges and opportunity of electronic resources identify three major challenges of electronic resources which affect the availability of these resources to include:

- **Pricing of e-resources:** The greatest enigma of e-resources is pricing which are not fixed as in case of print materials. In subscribing printed and purchased of printed books, there are hardly any such problems. There are fixed prices and subscription rates subject to verification if required. According to them, there is no standard pricing models for e-resources as yet. Different publishers have different policies which go on changing from time to time. It is difficult to remain in touch with these changing models. For example, Oxford journals policy for 2010 onwards included price of online journal as 'base' rather than print-plus-online or combined price. In these instances, the print only price will be 110% and combined price 120% of the online only price. Some publishers and vendors may deal with e-journals only; some may give offer for both e-journal and e-books together with additional benefits of accessing open sources. In brief, chandel and saikai stated that there are many models as the publishers which may further vary from vendor to vendor.
- **Management issues:** E-resources are not visible to the users as in traditional libraries where resources are physically available for browsing and use. Libraries subscribe to the different packages of different publishers/vendors, as such information sources remain scattered which is not convenient to the users for browsing and searching (Chandel and Saikai 2012). All such resources need to be integrated for access with a single stroke of key. Users neither have time nor patience for visiting number of location of website or platforms
- **Archival problem:** Online resources are remotely located which often remain under the ownership of the publishers or vendors. Libraries have access to these resources under the terms and conditions of the agreement and licensing policy which poses serious problems at times especially after the expiry of the subscription. In some cases, library decides on outright purchase of the package which, of course, is quite expensive and unaffordable by most of the libraries, it creates archival problems. Archiving of back files is also not without problem. If the responsibility of archiving is assigned to the publisher, library shall have to pay maintenance and licensing charges for back issues. Decision has to be taken whether archival responsibility would remain with the publisher or library will make its own arrangement.

In addition to the aforementioned challenges of the use of electronic information resources, Chisenga (2004) carried out a survey on the use of ICTs in ten African Public Library Services. The survey found that, although most libraries had internet connectivity, very few were offering web-based information services to their users. The study however, identifies four barriers to the effective provision of electronic information resources in those libraries, namely: lack of strategic planning; lack of adequate or reliable funding; lack of Internet access to information resources available on the web and a lack of consistent training for users on new ICT services. Bashorun (2011) revealed by research that frequency of use of electronic information resources by academic staff and students of the University of Ilorin was low, Reasons were lack of awareness to electronic information resources provided by the library; power outage, ineffective communication channels, slow network and inadequate searching skills. Ojo and Akande (2005) in a survey of 350 respondents examined student's access, usage and awareness of electronic information resources at the University College Hospital (UCH) Ibadan, Nigeria. The study revealed that the level of usage of the electronic information resources is not high. A major problem however identified is lack of information retrieval skills for exploiting electronic information resources, thus making the level of usage of the resources by medical students very low. Ajuwon et al (2003) also carried out a study of uptake of ICTs by health science students at the University College Hospital, Ibadan. This study found that 57% of students sampled could not use a computer, that the use of the database was poor, due to lack of awareness, lack of access to computers, insufficient training and the high cost of provision. Buttressing this fact, Abdullah (2006) noted that most users are unaware of the existence of e-books and e-journals in library collections, also unfriendly interfaces or usability problems tend to hinder their further use of electronic resources. Kebede (2002) carried out a survey of the use of ICT and electronic resources in ten academic libraries. The survey found that, although most libraries had internet connectivity, very few were offering web-based information services to their users. The study however, identifies four barriers to the effective provision of electronic resources in those libraries, namely: lack of strategic planning; lack of adequate or reliable funding; lack of use of Internet to provide information services to users and a lack of consistent training for users in new ICT services. In the same vein, Oduwole and Akpati (2003) investigated the accessibility and retrieval of

electronic information at the University of Agriculture Library, Abeokuta, Nigeria. The 425 participants responded out of a survey population of 1,000, giving a response rate of 53.87 percent. The study revealed that electronic information cuts across all members of the University community that it was to a greater extent easy to use and were satisfied with their search outputs. The constraints identified included insufficient number of terminals available for use despite high demand and inadequate electricity supply.

### 1.1.7 Methodology

The survey research method was adopted for this study because it was considered more appropriate for this type of study. Data was collected for the study through the use of questionnaire. 267 students in 200 levels and above who used the library during the period of the study formed the population for the study. The questionnaire was administered to 267 students who visited and used the library within the period of research through the assistance of the Library Assistants. The questionnaire was in four parts. Part A elicited background information such as gender and college of respondents. Part B elicited information on respondents' awareness of electronic information resources. Part C sought information on the usage of electronic information resources. Part D elicited information on respondents' perception of the effect of electronic information resources on their academic performance while part E sought information on the challenges of using electronic resources. The data was analyzed using simple percentages and frequency counts.

**Table 1: Respondents' gender**

Gender	Frequency	Percentage
Male	176	65.9
Female	89	33.3
No Response	2	0.7
Total	267	100

Table 1 shows that of the 267 (100%) respondents, 176 (65.9%) were male, 89 (33.3%) were female while 2 (0.8%) did not respond to the question that sought to elicit their gender. This clearly reveals that male undergraduate students form a larger population of Students in FUPRE.

**Table 2: Breakdown of participant by colleges**

College	Frequency	Percentage
Science	80	30
Technology	180	67.4
No Response	7	2.6
Total	267	100

Table 2 shows that of the 267 respondents, 80 (30%) were from the college of sciences, 180 (67.4%) were from the college of technology while 7 (2.6%) of the respondents did not respond to the question. This reveals that majority of the users of electronic information resources in Federal university of Petroleum resources Effurun are from the college of Technology.

**Table 3: Respondents Level of Awareness of electronic information resources**

Resources	Agreed	%	Disagree	%	Not Certain	%	Total
CD ROM	73	27.3	113	42.3	81	30.3	267
Online Database	168	62.9	37	13.9	62	23.2	267
Electronic Books	213	79.8	4	1.5	50	18.7	267
Internet	267	100	nil	0	nil	0	267
Electronic Journals	166	62.2	56	20.9	45	16.9	267

Table 3 represents the breakdown of the responses of the participants when they were asked if they were aware of the electronic information resources listed in the table. Of the 267 (100%) respondents, 73 (27.3%) agreed they were aware of the availability of CD-ROM in FUPRE library, 113 (42.3%) disagree of the availability of

CD-Rom facilities in FUPRE library while 81 (30.3%) said they are not certain of the availability of CD-ROM facility in FUPRE library. 168 (62.9%) said they were aware that online database was available while 37 (13.9%) disagreed that they were aware of the availability of online database in FUPRE university library and 62 (23.2%) said they are not certain of the availability of the Online database in FUPRE University Library. 213 (79.8%) of them agreed they were aware of the availability of electronic books in FUPRE library, 4(1.5%) disagree of the availability of electronic books in FUPRE Library and 50(18.7%) said they are not certain of the availability of electronic books in FUPRE library. 267 (100%) of the student are aware of the availability of internet in FUPRE library stipulating that all the respondent are aware of the availability of internet in FUPRE Library. 166(62.2%) of the respondent are aware of the availability of electronic journals in FUPRE Library while 56(20.9%) are unaware of the availability of electronic journals while 45(16.9%) said they are not certain of the availability of electronic journals in FUPRE library. This shows that a majority of the respondents were aware of the availability of electronic resources in the library.

**Table 4: Respondents' purpose of use of electronic information resources**

Purpose	Agreed	%	Disagreed	%	Total
Research	262	98	5	1.9	267
Access to timely information	252	94.4	15	5.6	267
Assignment	267	100	0	0	267
E-mail	267	100	0	0	267
News	251	94	16	6	267
Complement classroom teaching	243	91	24	9	267

As is shown in Table 4, 262 (98%) out of the 267 (100%) of the respondents, agreed that they used the electronic resources for research purpose while 5(1.9%) disagree. 252 (94.4%) indicated that they used them for purpose of having timely access to information while 15(5.6%) disagree. 267 (100%) agreed they used them to acquire information for their assignment. 267 (100%) indicated that they used electronic information resources for e-mail purpose. while 251 (94%) of them indicated that they used electronic resources for news acquisition though 16(6%) of them disagree to that fact. 243(91%) agreed that electronic information resources helps to complement classroom teaching/lectures and 24(9%) disagreed. From table 4 above, it is revealed that majority of the respondents used the electronic resources for research, current awareness, information acquisition, assignment, e-mail, and for acquiring news.

**Table 5: Respondents' frequency of use of electronic resources**

Resources	Regularly	%	Occasionally	%	Rarely	%	Not at all	%	Total
CD ROM	12	4.5	17	6.4	99	37.1	139	52.1	267
Online Database	52	19.5	153	57.3	50	18.7	12	4.5	267
Electronic Books	93	34.8	124	46.4	42	15.7	8	3	267
Internet	240	89.9	25	9.4	2	0.7	nil	0	267
Electronic Journals	78	29.2	73	27.3	85	31.8	31	11.6	267

Table 5 reveals that 12 (4.5%) of the 267 (100%) respondents used the CD-ROM facility regularly, 17 (6.4%) used it occasionally, 99 (37.1%) used it rarely while 139 (52.1%) indicated that they do not use it at all. Also, 52 (19.5%) confirmed that they use the online database regularly, 153 (57.3%) used it occasionally, 50 (18.7%) used it rarely while 12 (4.5%) said they never used it. Meanwhile, 93 (34.8%) said they used electronic books regularly, 124 (46.4%) used it occasionally, 42 (15.7%) used it rarely while 8 (3%) said they do not use it at all. 240 (89.9%) of them used the Internet regularly, 25 (9.4%) used it occasionally, 2 (0.8%) used it rarely while 0 (0%) said they do not use it at all. 78 (29.2%) of them indicated that they used e-journals regularly, 73 (27.3%) used it occasionally, 85 (31.8%) used it rarely while 31 (11.6%) do not use e-journals at all. This reveals that

majority of the respondents do not make use of the electronic information resources available in FUPRE library regularly. This corroborates Islam (2010) when he argued that Students preferred browsing through the shelves to locate books, which can lead to frustration and which has caused many to view the library as just a reading place rather than seeking for assistance on how to use the available electronic resources.

**Table 6: Challenges with the use of electronic information resources**

Problems	Response	%	Response	%	Total
	YES		NO		
LACK OF AWARENESS	65	24.3	202	75.7	267
UNFRIENDLY USER INTERFACE	66	24.7	201	75.3	267
INADEQUATE ELECTRONIC INFORMATION RESOURCES GADGETS	177	66.3	90	33.7	267
SLOW NETWORK PROBLEM	219	82.0	48	18	267
LACK OF REQUIRED SERCHING SKILLS	179	67	88	33	267
LACK OF CONSISTENCE TRAINING FOR USERS	230	86.1	37	13.9	267
The use of electronic resources does not present any particular problems	0	0	267	100	267

Table 6 is a summary of the challenges respondents face in their use of electronic information resources in FUPRE library. 65 (24.3%) of the respondents responded in the affirmative when they were asked if lack of awareness of the availability of electronic information resources was a challenge to their use of those resources while 202 (75.7%) of them said no. 66 (24.7%) of the respondents agreed that unfriendly user interface is a challenge to them in their quest to make use of electronic information resources available in FUPRE library while 201 (75.3%) said they had no problem with that. 177 (66.3%) of the respondents noted that their challenge is the inadequate electronic information resources in FUPRE library while 90 (33.7%) of them said they had no problem with that. 219 (82%) of the respondents noted that their challenge with the use of electronic information resources in FUPRE Library is slow network problem while 48 (18%) of them responded in the negative. 179 (67%) of the respondents noted that lack of required searching skill in the use of internet was their challenge while 88 (33%) of them did not see that as a challenge. 230 (86.1%) of the respondents agreed that lack of consistence training for the users was a challenge to them while 37 (13.9%) did not see lack of consistence training for the users as a challenge while using electronic information resources. None of the respondents agreed that the use of electronic information resources did not pose any challenge to them while using the resources and 267 (100%) indicating all the respondents agreed that they had one or two challenges while they used the resources. It is revealed from the table that majority of the respondents had challenges with the use of electronic resources. This confirms Islam (2010) when he noted that high quality user education is the solution to the problems encountered by students in using the electronic information resources available in the library, most especially the catalogue. There is need for the library management to organize periodic user education programme for the undergraduates in order for them to make adequate use of the E-resources.

### 1.1.8 Discussion of findings

The findings of this study revealed that the respondents even though were aware of the different types of electronic information resources available in the university library; their usage rate of these resources is low. Therefore, information professionals at FUPRE need to pay more attention to making every user aware of the various available e-resources and search strategies among others so as to promote the use of electronic information services in the University. It was also discovered that a large proportion of the respondents made use of the electronic resources mostly for research, assignment, current awareness, information acquisition, and e-mail and news acquisition. Various factors that militate against effective utilization of electronic resources by undergraduate students were discovered during the course of the study. Among the factors are: download delay i.e. slow network problem, lack of adequate electronic information resources facilities, high cost of access, inaccessibility of some electronic resources, difficulties in navigating through electronic resource as a result of inconsistency training for users etc. In consonance with this findings was a study by Ejibuwa (2005) who found out that the absence of basic infrastructure like constant electricity necessary for ICT growth, lack of facilitation



for network resources sharing, inadequate professionals with requisite ICT skills and above all, inadequate fund to support development in their direction were impediment to the use of electronic resources.

### 1.1.9 Conclusion

Based on the findings of this study, the researchers concluded that the use of electronic resources had tremendous impact on the academic performance of the undergraduate students of Federal University of Petroleum Resources Effurun. However, there was need for the students to acquire more skills on the use of electronic information resources. The purpose of this study was to enable the library improve on the provision of electronic information resources to meet the academic needs of the undergraduate students of the university. This paper expected to be helpful to libraries to improve library services, especially in assisting the undergraduate students in their academic work. This study will be made available for the university library management for implementation.

### 2.0 Recommendation

Based on the findings of the study the following recommendations were made by the researchers:

1. The management of Federal University of Petroleum Resources Effurun should ensure that the acquisition of Information and Communication Technology skills is acknowledged as one of the key learning objectives for its students so that students will be fully equipped to cope with the information intensive world. To this end more practical courses on Information Communication Technology should be inculcated into the curriculum of the computer Science department of the University.
2. The library management should organize periodic training on the use of electronic resources for the undergraduate students.
3. The paper has shown high level of acceptance of electronic resources by undergraduates in Federal University of Petroleum Resources Effurun. The University management should as a matter of importance acquire, subscribe and create access to electronic information resources that can be of benefits to the students and the entire University community
4. The University library should update faculties on the available electronic information resources. And academic staff should sensitize students on the usefulness of electronic resources' to student's course works, and assignments requiring the use of electronics resources should be develop. This will compel students to make use of the electronic information resources made available in the library.
5. The University and Library in particular should ensure that there are sufficient networked computers with fast Internet connectivity. This will improve on full text delivery of resources, electronic document delivery and the use of search engines. This calls for increased procurement of such facilities.

### References

- Adomi, Esharenana E., et al. (2003). A survey of cyber cafes in Delta State. Nigeria. *The Electronic Library* 21 (5): 487-495.
- Ajuwon G. A (2003). Computer and Internet Use by First Year Clinical and Nursing students in a Nigerian Teaching Hospital. *BMC Medical Informatics and Decision Making*, Vol.3 no. 10 September, Available at Biomed central, 1472-6947/3/10 (accessed: 8th November, 2011).
- Ani, Okon E. & Ahiauzu, B. (2008). Towards effective development of electronic information resources in Nigerian University Libraries. *Library Management* 29(6/7): 504 – 514.
- Ali, Naushad (2005). The use of electronic resources at IIT Delhi Library; a study of search behaviours. *The Electronic Library* Vol.23 no. 6: 691 – 700
- Bar-Ilan, J. , Peritz, B. C. and Wolman Y (2003). A Survey of the Use of Electronic Databases and Electronic Journals Accessed through the Web by the Academic Staff of Israeli Universities. *Journal of Academic Librarianship* 29, pp. 346–361
- Bashorun, M., Tunji, I. A. and Adisa, M.Y. (2011). User perception of electronic resources in the University of Ilorin, Nigeria (UNILORIN). *Journal of Emerging Trends in Computing and Information Sciences*, 2(11): 554-562.
- Brennan, M.J, et al (2002). A snapshot of early adopters of e-journals: Challenges to the library. *College & Research Libraries*63, 515-526.
- Bush A, et al (2004). Medical Faculty's Use of Print and Electronic Journals: Changes Over Time and in Comparison with Scientists. *Journal of the Medical Library Association* 92 (2004), 233–241.

- Dadzie, P. S. (2005). Electronic Resources: access and usage at Ashesi University College. Campus – wide Information Systems 22(5) Available at: <http://www.emeraldinsight.com>. Accessed on 8th November, 2011
- Dilek-Kayaoglu, H. (2008) Use of electronic journals by faculty at Istanbul University, Turkey: the results of a survey. The Journal of Academic Librarianship 34:239-247
- Islam M (2010). The Use of the Library Catalogue by Undergraduates; Library Philosophy and Practice Jagboro, K.O. (2003): A study of Internet Usage in Nigerian Universities: A case study of ObafemiAwolowo University, Ile – Ife, Nigeria. First Monday, Vol8. No. 2. (Available at: [http://Firstmonday.Org/Issues/Issue8\\_2/Jagboro/Index.html](http://Firstmonday.Org/Issues/Issue8_2/Jagboro/Index.html) (8th November, 2011).
- Kebede, G. (2002). The changing information needs of users in electronic environments. The Electronic Library, Vol. 20. No. 1: 19 – 21
- Madhusudhan, M. (2008). Use of UGC infonet – journals by the Research Scholars of University of Delhi”, Library Hi Tech, Vol. 26. No. 3. pp. 369 – 386.
- Manoj Kumar, S, et al (2011). Usage of electronic resources available under UGCINFONET Digital Library Consortium by Assam University Library Users. Proceedings of 8th International CALIBER. Goa University: March 02-04.
- Munira, N.A. & Bushra, A.Z.(2010). Use of Electronic Resources among Academics at the University of Karachi. Library Philosophy and Practice [online].
- Oduwole A. A. & Akpati, C. B. (2003). Accessibility and retrieval of Electronic Information at the University of Agriculture Library Abeokuta, Nigeria 52(5): 228 – 233, Available at:<http://www.emeraldinsight.com/researchregister>. Accessed 8th November, 2011.
- Ojedokun, A. A & Owolabi, E.O. (2003).Internet use for teaching and research in Botswana.African Journal of Library, Archives and Information Science, 13(1):43-53
- Ojo, R. A. & Akande, S. O. (2005). Students Access, Usage and awareness of Electronic Information Resources at the University College Hospital, University of Ibadan, Nigeria. Lagos Journal of Library and Information Science 3(1): 16 – 24.
- Okello-Obura, C. & Magara, E. (2008). Electronic Information access and utilization by Makerere University in Uganda” Available at: <http://creativecommons.org/licenses/by/2-0>. Accessed 8th November, 2011.
- Ray, K. & J. Day. (1998) Student attitudes towards electronic information resources. Information Research 4 (2) available at: <http://informationr.net/ir/4-2/paper54.html>. Accessed 12/9/2008
- Sabouri, M. S, et al (2010) Use of electronic resources by users in the faculty of Agriculture, Islamic Azad University. Middle-East Journal ofScientific Research 6 (5) 490-499
- Tenopir, C. (2003) Use and Users of Electronic Library Resources: An Overview and Analysis of Recent Research Studies. Washington, DC: Council on Library and Information Resources Available at: <http://www.clir.org/pubs/reports/pub120/pub120.pdf>. Accessed 11/9/2008

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