

## CHAPTER ONE

### INTRODUCTION

#### **Background to the Study**

The primary purpose of university libraries is to support teaching, learning and research, in order to achieve this, librarians use modern Information and Communication Technology (ICT) facilities such as the electronic information resource (EIR) databases to provide information services to users. Database consists of organized pieces of information placed in an electronic record in order to assist users in easily selecting, managing and updating desired information. An electronic information database is an organized list of published information sources which include journals and books, with directories on how to locate online information. Each information source has an individual record. Each database record contains different pieces of information on any subject area (Amanze, 2011).

Glossary of Library Terms (2012) defines electronic information resource databases as any of several different categories of databases and machine-readable files, including, but not limited to electronic journals and online databases. Furthermore, Saye (2001) states that electronic resource databases are those resources that are generated through some electronic medium and made available to a wide range of viewers both on-site and off-site via some electronic transferring machine or internet. Therefore, electronic resource

databases in their ambit include all kinds of published digital collections, such as Ebsco Host Resources, AAPG Datapages (American Association of Petroleum Geologists), Agriculture Network Information Center (AgNIC), UN Commodity Trade Statistics Database (UN Comtrade), Wildlife and Ecology Studies Worldwide, Agora, Social Sciences Full Text and JSTOR in many educational institutions across the world. Manir (2007) posited that these EIR databases will enable the academic communities in Nigeria to exploit the opportunities of having current online information resources for their research work. The traditional method of searching for materials in the library is good but the EIR databases are better when using library resources online.

Talawar and Negahban (2009) posited that electronic information resource databases in reality have become the corner stone for many academic organizations. Information explosion has increased the amount of information sources available on the web. EIR databases have helped to expand access, increase usability and effectiveness and establish new ways for individuals to use information to be more productive in learning and research.

The availability of EIR databases in libraries is seen as a variable that can influence it's utilization by lecturers and postgraduate students in university libraries. In information technology, availability refers to a system or component that is continuously operational for a desirably long time (Search Data Center.Com 2011). According to Hitachi (2011) availability is whether (or how often) a system is available for use by its intended users.

According to Samuel and Okpe (2013) availability of information resource databases means the continuous subscription of various online databases in libraries for use by staff and students. Emimi (2014) said that it is only when the National Universities Commission accreditation teams are visiting that funds are usually released for the subscription of EIR databases and other ICT related facilities in libraries. As soon as NUC visit is over, universities do not follow up with the subscription of online databases for their library.

Another variable that may influence the availability and utilization of EIR databases in university libraries is electricity. Ezema and Ugwu (2013) said that poor power supply in libraries affect the utilization of EIR databases. When there is no power supply it has adverse effects on the electronic information service rendered to library users. There must be constant power supply that will power all the ICT equipment that will make EIR databases services available to users.

Mbagwu and Opara (2011) observed that inadequate or non implementation of ICT policies has affected the availability of EIR databases in some university libraries. If there are inadequate ICT infrastructure such as computers and the internet, it will affect the availability and usage of EIR databases in libraries. These infrastructures are the gateway to EIR databases in university libraries. Achugbue and Akporido (2011) also observed that in most universities in Nigeria there are no standard ICT and EIRs policies to guide the availability and utilization of electronic information resource databases in libraries.

Funding of universities is seen as another factor that can influence the availability and utilization of EIR databases in university libraries. Federal universities are better funded than the state universities, because the sharing formula of the national resources favor the federal government. In order to solve the problems of poor funding in universities, The National Universities Commission in Nigeria requires statutorily that a minimum of 10% of each university's recurrent expenditure should go to the library budget (Onuoha, Onuoha & Amponsah, 2013). These allocations to libraries are not sufficient to subscribe to all the necessary electronic information resource databases needed for learning, teaching and research work. The Tertiary Education Trust Fund (TETFUND) was established as an intervention agency to fund Nigerian higher education as a result of the poor funding in all educational institutions. Between 2001 to 2014 TETFUND has allocated N23.8 billion between 2001 to August 2014 for the acquisition of books and e-database resources, leaving N14,205,494,587.06 yet to be accessed (TETFUND, 2014 & Ukim, 2014). In the same vein, The Librarians' Registration Council of Nigeria (LRCN) organized several workshops on grant proposal writing for librarians with the aim of equipping them to write proposals for grants from donor agencies for acquisition of information resources in their libraries (Olarotimi, 2015). With these funds granted to libraries it is expected that there should be various types of EIR databases constantly in libraries.

The nature of online databases can be seen as a contributing factor that can affect the availability and utilization of EIR. Abdelrahman (2009) observed that most libraries' EIR

databases collection in universities in developing nations are free-based and these free-based databases may not be sufficient to meet the information need of users. Ahmed (2013) has noted that users are not satisfied with the free electronic information resource databases that are available in their university libraries. Librarians should not rely on free - databases only, such as Directory of Open Access Journals. They should also subscribe to fee-based ones such as EBSCO Host Resources, Medline, CAB, Emerald, Sage etc in order to have a wide range of EIR databases collection that will cover the information need of users.

Unrestricted access to the EIR databases irrespective of the location and internet protocol address can be seen as another factor affecting the availability of EIR databases and their utilization. Lecturers and students should have unrestricted access to these resources in any location within and outside the university (Samuel & Okpe, 2013). As soon as they are connected to the net and then login into their university library site, they should be able to have access to the e- library resources.

Internet connection and high bandwidth are primary influencing factors affecting the availability and utilization of EIR databases in libraries. Samuel and Okpe (2013) observed that in some e-libraries in universities in developing nations, what they have in their libraries is just computers and some off-line CD ROMs consisting of e-journals and e-books. Emimi (2014) remarks that university libraries in developing nations should go beyond this, by

connecting to high speed internet bandwidth that will encourage utilization of EIR databases for teaching and learning in the university.

In some university libraries in Nigeria, what they claim to have in their e-library are computers connected to internet (Samuel & Okpe 2013). E-library is more than this, libraries should subscribe to various types of online databases, where lecturers and students can register with the library, have a user name and password in order to use the electronic resources anywhere. The issue now is how many university libraries have EIR databases available for teaching, learning and research.

The National Universities Commission (NUC) accreditation teams seriously frown at some libraries that are not able to subscribe to EIR databases in this modern knowledge-based society. Among the resources inspected by NUC in libraries is availability of EIR databases that meet the programmes of the university. They would want to see the librarians practically demonstrate to them that there are available online EIR databases subscribed to by the university in their e- library and not just computers connected to the internet. Lecturers and students all have laptops and their phones also connected to the internet. What they want is access to EIR databases.

This study, therefore, empirically examined the types of EIR database that are available, the nature and duration of subscription of EIR databases in the university libraries, the frequency of usage of EIR databases and the purposes for which these EIR databases are used by lecturers and postgraduate students in federal and state universities

in South – South Nigeria. To have empirical fore knowledge of what to expect on availability and utilization of EIR databases would, perhaps, better equip librarians in developing EIR databases in university libraries that will help in facilitating programmes of the university. It is against this background that this study is conceptualized and designed.

### **Statement of the Problem**

University libraries are institutions that are established to meet the information needs of students, lecturers, researchers and other categories of scholars. Advances in ICT have made it possible for libraries to provide electronic information database services to users. This development has placed libraries in most advantageous position that enables them to meet the information needs of lecturers and postgraduate students for teaching, learning and research work irrespective of their location. Libraries have used these electronic resource databases such as EbscoHost resources, journal storage (JSTOR), MIT open course ware etc as supplement to printed information resources needed for teaching, learning and research.

The issue in contention is how many federal and state university libraries in Nigeria are able to afford the subscription fees and continuity of this EIR databases in their libraries for lecturers and students to engage in teaching, learning and research. Some libraries claim to have e-library resources, some may just be computers connected to internet network with offline databases such as CD ROMs which are not up-to-date.

Another issue this study attempts to address is to articulate the fact that having computers connected to the internet does not mean that there are available EIR databases in the library. Universities in Nigeria are unequally funded, as some may receive more funds than the others and this might affect the availability of EIR databases in the university libraries.

The Tertiary Education Trust Fund (TETFUND) has made funds available for all government tertiary institutions in Nigeria to develop their institutions with modern facilities such as EIR databases. Several seminars and workshops have been organized by TETFUND for librarians in institutions on how to go about writing proposals, applying for funds and subscribing to e-databases in order to develop their e-library. The NUC has also subsidized the subscription of some EIR databases for libraries.

In addition to this, the NUC in collaboration with the Universities and the Committee of Vice Chancellors established Nigerian Research and Education Network for universities to form a consortium to subscribe to EIR databases to reduce cost to libraries. In addition to this, some international organizations such as The United Nations Educational, Scientific and Cultural Organization (UNESCO) and International Network for the Availability of Scientific Publications (INASP). With all these opportunities offered by these agencies to university libraries, it is expected that they should take advantage of them to develop their e-library collections with different types of EIR databases that meets the challenges of the objectives of the university and their programmes.



The issue now is, are federal and state university libraries in South-South Nigeria using these opportunities to make EIR databases available in their libraries? It is against this background that this study investigates the availability and utilization of electronic information resource (EIR) databases in federal and state university libraries in South-South Nigeria.

### **Purpose of the Study.**

The main purpose of the study is to determine the availability of EIR databases and their utilization by lecturers and postgraduate students in federal and state university libraries in South - South Nigeria. The specific objectives are to determine:

1. the types of EIR database available in the federal and state university libraries in the South- South, Nigeria.
2. the nature and duration of subscription of EIR databases in federal and state university libraries.
3. the types of EIR database being utilized by the lecturers.
4. the types of EIR database being utilized by the postgraduate students
5. the frequency of utilization of EIR databases by the lecturers in teaching and research.
6. the frequency of utilization of EIR databases by the postgraduate students in learning and research.

7. the purposes for which lecturers utilize the EIR databases.
8. the purposes for which postgraduate students utilize the EIR databases.

### **Significance of the Study**

This study revealed the nature and duration of subscription of available electronic information resource databases in the various university libraries as well as the frequencies of utilization of same by lecturers and postgraduate students. It adds to the research findings already made in the areas of EIR databases in libraries. Consequently, the study benefits the following; lecturers, all categories of students, librarians, library management staff, university management, NUC and TETFUND. Prior to this study, the various types, the nature and duration of subscription of available EIR databases were not known to the best of the researcher's knowledge. The findings of this study will show the various types, the nature and duration of subscription of the databases.

The findings will also help university librarians in developing or reviewing their library policies that will enhance the availability EIR databases. The findings of the study will create the awareness to librarian on those fee-based and free EIR databases that are available in other libraries, which are not available in their libraries.

The finding of this study will also create the awareness and accessibility of the various EIR databases in the universities to readers of this work in order for them to utilize these e-resources judiciously.

When the findings are kept in libraries it will be a resource material to those who are conducting research on availability and utilization of EIR databases in learning and research and to those who are organizing seminars, conferences and workshops on EIR databases.

The findings of this study will be useful to universities that are yet to begin postgraduate programmes for the university librarians to have knowledge of the types of EIR databases that should be made available to lecturers and postgraduate students.

The findings of this work will be useful to library management staff and university management of the various universities to know the frequency of usage of the fee-based EIR databases that they subscribed to, if lecturers and students are actually using them or not for their academic work.

The findings of this study will help NUC and TETFUND in reviewing their financial policies on acquisition of fee-based EIR databases and provide sufficient funds for subscription of more EIR databases in university libraries.

### **Scope of the Study.**

The study focused particularly on availability and utilization of EIR databases in federal and state university libraries in South – South Nigeria. It was restricted to university librarians, lecturers, masters and doctoral degree students who are registered users of the libraries. It was also limited to free and fee-based EIR databases such as Health Internetwork Access to Research Initiative (HINARI), Ebsco host resources, African Journals Online (AJOL),

Access to Global Online Research in Agriculture (AGORA), Sage Publication and other databases that were available in the university libraries. The reason why it was delimited to these EIR databases was because electronic information resource databases is a very broad term that includes a variety of different online and off-line databases.

The various types, nature and duration of subscription of EIR databases in federal and state university libraries were covered. The types being utilized and also the purposes for utilizing EIR databases by lecturers and postgraduate students' in federal and state university libraries in South - South Nigeria. As a result of this, the study was carried out among university librarians, lecturers and post graduate students in federal and state university libraries in South-South, Nigeria.

### **Research Questions**

The following research questions were formulated to guide the research:

1. What are the types of EIR database that are available in federal and state university libraries in South- South, Nigeria?
2. What are the nature and duration of subscription of EIR databases in federal and state university libraries in South- South, Nigeria?
3. What are the types of EIR database being utilized by lecturers in federal and state university libraries in South- South, Nigeria?

4. What are the types of EIR database being utilized by postgraduate students in federal and state university libraries in South- South, Nigeria?
5. How often do lecturers utilize the EIR databases in teaching and research in federal and state university libraries in South-South, Nigeria?
6. How often do postgraduate students utilize the EIR databases in learning and research in federal and state university libraries in South-South, Nigeria?
7. What are the purposes for which lecturers utilize the EIR databases in federal and state university libraries in South-South, Nigeria?
8. What are the purposes for which postgraduate students utilize the EIR databases in federal and state university libraries in South-South, Nigeria?

## **Hypotheses**

The study tested the following null hypotheses:

1. There is no significant difference between the proportions of federal and state university libraries that have EIR databases.
2. There is no significant difference between the proportions of lecturers in the federal and state universities that utilize the EIR databases.
3. There is no significant difference between the proportions of postgraduate students in the federal and state universities that utilize the EIR databases.

4. There is no significant difference between the percentage of lecturers in the federal and state universities that use the EIR databases for different purposes.
5. There is no significant difference between the percentage of postgraduate students in the federal and state universities that use the EIR databases for different purposes.

## **CHAPTER TWO**

### **REVIEW OF RELATED LITERATURE**

This chapter focused on review of related literature and it is discussed under the following sub-headings.

#### **Conceptual Framework**

Meaning and Nature of Electronic Information Resource Databases.

#### **Theoretical Framework**

Technology Acceptance Model (TAM).

#### **Theoretical Studies**

Types of EIR database in university libraries.

Availability of EIR database in university libraries.

Utilization of EIR databases in university libraries.

#### **Empirical Studies**

Availability of EIR databases in university libraries.

Studies on EIR databases utilization by lecturers and postgraduate students in universities.

Frequency of use of EIR databases by lecturers and postgraduate students in universities.

Purposes for which lecturers and postgraduate students utilize the EIR databases in universities.

#### **Summary of Literature Review**

##### **Conceptual Framework**

## **Meaning and Nature of Electronic Information Resource Databases**

The Dictionary for Library and Information Science (2004) defined electronic information resource databases as material consisting of data and/or computer program(s) encoded for reading and manipulation by a computer via the internet. The category includes electronic texts, bibliographic databases, institutional repositories, e-books, collections of e-journals, etc. There are electronic resources publicly available free of charge and some are fee based that requires licensing and authentication before users can access it.

Ohio State University Libraries (2014) did define electronic information resource databases as online information resources, including bibliographic databases, electronic reference books for full text collections, digital collections of data and data sets.

All Word .com English Dictionary (2014) further defined electronic information resource databases as information (usually a file) which can be stored in the form of electrical signals usually, but not necessarily, on a computer. It could be said that information available on the internet.

International Federation of Library Association (2014) defined electronic resource databases as materials that are computer controlled, including materials that require the use of a peripheral (e.g. a CD ROM player) attached to a computer; the item may or may not be used in the interactive mode. These resources could be inform of data (information in the form of numbers, letters, graphics, images, and sound, or a combination these) and



programs (instructions or routines for performing certain tasks including the processing of data and programs (e.g. online services, interactive multimedia).

Gerald and David (2003) viewed EIR databases as a technology such as CD ROM and online publication in various databases for processing and disseminating of information to a wide range of users. EIR databases refer to the digital processing and distribution of information via the use and manipulation of computers, electronic and telecommunication. It is one important resource which modern society utilizes in information dissemination at a stunningly rapid rate. One of the consequences of this is that information can be propagated to any location in the world with extreme rapidity, given the availability of appropriate infrastructure, in particular, infrastructure related to communications (Urua, 2004).

Technical Agriculture and Rural Co-operative (2003) said that EIR databases are technologies that facilitate communication, processing and transmission of information by electronic means that embraced a multitude of other simple communication devices. Electronic information resources carry the potential power of increasing the learning opportunities offered to students. In particular, the interactive and multimedia elements provided by the electronic medium can offer a great variety of learning experience than those offered by text on paper. Teaching materials in electronic form greatly enhance teaching possibilities, giving the students a greater variety of exercises and making courses much more lively and interactive.

Ogugua (2004) noted that electronic information resource databases are product of current advancements of computer and internet technology. It is the processing and communication of electronic information via interconnected network.

Ugboma (2005) described electronic resource databases as diverse, dynamic and around the clock information though in digital formats requiring navigational tools and diverse search strategies and platforms. There are also opportunities for hyperlinks to other resources and opportunities for new discoveries especially as materials are posted on the web daily and in large quantities. Electronic information resource databases include e-abstracting and indexing services, e-full text materials such as reference books, electronic journals, e-thesis, e-reports such as seminars, workshops and conferences that can be accessed via the computer connected to the internet , that are used by lecturers, students and researchers for their academic and other purposes (Swain & Panda, 2009).

Ekwelem, Okafor and Ukwoma (2009) said that EIR databases are those information resources that are available and can be accessed electronically through computer-networked facilities. These databases consist of electronic information resources such as the e-books, e-theses and e-journals that are available to teachers and students within and outside an academic community in order to effectively deliver information resources (Appleton, 2006). EIR databases is simply a set of activities which facilitate the process, transmission and display of information using modern electronic devices,

principally the computer, the internet and other devices such as the telephone and the television (Lee, 2004).

Free Dictionary (2013) defined electronic information resource databases as resources that can be accessed by computers via the internet. Wilson (2003) said it provides several supporting and supplementing resources for courses offered by students and can be visualized in content without facing many difficulties in understanding. Oyin (2014) stated that EIR databases is a new way of storing, processing and transmitting information through electronic and telecommunications systems such as the internet and the online data base systems.

A synthesis of definitions shows that EIR databases consist of online information resources such as the e-books, e-journals, e-dictionaries, e-reports, e-magazines and other e- resources that are used for teaching, learning and research. Some of these databases are Ebsco Host, Medline, Health Internetwork Access to Research Initiative (HINARI), The Essential Electronic Agricultural Library (TEEAL), Directory of Open Access Journals, MIT open course ware etc. There are several forms and types of electronic resource databases which are available on the internet, some of the popular ones that are gaining ground are the electronic journals, standards, technical specifications, reports, patents, full text articles, trade reports and hosts of other (Dhanavandan, Mohammed, Esmail & Nagarajan, 2012). They are either free based or fee based. These are materials that were in printed format, that are found in libraries, but have been transformed in to electronic format as a result of

modern ICT facilities such as the computers and the internet in order to be accessed anywhere by different users at the same time without geographical barriers, time and space.

### **Theoretical Framework.**

#### **Technology Acceptance Model (TAM).**

This study is based on Technology Acceptance Model (TAM). TAM was adapted by Davis from the theory of reasoned action (TRA) proposed by Fishbein and Ajzen (1975). Davis (1989) developed the Technology Acceptance Model (TAM) theory to explain and predict the adoption of information systems by users. TAM is particularly attractive for its parsimony and its good predictive performance in a variety of information systems adoption contexts, particularly in organizations, higher institutions, libraries and information centres and other working setting where information and communication technology facilities are made available for users to make use in order to improve their working performance. Davis (1989) proposed that perceived ease of use and perceived usefulness are two key factors influencing the intended use of information technology facilities, although the perceived ease of use often has an insignificant impact on the intended use by experienced users. However perceived usefulness can have a significant impact on the intended use of both inexperienced and experienced users (Bhattacharjee, 2001).

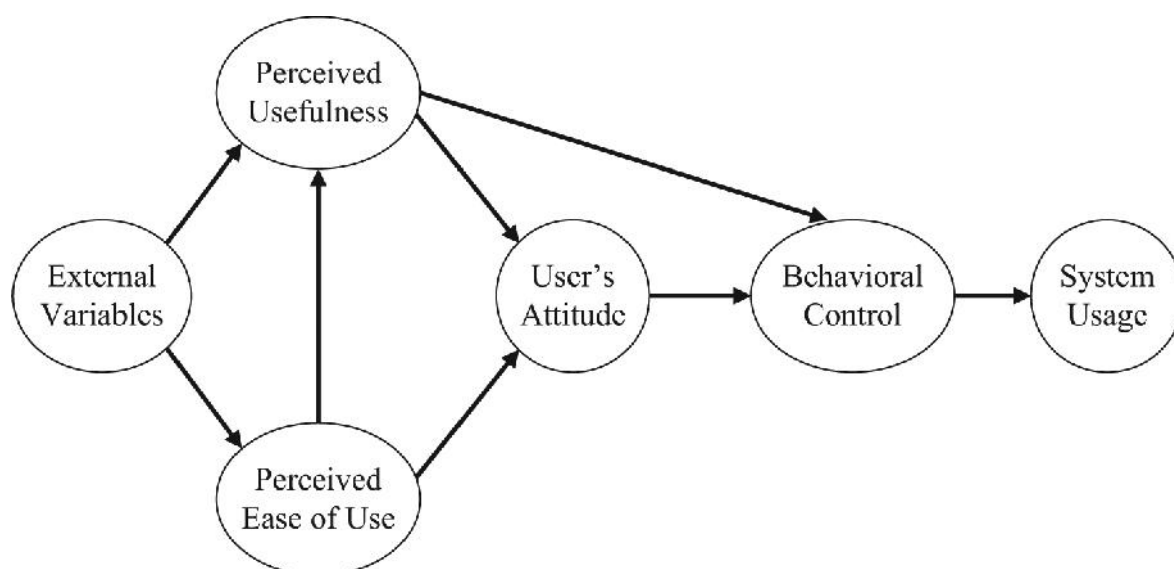
Perceived usefulness (the degree to which a person believes that using a particular system will enhance their job performance) exerts an influence on user perceived ease of

use (the degree to which a person believes that using a particular system will be free of effort). Technology Acceptance Model (TAM) is mainly about how people accept and use newly introduced technologies. Quite often, people think that introducing new technologies results in service acceptance and use. According to Louho, Kallioja and Oittinen (2006) Technology Acceptance Models (TAM) are used to explain how users will accept and use a specific technology.

Chang and Chang (2009) employed the theory of planned behaviour and the TAM to investigate the acceptance of library self-issue and return systems. Lai and Ulhas (2012) used TAM in understanding acceptance of dedicated e-textbook application for learning in Taiwanese University. Tella (2011) conducted a study on users acceptance of e-library from perspective of technology acceptance model. Wu, Lan and Lee (2013) incorporated the theory to determine the factors hindering acceptance of using cloud services in university. Aharony (2013) applied TAM in explaining librarians' attitude of mobile services. Letchumanan and Muniandy (2013) used TAM to investigate non-users' acceptance of e-books.

As noted, several studies have focused on the TAM within the library and information science arena. The current study would examine the TAM from a different point-of-view and will delve into librarians, lecturers and students perspectives towards the availability and usage of EIR databases in university libraries.

## Modification of TAM



Source: Davis *et al.* (1989)

### Figure 1 shows the modification of TAM

Technology Acceptance Model was modified in figure one to reflect variables or factors for predicting the availability and utilization of EIR databases in university libraries in Nigeria. Chang and Chang (2009) and Park (2009) included external variable of perceived usefulness and perceived ease of use toward EIR databases that can affect users' acceptance of EIR databases in university libraries. As proposed by TAM, there are several factors that affect the availability of technology, acceptance and use in libraries and by the way of modification some external variables were added (Tella, 2011), these are:

**Social Influence:** The degree to which an individual perceives the importance of using electronic information resource databases and services that are available in the library to meet their information needs (Venkatesh, Morris , Davis & Davis, 2003).

This variable was added because it is assumed that the social influence of users has a significant effect on their use of EIR databases in university libraries. When EIR databases are recommend to users by librarians, they may comply with librarians opinion and adopt the use of EIRs (Tella, 2011).

**Facilitating Conditions** are defined as the degree to which an individual believes that an organization and technical infrastructure exists to support use of the system (Venkatesh, Morris, Davis, & Davis 2003). These are provisions dedicated to supporting lecturers and students access to EIR databases in terms of computer hardware and software, high speed internet bandwidth, skilled digital librarians in the university libraries. EIR databases will not be used if it lacks the necessary facilitating condition that will influence users to lecturers and students to use it for teaching, learning and research work. According Sanchez, Hueros and Ordaz (2013) lack of technical support can be considered as an obstacle to effective use of EIR databases among lecturers and students. Technical support affects perceived ease of use of new technology.

Facilitating conditions have been found to have a positive impact on behavioral intention to use electronic information resources. Cheong, Park and Hwang (2004), Hung,

Chang and Yu (2006) and Zhou, Lu and Wang (2010) indicated that facilitating conditions are an important determinant of user acceptance of e-library services.

**Performance Expectancy** refers to the degree to which individuals believes that using the systems will help to improve his or her performance. Performance expectancy reflects the user's perception of performance improvement, such as convenience, fast response, and service effectiveness. (Venkatesh, Morris, Davis, & Davis, 2003). This study assumes that with the help of EIR databases lecturers and students will find information within and outside the university libraries, that can improve their work performance, and this will increase frequency of usage of these resources in the library.

**Relevance:** The degree to which something is closely connected with the subject of concern or the situation one is thinking about (Thong, Hong & Tam, 2004). Relevance was added because it is assumed that services must be appropriate before it can attract usage (Tella, 2011).

**Utilization.** This is degree to which one use the electronic information resource databases after the users have found out it usefulness. According to Ofu and Emiri (2012) users use these electronic information resource databases as a result of its time saving feature and its provision of relevant and up to date information for their teaching, learning and research work. The perceived usefulness of electronic information resource databases according to TAM could be determined by the lecturers and students skills and competencies which they needed in order to find EIR databases easy to use. Lecturers and students who favored



EIRs were likely to have well-developed ICT skills and to see ICT as an important tool for learning and instruction (Tella, Tella, Toyobo, Adika & Adeyinka , 2007).

**Accessibility.** Olusegun (2006) stated that accessibility is the extent to which the needed technology for electronic information resource databases are available for lecturers and students to use. Also, the ease and frequency of access to all the technology in the library needed for teaching, learning and research work.

**Computer /EIR Self Efficacy.** Tella (2011) define perceived computer / EIR databases self-efficacy as individuals' judgment of their capabilities in using a computer / EIR databases within various ICT contexts. Low confidence in the ability to use new EIR databases makes the individuals more prone to frustration in the face of obstacles, which in turn dampens expectations and their capacity to use new technologies. However, those with a higher estimation of their abilities persevere when faced with difficulties and are not easily put off by setbacks (Compeau & Higgins, 1995).

**Power Supply.** The degree to which there is no interruption in the use of EIR databases for teaching, learning and research among students and lecturers in University. Chiemeké and Ewiekpaefe (2011) stated that this can be achieved if government provides regular power supply as no university libraries can provide meaningful electronic information services or the traditional library services without adequate power supply. Also, Onyema (2011) observed that university libraries are faced with severe problems and hurdles in becoming a part of the global information system. This variable was added because it is

assumed that lecturers and students perceived ease of use of EIR databases can be influenced by power supply.

**Internet connection and Bandwidth:** This is similar to power supply, the degree to which there is no interruption of internet connection and the bandwidth (speed) subscribed by the university library is high enough to support the teaching, learning and research work in universities in Nigeria (Ofu & Emiri, 2012).

**Awareness.** The degree to which lecturers and students are aware of the various types of EIR databases and it can be accessible in any location within and outside the university (Nicholson, 2004).

**Subscription of EIR Databases.** The degree to which the university subscribe to electronic resource databases that are relevant to lecturers and students for teaching, learning and research in the libraries. It is assumed that this will influence the availability and utilization of EIR databases among users. Libraries need to renew the EIR databases when due in order to provide effective electronic information services to the university for teaching, learning and research work among scholars.

### **Theoretical Studies:**

Types of EIR Databases in Libraries.

In most developed and developing countries, libraries are increasingly using various types of EIR database to satisfy the information and research needs of their users. Offor (2006)

stated that with the advent of the internet there are numerous online databases and a lot more are yet to be made online. According to Khan and Haridasan (2009) EIR databases is a very broad term that includes a variety of different publishing models that cannot be exhausted, neither can all the types of electronic information resource database found in a library.

Naqvi (2012) stated that some of the types of information resource database in libraries as AGRIS, AGRICOLA, Agriculture and Natural Resource, Biotechnology, CAB Abstract, FSTA, Water Resource Abstract, Zoological Record and BIOSIS.

Uzuegbu, Chukwu and Ibegwam (2012) identified some e-resource databases to include ScienceDirect, ECONLIT, ERIC, LANTOOL, LEXIS, NEXIS and MEDLINE, while Aramide and Bolarinwa (2010) mention some e-resource databases, e.g., JSTOR, ERIC, e-bulletin and e-documents such as government publications, files and reports that are in electronic format.

The types of EIR databases listed by Msagati (2014) were Blackwell, Emerald, Wiley Science, Institute of Physics, Gale, ASABE, Cochrane and Springer. Sharma (2009) mentioned the following as types of electronic information resource database IEEE, Nature, Agora, Web of Science, ACM, Health Sciences Library System and UGC Info Net.

Offor (2006) identified some types of EIR that could be found in university libraries as Electronic Data Gathering Database, National Criminal Justice Reference Systems Cochrane Database of Systematic Review, Opposing Viewpoints Resource Center Data-

Planet Statistical Datasets, Oxford Companion to Australian History Education Research Complete, IPA Source, Journalism and Mass Communication Abstracts.

Kenyata (2008) listed some e-databases as Biodiversity Heritage Library, Biodiversity Heritage Library, Centers for Disease Control and Prevention, Geneva Foundation for Medical Education and Research, Informa Healthcare, QScience.com, Sciencedomain International Journals, SciTech Connect, Wildlife & Ecology Studies Worldwide and Wiley-Blackwell Open Access Backfiles as some of the types of resources that are available in their library.

Oyinola and Adekunle (2014) listed some types of online database in libraries as JSTOR, Oxford online journal, AJOL, DATAD and HINARI. Oyin (2014) mentioned some of the types of EIR database as Access to global Online Research in Agriculture (AGORA), Online Access to Research in the Environments (OARE), The Essential Electronic Agricultural Library (TEEAL), EBSCO Host Resources and Directory of Open Access Journals (DOAJ).

Nwosu, Okeke, and Ejedafiru (2013) further mentioned some various types of EIR databases that can be found in libraries as BIOMED CENTRAL, CANACADEMY and AGRICOLA.

### **Availability of EIR Databases in University Libraries.**

The availability of EIR databases in libraries has been significant in learning and research among lecturers and students in Universities. According to Search Data Centre (2014) in information technology, availability refers to a system or component that is continuously operational for a desirably long length of time. Hyper Dictionary (2009) defined availability as the quality of being at hand when needed.

There are large number of EIR databases that are available on the online, Hundies (2002) said that some of these databases to universities in developing nations' are accessible free of charge while some are fee-based , universities need to pay subscription fees in order for their libraries to have access to them. Some of these databases are quite expensive, despite this, some university libraries still strive to subscribe to few databases. Ani and Ahiauzu (2008) highlighted in their study that some federal university libraries in Nigeria have started subscribing to relevant electronic information resources databases like Obafemi Awolowo University, Ile Ife subscribed to more than 15 databases in order to boost their electronic information resources for teaching and learning in their Universities, while in the state university libraries it was relatively low. Okiy (2005) observed that that lack of sufficient funding were among the influencing factors for the low subscription of EIR databases in some libraries. As a result of this, libraries in developing countries like Nigeria opt for free online databases, such as the open access journals. These are free online journals that are made available to lecturers and students for their academic work. The

copy right owner usually the author allows the users to freely read, download, copy, print distribute, search, link to the full text of article (Kwan, 2003; Ricardo & Merce, 2004). Some of these online databases are subsidized by academic institutions, foundations, international organization or government information center. The World Health Organization (WHO) is one of such international agency that subsidized payment of online databases for research centers, hospitals, non-governmental organizations, colleges, universities and government ministries. They set up a programme comprising of HINARI, AGORA and OARE to provide developing countries with free or low cost access to academic and professional peer- reviewed content online (Research4life, 2012).

In Nigeria, the National University Commission (2010) reported that the commission subsidized the payment of 2 years subscription for online databases such as Ebsco host resources for Universities. In addition to this, TETFUND has also placed higher premium on the financial provision for e- resource databases in university libraries in Nigeria. The agency between 2011-2013 developed the NUC virtual library project which enables universities across Nigeria to have access to online databases that will enhance the use of e- resources in teaching and learning ( Na`iya, 2013).

Paines and Kwachi (2013) study shows that majority of the databases subscribed by the university were HINARI, JSTOR, OARE, AGORA, Ebsco host resources, TEEAL, DOAJ, MIT Open Course ware, Proquest, ScienceDirect and Elsevier

EIR databases in Kurukshetra University library, India. It was also discovered that majority of the resources were free and those subscribed to was 2- 3 years subscription.

Akinseye (2014) stated that many university libraries have subscribed 2- 3 years online databases for lecturers and students in order to have access to information and to updating their knowledge for the purposes of teaching, learning and research work.

In a study conducted by Antherjanam and Sheeja (2008) on the impact of ICT on library and Information Science: Major Shift and Practice in CUSAT Central Library. The study revealed that the CUSAT Central library subscribe to the following database: Elsevier Science, Taylor and Francis, Portland Press, Emerald, EBSCO, Oxford University Press, SpringerLinks, Chemical Abstract on CD and American Physical Society.

Mohsenzadeh and Isfandyari-Moghaddam (2009) carried out a study to determine the availability of electronic information in academic libraries in Kerman, Iran. Results showed that the level of application of electronic information databases in Kerman academic libraries was acceptable, but efforts should be made to improve their status to match with the ever-increasing demand for better library services at universities.

The availability of EIR databases in libraries are not seen as luxury, it is an opportunity open for university libraries in developing nations like Nigeria to bridge the knowledge gap and move toward a digital knowledge based society. Despite the efforts to provide EIR databases in universities, the internet connectivity that enable librarians render EIR database services to lecturers and students is slow. Chigbu and Dim (2012) affirmed

that the level of access and connectivity of internet is far below that of the developed countries. However they further mentioned that many universities and other institutions gain direct access to internet either through telecommunication or wireless network.

According to Rosenberg (2005) there is a new development in the provision of electronic resource databases in African university libraries, like in Nigerian. There have been negotiations with publishers, Budapest Open Access Initiative (BOAI) (2009) and other initiatives that electronic databases, should be made available for free or at subsidized price through programmes like Access to Global Online Research in Agriculture (AGORA), Health Internetwork Access to Research Initiative (HINARI) and Online Access to Research in the Environment (OARE) as well as training librarians and library users on how to use the electronic facilities available in their libraries. AGORA provides access to over 900 e-journals, HINARI provides over 3500 scientific publications, OARE has a current journal of 1,822.

In support of this, Nok (2006) stated that Kashim Ibrahim Library, Ahmadu Bello University Library, Zaria, have developed their electronic resource databases collection. The library has also acquired a substantial quantity of electronic resources on CD-ROM and has made significant efforts to secure online access to e- journals and other electronic resources. Through the sponsorship of an international organization, the library has EBSCO HOST, AGORA and AJOL, etc.



Another study conducted by Aliy and Nock (2010) in Ahmadu Bello University Libraries, Zaria revealed that HINARI, OARE, DOAJ and TEEAL have been added to the university libraries electronic information resource databases. Aina (2014) did a study on awareness, accessibility and use of electronic information in Babcock Business School, it was found out that SAGE, JSTOR, World Bank and National Virtual Library were among the EIR available in the University.

According to Kinengyere, Kiyingi and Bazirake (2012) and Fabumi (2014) most of the resources available in African universities like Nigeria are open access resources which are free to libraries in developing nations that have access to the web for teaching, learning and research work. The open access resources are made free courtesy of Directory of Open Access Journals (DOAJ) which includes 3,622 free quality controlled journals, covering all subjects and languages. There are few universities in developing nations that subscribe to fees databases in their libraries that can hardly meet up with the subscription fees or subscribe for more e-resources databases.

However, Ejemofor and Ohaji (2008) stated that for any university to have access to these free databases, Universities need to have a dedicated Internet Protocol (IP) address, register, pay subsidized rate subscription fees or for free as the case may be for some duration to databases publishers like JSTOR that has a subscription fees for 1-5 years with users name and pass words in order to have access to the resources for teaching, learning and research work.

Piotrowski, Perdue and Armstrong (2005) findings on scholarly EIR databases use in higher education, showed that library users were dissatisfied with the EIRs available because the library lack full-text articles. The majority of the scholarly databases relied on for researches were PsycINFO, JSTOR, Lexis-Nexis, ABI Inform, and Science Direct. Respondents noted that Current Contents, Social Sciences Citation Index, and IEEEEL databases were presently not available in university and that they would want these databases to be made available in the library.

Otokunefor and Kari (2008) said that the University of Port Harcourt library is registered with this EBSCO, AGORA and AJOL. The library has given members of the university the institutional usernames and passwords to enable them have access to full text journal articles. Users show a high acceptance of electronic resources and an unwillingness to return to print-only versions. A sharp contrast to this Nigerian situation is the experience of India where the National Information System of Science and Technology (NISSAT) promote metropolitan network in that country. With the assistance of NISSAT, there is a powerful Bombay Library Network (BONET) Data base (Ebijuwa, 2005).

Bashorun and Isah Abdulmumin (2011) conducted a study on users' perception of electronic resources in University of Ilorin, Nigeria. The study shows that full text databases: Emerald, ScienceDirect, Academic Search Premier, Ebscohost, TEEEL, OARE Sciences, Hinari, Virtual library (NUC) covering a variety of subjects, and major bibliographic databases like AGORA and MEDLARS were available for teaching, learning

and research work. A publication of Queen`s University (2013) revealed that the university library had 1750 e- databases resources. New Castle University On line Publication (2014) stated that their e- resources available for teaching, learning and research work were 450. It could be seen that in both universities there is a high level of availability of EIR databases in their library. Dadize (2014) study shows that in University of Methodist University College Ghana had thirty three e- databases resources and University of Ghana had eight five e- databases resources.

James (2014) carried out a study on availability of EIR databases in three higher institutions in South Africa. The result showed that University of Johannesburg had one hundred and sixty, Nelson Mandela Metropolitan University had forty and Cape Peninsula University of technology had one hundred e- database resources in their university e- library.

### **Utilization of EIR Databases by Lecturers and Postgraduate Students.**

Usage in librarianship is an implicit measure of the value of the library collections and services (Tenopir, 2009). How often the collection of the library resources are been used.

According to Davie (2012) in terms of ICT utilization it means the ratio of time a system is busy, that is been made use of.

Weingart and Anderson`s (2000) study observed that there were low usage of electronic databases in the early years 1995-2007, but there have been increase in

acceptance and utilization, especially amongst faculty members in more recent years in for their research work.

Dillon and Hahn (2002) also found that the faculty members comprising of students and staff utilize EIR databases at least once a month for their academic work. It was also shown that in the Colorado State University, faculty members used e-databases at least once a month in 2001 (Cochenour & Moothart, 2003). The various findings indicated that there were available electronic resource databases in the various university libraries that students and researchers used for their various activities.

Brady, McCord and Galbraith (2006) compared the rate of utilization between print and electronic databases in chemistry, engineering and physics in Owen Science and Engineering Library, at Washington State University for their learning and research work. They found that there was increase in electronic databases utilization in all the three disciplines used for the study, especially in physics. This high utilization of electronic databases among physicist was also reported by Vaughan (2003).

Nnadozie (2006) observed that lecturers and researchers in some universities in Nigeria were directing their search for information to electronic resources such as the e-journals for their research work.

Paines and Kwachi's (2013) study shows that majority of the students consult HINARI, JSTOR, OARE, AGORA, Ebsco host resources, TEEAL, DOAJ, MIT Open Course ware, Proquest, ScienceDirect and Elsevier EIRs databases in Kurukshetra

University library, India. They further suggested that libraries should not base their collections on open access resources. They should develop their e-resources more on fee based resources that are useful for teaching and learning in the university.

Fatoki (2004) found out that students consult the CD ROM for their research work because it contained the needed information resources useful for academic work. Adetimirin (2007) also found out that CD ROMs are among the highest EIR database facilities utilized among students in research work and seminar presentation in some universities in Nigeria. He further stated that the utilization of EIR databases in universities will facilitate scholarly work, as the world is a global village.

Gupta (2013) asserted that the utilization of this new method of learning and conducting research has brought in online learning, online teaching and online collaboration among students and lecturers. The increasing use of EIRs databases have begun to create relationship between their application, comparativeness and productivity within the academic communities. They found out in their study that electronic information resources such as the databases of AGORA, HINARI, OARE, Edinburgh University Press, Royal Society of Chemistry, Bio-one, Sage, Emerald, Nature, MIT Open Course Ware, JSTOR were accessible and highly used for research activities, teaching and learning among academic staff of Istanbul University, Turkey.

Kofi (2014) observed that there is an increase in the use Elsevier, EBSCO host resources, AGORA, Thomson, JSTOR, Scopus, Questia, Proquest, Emerald, DATAD

Science Direct and Springer Link, DOAJ, OARE, HINARI, TEEAL, Ebrary, AJOL and MIT Open Course Ware EIRs databases than print resources in teaching, learning and research work among academic staff in Universities in Ghana.

Adeyinka and Adam (2013) also found that lecturers using the Belle University of Technology library online databases consult more of Oxford online journal, Aluka publications, AJOL, DATAD, NUC Virtual Library, Elsevier, MEDline, Biomed central and CAB for research work. Gupta (2013) said that Universities in developing nations are relying on open access resources. They should build their collection by subscribing to other databases where lecturers and students can have wide range of EIR databases to consult for their academic activities. The reasons why open access resources are highly used is because universities have free access when connected to the web.

## **Empirical Studies**

### **Availability of EIR Databases in University Libraries.**

In a research conducted by Patra (2006) on introducing e-journal services among researchers in Kolkata in India. It was discovered that the library subscribed to e-journals database. The following fee based databases and numbers of titles of e-journals were available. Elsevier Science 399 titles, Springer 120 titles, American Institute of Physics 17 titles, Blackwell 55 titles, American Chemical Society 31 titles, John Wiley 31 titles Cambridge University Press 18 titles, Oxford University Press 28 titles, Royal Society of

Chemistry 22 titles and Engineering 19 titles. The findings showed that the institute library subscribed more to Elsevier Science than other publisher. It must be noted here that it is what the library subscribed to that they get. The e-journals that are relevant to the institution curricular is what they focused on.

Availability of electronic resources for service provision in university libraries in Ogun State, Nigeria, was conducted by Isiakpona and Goodluck (2012) the descriptive survey research design was used; the stratified random sampling was used to collect data from the study population which was a total of one 1038 academic staff and librarians from Federal University of Agriculture, Covenant, and Babcock universities. The instruments used to collect data were questionnaire and structured interview; the retrieved data was also analyzed through the use of frequency distributions and correlation analysis. The finding shows that 178 (43.0%) respondents indicated that EBSCOHOST was not available while 236 (57.0%) respondents indicated that it was available. 285 (68.8%) respondents indicated that HINARI was not available while 129 (31.2%) respondents indicated that it was available. A total of 255 (61.6%) respondents indicated that JSTOR was available while 159 (38.4%) respondents indicated that it was available while 347 (83.8%) respondents noted that the OARE database was not available and 67 (16.2%) respondents indicated that it was available. 315(76.1%) respondents indicated that MIT was not available while 99 (23.9%) respondents indicated that it was available. A total of 106 (25.6%) respondents indicated that AGORA was not available while 308 (74.4%)

respondents indicated that it was available. 230 (55.6%) respondents indicated that Science Direct was not available while 184 (44.4%) respondents indicated that it was available. As for the IEE database, 374(90.3%) respondents indicated that it was not available in their library while 40 (9.7%) respondents indicated that it was available. It was observed that AGORA was the most available followed by EBSCOHOST databases, while IEE was the least available database.

Teow and Zainab`s (2003) study on access to online databases at private colleges and Universities in Malaysia showed that out of the 26 Private Colleges and Universities, 15 out of the 26 Private Colleges and Universities provide access to online databases. Upadhyay and Chakraborty`s (2008) study on online journals and databases: a study of use and awareness among academics at main library, I.T., B.H.U shows that 43.75% respondent`s indicated average, 34.37% indicated good, 12.5% indicated excellent and 9.37% indicated fair on the issue of satisfaction, content, coverage and availability in the subject area.

Similarly, the study of Ugwu and Onyegiri (2013) confirmed that University of Nigeria Nsukka Library, subscribes to some online databases such as EBSCOHOST, OARE, AGORA and JSTOR. This is meant to support teaching and learning among lecturers and students in the University. It was noted that the study did not reveal the durations of subscriptions of these online databases.



A study conducted on awareness and use of online information resources by medical students at Delta State University Nigeria by Baro, Endouware and Ubogu (2011) revealed that Medline had 52 (23.2%) respondents, HINARI had 135 (60.3%) respondents, CINAHL had 45 (20.1%), NUC virtual Library had 81 (36.2%) respondents and Ebsco host resources had 128 (57.1%) respondents agreed that these databases are available in the library. From this study it could be said that there are databases in the library. According to Aliyu and Nock (2013) findings revealed that majority of the academic staff 275 (20.74%) and 858 (20.32%) postgraduate students accepted that Agora and Hinari were available in the library. Ebsco host resources recorded 240 (19.38%) of academic staff and 799 (18.94%) of postgraduate students that accepted the availability of this database in the library. The availability of these electronic resources could be attributed to the current trends in information packaging and dissemination especially in the field of science, coupled with the fact that internet and other forms of electronic resources are being made available in the university, for teaching, learning and research (Knight, 2013).

Bamigboye and Agboola (2011) conducted a study on the availability and accessibility of internet facilities in Nigerian university libraries: a case study of two federal Universities in south west Nigeria. Among the objectives of the study was to assess the availability of Internet and other EIRs facilities in the university libraries. The survey research was adopted for the study. A questionnaire was used in collecting data from 300 respondents who were randomly selected from two federal universities in southwest

Nigeria, the University of Ibadan and the University of Lagos. These comprise academic staff, non-teaching staff, and students. The data collected for the study were analyzed using simple percentages. The findings revealed that more than 80 percent indicated those online databases are available in their library. 60% indicated that the online databases are available on the online and it can be accessed anywhere. There are lots of EIR databases available, this study did not list the types of EIRs in the two Federal universities used.

Swain and Panda (2009) studied the use of electronic resources in Business School Libraries, a study of librarians' opinion. It was found that 5 respondents (11.36%) accepted the availability of EBSCO and 9 (20.45%) accepted the availability of online database in library. On the types of availability of EIRs in their libraries 16 librarians agreed that, their library had Internet based e-resources such as the e- books, e –reports and e-journals while 9 librarians agreed that CD-ROM resources were available in their library.

Abdelrahman (2009) examined the state of EIR implementation and training at the University of Khartoum Library System (UKLIS) Sudan. The findings showed that there were 2000 peer reviewed journals and more than 15000 e-books down loaded online and made available to users. The collection of e-journals and e-books services are made available by a number of international initiatives, such as (Access to Global Online Research in Agriculture), HINARI (Health Inter Network Access to Research Initiative) and OARE (Online Access to Research In the Environment).

Aramide and Bolarinwa (2010) reported on the availability and use of audiovisual and electronic resources by distance learning students in Nigerian Universities: A case study of National Open University of Nigeria (NOUN), Ibadan Study Centre. The survey research was used. A total of 137 respondents were used for the study across departments. 4 (18.2%) respondents from the school of Business and Human Resources, 25 (45.5%) respondents in School of Education and 25 (58.1%) respondents in School of Science and technology accepted that there are available electronic information resources such JSTOR and ERIC (Education database) in the institution. It must be noted there that JSTOR and ERIC are fee based databases, the library pay to access these databases but the findings did not reveal the duration of subscription of the databases.

### **Utilization of EIR Databases by Lecturers and Postgraduate Students in Universities**

A review of relevant literature shows that studies have been carried out in developed and developing countries on usage of electronic information resource databases in learning and research by lecturers, students and research scholars in universities and research institutions.

Naqvi (2012) conducted a study on use of electronic databases by postgraduate students and research scholars at GBPUAT Library, India. Among the objectives of the study was to determine the types of database information resources used by postgraduate students and research scholars. The questionnaire was used in gathering data for the study.

143 (57.2%) students and 137 (54.8%) research scholars returned and found usable for the study. The findings of the study showed that AGRIS was the most frequently used e-database by 42.86% of the postgraduate students, followed by CAB abstract (33.33%), Agriculture and natural resources (30.16%) and AGRICOLA (23.81%) respectively. Whereas, AGRICOLA, CAB abstract, AGRIS, and Agriculture and Natural Resources were the frequently used e-databases by 41.27%, 26.98%, 25.40%, and 22.22% of the postgraduate students respectively.

Similarly, AGRIS was the most frequently used e-database by the highest 62.22% of the research scholars, followed by CAB abstract (57.78%), AGRICOLA (51.11%), agriculture & natural resources (35.56%), and BIOSIS (28.89%) respectively. This was also evident from the table that CAB Abstract, Biotechnology and AGRICOLA were the frequently used e-databases by 37.78%, 33.33% and 28.89% of the research scholars respectively. Only 26.67% by the research scholars used water resource abstract somewhat frequently.

In the same vein Upadhyay and Chakraborty's (2008) study on online journals and databases: a study of use and awareness among academics at the main library, I.T., B.H.U showed that Science Direct (50%) is the most used and useful online journal for engineering field researchers and faculty members. IEL online (28.12%), Springer link (15.62%), Taylor and Francis (12.5%), ASCE and ASME (9.37%), Royal Society of

Chemistry (6.25%) and Science (6.25%) are the other journals which are mostly used and useful for respondents.

In another study conducted by Kwafoa, Imoro, and Afful-Arthur (2014) on assessment of the use of electronic resources among administrators and faculty in the University of Cape Coast Among the objectives of the study is to determine the faculty's usage of electronic resource databases for their academic work. One hundred questionnaire was found useful for the study. The statistical package for the social sciences (SPSS) software version 16 was used to analyse the data collected into frequencies and percentages. The findings showed that the most used electronic information databases is Emerald (24 responses) followed by Ebsco Host (23 responses).

Kaur and Verma (2009) conducted a study on use and impact of electronic journals in the Indian Institute of Technology, Delhi, India. The paper aimed at describing the use of electronic information resources databases and services provided at the central library of Indian Institute of Technology, Delhi. The paper focus was to know who are those that utilize the electronic information resources, how often they use the resources and the place where they access the resources. Also, the users were asked to give their preferences between an electronic and print journal format in libraries. The questionnaire method was used for collecting data from the users (i.e. undergraduate, postgraduate, research scholar and faculty members). 997 questionnaire were distributed and 825 were

returned, the questionnaire was distributed as follows: undergraduates 439 were distributed, 379 was received, postgraduates 306 were distributed 255 was received, research scholars 183 were distributed, 133 was received, faculty 69 were distributed, 58 was received. The data were analyzed by percentages. The findings shows that undergraduates 72 (33.03%), postgraduates 148 (80.43) research scholars 127 (98.45), faculty 58 (100.0) were aware of the EIR in the library and they also use it. In the same study it was also discovered that down load usage of full text from the following databases were 113,013 IEE/IEL online, Elsevier Science Direct had 317,635, Capitaline 2,3332,390. It shows that Capitaline database was heavily used than other database in the library.

Uzuegbu, Chukwu and Ibegwam (2012) stated that National Universities Commission in May 18, 2010, sent a usage report of the NUC Virtual Library and Ebsco host for the period between January 2009 – February 2010 to the Vice Chancellor of Michael Oporika University of Agriculture, Umudike. The report has the login statistic as 0.04%, with a search count of 0.70% and a total usage record of 0.05%. Relatively, the internal usage record of the Digital Library reveals that student and staff hardly consult any of the databases.

Fagbami (2005) did a study on an evaluation of use by scientists of communication media in tree crops research information transfer in Nigeria: a case study of Cocoa Research Institute of Nigeria (CRIN). The population for the study was 59 CRIN scientists. Data was collected through the use of questionnaire. The findings shows that AGORA

usage had 11 (8.09%) respondents and CAB (Agriculture database) had 13 (9.56%) respondents accepted using it.

Okorie (2010) conducted a research on utilization of electronic information services: a case study at the University of Agriculture Library, Abeokuta. Among the objectives of the study was to identify the types of EIR database used among students. A survey design was adopted for the study. A total number of 800 questionnaires were administered by the researcher to library users at the University of Agriculture, Abeokuta. The findings showed that 300 (40.15%) respondents use TEEAL, 250 (38.46%) respondents use MEDLINE, 8 (1.23%) respondents use CAB Abstract, 4 (0.61%) respondents use Agricola and 24 (4.30%) respondents use GLAS. The Essential Electronic Agricultural Library (TEEAL) and MEDLINE are the most widely used electronic database by library users.

In the same vein, Baro, Endouware and Ubogu (2011) awareness and use of online information resources by medical students at Delta State University Nigeria. It was revealed that 38 (17%) respondents agreed that they use Medline, 87 (38.8%) respondents agreed that they use HINARI, 45 (20.1%) respondents agreed that they use CINAHL, 81 (36.2%) respondents agreed that they use NUC virtual Library and 128 (57.1%) respondents agreed that they use Ebsco host resources.

Aliyu and Nock (2010) carried out a study on utilization of databases among staff and students. The major finding shows that 285 (100%) staff and 998 (100) students used

HINARI, 270 (94.74%) staff and 948 (95%) used JSTOR, 428 (42.88%) staff and 498 (46.58%) students used PROTA, 285 (100%) staff and 998 (100%) students used OARE, 285 (100%) staff and 998 (100%) students used AGORA, 285 (100%) staff and 998 (100%) students used Ebsco host resources and 231 (74.73%) staff and 705 (70.64%) students used DOAJ. The least used database was PROTA, the reason was that the awareness was not much.

### **Frequency of Use of EIR Databases by Lecturers and Postgraduate Students in Universities**

In a study conducted by Sharma (2009) on the use and impact of e-resources at Guru Gobind Singh Indraprastha University (India): a case study. Among the objectives of the study was to determine the different types of electronic resource database used by teachers and research scholars, 100 questionnaire was used in collecting information from respondents and 82 was found useful. The study showed that majority of the teachers use Science Direct, Springer Link and Wikipedia often, i.e. 24 (46.51%), 20 (38.61%) and 18 (34.61%) respectively, whereas 18 (60%) research scholars use Science Direct often and 16 (53.33%) use Springer Link often. Use of IEEE is not frequent among respondents; it may be due to access being restricted to five users at GGSIPU. 12 (23.07%) teachers and 6 (20%) research scholars sometimes use Nature Bundle. 14 (26.92%) teachers and 5 (16.66%) researchers use Emerald Xtra sometimes. 21 (40.38%) teachers and 8 (26.66%)



research scholars use UGC InfoNet sometimes whereas 20% of respondents are unfamiliar with ACM which is shocking in a technical university.

Students' e-information seeking behaviour at KSCE, Kiiit University, India, was conducted by Swain and Panda (2013) in this study among the aims of the researchers was to investigate the frequency of usage of electronic information resource databases among the students. The study revealed that 61 (70.11%) accepted using it daily, 12 (13.79%) accepted using weekly, 6(6.9%) accepted using it fortnightly, 5 (5.75%) accepted using it once a month and 3 (3.45%) accepted using it rarely.

In a study conducted by Manda (2005) on electronic resources usage in academic and research institutions in Tanzania, it was revealed that the frequency of use of the various databases were as follows: Ebsco host had one respondents, Blackwell had four respondents and AJOL had seven respondents that accepted using it daily. Emerald had four respondents, OUP had four respondents and AJOL had six respondents that accepted using it three times per week. OUP had four respondents, Ebsco host had five respondents, Blackwell had six respondents and AJOL had six respondents that accepted using it once per week. OUP had eight respondents, Emerald had four respondents and Blackwell had three respondents that accepted using these databases once per month.

Zainab, Huzaimah and Ang (2006) in their study found out that ninety respondents who answered the question of frequency of use were heavy users of electronic journals, majority of the users 39 (43%) access it weekly, those who access it daily had 15 (17%)

respondents and monthly 12 (13%) respondents. It was shown that faculty members tend to use the e-databases more frequently.

Khan and Ahmed (2009) study also revealed the use of e-databases by research scholars at Aligarh Muslim University and Banaras Hindu University as follows 55.69 % of researchers at Aligarh Muslim University and 47.84% at Banaras Hindu University use e-journals daily, while 20.33% of researchers of Aligarh Muslim University and 26.72 % of Banaras Hindu University use e-journals 2-3 times in a week. 18.70% researchers in Aligarh Muslim University and 20.69% Banaras Hindu University researchers use e-journals on a weekly basis. Only a small number 5.28 % at Aligarh Muslim University and 4.75% at Banaras Hindu University use them occasionally, i.e. less often than once a week. This study did not reveal the frequency of use of the various types of EIRs. It only revealed the use of EIRs generally.

Kaur and Verma (2009) conducted a study on use and impact of electronic journals in the Indian Institute of Technology, Delhi, India. On extent of EIR databases usage out of 825 respondents, 232 (28.12 %) did not answer the question. 11 undergraduates (5.64 %) use EIR databases daily, 30 (15.38 %) 2/3 times a week, 28 (14.36 %) once a week, and 126 (64.62 %) occasionally. Thus, the maximum number of undergraduates used EIR databases occasionally. Similarly, 41 (19.34 %) postgraduates used EIR databases daily, 83 (39.15 %) 2/3 times a week 31 (14.62 %) once a week and 57 (26.89 %) occasionally. The results show that maximum number of postgraduates used EIR databases 2/3 times a

week. Further, as many as 41 (31.78 %) research scholars used EIR databases daily 38 (29.46 %) 2/3 times a week, 15 (11.63 %) once a week and 35 (27.13 %) occasionally. Lastly, as many as 4 (7.02 %) faculty members used EIR databases daily, 46 (80.70 %) 2/3 times a week, and 7 (12.18% ) once a week.

In a similar study conducted by Swain and Panda (2009) on access and use of electronic resources in business school libraries, a study of librarians' opinion. The findings showed the frequency of utilization of EIR databases in daily, 2-3 times a week, monthly and no usage. Faculty members 13 (52%), 5 (20%), 1 (4%), 6 (24%), Lecturers 11 (44%), 6 (24%), 8 (32%) and Students 15 (60%), 3 (62%), 1 (4%), 6 (24%) respectively in business school libraries. It was observed that lecturers frequency of utilization starts from monthly. None of them accepted accessing and utilizing the EIRs daily and weekly for learning and research work.

Oduwale and Oyewumi (2010) conducted a study on accessibility and use of web-based electronic resources by physicians in a psychiatric institution in Nigeria by psychiatric medical doctors, which includes consultants and resident doctors the population was twenty eight. The questionnaire was used in gathering information. It was revealed that majority of the respondents used the Medline and Fronter e-resource databases once a week and twice a week.

Among the objectives of the study of Ekwelem, Okafor and Ukwoma (2009) was to determine the frequency of EIR databases usage among students in university of Nigeria

Nsukka. The findings showed that 136 (25.5%) respondents use it very often, 168 (31.5%) respondents use it often, 170 (31.8%) respondents use it sometimes and 60 (11.2%) respondents use it not very often. This shows that majority of the respondents used the EIR databases often.

Online journals and databases: a study of use and awareness among academics at main library, I.T., B.H.U was conducted by Upadhyay and Chakraborty (2008) the study showed that only 21.87% respondents' access online journals and databases every day, 25% access 2-3 times a week, 31.25% once a week and 21.87% indicated occasionally.

Omotayo (2010) reported on access, use, and attitudes of academics toward electronic journals: a case study of Obafemi Awolowo University, Ile-Ife. The frequency of use showed that 22 (8.98%) of the respondents use the e-journal daily, 67 (37.35%) of the respondents use the weekly, 102 (41.63%) of the respondents use the e-journal monthly, 34 (13.88%) of the respondents use the e-journal bi-monthly, 20 (8.16%) of the respondents use the e-journal occasionally.

Shukla and Mishra (2011) conducted a study on use of electronic information resources by research scholars in Institute of Technology, Banaras Hindu University, India. Among the aims of the study was to find out the frequency of usage of EIR databases among the scholars. The finding shows that 38 (76%) respondent accepted using it daily, 11 (22%) respondent accepted using it 2-3 weekly and 01(0.2%) respondent accepted using it monthly. Similarly Malemia (2014) conducted a study on the use of electronic journal

articles by academics at Mzuzu University, Malawi. One hundred and six four staff was used for the study and the instrument used for data collection was the questionnaire. The study shows that majority of the staff use the EIR databases daily, twice a week, once a month.

Ekenna and Mabawonku (2013) conducted a study on information retrieval skills and use of library electronic resources by university undergraduates in Nigeria. The finding on frequency of usage of electronic resources were as follows e-journals 92 (3.7%) respondents accepted using it daily, 111 (4.5%) respondents accepted using it twice a week, 132 (5.3%) respondents accepted using it once a week, 264 (10.7%) respondents accepted using it twice a month, 251 (10.2%) respondents accepted using it once a month, 712 (28.8%) respondents accepted using it occasionally and 907 (36.7%) respondents accepted using it never used. The frequency of e- books were as follows 156 (6.3%) respondents accepted using it daily, 102 (4.1%) respondents accepted using it twice a week, 103 (4.2%) respondents accepted using it twice a month, 144 (5.8%) respondents accepted using it once a month, 252 (10.2%) respondents accepted using it once a month, 751 (30.4%) respondents accepted using it occasionally and 961 (38.9%) respondents accepted that they never used it. It could be seen from the finding that there are more respondents accepted that they use the e-journal and e-books occasionally and those that accepted that they have never used these e-resources where higher.

## **Purposes for which Lecturers and Postgraduate Students Utilize the EIR Databases in Universities**

Previous work showed that there are various purposes in which lecturers and postgraduate students utilize electronic information resources in universities.

Hwitson (2002) did a research on use and awareness of electronic information services by academic staff at Leeds Metropolitan University, UK. It was revealed that 84% of the respondents use the EIR databases for keeping up to date in their subject area. 76% respondents use it to obtain full text for their research work and 82% use it for teaching preparation.

Ndinoshiho (2010) conducted a study on the use of electronic information services by undergraduate nursing students at the University of Namibia's Northern Campus. The study used a descriptive survey design. The questionnaire was used in eliciting information from nursing students at the Main Campus of the University of Namibia in Windhoek. Out of 163 questionnaires distributed, a total of 132 were completed, representing a good response rate of 81 percent. The data collected were analysed using SPSS version 15.0 for Windows 2006. The finding revealed that the EIR databases were used predominantly for educational purposes. Majority of the respondents 87.3% indicated that they used it for class assignments, while 54.2% reported that they used it to read newspapers, and 28.8% said they used it for other purposes. 10.1% used it for administrative purposes and 83.3% use the e-database to find information for class assignment.

Manda (2005) studied the electronic resources usage in academic and research institutions in Tanzania. Among the objective of the study was to find out the purposes of using EIR databases. It was revealed that 2 undergraduates, 13 graduates and 18 lecturers accepted using it for literature search. One graduate and 17 lecturers accepted that they used it as teaching/lecturing material. Three undergraduates and 15 graduates accepted that they use it for assignment.

Zainab, Huzaimah and Ang (2006) conducted a study on the use of e-journal using 330 registered student of University of Malaya, the result showed that 30(27.3%) respondents search for new information, access to full text article had 26 (23.6%) respondents, reading of abstract had 20 (18.2%) respondents and checking for bibliography citation had 8 (7.3%) respondents. Romero-Otero, Iglesias-Fernández and Giménez-Toledo (2013) conducted a study on Use, acceptance and expectations for the e-book in a research library. 62 academic researchers were used for the study. The online questionnaire was used in gathering information. The finding shows that majority of the academic researchers' use the e-resources for research work, writing of articles and for lecture preparation.

Shukla and Mishra (2011) studied the use of electronic information resources by research scholars in Institute of Technology, Banaras Hindu University, India. Among the aims of the study was to find out the purposes of usage of EIR databases among the scholars. The study showed that 44 (88%) of the scholars accepted that they use it for research, 19 (38%) of the scholars accepted that they use it for publishing articles, 15

(30%) of the scholars accepted that they use it for searching for relevant information and 11 (22%) of the scholars accepted that they use it for updating their knowledge.

Adeniran (2013) conducted a research on usage of electronic resources by undergraduates at the Redeemer's University, Nigeria. Among the objective of the study was to determine the purposes of usage of electronic resources by students. The survey research method was adopted for this study, the questionnaire was used in gathering data from 256 respondent. The result for the purposes for which they use the EIR databases showed that 147 (12.8%) indicated that they used them for current awareness purpose. 232 (20.3%) agreed they used them to acquire information, 250 (21.8%) indicated that they used electronic resources for assignment and 140 (12.2%) of them indicated that they used electronic resources for acquisition of knowledge.

A study conducted by Ojo (2014) on awareness and use of electronic information resources in Pan African University. The study revealed that majority of the postgraduate students use the EIR databases for group discussion, conferences, for recreation and leisure, sharing of knowledge through social net working sites and writing of their theses work.

Ekwelem, Ukoma and Okafor (2009) research on students' utilization of electronic information sources at the University of Nigeria, Nsukka. The survey approach was used for this study with data being collected through a questionnaire. 600 questionnaire were distributed but 568 was found useful. Questions on purposes usage of EIR databases were



among the question asked in the questionnaire. It revealed that class assignment had 162 (28.5%), newsgroup had 24 (4.2%) general information 279 (38.5%), e-conferencing 6 (1.3%), e-learning 44 (9.2%) this show that very few used EIR databases for the purpose of e-conferencing.

Ogunyade and Oyibo (2003) studied the use of CD-ROM MEDLINE by Medical Students of the College of Medicine, University of Lagos, Nigeria. The Medical Library of the College of Medicine, University of Lagos, was used for the study. 340 questionnaires were administered and 250 were duly completed. The result showed that students used MEDLINE on CD-ROM for preparing for examination had 22%, personal interest had 20%, research had 24%, patient care had 6% and preparation of assignments or clinical cases had 26%.

Sangowusi (2003) conducted a study patterning the problems of accessing scholarly publications by Nigerian scientists: a study of the University of Ibadan. The study aimed at investigating the impact of EIR databases on scholarly publication of scientists in Nigerian universities. The descriptive type of study was used and the random sampling was used in choosing the sample size 200. The instrument for data collection was the questionnaire. 128 were returned and all were found usable. The findings shows that 121 (94.5%) respondents accepted that the EIR databases increase their communication pattern. 122 (95.3%) respondents accepted that it improved their quality of work. 125 (97.7%) respondents accepted that it widened their scholarly publications. 106 (82.85%)

accepted that it produced more work in less time 124 (96.8%) respondents accepted that it made it easier to find relevant information.

Sansnee and Wallin (2002) conducted a study on use of formal and informal methods to gain information among faculty at an Australian regional university. The result of the study showed that faculty members use the e- resources databases in preparing for seminars, e-conference, writing of books and scholarly Web sites publications.

Damilola (2013) researched on Use of Electronic Resources by Distance Students in Nigeria: The Case of the National Open University, Lagos and Ibadan Study Centers. Among the objective of the study was to find out the purposes which respondents used the EIR databases for. The study adopted the survey method and the use of self-designed questionnaire in gathering information from respondents. The finding shows that majority of the respondents 76 (30.4%) in the two study centers make use of the available electronic information resources mostly for knowledge acquisition and learning purposes. This was followed by information exchange which constituted 73 (29.2%) of the respondents. 16 (6.4%) respondents utilize these electronic information resources for thesis/dissertation write up. The findings revealed that the most significant use of electronic information resources by the distance learners in both the Lagos and Ibadan study centers of the National Open University was for knowledge acquisition and learning purposes as well as information exchange

## **Summary of Literature Review**

The study is based on Technology Acceptance Model (TAM) by Davis (1989). It was developed to explain and predict the adoption of ICT by users in higher institutions, libraries, organizations and other working environment where ICT are used to achieve a meaningful output. The theory proposed that perceived ease of use and perceived usefulness are the two key factors influencing the intended use of ICT facilities. This theory was modified to include some factors for predicting the availability and utilization of EIR databases in university libraries in Nigeria. Some of these factors are social influence, facilitating conditions, availability, utilization, accessibility, subscription to databases, gender, poor supply and others.

The review also showed that various studies have been conducted on availability of electronic information resource databases in some universities in the developed and developing countries like United States, United Kingdom, India, Ghana, Nigeria, Tanzania and South Africa. It was made known that some of the university libraries in these countries subscribe to fee based databases while some in developing nations in Africa are being sponsored by international organizations. It is also imperative to note that faculty members comprising of lecturers, students and staff use these EIR databases for their day to day academic activities.

The empirical studies in some universities in South Africa, India and United Kingdom showed that there are great shift towards the acquisition of EIR databases in libraries and

this has resulted to high usage of these resources by lecturers and students in Universities. Studies reviewed also showed that EIR databases are used for different purposes such as gathering information for publication, writing assignment/ term papers, teaching and research work. Studies also showed that there are preferences in the use of electronic information resources among lecturers and students using it.

The speed at which EIR databases are made available and utilized in teaching, learning and research work among students and lecturers in universities in Indian was quite impressive. While in Nigeria, few empirical studies attempted to explain the availability and utilization of EIR databases in some university libraries. There is a knowledge gap on the present situation of availability and utilization of electronic information resource databases in federal and state university libraries in South-South, Nigeria. Therefore, an understanding of the availability and utilization of electronic information resource databases in federal and state university libraries in South-South, Nigeria will enable university management, library committee, university librarians and other stakeholders to provide different types of EIR databases that are relevant to the university programme.

To the best of the researchers' knowledge there are no available comprehensive research reports conducted in this area of availability and utilization of EIR databases by lecturers and postgraduate students in university libraries in South-South, Nigeria. This is the gap the study is set out to fill and add to the existing knowledge.

## **CHAPTER THREE**

### **METHOD**

This chapter discusses the methods that were used for the study. Specifically, the following sub topics were discussed: research design, area of the study, population of the study, sample and sampling techniques, instrument for data collection, validation of the instrument, reliability of the instrument, method of data collection and method of data analysis.

#### **Research Design**

The descriptive survey research was employed for this study. According to Egbule and Okobia (2001) this design is very valuable and advantageous because it has a wide range of scope, a great deal of information as well as representative sample which permits inference and generalizations of the entire population. It sought to find out facts concerning existing phenomena with respect to one or more variables. It also provides appropriate methodology for human behavior, perception and opinion. This design seems appropriate for the study to collect data on responses on availability and utilization of EIR databases among lecturers and postgraduate students in federal and state university libraries in South -South Nigeria.

### **Area of the Study**

This study was carried out in federal and state university libraries in South-South Nigeria. South – South Nigeria consists of Akwa Ibom, Bayelsa, Delta, Cross River, Edo, and Rivers States. South-South Nigeria is an oil rich region with a population of 21,014,655 (National Population Census, 2007). It covers an area of 70,000 square kilometers and is noted for its sandy coastal ridge barriers, mangroves, fresh water, permanent and seasonal swamp forest as well as low land rain forest.

### **Population of the Study**

The population of this study was 2,350 (See Appendix A, p141) made up of 7 university librarians, 1,421 lecturers, 922 postgraduate students. Out of the lecturers (1,421), 1,005 were from federal universities and 416 from state universities, while out of the 922 postgraduate students, 582 were from federal universities and 340 were from state universities (See Appendix B, p 142).

The study covered libraries in all the universities in South-South Nigeria that offered postgraduate programmes. These university libraries were Ambrose Alli University, Ekpoma, Delta State University, Abraka; University of Benin, Benin City; Rivers State University of Science and Technology; University of Port-Harcourt, Port-Harcourt; University of Calabar, Calabar and University of Uyo, Uyo. Niger Delta University, Wilberforce Island; Akwa Ibom State University of Science and technology, Ikot Ekpene;

Federal University of Petroleum Resources, Effurun and Cross River State University of Technology, Ekpo Abasi were yet to offer postgraduate programmes. Their libraries were not included in the study. There were three categories of respondents that formed the population. These were the university librarians; the registered lecturers and postgraduate students that used their various university library facilities in the four (4) federal and three (3) state university libraries in South - South Nigeria, these people constituted the population for the study. All the seven (7) university librarians were used.

The registered lecturers were one thousand four hundred and twenty one (1,421) (See Appendix B, p142) taken from the registers of the various university libraries in the four (4) federal and three (3) state university libraries. The registered postgraduate students of these university libraries were nine hundred and twenty two (922) ( See Appendix B, p142) taken from the library registers of the various University libraries in the four (4) federal and three (3) state university libraries, 2011/2012 session.

### **Sample and Sampling Techniques**

The research covered the whole population of 2350 respondents (See Appendix A, p141), consisting of university librarians, lecturers, postgraduate students that used the library facilities in the universities. This is in order to have adequate representation of the views of the entire members of the population. Other reasons and conditions given where the entire population can be used in a study include when there is enough time to conduct the study

and when the sole objective of the study is to provide accurate account of the population (Egbule & Okobia, 2001).

### **Instrument for Data Collection**

Data collection was done through the use of structured questionnaires in a checklist format. There were two sets of questionnaires. The first set of questionnaire was administered to the university librarians to determine the types, nature and duration of subscription of EIR databases in their libraries (See Appendix C, p143). The second set of questionnaire was administered on lecturers and postgraduate students who were registered library users, to determine the extent of utilization of electronic information resources in their university libraries (See Appendix D, p146). The questionnaire for the librarians was titled: Availability of Electronic Information Resource Databases (AEIRDs) and that of the lecturers and postgraduate students was titled: Utilization of Electronic Information Resource Databases (UEIRDs).

The university librarian's questionnaire was divided into three sections and the questionnaire for lecturers and postgraduate students was divided into four sections.

Questionnaire for university librarians (See Appendix C, p143)

Section A: This consists of the background information of respondents.



Section B: focused on the types of EIR database available. Thirteen various types of EIR database were listed, librarians were requested to tick the types of EIR database and other databases that were available in their libraries.

Section C: focused on the nature and duration of subscription of EIR databases. It required the librarians to indicate whether the databases available were free or fee-based and for those that were fee-based, they were requested to indicate the duration of subscription.

Questionnaire for lecturers and postgraduate students (see Appendix D, p146)

Section A: This section consists of the background information of the respondents.

Section B: raised questions on the types of EIR database being utilized by lecturers and post graduate students. Thirteen various types of EIR database that could be found in library were listed and options were made available for lecturers and postgraduate students to state other types that they used in their libraries.

Section C: raised questions on how often lecturers and postgraduate students utilized the EIR databases in learning and research. 6-point response scale was used for mere identification of the frequency of usage with 6 standing for daily use, 5 for 2-3 times a week, 4 for once a month, 3 for 2-3 times a month, 2 for once in 2-3 times a month and 1 for once in several months.

Section D: raised questions on the purposes for which lecturers and postgraduate students utilized the EIR databases. Fifteen purposes were listed and provision was made for respondent to indicate any other purposes not covered. The respondent was asked to tick as many purposes as he/ she used.

### **Validation of the Instruments**

The instruments AEIRDs and UEIRDs were validated by four experts. These were a former University Librarian and currently a Professor, a Deputy University Librarian and two Senior Lecturers. The professor specialized in ICT and librarianship and is from the Department of Library and Information Science, Delta State University, Abraka. The Deputy University Librarian specialized in digital libraries in Nnamdi Azikiwe University Library, Awka. The two Senior Lecturers, were from Nnamdi Azikiwe University Awka. One of them specialized in Measurement and Evaluation, while the other specialized in ICT and librarianship in the Department of Library and Information Science, Nnamdi Azikiwe University, Awka.

The title of the dissertation, purpose of the study, research questions and hypotheses were given to the validators to use for the validation. The Professor and Deputy University Librarian did the content validation. They vetted the items of the instruments in terms of relevance to the subject matter, coverage of the content area, appropriateness of the language usage and clarity of purpose. The face validity was done

by the two Senior Lecturers. The structures of the instruments were amended and some items were expunged while new ones were added. (See Appendix E, p150 for comments on the validation of the instruments).

### **Reliability of the Instruments**

The reliability of the instruments was based on test-retest for qualitative and quantitative analysis. The qualitative analysis was done by comparing the response the first time and second time to see if there are no much differences. This method was used in determining the reliability of the questionnaire for the University Librarian and Section B and D for the postgraduate students, while the quantitative analysis was computed using Pearson's product moment correlation coefficient,  $r$ , was used to establish the reliability of Section C of the postgraduate students. The research instruments were administered twice in two weeks.

The researcher travelled to the universities used for the reliability of the instrument with a letter of introduction from the Head of Department Library and Information Science, Nnamdi Azikiwe University, Awka, to the university librarians to allow the researcher administer the instrument to university librarians and to use the register of users' for lecturers and for postgraduate students in order to administer the instrument (see Appendix F, p184 for the letter to the University librarians). The various Heads of Departments in each of the sampled university to be allowed to administer the instruments to the lecturers and postgraduate students that were registered with the library (see

Appendix G, p185 for the letter to the Heads of Department). Two university librarians were used, the University of Lagos, Akoka and Lagos State University, Ojo. Five (5) lecturers and ten (10) postgraduate students were used as respondents in University of Lagos Library. Five (5) lecturers and ten (10) postgraduate students were also used as respondents in Lagos State University Library.

Qualitative analysis was used to establish the reliability of the four results generated separately. Section by section reliability was carried out on the instruments to determine each section's reliability. The results of University Librarians for Section B: types of EIR database in their library shows that for University of Lagos there were twenty one types of EIR databases for the first administration and twenty one same types EIR databases for the second administration. Lagos State University had fourteen types of EIR database for the first administration and fourteen same types EIR databases for the second administration. Section C: Nature and duration of subscription of available EIR databases in the university libraries showed that sixteen EIR databases in University of Lagos were free and five were fee-based EIR databases for 2-3 years duration of subscription. In Lagos State University the result showed that twelve were free EIR databases and two was fee-based EIR databases for 3 years duration of subscription. In both universities the results showed same for first and second administration of instrument.

The result of lecturers and postgraduate students in University of Lagos and Lagos State University for Section B: types of EIR database utilized showed that lecturers

and postgraduate students used twenty one types of EIR database. Lecturers and postgraduate students in Lagos State University used fourteen types of EIR database. It was same in first and second administration. Section C: frequency of use of EIR databases was 0.74. Section D: purposes for which EIR databases are utilized was 0.86. This shows a high reliability for the instrument used. Reliability index of 0.5 - 0.99 is suitable for a research of this kind (Egbule & Okobia, 2001). The detailed computations of the reliability index are shown in for lecturers and postgraduate students in (Appendix H, p186).

### **Method of Data Collection**

Four research assistants were recruited to assist in the administration of the instrument. The researcher travelled to the sampled universities with a letter of introduction from the Head of Department Library and Information Science, Nnamdi Azikiwe University, Awka, to the University librarians to allow the researcher use the register for lecturers and for postgraduate students ( see Appendix I, p 190 for the letter) . Another letter was given to Heads of Departments in each of the sampled universities to allow the researcher to administer the instruments to the respondents (see Appendix J, p 191). The researcher used the library register containing the names, departments, home addresses, phone numbers and e-mail addresses of registered lecturers and postgraduate students in contacting them for the administration of the questionnaire.

The questionnaire for the university librarians was administered face to face by the researcher to the university librarians in the selected universities. The second instrument was administered to the selected lecturers and postgraduate students who were registered library users. The lecturers were reached through their different Heads of Department. Some of the lecturers were contacted directly through the research assistants. Others had the instrument kept in their letter boxes and retrieved through their various Departmental secretaries. The postgraduate students were reached during their seminars at their various Departments through the research assistants and postgraduate studies coordinators in the various Departments and a follow up was made. The researcher and research assistants had contact with some of them using their contact details in the library register. The administration and collection of completed questionnaire lasted eight weeks.

#### **Method of Data Analysis.**

Research questions 1 to 8 were analyzed using percentages, while the hypotheses were tested using z- test proportion of difference at 0.05 level of significance. All the statistical analyses were carried out using the Statistical Package for Social Science (SPSS Version 20)

## CHAPTER FOUR

### PRESENTATION AND ANALYSIS OF DATA

In this chapter, the data collected were analyzed and the summaries were presented in tables to highlight the findings. The presentation was done sequentially, starting with the answers to the research questions and then the testing of the null hypotheses.

A total of 2,350 copies of questionnaires were administered. Seven copies of questionnaire were administered to the university librarians and the entire 7 were returned (see Appendix K p 192). Two thousand three hundred and forty three (2,343) copies of the questionnaire were administered to lecturers and postgraduate students' and 1,500 were returned. Out of the 1,500 lectures in the federal universities were 620 and in the state universities were 311, postgraduate students in the federal universities were 345 and in the state universities were 224 (see Appendix L, p194). The total number of questionnaire returned were 1,507 (64%). The response rate of 64% is considered adequate for the study because the standard and acceptable response rate for most studies is 60% (Evans, Peterson, & Demark-Wahnefried 2004; Malaney, 2002 as cited in Dulle, Minish-Majanja & Cloete, 2010).

**Research Question 1:** What are the types of EIR database that are available in federal and state university libraries in South-South, Nigeria?

The result is presented in table 1.

Table 1. Types of EIR Database that are Available in Federal and State University Libraries.

<b>EIR databases</b>	<b>Availability of EIR databases in federal universities</b>	<b>Availability of EIR databases in state universities</b>
AGORA	Available	Available
HINARI	Available	Available
EBSCO	Available	Available
AJOL	Available	Available
OARE	Available	Available
DATAD	Available	Not Available
TEEAL	Available	Available
INASP	Available	Not Available
MIT Open Course Ware	Available	Not available
DOAJ	Available	Available
Bibliomanania	Not available	Not available
BLDS	Not available	No available
JSTOR	Available	Available
<b>Others</b>		
World Public Library	Available	Not available
Lexisnexis	Available	Not available
Questia	Available	Not available
Ebrary	Available	Available
The Observatory	Available	Not available
Egranary	Available	Not available
Oxford online journal	Not available	Available
Biomed central	Not available	Available
Aluka publications	Not available	Available



Table 1 showed that of the 22 types of EIR database listed, the federal universities had 17 namely: AGORA, HINARI, EBSCO host resources, AJOL, OARE, DATAD, TEEAL, INASP, MIT Open Course Ware, DOAJ, JSTOR, World Public Library, Lexisnexis, Questia, Ebrary, The Observatory and Egranary.

The state universities in South-South, Nigeria had 12 namely: AGORA, HINARI, EBSCO host Resources, AJOL, OARE, TEEAL, DOAJ, JSTOR, Ebrary, Oxford online journal, Biomed central and Aluka Publication.

It could be seen that nine of EIR database were available in both federal and state universities in South-South, Nigeria. These are AGORA, HINARI, EBSCO Host Resources and OARE, AJOL, TEEAL, DOAJ, JSTOR and Ebrary. However, Bibliomanania and BLDS were not available in all the Federal and State University libraries. As a result, these EIR databases will not be listed and reported in subsequent analysis.

**Research Question 2:** What are the nature and duration of subscription of EIR databases available in federal and state university libraries?

To determine the nature and duration of subscription of EIR databases available in federal and state university libraries, librarians were asked to indicate the available free or fee-based databases subscribed to and also specify the duration of subscription of the fee-based databases in their library. Their responses are shown in Table 2.

Table 2. Nature and Duration of Subscription of EIR Databases Available in Federal and State University Libraries in South-South, Nigeria.

EIR databases	Federal universities		State universities	
	Nature of databases	Duration of subscription of fee-based databases	Nature of databases	Duration of subscription of fee-based databases
AGORA	Free	-	Free	-
HINARI	Free	-	Free	-
EBSCO Host Res.	Fee	3 yrs	Fee	3 yr
AJOL	Free	-	Free	-
OARE	Free	-	Free	-
DATAD	Free	-	-	-
TEEAL	Free	-	Free	-
INASP	Fee	2 yrs	-	-
MIT Open Course Ware	Free	-	-	-
DOAJ	Free	-	Free	-
JSTOR	Fee	3 yrs	Free	-
<b>Others</b>				
World Public Library	Fee	2 yrs	-	-
LexisNexis	Fee	2yrs	-	-
Questia	Fee	2yrs	-	-
Ebrary	Fee	1yr	Fee	1yr
The Observatory	Free	-	-	-
Egranary	Free	-	-	-
Oxford online journal	-	-	Free	-
Biomed central	-	-	Free	-
Aluka publications	-	-	Free	-

Table 2, indicates that of the 20 EIR databases listed, the federal universities had 10 free and 7 fee-based databases. The free EIR databases are AGORA, HINARI, AJOL, OARE,

DATAD, TEEAL, MIT Open Course Ware, DOAJ, JSTOR, The Observatory and Egranary. The 7 fee-based EIR databases are Ebsco host resources (3 years duration of subscription), INASP (2 years duration of subscription), JOSTOR (3 years duration of subscription), World Public Library (2 years duration of subscription), Lexisnexis (2 years duration of subscription), Questia (2 years duration of subscription) and Ebrary (1 year duration of subscription).

The state university libraries had 10 free-based EIR databases and 2 fee-based EIR databases. The free EIR databases are AGORA, HINARI, AJOL, OARE, TEEAL, DOAJ, JSTOR, Oxford online Journal, Biomed Central and Aluka publications. The fee-based databases are Ebsco host resources with (3 years duration of subscription) and Ebrary with (1 year duration of subscription)

It could be seen that most of the EIR databases in both federal and state universities were free based databases. There were more fee-based EIR databases in the federal universities than the state universities.

**Research Question 3:** What are the types of EIR databases being utilized by lecturers in federal and state university libraries?

The result is presented in table 3.

Table 3: Number and Percentage of Lecturers in Federal and State Universities that Utilize the various Types of EIR Databases.

EIR Databases	Federal universities (N 620)		State universities (N 311)	
	No. that are used	% that are used	No. that are used	% that are used
AGORA	167	73	86	28
HINARI	180	71	91	29
EBSCO Host Resources	201	68	87	28
AJOL	185	70	22	7
OARE	176	72	85	27
DATAD	45	93	-	-
TEEAL	161	74	62	20
INASP	97	84	-	-
MIT Open Course Ware	100	84	-	-
DOAJ	94	84	83	27
JSTOR	98	84	44	14
<b>Other types of EIR database</b>				
World Public Library	50	92	-	-
Lexisnexis	38	94	-	-
Questia	28	95	-	-
Ebrary	43	93	45	14
The Observatory	43	93	-	-
Egranary	40	94	-	-
Oxford online journal	-	-	39	13
Biomed central	-	-	34	11
Aluka publications	-	-	28	9

From table 3, it was observed that, of the 20 types of EIR database listed 17 were used by lecturers in the federal universities and 12 in the state universities. The 17 types used by lecturers in the federal universities were AGORA 167 (27%), HINARI 180(29%), EBSCO Host Resources 201 (32%), AJOL 185 (30%), OARE 176 (28%), DATAD 45 (7%), TEEAL 161 (26%), INASP 97 (16%), MIT Open Course Ware 97(15%), DOAJ 92(15%), JSTOR 98 (16%), Lexisnexis 38(6%), World Public Library 50 (8%), Ebrary 43 (7%), The Observatory 43 (7%), Egranary 40(6%) and , Questia 28 (5%), lecturers accepted using these types of EIR database.

The 12 types of EIR database used by lecturers in the state universities were; AGORA 86 (28%), HINARI 91 (29%), EBSCO Host Resources 87 (28%), OARE 85 (27%), TEEAL 62 (20%), DOAJ 83 (27%), JSTOR 44(14%), Ebrary 45(14%), Oxford online journal 39(13%), Biomed central 34 (11%), Aluka publications 32 (10%) and AJOL 22 (7%).

It could be deduced that higher percentage of lecturers in the federal universities used the EIR databases than those in the state universities and the most highly used types of EIR database in the federal universities are EBSCO Host Resources, AJOL, HINARI, OARE, TEEAL and AGORA, while in the state universities are HINARI, EBSCO Host Resources, AGORA, OARE, DOAJ and TEEAL.

It could be said that the types of EIR database used among lecturers in the federal universities were more than those used by lecturers in the state universities. It was also

seen that the most used types of EIR database in both federal and state universities were EBSCO Host Resources, HINARI, OARE, TEEAL, AGORA and DOJA.

It could be seen that lecturers in both category of universities the Free based EIR databases were mainly used than the Fee based EIR databases.

**Research Question 4:** What are the types of EIR database being utilized by postgraduate students in federal and state university libraries in South-South Nigeria?

To determine the types of EIR databases being utilized by postgraduate students in Federal and State University libraries in South-South Nigeria, they were requested to indicate the types of EIR database they used. There were 345 postgraduate students in the federal universities and 224 in state universities. The responses are presented in table 4.

Table 4. Number and Percentage of Postgraduate Students in Federal and State Universities that Utilize the various Types of EIR Databases.

EIR databases	Federal universities (N345)		State universities (N224)	
	No. that are used	% that are used	No. that are used	% that are used
AGORA	138	40	73	33
HINARI	121	35	48	21
EBSCO Host Resources	154	45	87	39
AJOL	138	40	13	6
OARE	91	26	79	35
DATAD	9	3	-	-
TEEAL	115	33	39	17
INASP	68	20	-	-
MIT Open Course Ware	86	25	-	-
DOAJ	90	26	83	37
JSTOR	85	25	64	29
<b>Other types of EIR database.</b>				
World Public Library	34	10	-	
Lexisnexis	29	8	-	
Questia	37	11	-	
Ebrary	18	15	45	20
The Observatory	34	10	-	
Egranary	33	10	-	
Oxford online journal	-	-	13	6
Biomed central	-	-	12	5
Aluka publications	-	-	9	4

The results in table 4, indicate that, of the 20 types of EIR databases listed, 16 were used by postgraduate students in the federal universities and 12 in the state universities.

The 16 types used by postgraduate students in the federal universities listed, starting from the highest to the lowest are as follows: EBSCO Host Resources 154 (45%) AJOL 138 (40%), AGORA 138(40%), HINARI 121(35%), TEEAL 115 (33%), OARE 91 (26%), DOAJ 90(26%), MIT Open Course Ware 86(25%), JSTOR 85 (25%), INASP 68(20%), Questia 37 (11%), World Public Library 34 (10%), The Observatory 34 (10%), Egranary 33 (10%), Lexisnexis 26 (8%), Ebrary 18 (15%) and DATAD 9(3%),

The 12 types of EIR database used by postgraduate students in the State universities listed, starting from the highest to the lowest are as follows: EBSCO Host Resources 87 (39%), DOAJ 83 (37%), OARE 79 (35%), AGORA 73 (33%), JSTOR 64(29%), HINARI 48 (21%), TEEAL 39 (17%), (13%) Ebrary 15(7%), AJOL13 (6%), Oxford online journal 13(6%), Biomed central 12(5%) and Aluka publications 9(4%).

It could be seen that higher percentage of postgraduate students in the federal universities used the EIR databases than those in the state universities and the most highly used types of EIR database among postgraduate students in the federal universities are EBSCO Host Resources, HINARI, AGORA, TEEAL, OARE, TEEAL, DOAJ, MIT Open Course Ware and JSTOR, while in the State Universities are EBSCO Host Resources, DOAJ, OARE, AGORA and JSTOR.



This revealed that the types of EIR database used among postgraduate students in the federal universities are more than those used by postgraduate students in the state Universities in South-South, Nigeria. It could be seen that the commonly and highly used types of EIR database in both federal and state universities postgraduate students are EBSCO Host Resources, HINARI, OARE, TEEAL, AGORA, DOJA, MIT Open Course Ware and JSTOR. It could be also said that postgraduate students in both category of universities the Free based EIR databases were mainly used than the Fee based EIR databases.

#### **Research Question 5:**

How often do lecturers utilize the EIR databases in learning and research in federal and state university libraries?

To determine how often lecturers in the federal and state universities in South-South, Nigeria use the EIR databases in learning and teaching, they were requested to indicate their frequency of usage of the various resources. There were 620 lecturers in the federal universities and 311 in state universities. Their responses are presented in table 5.

Table 5. Frequency of Use of EIR Databases by Lecturers in Federal and State University.

EIR databases	Federal Universities													State Universities												
	1		2		3		4		5		6		Total	1		2		3		4		5		6		Total
	N	%	N	%	N	%	N	%	N	%	N	%		N	%	N	%	N	%	N	%	N	%	N	%	
AGORA	-	-	21	13	59	35	19	11	46	28	22	13	167	-	-	8	9	4	5	27	31	34	39	15	17	86
HINARI	-	-	23	14	29	16	46	26	59	32	23	13	180		6	2	26	27	26	27	20	22	13	14	91	
Ebsco Host Resources	-	-	-	-	126	63	40	20	16	8	19	9	201		10	12	4	5	32	37	26	30	15	17	87	
AJOL	-	-	-	-	78	42	48	26	37	20	22	12	185	-	-	-	-	-	10	46	8	36	4	18	22	
OARE	-	-	4	2	52	30	33	19	68	39	19	11	176	-	-	4	5	16	19	14	16	39	46	12	14	85
DATAD	-	-	4	9	5	11	17	38	13	29	6	13	45	-	-	-	-	-	-	-	-	-	-	-	-	
TEEAL	9	6	12	8	35	22	52	32	35	22	18	11	161	-	-	-	-	14	23	23	37	13	21	12	19	62
INASP	-	-	3	3	28	29	2	2	50	52	14	14	97	-	-	-	-	-	-	-	-	-	-	-	-	
MIT Open Course Ware	-	-	15	15	13	13	39	39	13	13	20	20	100	-	-	-	-	-	-	-	-	-	-	-	-	
DOAJ	-	-	-	-	20	21	38	40	25	27	11	12	94	-	-	-	-	19	23	30	36	23	28	11	13	83
JSTOR	-	-	-	-	29	30	9	9	45	46	15	15	98	-	-	10	22	5	11	11	25	8	18	10	23	44
World Public Library	-	-	-	-	15	30	9	18	23	46	3	6	50	-	-	-	-	-	-	-	-	-	-	-	-	
Lexisnexis	-	-	7	18	14	37	10	26	7	18	-	-	38	-	-	-	-	-	-	-	-	-	-	-	-	
Questia	-	-	-	-	3	11	4	14	13	46	8	29	28	-	-	-	-	-	-	-	-	-	-	-	-	
Ebrary	-	-	-	-	13	30	14	33	16	37	-	-	43	-	-	1	2	12	27	16	36	10	22	6	13	45
The Observatory Egranary	-	-	-	-	7	16	28	65	5	12	3	7	43	-	-	-	-	-	-	-	-	-	-	-	-	
Oxford online journal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	18	8	21	12	31	6	15	6	15	39
Biomed central	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	6	8	24	10	29	9	27	5	15	34
Aluka publications	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	3	6	19	19	59	6	19	32

\*1 = once in several months (>3months); 2 = once in 2-3 months; 3= 2-3 times a month; 4=once a month; 5=2-3 times a week; 6 = Daily

Table 5, revealed that of the 20 EIR databases listed, the frequency of usage of EIR databases by lecturers in federal universities were as follows: AGORA 57(36%) lecturers accepted using it 2-3 times a month and 44 (28%) accepted using it 2-3 times a week; HINARI 59 (36%) accepted using it 2-3 times a week and 36(22%) lecturers accepted using it once a month; EBSCO Host Resource 128 (63%) lecturers accepted using it 2-3 times a month and 40(20%) accepted using it once a month. AJOL 78 (42%) lecturers accepted using it 2-3 times a month and 48 (26%) lecturers accepted using it once a month. OARE 68 (39%) accepted using it 2-3 times a week and 52 (30%) lecturers accepted using it 2-3 times a month. DATAD 17 (38%) accepted using it once a month and 13 (29%) accepted using it 2-3 times a week; TEEAL 52 (32%) accepted using it once a month; INASP 50 (52%) lecturers accepted using it 2-3 times a week; MIT Open Course Ware 39(42%) accepted using it once a month; DOAJ 38(40%) lecturers accepted using it once a month; JSTOR 45(46%) lecturers accepted using it 2-3 times a week; World Public Library 23 (46%) lecturers accepted using it 2-3 times a week; Lexisnexis 14 (37%) lecturers accepted using it 2-3 times a month; Questia 13(46%) lecturers accepted using it 2-3 times a week; Ebrary 16(37%) lecturers accepted using it 2-3 times a week and Egranary 18 (45%) lecturers accepted using it 2-3 times a week. None of the lecturers accepted using Oxford online journals, Biomed central and Aluka publications.

The frequency of usage of EIR databases by lecturers in state universities were: AGORA 27(31%) lecturers accepted using it once a month and 34 (39%) accepted using it

2-3 times a week; HINAR 26 (27%) accepted using it 2-3 times a week and 36(22%) lecturers accepted using it once a month; EBSCO Host Resource 32 (27%) lecturers accepted using it once a month and 26(30%) accepted using it once a month. AJOL 10 (46%) accepted using it once a month and 8 (36%) lecturers accepted using it 2-3 times a week; OARE 39 (46%) accepted using it 2-3 times a week and 16 (19%) lecturers accepted using it 2-3 times a month; TEEAL 23 (37%) accepted using it once a month; DOAJ 30 (36%) accepted using it once a month; JSTOR 11(25%) lecturers accepted using it once a month; Ebrary 16(36%) lecturers accepted using it once a month, Oxford online journal 12(31%) lecturers use it 2-3 times a month; Biomed central 10(29%) lecturers accepted using it once a month and Aluka Publications 19(59%) lecturers accepted using it 2-3 times a week.

It can be deduced from the analysis that greater proportion of lecturers in federal and state universities in South-South, Nigeria often use these resources, 2-3 times a week; 2-3 times a month and once a month.

### **Research Question 6.**

How often do postgraduate students utilize the EIR databases in learning and research in federal and state university libraries in South-South, Nigeria?

To determine how often postgraduate students in the federal and state universities in South South, Nigeria use the EIR databases in learning and teaching, they were requested to indicate their frequency of usage of the various resources. There were 345 postgraduate students in the federal universities and 224 in the state universities. Their responses are presented in table 6.

Table 6. Frequency of Use of EIR Databases by Postgraduate Students in Federal and State Universities.

EIRS	Federal universities														State universities													
	Frequency		1		2		3		4		5		6		Total	1		2		3		4		5		6		Total
	N	%	N	%	N	%	N	%	N	%	N	%	N	%		N	%	N	%	N	%	N	%	N	%	N	%	
AGORA	-	-	-	-	69	50	12	9	49	34	8	6	138	-	-	-	-	18	25	11	15	24	33	20	27	73		
HINARI	-	-	-	-	65	54	1	1	42	35	13	11	121	-	-	10	21	12	25	5	10	13	27	8	17	48		
EBSCO H Resources	-	-	-	-	70	46	28	18	36	23	20	13	154	-	-	-	-	-	-	18	21	42	48	27	31	87		
AJOL	-	-	-	-	19	14	24	17	47	34	48	35	138	-	-	-	-	2	15	3	23	5	39	3	23	13		
OARE	-	-	-	-	7	8	20	22	46	51	18	20	91	-	-	-	-	12	15	17	22	36	46	14	18	79		
DATAD	-	-	-	-	-	-	5	56	4	44	-	-	9	-	-	-	-	-	-	-	-	-	-	-	-	-		
TEEAL	-	-	-	-	53	46	6	5	30	26	26	23	115	-	-	-	-	13	33	4	10	18	46	4	10	39		
INASP	-	-	-	-	9	13	9	13	22	32	28	41	68	-	-	-	-	-	-	-	-	-	-	-	-	-		
MIT Open C Wear	-	-	-	-	29	34	5	6	34	40	18	21	86	-	-	-	-	-	-	-	-	-	-	-	-	-		
DOAJ	-	-	-	-	52	58	8	9	25	28	5	6	90	-	-	-	-	29	35	33	40	10	12	11	13	83		
JSTOR	-	-	-	-	50	60	4	5	14	16	17	20	85	-	-	-	-	-	-	7	20	22	63	6	17	35		
World Pub Library	-	-	-	-	3	9	11	32	9	27	11	32	34	-	-	-	-	-	-	-	-	-	-	-	-	-		
Lexisnexis	-	-	-	-	6	21	3	10	12	41	8	28	29	-	-	-	-	-	-	-	-	-	-	-	-	-		
Questia	-	-	-	-	8	22	15	41	4	11	10	27	37	-	-	-	-	-	-	-	-	-	-	-	-	-		
Ebrary	-	-	-	-	-	-	6	33	7	39	5	28	18	-	-	-	-	-	-	26	58	14	31	5	11	45		
The Observatory	-	-	-	-	13	38	12	35	6	18	3	9	34	-	-	-	-	-	-	-	-	-	-	-	-	-		
Egranary	-	-	1	3	12	36	6	18	8	24	6	18	33	-	-	-	-	-	-	-	-	-	-	-	-	-		
Oxford online journal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	8	4	31	2	15	6	46	13		
Biomed central	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	8	2	17	7	58	2	17	12		
Aluka publications	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	11	1	11	3	33	4	44	9		

\*1 = once in several months (>3months); 2 = once in 2-3 months; 3= 2-3 times a month; 4=once a month; 5=2-3 times a week; 6 = Daily.

A cursory look at table 6, revealed that all of the 20 EIR databases listed, the frequency of usage of these information resources among postgraduate students in federal and state university libraries in South South, Nigeria are presented according to order of ranking and greater proportion.

The frequency of usage in the federal universities were as follows: AGORA 67(52%) postgraduate students accepted using it 2-3 times a month and 47 (36%) accepted using it 2-3 times a week; HINARI 74 (57%) accepted using it 2-3 times a month and 42(32%) postgraduate students accepted using it 2-3 times a week; EBSCO Host Resource 70(46%) postgraduate students accepted using it 2-3 times a month and 36(23%) accepted using it 2-3 times a week. AJOL 48 (35%) postgraduate students accepted using it daily and 47 (34%) postgraduate students accepted using it 2-3 times a week. OARE 46 (51%) accepted using it 2-3 times a week and 18 (20%) postgraduate students accepted using it daily. DATAD 13 (62%) accepted using it once a month and 8 (38%) accepted using it 2-3 times a week; TEEAL 53 (43%) accepted using it 2-3 times a month and 26 (21%) postgraduate students accepted using it daily ; INASP 28 (41%) postgraduate students accepted using it daily and 22 (32%) accepted using it 2-3 times a week ; MIT Open Course Ware 34(40%) accepted using it 2-3 times a week and 29(34%) accepted using it 2-3 times a month; DOAJ 52(58%) postgraduate students accepted using it 2-3 times a month and 25(28%) 2-3 times a week; JSTOR 50(60%) postgraduate students accepted using it 2-3 times a month and 17 (20%) postgraduate students accepted using it daily; World Public Library 11 (32%) postgraduate students accepted using it once a month and 11(32%) also accepted using it daily; Lexisnexis 12 (46%) postgraduate students accepted using it 2-3

times a week and 8(31%) accepted using it daily; Questia 15(41%) postgraduate students accepted using it once a month and 10 (27%) accepted using it daily; Ebrary 7(39%) postgraduate students accepted using it 2-3 times a week and 6(33%) accepted using it once a month. The observatory 13(38%) accepted using it 2-3 times a month and 12 (35%) accepted using it once a month. Egranary 12(35%) postgraduate students accepted using it 2-3 times a month and 8 (24%) accepted using it 2-3 times a week.

The frequency of usage in the state universities were as following: AGORA 24(33%) postgraduate students accepted using it 2-3 times a week and 20 (27%) accepted using it daily; HINARI 13 (27%) accepted using it 2-3 times a week and 12(25%) postgraduate students accepted using it 2-3 times a month; EBSCO Host Resource 42(48%) postgraduate students accepted using it 2-3 times a week and 27(31%) accepted using it daily. AJOL 5(39%) postgraduate students accepted using it 2-3 times a week. OARE 36 (46%) accepted using it 2-3 times a week and 17 (22%) postgraduate students accepted using it once a month. TEEAL 18 (46%) accepted using it 2-3 times a week and 13 (33%) postgraduate students accepted using it 2-3 times a month; DOAJ 33(40%) postgraduate students accepted using it once a month and 29(35%) 2-3 times a month; JSTOR 22(63%) postgraduate students accepted using it 2-3 times a week; Ebrary 6(40%) postgraduate students accepted using it once a month and 6(33%) accepted using it once a month. Oxford online journals 6 (46%) postgraduate students accepted using it daily and 4(31%) postgraduate students accepted using it once a month, Biomed central 7(58%)



postgraduate students accepted using it 2-3 times a week; Aluka publications<sup>4</sup>(44%) postgraduate students accepted using it daily.

It could be seen that in the federal universities: AGORA, HINARI, Ebsco Host Resources, TEEAL, DOAJ, JSTOR, Egranary were used 2-3 times a month, DATAD, World Public Library and Questia were used once a month, OARE, MIT Open Course Ware, Lexisnexis and Ebrary were used 2-3 times a week, AJOL and INASP were used daily, while in the state universities it was observed that AGORA, Ebsco Host Resources, AJOL, OARE, TEEAL, JSTOR and Biomed central were observed used 2-3 times a week this was followed by Ebrary and DOAJ that were used among the postgraduate students once a month. Oxford Online Journal and Aluka were said to have been used daily.

**Research Question 7:** What are the purposes for which lecturers utilize the EIR databases in federal and state libraries?

Table 7 showed the numbers and percentages of lecturers that use the EIR databases for various purposes.

Table 7. Number and Percentage of Lecturers in the Federal and State Universities that Use the EIR Databases for Different Purposes.

Purposes for which EIR databases are used	Federal universities (N 620)		State universities (N 311)	
	No. that are used	% that are used	No. that are used	% that are used
Writing of journal articles	620	100	311	100
Preparing for seminars	489	79	116	37
Preparing for conferences	602	97	239	77
Preparing for workshops	458	74	78	25
Group discussion	9	1	11	4
To write my thesis	36	6	28	9
To write my dissertation	16	3	18	6
To update my knowledge	532	86	251	81
To share knowledge	233	38	220	71
Preparing lectures	265	43	243	78
For teaching	269	43	244	78
To write my assignments	30	5	34	11
Preparing for examinations	26	4	35	11
Writing of books	170	27	88	28
For recreation and leisure	168	27	178	57

Table 7 showed that for federal universities, all the lecturers (100%) use EIR databases for writing of journal articles. Other purposes for which lecturers reasonably use EIR databases, in order of frequency are: preparing for conference (97%), to update knowledge (86%), preparing for seminars (79%) and preparation for workshops (74%). The purposes for which lecturers in federal universities least use the EIR databases is group discussion which has only 1% the respondents that indicated using it. Other purposes for which the lecturers least use that databases are for writing of dissertation (3%), preparing for examinations (4%) writing of assignment (5%) and writing of thesis (6%).

In the state universities all the lecturers (100%) use the EIR databases for writing journal articles. Other purpose for which lecturers reasonable use EIR databases, in order of frequency are: to update their knowledge (81%), for teaching (78%), preparing for lectures (78%); preparing for conference (77%) and for recreation and leisure (57%). The purposes for which lecturers in state universities least use the EIR databases is for group discussion where 4% of the respondents indicated using it. Other purposes for which the lecturers least use the databases are for writing their dissertation (6%), preparing for examinations (11%) and writing of assignments (11%).

It could be observed that greater proportion of lecturers in the federal and state universities use the EIR databases for the following purposes: writing of journal articles, preparing for seminars, preparing for conference, preparing for workshops, for teaching, preparing for lectures and writing of books, while the lecturers least use the EIR databases

for group discussion, writing of their dissertation, preparing for examinations and writing of assignments.

**Research Question 8:** What are the purposes for which postgraduate students utilize the EIR databases in federal and state libraries?

Table 8. Number and Percentage of Postgraduate Students in the Federal and State Universities that Use the EIR Databases for Different Purposes.

Purposes for which EIR databases are used	Federal universities (N 345)		State universities (N 224)	
	No. that are used	% that are used	No. that are used	% that are used
Writing of journal articles	87	25	70	31
Preparing for seminars	322	93	152	68
Preparing for conferences	141	41	48	21
Preparing for workshops	32	9	18	8
Group discussion	209	61	115	51
To write my thesis	213	62	130	58
To write my dissertation	132	38	94	42
To update my knowledge	189	55	96	45
To share knowledge	200	58	107	48
Preparing lectures	20	6	41	18
For teaching	20	6	23	10
To write my assignments	335	97	119	55
Preparing for examinations	262	76	173	49
Writing of books	-	-	-	-
For recreation and leisure	162	47	116	52

Table 8, the result showed that in federal universities the postgraduate students (97%) use EIR databases to write their assignments. Other purposes for which postgraduate students reasonably use EIR databases, in order of popularity are: preparing for seminars (93%), preparing for examinations (76%), writing of thesis (62%), for group discussion (61%), sharing of knowledge (58%), update of their knowledge (58%), for recreation and leisure (47%) and preparing for conferences (41%). The purposes for which postgraduate students in federal university least use EIR databases are preparing for lecture (6%) and for teaching (6%). Other purposes for which the postgraduate students least use the databases are: group discussion (9%), writing of journal articles (25%) and writing of their dissertation (38%).

In the state universities (68%) postgraduate students use EIR databases to prepare their seminars. Other purposes for which postgraduate students reasonably use EIR databases, in order of popularity are: to write their thesis (58%), to write their assignments (55%), for recreation and leisure (52%), and group discussion (51%), preparing for examination (49%), sharing of knowledge (48%), to update their knowledge (45%) and to write their dissertation (42%). The purposes for which postgraduate students in state universities least use EIR databases are writing of journal articles (31%) preparing for conferences (21%), preparing for lectures (18%), for teaching (10%) and preparing for workshop (8%).

It could be observed that greater proportion of postgraduate students in the federal and state universities use the EIR databases for the following purposes: to write assignment, preparing for seminars, preparing for examinations, to write thesis, group

discussion, share knowledge, update knowledge, for recreation and leisure, preparing for conferences and to write my dissertation .

## Testing the Null Hypotheses

### Null Hypothesis 1

There is no significant difference between the proportions of federal and state university libraries that have EIR databases.

Table 9 : Z test Analysis on the Difference Between the Proportions of Federal and State University Libraries that have EIR Databases.

EIR databases	Federal universities	State universities	Total	Df	Cal. $\chi^2$	Crit. $\chi^2$	Decision
AGORA	4	3	7	6	0.00	1.96	Not Sig
HINARI	4	3	7	6	0.00	1.96	Not Sig
EBSCO Host Resources	4	3	7	6	0.00	1.96	Not Sig
AJOL	4	2	6	6	0.03	1.96	Not Sig
OARE	4	3	7	6	0.00	1.96	Not Sig
DATAD	1	0	1	6	0.00	1.96	Not Sig
TEEAL	4	2	6	6	0.03	1.96	Not Sig
INASP	3	0	3	6	0.00	1.96	Not Sig
MIT Open Course Ware	2	0	2	6	0.00	1.96	Not Sig
DOAJ	3	3	6	6	0.00	1.96	Not Sig
JSTOR	2	2	4	6	0.00	1.96	Not Sig
World Public Library	1	0	1	6	0.00	1.96	Not Sig
Lexisnexis	1	0	1	6	0.00	1.96	Not Sig
Questia	1	0	1	6	0.00	1.96	Not Sig
Ebrary	1	1	2	6	0.00	1.96	Not Sig
The Observatory	1	0	1	6	0.00	1.96	Not Sig
Egranary	1	0	1	6	0.00	1.96	Not Sig
Oxford online journal	0	1	1	6	0.00	1.96	Not Sig
Biomed central	0	1	1	6	0.00	1.96	Not Sig
Aluka publications	0	1	1	6	0.00	1.96	Not Sig
<b>Total</b>	<b>40</b>	<b>25</b>	<b>66</b>		<b>00.06</b>	<b>39.2</b>	<b>NS</b>

Table 9 shows that at 0.05 level of significance and 6 df, the calculated  $\chi^2$  00.06 is less than the critical  $\chi^2$  39.2. Therefore, the first null hypothesis is upheld. The proportions of federal and state university libraries that have EIR databases do not differ significantly.

## Null Hypothesis 2

There is no significant difference between the proportions of lecturers in the federal and state universities that utilize the EIR databases.

Table 10: Z test Analysis of Test of Difference between the Proportion of Lecturers in the Federal and State Universities that Utilize the EIR Databases.

EIR databases	Federal universities	State universities	Total	Df	Cal. $\chi^2$	Crit. $\chi^2$	Decision
AGORA	167	86	253	929	0.23	1.96	Not Sig
HINARI	180	91	271	929	0.12	1.96	Not Sig
EBSCO Host Resources	201	87	288	929	0.14	1.96	Not Sig
AJOL	185	22	207	929	0.15	1.96	Not Sig
OARE	176	85	261	929	0.44	1.96	Not Sig
DATAD	45	0	45	929	0.12	1.96	Not Sig
TEEAL	161	62	223	929	1.29	1.96	Not Sig
INASP	97	0	97	929	1.58	1.96	Not Sig
MIT Open Course Ware	100	0	100	929	1.67	1.96	Not Sig
DOAJ	94	83	177	929	0.72	1.96	Not Sig
JSTOR	98	44	142	929	0.66	1.96	Not Sig
World Public Library	50	0	50	929	0.17	1.96	Not Sig
Lexisnexis	38	0	38	929	0.38	1.96	Not Sig
Questia	28	0	28	929	0.12	1.96	Not Sig
Ebrary	43	45	88	929	1.12	1.96	Not Sig
The Observatory	43	0	43	929	0.11	1.96	Not Sig
Egranary	40	0	40	929	0.11	1.96	Not Sig
Oxford online journal	0	39	39	929	0.43	1.96	Not Sig
Biomed central	0	34	34	929	0.29	1.96	Not Sig
Aluka publications	0	28	28	929	0.12	1.96	Not Sig
<b>Total</b>	<b>1746</b>	<b>704</b>	<b>2452</b>		<b>10.06</b>	<b>39.2</b>	<b>NS</b>

Table 10 indicates that at 0.05 level of significance and 929 df, the calculated  $\chi^2$  10.06 is less than the critical  $\chi^2$  39.2. Therefore, the second null hypothesis is upheld. The proportions of lecturers in the federal and state universities that utilize the EIR databases do not differ significantly.



## Null Hypothesis 3

There is no significant difference between the proportions of postgraduate students in the federal and state universities that utilize the EIR databases.

Table 11: Z Test Analysis of Test of Difference between the Proportion of the Postgraduate Students in the Federal and State Universities that Utilize the EIR Databases.

<b>EIR databases</b>	<b>Federal Universities</b>	<b>State universities</b>	<b>Total</b>	<b>Df</b>	<b>Cal. <math>\chi^2</math></b>	<b>Crit. <math>\chi^2</math></b>	<b>Decision</b>
AGORA	138	77	215	567	1.79	1.96	Not Sig
HINARI	121	47	168	567	1.34	1.96	Not Sig
EBSCO Host Resources	154	92	246	567	1.11	1.96	Not Sig
AJOL	138	13	151	567	2.11	1.96	Sig
OARE	91	83	174	567	1.10	1.96	Not Sig
DATAD	9	0	9	567	0.90	1.96	Not Sig
TEEAL	115	40	155	567	1.21	1.96	Not Sig
INASP	68	0	68	567	0.45	1.96	Not Sig
MIT Open Course Ware	86	0	86	567	0.78	1.96	Not Sig
DOAJ	90	88	178	567	0.03	1.96	Not Sig
JSTOR	85	64	149	567	0.98	1.96	Not Sig
World Public Library	34	0	34	567	1.85	1.96	Not Sig
Lexisnexis	29	0	29	567	0.43	1.96	Not Sig
Questia	37	0	37	567	0.78	1.96	Not Sig
Ebrary	18	46	63	567	0.96	1.96	Not Sig
The Observatory	34	0	34	567	0.71	1.96	Not Sig
Egranary	33	0	33	567	0.54	1.96	Not Sig
Oxford online journal	0	13	13	567	0.23	1.96	Not Sig
Biomed central	0	12	12	567	0.06	1.96	Not Sig
Aluka publications	0	9	9	567	0.03	1.96	Not Sig
<b>Total</b>	<b>1280</b>	<b>584</b>	<b>1864</b>		<b>17.38</b>	<b>39.2</b>	<b>NS</b>

Table 11 reveals that at 0.05 level of significance and 567df, the calculated  $\chi^2$  17.38 is less than the critical  $\chi^2$  39.2 Therefore, the third null hypothesis is upheld. The proportions of

postgraduate students in the federal and state universities that utilize the EIR databases do not differ significantly.

#### Null Hypothesis 4

There is no significant difference between the proportion of lecturers in the federal and state universities that use the EIR databases for different purposes.

Table 12: Z Test Analysis on The Purposes for Utilizing EIR Databases by Lecturers in Federal and State University Libraries.

Purpose for utilizing EIR Databases	Federal Universities	State universities	Total	Df	Cal. $\chi^2$	Crit. $\chi^2$	Decision
Writing of journal articles	620	311	931	929	0.00	1.96	Not Sig
Preparing for seminars	489	116	605	929	0.84	1.96	Not Sig
Preparing for conferences	602	239	841	929	0.56	1.96	Not Sig
Preparing for workshops	458	78	536	929	2.10	1.96	Sig
Group discussion	9	11	20	929	0.22	1.96	Not Sig
To write my thesis	35	28	63	929	0.45	1.96	Not Sig
To write my dissertation	15	18	33	929	0.32	1.96	Not Sig
To update my knowledge	532	251	783	929	0.89	1.96	Not Sig
To share knowledge	300	220	520	929	0.76	1.96	Not Sig
Preparing lectures	300	243	543	929	0.69	1.96	Not Sig
For teaching	300	244	544	929	0.72	1.96	Not Sig
To write my assignments	30	34	64	929	0.34	1.96	Not Sig
Preparing for examinations	26	35	61	929	0.22	1.96	Not Sig
Writing of books	100	88	188	929	0.65	1.96	Not Sig
For recreation and leisure	100	178	278	929	0.69	1.96	Not Sig
<b>Total</b>	<b>3916</b>	<b>2094</b>	<b>6010</b>		<b>9.45</b>	<b>39.2</b>	<b>NS</b>

Table 12 indicates that at 0.05 level of significance and 929 df, the calculated  $\chi^2_{9.45}$  is lesser than the critical  $\chi^2_{39.2}$ . Therefore, the fourth null hypothesis is upheld. The proportion of lecturers in the federal and state universities that use the EIR databases for different purposes do not differ significantly.

#### Null Hypothesis 5

There is no significant difference between the proportion of postgraduate students in the federal and state universities that use the EIR databases for different purposes.

Table 13: Z Test Analysis of the Proportion of Postgraduate Students in Federal and State University that Use the EIR Databases for Different Purposes.

<b>Purpose for utilizing EIR Databases</b>	<b>Federal universities</b>	<b>State universities</b>	<b>Total</b>	<b>df</b>	<b>Cal. <math>\chi^2</math></b>	<b>Crit. <math>\chi^2</math></b>	<b>Decision</b>
Writing of journal articles	133	69	202	567	0.82	1.96	Not Sig
Preparing for seminars	322	95	417	567	1.38	1.96	Not Sig
Preparing for conferences	141	48	189	567	2.45	1.96	Sig
Preparing for workshops	32	18	50	567	0.10	1.96	Not Sig
Group discussion	20	115	324	567	1.78	1.96	Not Sig
To write my thesis	213	130	343	567	0.23	1.96	Not Sig
To write my dissertation	132	94	226	567	0.59	1.96	Not Sig
To update my knowledge	189	96	285	567	0.19	1.96	Not Sig
To share knowledge	201	107	308	567	0.18	1.96	Not Sig
Preparing lectures	20	41	61	567	0.61	1.96	Not Sig
For teaching	20	23	43	567	0.27	1.96	Not Sig
To write my assignments	335	119	454	567	0.76	1.96	Not Sig
Preparing for examinations	262	173	435	567	0.65	1.96	Not Sig
Writing of books	0	0	0	567	0	1.96	Not Sig
For recreation and leisure	162	116	278		0.56	1.96	Not Sig
<b>Total</b>	<b>2371</b>	<b>1244</b>	<b>3515</b>		<b>10.57</b>	<b>39.2</b>	<b>NS</b>

Table 13 indicates that at 0.05 level of significance and 567df, the calculated  $\chi^2$  10.57 is less than the critical  $\chi^2$  39.2. Therefore, the fifth null hypothesis is upheld. The proportion of postgraduate students in the federal and state universities that use the EIR databases for different purposes do not differ significantly.

### **Summary of Major Findings**

The following are the major findings from the result of the study.

1. The federal university libraries in South South, Nigeria had 17 EIR databases namely: AGORA, HINARI, EBSCO host resources, AJOL, OARE, DATAD, TEEAL, INASP, MIT Open Course Ware, DOAJ, JSTOR, World Public Library, Lexisnexis, Questia, Ebrary, The Observatory and Egranary.

The state universities in South South, Nigeria had 12 EIR databases namely:, AGORA, HINARI, EBSCO host Resources, AJOL, OARE, TEEAL, DOAJ, JSTOR, Ebrary, Oxford online journal, Biomed central and Aluka Publication.

2. The federal universities in South-South, Nigeria had 10 free and 7 fee-based EIR databases. The 10 free EIR databases are AGORA, HINARI, AJOL, OARE, DATAD, TEEAL, MIT Open Course Ware, DOAJ, The Observatory and Egranary. The 7 fee EIR databases are Ebsco host resources (2 years duration of subscription), INASP (2 years duration of subscription), World Public Library (2 years duration of subscription), JSTOR (3 years duration of subscription), Lexisnexis (2 years duration of subscription), Questia (2 years duration of subscription) and Ebrary (3 years duration of subscription).

The state university libraries in South-South, Nigeria had 10 free databases and 2 fee-based EIR databases. The 10 free EIR databases are AGORA, HINARI, AJOL, OARE, TEEAL, DOAJ, JSTOR, Oxford online Journal, Biomed Central and Aluka publications. The fee-based database are EBSCO Host Resources (3 years duration of subscription) and Ebrary (1 year duration of subscription).

There are more free EIR databases than fee-based EIR databases in the federal and state university libraries in South-South, Nigeria.

3. Lecturers in the federal universities in South-South, Nigeria used 17 different types of EIR database namely AGORA, HINARI, Ebsco Host Resources, AJOL, OARE, DATAD, TEEAL, INASP, MIT Open Course Ware, DOAJ, JSTOR, Lexisnexis, World Public Library, Ebrary, The Observatory, Egranary and Questia.

Lecturers in the state universities in South-South, Nigeria used 12 different types of EIR database namely, AGORA, HINARI, Ebsco host Resources, AJOL OARE, TEEAL, DOAJ, JSTOR, Ebrary, Oxford online journal, Biomed central and Aluka publications. The types of EIR database used among lecturers in the federal universities in South-South, Nigeria were more than those used by lecturers in the state universities in South-South, Nigeria. It was also seen that higher percentage of lecturers in the federal universities claim to use the EIR databases than those in the state universities. The most used types of EIR database in both federal and state universities in South-South, Nigeria, were EBSCO Host Resources, HINARI, OARE, TEEAL, AGORA and DOJA.

4. Postgraduate students in the federal universities in South-South, Nigeria used 17 different types of EIR database namely, EBSCO Host Resources, AJOL, HINARI, AGORA , TEEAL, OARE, DOAJ, MIT Open Course Ware, JSTOR, INASP, Questia, World Public Library, Egranary, The Observatory, DATAD, Lexisnexis and Ebrary, while postgraduate students in the state universities in South-South, Nigeria used 12 different types of EIR database namely, EBSCO Host Resources, DOAJ, OARE, AGORA, JSTOR, HINARI, TEEAL, Ebrary, AJOL, Oxford online journal, Biomed central and Aluka publications. The types of EIR and database used among postgraduate students in the federal universities in South-South, Nigeria were more than those used by postgraduate students in the state universities in South-South, Nigeria. The highly used types of EIR database among postgraduate students in both federal and state universities in South South, Nigeria were EBSCO Host Resources, HINARI, OARE, TEEAL, AGORA, DOJA, MIT Open Course Ware and JSTOR.
5. Majority of the lecturers in federal universities in South-South Nigeria, often utilize EIR databases 2-3 times a week namely: HINAR, OARE, INASP, JSTOR and World Public Library. 2-3 times a month namely: Agora, Ebsco host resources and AJOL. Once a month namely: TEEAL and MIT Open Course Ware. Lecturers in state universities in South-South Nigeria, often utilize EIR databases 2-3 times a week namely: AGORA and OARE. Once a month namely: HINARI, Ebsco host resources, AJOL, TEEAL and DOAJ.
6. Majority of the postgraduate students in the federal universities in South-South, Nigeria often utilize the EIR databases 2-3 times a month namely: AGORA, HINARI, Ebsco Host Resources, TEEAL, DOAJ, JSTOR, Egranary. Once a month namely: DATAD, World

Public Library and Questia, followed by 2-3 times a week namely: OARE, MIT Open Course Ware, Lexisnexis and Ebrary.

The postgraduate students in the state universities in South-South Nigeria often utilize the EIRs 2-3 times a week namely: AGORA, Ebsco Host Resources, AJOL, OARE, TEEAL, JSTOR and Biomed central. Once a month namely: Ebrary and DOAJ, followed by Daily namely: Oxford Online Journal and Aluka.

7. Lecturers in the federal and state universities in South-South Nigeria, utilize the EIR databases for the following purposes: writing of journal articles, preparing for seminars, preparing for conference, preparing for workshops, for teaching, preparing for lectures and writing of books.
8. Postgraduate students in the federal and state universities in South-South Nigeria, utilize the EIR databases for the following purposes: to write assignment, preparing for seminars, preparing for examinations, to write thesis, group discussion, share knowledge, update knowledge, for recreation and leisure, preparing for conferences and to write my dissertation.
9. The proportions of federal and state university libraries that have EIR databases do not differ significantly.
10. The proportions of lecturers in the federal and state universities that utilize the EIR databases do not differ significantly.
11. The proportions of postgraduate students in the federal and state universities that utilize the EIR databases do not differ significantly.

12. The proportion of lecturers in the federal and state universities that use the EIR databases for different purposes do not differ significantly.
13. The proportion of postgraduate students in the federal and state universities that use the EIR databases for different purposes do not differ significantly.



## CHAPTER FIVE

### DISCUSSION OF RESULTS, CONCLUSION AND RECOMMENDATIONS.

This chapter discussed the results of the data analysis in this study. Conclusion and recommendations based on findings were made on the following headings: Discussion of Results, Conclusions, Implications of the Study, Recommendation(s), Limitations of the Study and Suggestions for Further Research.

#### **Discussion of Results**

The discussion of the findings is presented under the following subheadings:

1. Types of EIR database that are available in federal and state university libraries in South-South, Nigeria.
2. Nature and duration of subscription of available EIR databases in federal and state university libraries in South-South, Nigeria.
3. Types of EIR database being utilized among lecturers and postgraduate students in teaching, learning and research in federal and state university libraries in South-South, Nigeria
4. Frequency of utilization of EIR databases by lecturers and postgraduate students in learning and research in federal and state university libraries in South-South, Nigeria.
5. Purposes for which lecturers and postgraduate students utilize the EIR databases in federal and state university libraries in South-South, Nigeria.

6. The significant differences in the hypotheses.

### **Types of EIR Database that were Available in University libraries in Federal and State University in South-South Nigeria.**

The study revealed that there were 17 type of EIR databases available in the federal university libraries in South-South, Nigeria namely: AGORA, HINARI, EBSCO host resources, AJOL, OARE, DATAD, TEEAL, INASP, MIT Open Course Ware, DOAJ, JSTOR, World Public Library, Lexisnexis, Questia, Ebrary, The Observatory and Egranary.

The state universities in South -South, Nigeria had 12 EIR databases namely: AGORA, HINARI, EBSCO host Resources, AJOL, OARE, TEEAL, DOAJ, JSTOR, Ebrary, Oxford online journal, Biomed central and Aluka Publication. This is unlike other university libraries in developed nations such as Queen`s University that had 1750 e-databases, New Castle University in England that had 450 online resources in their libraries, ( Publication of Queen`s University, 2013, & New Castle University Online Publication, 2014). In South Africa a developing nation like Nigeria, James (2014) study on availability of EIR databases in three higher institutions in South Africa, showed that University of Johannesburg had 160 e-databases, Nelson Mandela Metropolitan University had 40 and Cape Peninsula University of technology had 100 e- database resources in their university e- library. The reason for the low level of EIR databases in the federal and state university libraries in South South, Nigeria, could be due to poor funding and lack of awareness of free databases among librarians, as it could be observed from this study that some of the EIR databases that were available in the federal

universities were not available in the state universities. It was noted by Nok (2006), Otokunefor and Kari (2008), Aliy and Nock (2010), Aina (2014) and Fabumi (2014) studies that Ebsco host resources, Agora, AJOL and TEEAL were among the types of EIR available in university libraries in Nigeria.

### **Nature and Duration of Subscription of Available EIR Databases in Federal and State University Libraries in South South Nigeria.**

The federal universities in South-South, Nigeria had 10 free and 7 fee-based EIR databases. The 10 free EIR databases are AGORA, HINARI, AJOL, OARE, DATAD, TEEAL, MIT Open Course Ware, DOAJ, The Observatory and Egranary. The 7 fee-based EIR databases are Ebsco host resources (2 years duration of subscription), INASP (2 years duration of subscription), World Public Library (2 years duration of subscription), JSTOR (3 years duration of subscription), Lexisnexis (2 years duration of subscription), Questia (2 years duration of subscription) and Ebrary (3 years duration of subscription).

The state university libraries had 10 free databases and 2 fee-based EIR databases. The 10 free EIR databases are AGORA, HINARI, AJOL, OARE, TEEAL, DOAJ, JSTOR, Oxford online Journal, Biomed Central and Aluka publications. The only fee based databased are EBSCO Host Resources with (2 years duration of subscription) and Ebrary (1year duration of subscription).

It could be deduced from the result that there are more free EIR databases than fee-base EIR databases in the federal and state university libraries in South-South, Nigeria. The reason why there are more free databases in both university libraries could be that they cannot

afford the subscription fee of EIR databases and so they rely on free access databases for teaching, learning and research. In support of this finding Rosenberg (2005), Kinengyere, Kiyingi and Bazirake (2012) and Fabumi (2014) said that most of the resources available in universities in developing nations like Nigeria are open access resources such as AGORA, HINARI, OARE, and DOAJ which are free to libraries in developing nation that have access to the web for teaching, learning and research work.

This finding also showed that there were more fee-based EIR databases in the federal universities than in the state university libraries in South-South, Nigeria. It has been discovered by Ani and Ahiauzu (2008) that there were more fee-based EIR databases in federal universities than the state universities in Nigeria. Okiy (2005) and Ndubisi (2014) noted that this is as a result of inadequate funding in state owned universities which has limited the subscription of EIR databases in state university libraries in Nigeria.

On the issue of duration of subscriptions of fee-based EIR databases, this result showed that the fee based databases duration ranges from 2-3 years subscription fee. The findings here agree with Akinseye (2014) who reported that many university libraries have subscription period of 2-3 years online databases for lecturers, students and staff to have access to information for the purposes of teaching, learning and reach work. The findings were also supported by The National University Commission (2010) that Educational Trust Fund (ETF) has been able to subsidize the payment of 2 years subscription for online databases such as Ebsco host resources for Universities, Polytechnics and Colleges of Education.

## **Types of EIR Database being utilized by lecturers and postgraduate students in learning and research in federal and state university libraries in South-South, Nigeria.**

The finding from this study revealed that lecturers in the federal universities in South South, Nigeria use 17 different types of EIR database namely, AGORA, HINARI, EBSCO Host Resources, AJOL, OARE, DATAD, TEEAL, INASP, MIT Open Course Ware, DOAJ, JSTOR, Lexisnexis, World Public Library, Ebrary, The Observatory, Egranary and Questia.

Lecturers in the state universities in South-South, Nigeria used 12 different types of EIR databases namely, AGORA, HINARI, EBSCO Host Resources, OARE, TEEAL, DOAJ, JSTOR, Ebrary, Oxford online journal, Biomed central, Aluka publications and AJOL. The possible reasons for this could be that lecturers are becoming aware of types of databases that cover their curricula and other academic activities. This finding corroborates Aliyu and Nock (2010) and Kofi (2014) that majority of the academic staff in universities of Nigeria use EBSCO host resources, AGORA, JSTOR, Questia, DATAD, DOAJ, OARE, HINARI, TEEAL, Ebrary, AJOL and MIT Open Course Ware databases in teaching, learning and research work in universities. In support of this finding Adeyinka and Adam (2013) also found that lecturers using online databases consult more of Oxford online journal, Aluka publications, AJOL, DATAD and Biomed central for research work. The reason why the finding of this study is in line with Adeyinka and Adam (2013) and Kofi (2014) could be that universities in developing nations rely more on open access resources. Gupta (2013) advised that they should build their collection by subscribing to other online databases were lecturers and students can have wide range of online databases to consult for their academic activities. Furthermore, Kinengyere, Kiyingi and Bazirake (2012) and Fabumi (2014) stated that universities in developing nations depend on free e-resources

databases in their libraries with very few of them subscribing to databases of which they can hardly meet up with subscription fee, let alone to subscribe to more e-resource databases.

It was also revealed that postgraduate students in the federal universities in South-South, Nigeria used 17 different types of EIR database namely, EBSCO Host Resources, AJOL, HINARI, AGORA , TEEAL, OARE, DOAJ, MIT Open Course Ware, JSTOR, Questia, World Public Library, Egranary, The Observatory, DATAD, Lexisnexis and Ebrary, While postgraduate students in the state universities used 12 different types of EIR namely, Host Resources, DOAJ, OARE, AGORA, JSTOR, HINARI, TEEAL, Ebrary, AJOL, Oxford online journal, Biomed central and Aluka publications. The possible reason for this is that students have availed themselves with these resources in order to pursue their academic work or activities. The finding of this study confirms those of Madhusuudhan (2013) that postgraduate students mostly use Oxford online journal, TEEAL, Biomed central and Aluka publications in order to seek information for their different subject areas. Paines and Kwachi (2013) also noted that majority of the students consult HINARI, JSTOR, OARE, AGORA, Ebsco host resources, TEEAL, DOAJ and MIT Open Course ware EIR databases for their research work.

### **Frequency of Utilization of EIR Databases Among Lecturers and Postgraduate Students in Learning and Research in Federal and State University Libraries in South-South, Nigeria.**

The study shows that majority of the lecturers in federal universities in South-South Nigeria, often utilize EIR databases 2-3 times a week namely: HINAR, OARE, INASP, JSTOR and World Public Library. 2-3 times a month namely: Agora, Ebsco host resources and AJOL. Once a month namely: TEEAL and MIT Open Course Ware.

Conversely, the lecturers in state universities in South-South Nigeria, often utilize EIR databases 2-3 times a week namely: AGORA and OARE. 2-3 times a month namely: once a month namely: HINARI, Ebsco host resources, AJOL, TEEAL and DOAJ. This result is consistent with majority of the finding of the studies conducted by Oduwole and Oyewumi (2010) who reported in their study that researchers use the EIR databases weekly, twice a week. Zainab, Huzaimah and Ang (2006) that researchers use the EIR databases weekly. Khan and Ahmed (2009) that research scholars use the EIR databases 2-3 times a week. Shuklla and Mishra (2011) that research scholars use the EIR databases daily and 2-3 times a week and Malemia (2014) also reported that staff frequently use the EIR databases daily, twice a week, once a month.

Another finding revealed that majority of the postgraduate students in the federal universities in South-South often utilize the EIR databases 2-3 times a month namely: AGORA, HINARI, Ebsco Host Resources, TEEAL, DOAJ, JSTOR, Egranary. Once a month namely: DATAD, World Public Library and Questia, followed by 2-3 times a week namely: OARE, MIT Open Course Ware, Lexisnexis and Ebrary. However, the postgraduate students in the state universities in South-South Nigeria often utilize the EIRs 2-3 times a week namely: AGORA, Ebsco Host Resources, AJOL, OARE, TEEAL, JSTOR and Biomed central. Once a month namely: Ebrary and DOAJ, followed by daily namely: Oxford Online Journal and Aluka. This finding is in consonance with the findings of Kaur and Verma (2009) who observed that postgraduate students use the EIRs 2-3 times a week. Swain and Panda (2013) study revealed that students use the EIRs daily, weekly and once a month. Upadhyay and Chakraborty (2008) also noted that students use the EIRs daily, weekly, 2- 3 a week and once a month. The high

frequency of usage of these EIR databases could be a as a result of use of modern ICT related facilities among lecturers and students such as laptops, smart phones and tablets. It could also be said that the EIR databases are very fast means of retrieving current information for scholarly output.

### **Purposes for which Lecturers and Postgraduate Students Utilize the EIR Databases in Federal and State University libraries in South South Nigeria.**

The study revealed that greater proportion of the lecturers in the federal and state universities in South-South Nigeria, utilize the EIR databases for the same purposes, which are as follows: writing of journal articles, preparing for seminars, preparing for conference, preparing for workshops, for teaching, preparing for lectures and writing of books. This result agrees with Jirojwong (2014) that majority of the researchers used for their study utilize e-resources for conference preparation, seminars, writing of books and articles. Shukka and Nishra (2011) reported that majority of the respondents used the EIR databases for publishing of articles, updating of knowledge. Also Manda (2005) stated that they use it for teaching/lecturing. Adeniran (2013) found out that they use the electronic resources for acquisition of knowledge. Romero-Otero, Iglesias-Fernández and Giménez-Toledo (2013) also agreed that majority of the academic researchers' use the e-resources for research work, writing of articles and for lecture preparation. Sansnee and Wallin (2002) who noted that more of the faculty members use the e-resource databases in preparing for seminars, e-conference, writing of books and scholarly Web sites publications



Again the findings revealed that, postgraduate students in the federal and state universities in South-South, Nigeria, utilize the EIR databases for the same purposes which are as follows: to write assignment, preparing for seminars, preparing for examinations, to write thesis, group discussion, share knowledge, update knowledge, for recreation and leisure, preparing for conferences and to write dissertation. This finding agrees with Sangowusi (2003) who noted that postgraduate students use the EIR for scholarly publications. Damilola (2013) also noted that they use it for writing of theses/ dissertations. Dinoshiho (2010) also observed that they use it for preparing for assignments, Ekwelem Ukoma and Okafor (2009) stated that they use the EIR databases to prepare for conference. Ogunyade and Oyibo (2003) asserted that postgraduate students use the EIR databases for preparing their assignments and for examinations. Ojo (2014) stated that postgraduate students use the EIRs for group discussion, for recreation and leisure, sharing of knowledge and writing of their theses work.

### **The significant differences in the hypotheses.**

The study also revealed that the proportions of federal and state university libraries that have EIR databases do not differ significantly. This result is not surprising, because some of the various types of EIR databases found in the federal universities were also found in the state universities. Hundies (2002) reported that majority of the databases in universities in developing nations' are accessible at no cost. The reason for this could be as a result of insufficient funding of universities to subscribe to fee based databases. As a result of this, libraries rely on free-databases for teaching, learning and teaching. Furthermore, some of these online databases are subsidized to developing nations by academic institutions,

foundations, international organization or government information center. The World Health Organization (WHO) is one of such international agencies that subsidize payment of online databases such as HINARI, AGORA and OARE to research centers, hospitals, non-governmental organizations, colleges, universities and government ministries (Research4life, 2012).

The study also revealed that the proportions of lecturers in the federal and state universities that utilize the EIR databases do not differ significantly. Sharma, Singh and Sharma (2011) study on usage and acceptability of e-resources in National Dairy Research Institute (NDRI) and National Bureau of Animal Genetic Resources (NBAGR), India, showed that e-resources databases were the most preferred used resources among the teachers and researchers in the research institutes. Omotayo (2010) examined the access and use of electronic journals in Obafemi Awolowo University, Ile-Ife. The present situation may be explained as a result of internet revolution that has ushered the use of e-resources for quick access to resources needed for their research work at any time irrespective of their location.

The study also revealed that the proportions of postgraduate students in the federal and state universities that utilize the EIR databases do not differ significantly. Swain (2010) study in Business Schools of Orissa (India), showed that postgraduate students' have keen interest in the use of electronic resources that are relevant to their course work, project works/assignments and theses /dissertations. In the same vein, Masoumeh (2014) finding in Ten (10) government university libraries among postgraduate students in Iran. The finding showed that there is a high level of usage of electronic resources and all the postgraduate students in the various

universities libraries use the resources. This may be as a result of students' deep knowledge and frequent use of e- resources.

The study also revealed that the proportion of lecturers in the federal and state universities that use the EIR databases for different purposes do not differ significantly. Wasike (2013) discovered from their study that academic staff used the EIR databases for same purposes and the emphases were on teaching, learning, research and publications used for promotion. All these emphases require academicians to use the EIR databases to search for information and materials that will be used for teaching. Similarly, the study by Ahmed (2013) on the use of electronic resource databases by the faculty members in diverse public universities in Bangladesh showed that lecturers in the various public universities utilize the EIR databases for similar purposes irrespective of their rank in order to enhance their research output. This result is encouraging and it could be attributed to the fact that lecturers in universities conduct research and publish the output of their research work which in turn is used for the development of the society and for the lecturers' promotion.

The study also revealed that the proportion of postgraduate students in the federal and state universities that use the EIR databases for different purposes do not differ significantly. This finding of this study is contrary to the findings of Ndinoshiho (2010), Adeniran (2013) and Ojo (2014) that students irrespective of their universities use the databases for similar purposes such as current awareness, find information for class assignment, acquisition of knowledge, for group discussion, conferences, for recreation and leisure, sharing of knowledge.

## Conclusion

Based on the findings of this study, it could be concluded that:

Despite all the efforts made so far by agencies such as TETFUND to provide EIR databases in universities, the availability of EIR databases in federal and state university libraries in South-South, Nigeria is still very low. This shows that there is still much to be acquired.

It could be seen that the nature of EIR databases available were mainly free-based, only 7 fee-based EIR databases were subscribed to by the federal universities and 2 fee-based EIR databases were subscribed to by the state universities.

It is evident from this study that most of the free-based EIR databases that were available in the federal university libraries were not available in the state university libraries in South-South, Nigeria despite being free.

The study also found that the different types of EIR database were used by lecturers and postgraduate in the federal and state university libraries in South-South, Nigeria.

The level of usage of EIR database by lecturers and postgraduate in the federal and state university libraries was generally high as most of them indicated that they use these resources frequently for their academic activities.

The study also found that the purposes of usage of EIR databases by lecturers and postgraduate in the federal and state university libraries in South-South, Nigeria were writing of journal articles, preparing for seminars, preparing for conference, preparing for workshops, for teaching, preparing for lectures and writing of books, to write assignment, preparing for

seminars, preparing for examinations, to write thesis, group discussion, share knowledge, update knowledge, for recreation and leisure, preparing for conferences and to write their dissertation.

The proportions of federal and state university libraries that have EIR databases do not differ significantly. This shows that there is no much gap in the EIR databases in these universities. What is available in the federal universities could also be found in the state universities as both universities use these resources for similar purpose.

The study also showed that the proportions of lecturers and postgraduate students in the federal and state universities that utilize the EIR databases do not differ significantly. This could be as a result of similar usage of these e-resources in both universities.

The proportion of lecturers and postgraduate students in the federal and state universities that use the EIR databases for different purposes do not differ significantly. It could be said that lecturers in both universities use these EIR databases for similar purposes such as teaching, learning and research work and also for promotion. Therefore the purpose for using EIR databases may not differ significantly in both universities.

### **Implications of the Study**

The results of this study have raised some implications for federal and state universities in the South-South, Nigeria to improve on the development of their electronic information resource databases.

1. The study revealed that federal and state universities in the South-South, Nigeria do not subscribe to wide range of electronic information resource databases in their libraries for teaching, learning and research work. This could be because enough funds were not released for the subscription of fee-based EIR databases in the federal and state universities that will enhance effective teaching, learning and research.
2. The free-based EIR databases available are few, these indicate that librarians in the federal and state universities may not be well exposed to free based databases that can be used to develop their e-resources for teaching, learning and research work.
3. Lecturers and postgraduate students are limited to use the EIR databases available in their universities; this indicates that they are not exposed to other databases for a wide variety of information that will broaden their teaching, learning and research work.
4. The study revealed that there were some free-base databases that were available in the federal university libraries but not available in the state university libraries. Similarly, there were some resources that were available in the state university libraries but not available in the federal university libraries in South-South, Nigeria. This indicates that there may not be a communication platform were librarians in universities share scholarly ideas to improve on their electronic services for teaching, learning and research.
5. This study has contributed to the global body of literature on the availability and utilization of electronic information resource databases in federal and state university libraries in South-South, Nigeria.
6. The study has provided enough information to university librarians, and university management on the strengths and weaknesses of the electronic information resource

databases collection and university libraries can now strengthen their weaknesses if they choose.

## **Recommendations**

Based on the findings of this study and their implications, the following recommendations were made.

1. The university libraries should be well funded in order to subscribe to more fee based EIR databases that are relevant to the teaching, learning and research work in their libraries.
2. There should be periodic assessments by library management committee on the acquisition of EIR databases in the university libraries in order to ensure that they improve on the EIR databases and that the collections that match with the curriculum of the universities should be acquired.
3. The acquired EIR databases should be evaluated from time to time through usage statistics.
4. University library committee should draw up acquisition policy to guide the librarians in the selection and acquisition of EIR databases.
5. Efforts should be made by librarians to increase the free- based EIR databases in their libraries in order to reduce users' frustration.
6. University management should use the fund provided by Tertiary Education Trust Fund to develop their library.

7. University management should assist their libraries by ensuring that the identified EIR databases collection weaknesses are strengthened.

### **Limitations of the Study**

The following are the limitations of this study.

1. It was expected that a large number of EIR databases would be covered but it turns out that the EIR databases available in both categories of universities used for this study were very few.
2. The October 2012 flood in some parts of South-South West, Nigeria, delayed the administration of the questionnaires as road leading to some of the universities could not be accessible until the flood rescinded.

### **Suggestions for Further Research**

This study is by no means exhaustive as far as availability and utilization of electronic information resources in federal and state university libraries in South–South, Nigeria are concerned. In this regard, it is recommended that further studies should be carried out in the following areas:

1. Expansion of this study to other zones / libraries in federal, state and private universities in Nigeria.
2. A study of university libraries in Nigeria that subscribe to more of fee-based EIR databases for teaching, learning and research work.



3. Strategies to be adopted for library consortium in subscribing to fee-based EIR databases in federal, state and private universities in Nigeria.
4. An overview of selection, acquisition and usage of electronic information resources in federal, state and private universities in Nigeria
5. Licensing and negotiations of commercial e-resources in federal, state and private universities in Nigeria.
6. Acquisition and management of EIR databases by Tertiary Education Trust Fund (TETFUND) and Nigeria Research and Education Network (NgREN) in University libraries in Nigeria.

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## APPENDIX A

### List of university libraries used for the study

S/N	Universities	University librarians	Population of Lecturers		Population of PG students	
			Male	Female	Male	Female
1	Ambrose Alli University Library, Ekpoma (AAU)	1	105	15	38	18
2	Delta State University Library, Abraka (DELSU)	1	142	8	69	38
3	University of Benin Library (UNIBEN)	1	270	15	95	50
4	Rivers State University of Science and Technology Library (RUST)	1	134	12	136	41
5	University of Port-Harcourt Library, Choba (UNIPOINT)	1	245	19	182	48
6	University of Calabar Library (UNICAL)	1	219	16	71	25
7	University of Uyo Library (UNIUYO)	1	204	17	69	42
<b>Total</b>		7	1319	102	660	262 = <b>2350</b>

**Source:** Library registration record of the seven universities (2012), as at the time of this research.

## APPENDIX B

### Registered Lecturers and Postgraduate Students in Federal and State University Libraries in South-South, Nigeria.

Ownership of University	Lecturers	Postgraduate students
Federal	1005	582
State	416	340
Total	1421	922

Derived from the Table 1 Appendix A, the library registers of the various university libraries in the four (4) federal and three (3) state university libraries, 2011/2012 session.

## APPENDIX C

### QUESTIONNAIRE FOR THE UNIVERSITY LIBRARIANS

Department of Library and Information Science,  
Nnamdi Azikiwe University,  
Awka.  
4<sup>th</sup> September, 2012.

Dear Respondents,

#### **Availability of Electronic Information Resource Databases in University Libraries in South- South, Nigeria Questionnaire (AEIRDs)**

I am a postgraduate student currently pursuing a doctorate degree in Library and Information Science in the above mentioned institution. This questionnaire is aimed at gathering information on availability of EIR databases in university libraries in South- South, Nigeria.

Kindly, respond to the items by ticking the appropriate responses. You are guaranteed strict confidentiality of any information provided.

Thank you.

Yours Sincerely,

**Tiemo, Pereware Aghwotu.**

08032384130.

Pere\_tiem@yahoo.com



## QUESTIONNAIRE FOR UNIVERSITY LIBRARIANS

### SECTION A

This questionnaire is meant for the university librarians only, to elicit information regarding the availability of EIR databases in their university libraries.

#### Background information

**Introduction:** Please tick (√) the appropriate response or fill the blank spaces provided.

1. Name of University .....
2. Status of University: Federal ( )      State ( )

### SECTION B

#### Types of EIR database in your university library

The Items numbered 1-13 are various types of EIR databases that could be found in a library. Indicate by ticking (√) those databases that are available in your university library

S/NO	EIR databases	Tick here
1	Access to global online research in Agriculture (AGORA)	
2	Access to Research Initiative (HINARI)	
3	EBSCO Host Resources	
4	African Journals Online (AJOL)	
5	Online Access to Research in the Environments (OARE)	
6	Database of African Theses and Dissertations (DATAD)	
7	The Essential Electronic Agricultural Library (TEEAL)	
8	International Network for Availability of Scientific Publication (INASP)	
9	MIT Open Course Ware	
10	Directory of Open Access Journals (DOAJ)	
11	Bibliomania	
12	British Library and Development studies (BLDS)	
13	Journal storage (JSTOR)	
	Please state other types of EIRs in your library.	
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15		
16		
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22		
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24		
25		
26		
27		

## SECTION C

Nature and subscription of available EIR databases in your university library.

Please tick (✓) nature and duration of subscription of the fee-based EIR databases.

S/NO	EIR databases	Nature of EIR databases		Duration of subscription of Fee-based EIR databases		
		Free-based	Fee -based	1 yr	2 yrs	3 yrs
1	Access to global online research in Agriculture (AGORA)					
2	Access to Research Initiative (HINARI)					
3	EBSCO Host Resources					
4	African Journals Online (AJOL)					
5	Online Access to Research in the Environments (OARE)					
6	Database of African Theses and Dissertations (DATAD)					
7	The Essential Electronic Agricultural Library (TEEAL)					
8	International Network for Availability of Scientific Publication (INASP)					
9	MIT Open Course Ware					
10	Directory of Open Access Journals					
11	Bibliomanania					
12	British Library and Development studies (BLDS)					
13	Journal storage (JSTOR)					
	<b>Please state other EIR databases that are available in your library, also tick the nature and duration of subscription of the fee-based EIR databases.</b>					
14						
15						
16						
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22						
23						
24						
25						
26						
27						

## APPENDIX D

### QUESTIONNAIRE FOR LECTURERS AND POSTGRADUATE STUDENTS

Department of Library and Information Science,  
Nnamdi Azikiwe University,  
Awka.  
4<sup>th</sup> September, 2012.

Dear Respondents,

#### **Utilization of Electronic Information Resource Databases in University Libraries in South-South, Nigeria Questionnaire (UEIRDs)**

I am a postgraduate student currently pursuing a doctorate degree in Library and Information Science in the above mentioned institution. This questionnaire is aimed at gathering information on Utilization of EIR Databases by Lecturers and Postgraduate Students in University Libraries in South- South, Nigeria.

Kindly, respond to the items by ticking the appropriate responses. You are guaranteed of strict confidentiality of any information provided.

Thank you.

Yours Sincerely,

**Tiemo, Pereware Aghwotu.**

08032384130.

Pere\_tiem@yahoo.com

## QUESTIONNAIRE FOR LECTURERS AND POSTGRADUATE STUDENTS

### SECTION A

Utilization of EIR databases by Lecturers and Postgraduate Students in University Libraries in South-South, Nigeria.

This questionnaire is for lecturers and postgraduate students only. It is meant to elicit information regarding the utilization of EIR databases in their university libraries.

#### Bio Data

**Introduction:** Please tick (√) the appropriate response or fill the blank spaces provided.

1. Name of University .....
3. Status of University: Federal ( )      State ( )
4. Sex: Female ( )      Male ( )
5. Status: University lecturer ( )      PG student ( )

#### SECTION B: Utilization of EIR databases

Please tick (√) the types of EIR database that you use in your university library.

S/NO	EIR databases	Please tick the EIR databases that you use.
1	Access to global online research in Agriculture (AGORA)	
2	Access to Research Initiative (HINARI)	
3	EBSCO Host Resources	
4	African Journals Online (AJOL)	
5	Online Access to Research in the Environments (OARE)	
6	Database of African Theses and Dissertations (DATAD)	
7	The Essential Electronic Agricultural Library (TEEAL)	
8	International Network for Availability of Scientific Publication (INASP)	
9	MIT Open Course Ware	
10	Directory of Open Access Journals (DOAJ)	
11	Bibliomanania	
12	British Library and Development studies (BLDS)	
13	Journal storage (JSTOR)	
	<b>Please state other types of EIR database in your library that you use.</b>	
14		
15		
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**SECTION C: Frequency of use of EIR databases**

Please tick (✓) one of the statements below, to indicate how often you use the EIR databases in your library

S/N	EIR databases	Frequency of utilization					
		Daily	2-3 times a week	Once a month	2-3 times a month	Once in 2-3 months	Once in several (more than 3) months
1	Access to global online research in Agriculture (AGORA)						
2	Access to Research Initiative (HINARI)						
3	EBSCO Host Resources						
4	African Journals Online (AJOL)						
5	Online Access to Research in the Environments (OARE)						
6	Database of African Theses and Dissertations (DATAD)						
7	The Essential Electronic Agricultural Library (TEEAL)						
8	International Network for Availability of Scientific Publication (INASP)						
9	MIT Open Course Wear						
10	Directory of Open Access Journals (DOAJ)						
11	Bibliomanania						
12	British Library and Development studies (BLDS)						
13	Journal storage (JSTOR)						
	Please state other types of EIR databases you use in your university library and the frequency of use.						
14							
15							
16							
17							
18							
19							
20							
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24							
25							
26							
27							

## SECTION D: Purposes for which EIR databases are utilized.

Please tick (✓) the purposes for utilizing EIR databases in your university library.

S/N	Purposes	Tick here
1	Writing of journal articles	
2	Preparing for seminars	
3	Preparing for conferences	
4	Preparing for workshops	
5	Group discussion	
6	To write my thesis	
7	To write my dissertation	
8	To update my knowledge	
9	To share knowledge	
10	Preparing lectures	
11	For teaching	
12	To write my assignments	
13	Preparing for examinations	
14	Writing of books	
15	For recreation and leisure	
	<b>Please state other additional purposes which you use the EIR databases for in your library</b>	
16		
17		
18		

APPENDIX E

COMMENTS ON THE VALIDATION OF THE INSTRUMENTS.

APPENDIX

Validation of instrument on the Topic:  
 Availability and Utilization of Electronic  
 Information Resources in University  
 Libraries in South-South Nigeria.

This is to certify that I DR. OTUNWABI V. ANUNOBI  
 Validated the above mentioned instrument and made corrections/recommendations  
 on the following areas: As indicated on the instruments  
Comments

- You can provide one purpose to lecturers and  
 postgraduate students and give them collect  
 the types of ERs being utilized by the subject;  
 Purpose 9. You can amend it out the difference  
 in use between male and female students  
 for 10. The changes should affect questions

- You can remove department and degree if  
 there is no precaution then your purpose  
 to determine the frequency of use

- I do not think it is necessary to  
 provide names of the databases else  
 errors & you should take care of them

- For the extent of availability of databases  
 did you use the data of subscription (initial)  
 of the databases could be computer or personal ownership

After the amendments, I considered the instruments fit/unfit for the study which it  
 is designed for.

Signature: at  
 Date: 28/06/12

**QUESTIONNAIRE FOR LECTURERS AND POSTGRADUATE STUDENTS**

Department of Library and Information  
Science,  
Nnamdi Azikiwe University,  
Awka.  
12<sup>th</sup>, January, 2012.

Dear Respondents,

**Utilization of Electronic Information Resources (EIRs) By Lecturers and Postgraduate Students in Federal and State University Libraries in South- South, Nigeria Questionnaire (UEIRs)**

I am a postgraduate student currently pursuing a doctorate degree in Library and Information Science in the above mentioned institution. This questionnaire is aimed at gathering information on Utilization of EIRs by Lecturers and Postgraduate Students in University Libraries in South- South, Nigeria.

Kindly, respond to the items by ticking the appropriate responses. You are guaranteed of strict confidentiality of any information provided.


Thank you.

Yours Sincerely,

**Tiemo, Pereware Aghwotu.**

08032384130.

Pere\_tiem@yahoo.com

*This instrument has been  
validated. Dr.   
Hilda Okela  
7/6/12*



**QUESTIONNAIRE FOR LECTURERS AND POSTGRADUATE STUDENTS**

**SECTION A**

Extent of Utilization of EIRs by Lecturers and Postgraduate Students in University Libraries in South-South, Nigeria.

This questionnaire is for lecturers and postgraduate students only. It is meant to elicit information regarding the extent of utilization of EIRs in their university libraries.

**Bio Data**

**Introduction:** Please tick (✓) the appropriate response or fill the blank spaces provided.

1. Name of University .....
3. Status of University: Federal ( ) State ( )
4. Sex: Female ( ~ ) Male ( )
5. Department .....
6. Degree in View.....
7. Status: University Lecturer ( ) PG student ( )

**SECTION B: Utilization of EIR**

Please tick (✓) the types of EIRs that you utilize.

S/N	Statement	Types utilized	S/N	Statement	Types utilized
1	CD ROMs		17	African Journals Online (AJOL)	
2	E-theses		18	Access to global online research in Agriculture (AGORA)	
3	E-book titles		19	Others:	
4	E-journals titles		20	Access to global online research in Agriculture (AGORA)	
5	E-dictionaries		21	Access to Research Initiative (HINARI)	
6	E-encyclopedias		22	EBSCO Host Resources	
7	E-conference reports		23	AJOL	
8	E-seminar reports		24	Online Access to Research in the Environments	
9	Online Public Access Catalogue (OPAC)		25	Database of African Theses and Dissertations (DATAD)	
10	Institutional Repositories		26	The Essential Electronic Agricultural Library (TEEAL)	
<b>Online data base such as:</b>			27	International Network for Availability of Scientific Publication (INASP)	
12	Access to Research Initiative (HINARI)		28	Database for Africa Theses and Dissertations (DATAD).	
13	EBSCO host		29	Directory of Open Access Journals	
14	Sage Publication		<b>Please state other database that you used in your</b>		
15	Emerald		30		
16	IGI Publication		31		

*Is there any way you can add more to this other*  
 32.  
 33.

## SECTION D: Frequency of use of EIRs

Please tick (✓) one of the statements below, to indicate how often the EIRs

	Statement	How often
1	I use the EIRs daily	
2	I use the EIRs 2-3 times a week	
3	I use the EIRs once in a month	
4	I use the EIRs 2-3 times a month	
5	I use the EIRs once in 2 or 3 months	
6	I use the EIRs once in several (more than 3) months	

## SECTION E: Purposes for which EIRs are utilized.

Please tick (✓) the purposes for utilizing EIRs.

	Statement	Purposes
1	Writing of articles	
2	Preparing for seminars	
3	Preparing for conferences	
4	Preparing for workshops	
5	Group discussion	
6	To write my thesis	
7	To write my dissertation	
8	To update my knowledge	
9	To share knowledge	
10	Preparing lectures	
11	Preparation of course work	
12	To write my assignments	
13	Preparing for examinations	
14	Writing of books	

include other purposes as per

e.g. 15. ✓ 20  
16. ✓ 18 for the respondents to  
19. ✓ 19 include by writing.

## QUESTIONNAIRE FOR THE LIBRARIANS

Department of Library and Information  
Science,  
Nnamdi Azikiwe University,  
Awka.

12<sup>th</sup>, January, 2012.

*do not forget to  
change the date  
starting from the  
date of administering  
the questionnaire.*

Dear Respondents,

### Availability of Electronic Information Resources (EIRs) in Federal and State University Libraries in South- South, Nigeria Questionnaire (AEIRs)

I am a postgraduate student currently pursuing a doctorate degree in Library and Information Science in the above mentioned institution. This questionnaire is aimed at gathering information on Availability of EIRs in University Libraries in South- South, Nigeria.

Kindly, respond to the items by ticking the appropriate responses. You are guaranteed strict confidentiality of any information provided.

Thank you.

Yours Sincerely,

**Tiemo, Pereware Aghwotu.**

08032384130.

Pere\_tiem@yahoo.com

**QUESTIONNAIRE FOR UNIVERSITY LIBRARIAN**

**SECTION A**

This questionnaire is meant for the university librarians only. To elicit information regarding the extent of availability of EIRs in their university libraries.

**Background information**

**Introduction:** Please tick (√) the appropriate response or fill the blank spaces where need.

1. Name of University .....
2. Status of University: Federal ( ) State ( )

**SECTION B**

**Types of EIRs in your University library**

S/NO	Statement	The Items numbered 1-23 are various types of EIRs and online database that could be found in a library. Indicate by ticking (√) those facilities that are available in your university library in each of the areas.
1	CD ROMs	
2	E-theses	
3	E- dissertations	
4	E-books titles	
5	E-journals titles	
5.	E-dictionaries titles	
6	E-encyclopedias titles	
7	E-conference reports	
8	E-seminar reports	
9	Access to global online research in Agriculture (AGORA)	
10	Access to Research Initiative (HINARI)	
11	EBSCO Host Resources	
12	AJOL — <i>What does this mean</i>	
13	Online Access to Research in the Environments	
14	Database of African Theses and Dissertations (DATAD)	
15	The Essential Electronic Agricultural Library (TEEAL)	
16	International Network for Availability of Scientific Publication (INASP)	
17	Database for Africa Theses and Dissertations (DATAD).	
18	Directory of Open Access Journals	
19	Sage Publication	
20	Emerald Group Publishing	
21	IGI Publication — <i>what is the meaning of IGI</i>	
22	Online Public Access Catalogue (OPAC)	
23	Institutional Repository	

*you did not make provision for others.*

SECTION C

Extent of availability of EIRs in your university library.

S/NO	Statement	Please indicate from ( serial number 1-8) the numbers of each of the EIRs available in your library.				
1	CD ROMs					
2	E-theses					
3	E- dissertations					
4	E-books titles					
5	E-journals titles					
5	E-dictionaries titles					
6	E-encyclopedias titles					
7	E-conference reports					
8	E-seminar reports					
<b>Database subscription</b>						
	<b>Please tick (✓) the range bracket of database subscription in your library</b>	<b>1-2months</b>	<b>2-4 months</b>	<b>4-6 months</b>	<b>8 months and above</b>	<b>none</b>
10	Access to global online research in Agriculture (AGORA)					
11	Access to Research Initiative (HINARI)					
12	EBSCO Host Resources					
13	AJOL → write in full.					
14	Online Access to Research in the Environments					
15	Database of African Theses and Dissertations (DATAD)					
16	The Essential Electronic Agricultural Library (TEEAL)					
17	International Network for Availability of Scientific Publication (INASP)					
18	Database for Africa Theses and Dissertations (DATAD).					
19	Directory of Open Access Journals					
20	Sage Publication					
21	Emerald Publication					
22	IGI Publication → write in full (IGI)					
	<b>Please state other database that are available in your library and tick the range of subscription</b>					
23						
24						
25						
26						

Note 1. Not all these databases are free base. Some are fees base. So differentiate them.

**QUESTIONNAIRE FOR THE LIBRARIANS**

Department of Library and Information  
Science,  
Nnamdi Azikiwe University,  
Awka.  
12<sup>th</sup>, January, 2012.

Dear Respondents,

**Availability of Electronic Information Resources (EIRs) in Federal and State  
University Libraries in South- South, Nigeria Questionnaire (AEIRs)**

I am a postgraduate student currently pursuing a doctorate degree in Library and Information Science in the above mentioned institution. This questionnaire is aimed at gathering information on Availability of EIRs in University Libraries in South- South, Nigeria.

Kindly, respond to the items by ticking the appropriate responses. You are guaranteed strict confidentiality of any information provided.

Thank you.

Yours Sincerely,

Tiemo, Pereware Aghwotu.

08032384130.

Pere\_tiem@yahoo.com

*Dr. E.S. Anacholn  
Lib & Inf. Sc. Unizik  
E.S. Anacholn  
25/1/12*

QUESTIONNAIRE FOR UNIVERSITY LIBRARIAN

SECTION A

This questionnaire is meant for the university librarians only. To elicit information regarding the extent of availability of EIRs in their university libraries.

Background information

Introduction: Please tick (✓) the appropriate response or fill the blank spaces where need.

1. Name of University .....
2. Status of University: Federal ( ) State ( )

SECTION B

Types of EIRs in your University library

S/NO	Statement	The Items numbered 1-23 are various types of EIRs and online database that could be found in a library. Indicate by ticking (✓) those facilities that are available in your university library in each of the areas.
1	CD ROMs	
2	E-theses	
3	E- dissertations	
4	E-books titles	
5	E-journals titles	
5	E-dictionaries titles	
6	E-encyclopedias titles	
7	E-conference reports	
8	E-seminar reports	
9	Access to global online research in Agriculture (AGORA)	
10	Access to Research Initiative (HINARI)	
11	EBSCO Host Resources	
12	AJOL	
13	Online Access to Research in the Environments	
14	Database of African Theses and Dissertations (DATAD)	
15	The Essential Electronic Agricultural Library (TEEAL)	
16	International Network for Availability of Scientific Publication (INASP)	
17	Database for Africa Theses and Dissertations (DATAD)	<i>See item 14</i>
18	Directory of Open Access Journals	<i>This URL is available in any system connected to the Net. Please delete.</i>
19	Sage Publication	
20	Emerald Group Publishing	
21	IGI Publication	
22	Online Public Access Catalogue (OPAC)	
23	Institutional Repository	

**SECTION C :**  
Extent of availability of EIRs in your university library.

S/NO	Statement	Please indicate from ( serial number 1-8) the numbers of each of the EIRs available in your library.				
1	CD ROMs					
2	E-theses					
3	E- dissertations					
4	E-books titles					
5	E-journals titles					
5	E-dictionaries titles					
6	E-encyclopedias titles					
7	E-conference reports					
8	E-seminar reports					
<b>Database subscription</b>						
	<b>Please tick (√) the range bracket of database subscription in your library</b>	<b>1-2months</b>	<b>2-4 months</b>	<b>4-6 months</b>	<b>8 months and above</b>	<b>none</b>
10	Access to global online research in Agriculture (AGORA)					
11	Access to Research Initiative (HINARI)					
12	EBSCO Host Resources					
13	AJOL					
14	Online Access to Research in the Environments					
15	Database of African Theses and Dissertations (DATAD)					
16	The Essential Electronic Agricultural Library (TEEAL)					
17	International Network for Availability of Scientific Publication (INASP)					
18	Database for Africa Theses and Dissertations (DATAD).					
19	Directory of Open Access Journals					
20	Sage Publication					
21	Emerald					
22	IGI Publication					
	<b>Please state other database that are available in your library and tick the range of subscription</b>					
23						
24						
25						
26						



## QUESTIONNAIRE FOR LECTURERS AND POSTGRADUATE STUDENTS

Department of Library and Information  
Science,  
Nnamdi Azikiwe University,  
Awka.  
12<sup>th</sup>, January, 2012.

Dear Respondents,

### Utilization of Electronic Information Resources (EIRs) By Lecturers and Postgraduate Students in Federal and State University Libraries in South- South, Nigeria Questionnaire (UEIRs)

I am a postgraduate student currently pursuing a doctorate degree in Library and Information Science in the above mentioned institution. This questionnaire is aimed at gathering information on Utilization of EIRs by Lecturers and Postgraduate Students in University Libraries in South- South, Nigeria.

Kindly, respond to the items by ticking the appropriate responses. You are guaranteed of strict confidentiality of any information provided.

Thank you.

Yours Sincerely,

**Tiemo, Pereware Aghwotu.**

08032384130.

Pere\_tiem@yahoo.com

**QUESTIONNAIRE FOR LECTURERS AND POSTGRADUATE STUDENTS**

**SECTION A**

Extent of Utilization of EIRs by Lecturers and Postgraduate Students in University Libraries in South-South, Nigeria.

This questionnaire is for lecturers and postgraduate students only. It is meant to elicit information regarding the extent of utilization of EIRs in their university libraries.

**Bio Data**

**Introduction:** Please tick (✓) the appropriate response or fill the blank spaces provided.

1. Name of University .....
3. Status of University: Federal ( ) State ( )
4. Sex: Female ( ) Male ( )
5. Department .....
6. Degree in View.....
7. Status: University Lecturer ( ) PG student ( )

**SECTION B: Utilization of EIR**

Please tick (✓) the types of EIRs that you utilize.

S/N	Statement	Types utilized	Statement	Types utilized
1	CD ROMs		17 African Journals Online (AJOL)	
2	E-theses		18 Access to global online research in Agriculture (AGORA)	
3	E-book titles		19 Others:	
4	E-journals titles		20 Access to global online research in Agriculture (AGORA)	
5	E-dictionaries		21 Access to Research Initiative (HINARI)	
6	E-encyclopedias		22 EBSCO Host Resources	
7	E-conference reports		23 AJOL	
8	E-seminar reports		24 Online Access to Research in the Environments	
9	Online Public Access Catalogue (OPAC)		25 Database of African Theses and Dissertations (DATAD)	
10	Institutional Repositories		26 The Essential Electronic Agricultural Library (TEEAL)	
	<b>Online data base such as:</b>		27 International Network for Availability of Scientific Publication (INASP)	
12	Access to Research Initiative (HINARI)		28 Database for Africa Theses and Dissertations (DATAD).	
13	EBSCO host		29 Directory of Open Access Journals	
14	Sage Publication		Please state other database that you used in your	
15	Emerald		30	
16	IGI Publication		31	

*Page the questionnaire*

## SECTION D: Frequency of use of EIRs

Please tick (✓) one of the statements below, to indicate how often the EIRs

	Statement	How often
1	I use the EIRs daily	
2	I use the EIRs 2-3 times a week	
3	I use the EIRs once in a month	
4	I use the EIRs 2-3 times a month	
5	I use the EIRs once in 2 or 3 months	
6	I use the EIRs once in several (more than 3) months	

*This profile should be rearranged.*

## SECTION E: Purposes for which EIRs are utilized.

Please tick (✓) the purposes for utilizing EIRs.

	Statement	Purposes
1	Writing of articles	
2	Preparing for seminars	
3	Preparing for conferences	
4	Preparing for workshops	
5	Group discussion	
6	To write my thesis	
7	To write my dissertation	
8	To update my knowledge	
9	To share knowledge	
10	Preparing lectures	
11	Preparation of course work	
12	To write my assignments	
13	Preparing for examinations	
14	Writing of books	

Department of Library and Information Science,  
Nnamdi Azikiwe University,  
Awka.  
12<sup>th</sup>, April, 2011.

Dear Respondents,

**~~Extent of~~ Utilization of Electronic Information Resources (EIRs) By Lecturers and Postgraduate Students in Federal and State University Libraries in South- South, Nigeria Questionnaire (EUEIRs)**

I am a postgraduate student currently pursuing a doctorate degree in Library and Information Science in the above mentioned institution. This questionnaire is aimed at gathering information on the Extent of Utilization of EIRs by Lecturers and Postgraduate Students in University Libraries in South- South, Nigeria.

Kindly, respond to the items by ticking the appropriate responses. You are guaranteed of strict confidentiality of any information provided.

Thank you.

Yours Sincerely,

**Tiemo, Pereware Aghwotu.**

08032384130.

Pere\_tiem@yahoo.com

4

SECTION A

Extent of utilization of EIRs by lecturers and postgraduate students in university libraries in South-South, Nigeria.  
 This questionnaire is for lecturers and postgraduate students only. It is meant to elicit information regarding the extent of utilization of EIRs in their university libraries.

Bio Data

Introduction: Please tick ( ) the appropriate response or fill the blank spaces provided.

1. Name of University .....
3. Status of University: Federal ( ) State ( )
4. Sex: Female ( ) Male ( )
5. Department .....
6. Degree in View.....
7. Status: University Lecturer ( ) PG student ( )

SECTION B

Please tick the types of EIRs that you utilize.

S/N	Statement	Types utilized		Statement	Types utilized
1	Computers		14	EBSCO	
2	CD-ROMS		15	AJOL	
3	Internet		16	AGORA	
4	Email			Search Engine such as:	
5	World Wide Web		17	Yahoo	
6	e-journals		18	Ask.com	
7	e-books		19	Google	
8	e-report		20	AltaVista	
9	e-theses		21	Hotbot	
10	Online Public Access Catalogue (OPAC)			Multimedia resources	
11	Institutional Repositories		22	over head projectors	
	Online data base such as:		23	television	
12	OARE ??		24	video tapes	
13	HINARI ??		25	audio tapes	

An ordinary lecturer or PG student may not know what these mean

An average lecturer may not even know what some of these things mean. Do you consider it necessary, as part of this study to find out how many of these resources the lecturers/students know what they are. This may be part of information needed under EIR skills literacy

SECTION C

Extent of EIR skills – literacy

	Rank your level of EIR proficiency skills	Knowledge of EIR skills	Highly Proficient	Proficient	Weakly proficient	Not proficient
1	Word processing					
2	Internet usage					
3	OPAC					
4	e-journal, e-theses and e-book					
5	Sending and receiving of e-mail					
6	Downloading data					
7	Printing of documents					
8	Use of Search engines e.g yahoo, Google etc					
9	Teleconferencing					
10	Use of over head projectors					
11	Use of CD ROMs					
12	Use of online data base such as AGORA, HINARI					
13	Electronic format e.g. PDF, JPEG					
14	Online publishing					
15	Course preparation					
16	Face book					
17	Sending and receiving emails					

SECTION D

Please tick the extent of EIRs utilization for your learning and research

	Statement	Extent of utilization
1	I use the EIRs daily	
2	I use the EIRs 2-3 times a week	
3	I use the EIRs 2-3 times a month	
4	I use the EIRs once in a month	
5	I use the EIRs once in 2 or 3 months	
6	I use the EIRs once in several (more than 3) months	

*[Signature]* 2/2/12  
 Dr. Romy Okoye

## SECTION E

Please tick the purposes for utilizing EIRs

	Statement	Purposes
1	writing Articles <input checked="" type="checkbox"/>	
2	Preparing for seminars, conferences and workshops	
3	Group discussion	
4	Thesis / dissertation work	
5	Course work	
6	Update my knowledge	
7	Share knowledge	
9	Teleconference	
10	Publication of Articles <i>How does this differ from No.1?</i>	
11	Communicating with lecturers and students	
12	To improve on my EIR skills	
13	Entertainment	
12	Preparing for examinations	
13	Chatting	
14	Contacting editors	
15	Sending and receiving emails	

## SECTION F

Please tick the problems encountered with the utilization of EIRs

	Statement	Problems encountered
1	Slow internet speed	
2	Difficulty in finding relevant materials online	
3	Limited access to computers and the internet	
4	Lack of ICT proficiency	
5	Insufficient material stored in database	
6	Power outage	
7	Inaccessibility of some websites	
8	Out-dated electronic information resources	
9	Insufficient EIRs in the library	
10	Lack of assistance from librarians to utilize the EIR services	
11	Frequent breakdown of computers	
12	Language barriers in translating foreign online resources	

## QUESTIONNAIRE FOR LECTURERS AND POSTGRADUATE STUDENTS

Department of Library and Information  
Science,  
Nnamdi Azikiwe University,  
Awka.  
12<sup>th</sup>, June, 2012.

Dear Respondents,

### Utilization of Electronic Information Resources (EIRs) in University Libraries in South- South, Nigeria Questionnaire (UEIRs)

I am a postgraduate student currently pursuing a doctorate degree in Library and Information Science in the above mentioned institution. This questionnaire is aimed at gathering information on Utilization of EIRs by Lecturers and Postgraduate Students in University Libraries in South- South, Nigeria.

Kindly, respond to the items by ticking the appropriate responses. You are guaranteed of strict confidentiality of any information provided.

Thank you.

Yours Sincerely,

**Tiemo, Pereware Aghwotu.**

08032384130.

Pere\_tieme@yahoo.com

Validated by me:  
Dr. S. O. Uwuifo  
Associate Professor & HOD, LIS, DEAS  
22/06/12  
07038643499



QUESTIONNAIRE FOR LECTURERS AND POSTGRADUATE STUDENTS

SECTION A

Extent of Utilization of EIRs by Lecturers and Postgraduate Students in University Libraries in South-South, Nigeria.

This questionnaire is for lecturers and postgraduate students only. It is meant to elicit information regarding the extent of utilization of EIRs in their university libraries.

Bio Data

Introduction: Please tick (✓) the appropriate response or fill the blank spaces provided.

1. Name of University .....
3. Status of University: Federal ( ) State ( )
4. Sex: Female ( ) Male ( )
5. Department .....
6. Degree in View.....
7. Status: University Lecturer ( ) PG student ( )

*Of what use is 5 and 6 in this work?*

*Don't you think you should separate them.*

SECTION B: Utilization of EIR

Please tick (✓) the types of EIRs that you utilize in your university library.

*Why not list open access licensed resources.*

S/N	EIRs and database	Types utilized		EIRs and database
1	CD ROMs		17	African Journals Online (AJOL)
2	E-theses		18	Access to global online research in Agriculture (AGORA)
3	E-book titles		19	MIT
4	E-journals titles		20	Online Access to Research in the Environments
5	E-dictionaries		21	Database of African Theses and Dissertations (DATAD)
6	E-encyclopedias		22	The Essential Electronic Agricultural Library (TEEAL)
7	E-conference reports		23	International Network for Availability of Scientific Publication (INASP)
8	E-seminar reports		24	Directory of Open Access Journals
9	Online Public Access Catalogue (OPAC)			Please state other database that you used in your library
10	Institutional Repositories		25	
	Online data base such as:		26	
12	Access to Research Initiative (HINARI)		27	
13	EBSCO host		28	
14	Sage Publication		29	
15	Emerald Publications		30	
16	IGI Publications		31	

SECTION C: Frequency of use of EIRs *(Which of the EIRs?)*

Please tick (✓) one of the statements below, to indicate how often you use the EIRs in your library

S/N	Statement	How often
1	I use the EIRs daily	Daily
2	I use the EIRs 2-3 times a week	2-3 times a week
3	I use the EIRs once in a month	
4	I use the EIRs 2-3 times a month	
5	I use the EIRs once in 2 or 3 months	
6	I use the EIRs once in several (more than 3) months	

*Why not list the EIR such*

*1. CD*

*2. E-theses*

*3. E-book*

*I think this would be better.*

SECTION D: Purposes for which EIRs are utilized.

Please tick (✓) the purposes for utilizing EIRs in your university library.

S/N	Statement	Purposes
1	Writing of articles	
2	Preparing for seminars	
3	Preparing for conferences	
4	Preparing for workshops	
5	Group discussion	
6	To write my thesis	
7	To write my dissertation	
8	To update my knowledge	
9	To share knowledge	
10	Preparing lectures	
11	For teaching	
12	To write my assignments	
13	Preparing for examinations	
14	Writing of books	
	Please state other additional purposes which you use the EIRs for in your library	
15		
16		

**QUESTIONNAIRE FOR LECTURERS AND POSTGRADUATE STUDENTS**

Department of Library and Information  
Science,  
Nnamdi Azikiwe University,  
Awka.  
12<sup>th</sup>, January, 2012.

Dear Respondents,

**Utilization of Electronic Information Resources (EIRs) By Lecturers and  
Postgraduate Students in Federal and State University Libraries in South- South,  
Nigeria Questionnaire (UEIRs)**

I am a postgraduate student currently pursuing a doctorate degree in Library and Information Science in the above mentioned institution. This questionnaire is aimed at gathering information on Utilization of EIRs by Lecturers and Postgraduate Students in University Libraries in South- South, Nigeria.

Kindly, respond to the items by ticking the appropriate responses. You are guaranteed of strict confidentiality of any information provided.

Thank you.

*Sign*  
Yours Sincerely,

**Tiemo, Pereware Aghwotu.**

08032384130.

Pere\_tiem@yahoo.com

*Prof. D. O. Bozimo*  
*D. O. Bozimo*  
27<sup>th</sup> June 2012

QUESTIONNAIRE FOR LECTURERS AND POSTGRADUATE STUDENTS

SECTION A

Extent of Utilization of EIRs by Lecturers and Postgraduate Students in University Libraries in South-South, Nigeria.

This questionnaire is for lecturers and postgraduate students only. It is meant to elicit information regarding the extent of utilization of EIRs in their university libraries.

Bio Data

Introduction: Please tick (✓) the appropriate response or fill the blank spaces provided.

1. Name of University .....
3. Status of University: Federal ( ) State ( )
4. Sex: Female ( ) Male ( )
5. Department .....
6. Degree in View.....
7. Status: University Lecturer ( ) PG student ( )

SECTION B: Utilization of EIR

Please tick (✓) the types of EIRs that you utilize. *(Tick as much as applicable)*

S/N	Statement	Types utilized	Statement	Types utilized
1	CD ROMs		17 African Journals Online (AJOL)	
2	E-theses		18 Access to global online research in Agriculture (AGORA)	
3	E-book titles		19 <del>Others:</del>	
4	E-journals titles		20 <del>Access to global online research in Agriculture (AGORA)</del>	
5	E-dictionaries		21 <del>Access to Research Initiative (HINARI)</del>	
6	E-encyclopedias		22 <del>EBSCO Host Resources</del>	
7	E-conference reports		23 <del>AJOL</del>	
8	E-seminar reports		24 Online Access to Research in the Environments	
9	Online Public Access Catalogue (OPAC)		25 Database of African Theses and Dissertations (DATAD)	
10	<del>Institutional Repositories</del>		26 The Essential Electronic Agricultural Library (TEEAL)	
	Online data base such as:		27 International Network for Availability of Scientific Publication (INASP)	
12	Access to Research Initiative (HINARI)		28 <del>Database for Africa Theses and Dissertations (DATAD)</del>	
13	EBSCO host		29 Directory of Open Access Journals	
14	Sage Publication		Please state other database that you used in your <i>incomplete</i>	
15	Emerald		30	
16	IGI Publication		31	

## SECTION C: Frequency of use of EIRs

Please tick (✓) one of the statements below, to indicate how often the EIRs

*you use*  
*(Tick only one option)*

	Statement	<del>How often</del>
1	I use the EIRs daily	
2	I use the EIRs 2-3 times a week	
3	I use the EIRs once in a month	
4	i use the EIRs 2-3 times a month	
5	I use the EIRs once in 2 or 3 months	
6	I use the EIRs once in several (more than 3) months	

## SECTION D: Purposes for which EIRs are utilized.

Please tick (✓) the purposes for utilizing EIRs.

*provide a lead statement*  
*(Tick as much as applicable)*

	Statement	Purposes
1	Writing of articles	
2	Preparing for seminars	
3	Preparing for conferences	
4	Preparing for workshops	
5	Group discussion	
6	To write my thesis	
7	To write my dissertation	
8	To update my knowledge	
9	To share knowledge	
10	Preparing lectures	
11	Preparation of course work	
12	To write my assignments	
13	Preparing for examinations	
14	Writing of books	

**QUESTIONNAIRE FOR THE LIBRARIANS**

Department of Library and Information  
Science,  
Nnamdi Azikiwe University,  
Awka.  
12<sup>th</sup>, January, 2012.

Dear Respondents,

**Availability of Electronic Information Resources (EIRs) in Federal and State University Libraries in South- South, Nigeria Questionnaire (AEIRs)**

I am a postgraduate student currently pursuing a doctorate degree in Library and Information Science in the above mentioned institution. This questionnaire is aimed at gathering information on Availability of EIRs in University Libraries in South- South, Nigeria.

Kindly, respond to the items by ticking the appropriate responses. You are guaranteed strict confidentiality of any information provided.

Thank you.

Yours Sincerely,

*T. Aghwotu*  
**Tiemo, Pereware Aghwotu.**

08032384130.  
Pere\_tiamo@yahoo.com

QUESTIONNAIRE FOR UNIVERSITY LIBRARIAN

SECTION A

This questionnaire is meant for the university librarians only. To elicit information regarding the extent of availability of EIRs in their university libraries.

Background information

Introduction: Please tick (✓) the appropriate response or fill the blank spaces where need.

- Name of University .....
- Status of University: Federal ( ) State ( )

SECTION B

Types of EIRs in your University library

S/NO	Statement	The items numbered 1-23 are various types of EIRs and online database that could be found in a library. Indicate by ticking (✓) those facilities that are available in your university library in each of the areas.
1	CD ROMs	
2	E-theses	
3	E- dissertations	
4	E-books titles	
5	E-journals titles	
5	E-dictionaries titles	
6	E-encyclopedias titles	
7	E-conference reports	
8	E-seminar reports	
9	Access to global online research in Agriculture (AGORA)	
10	Access to Research Initiative (HINARI)	
11	EBSCO Host Resources	
12	AJOL	
13	Online Access to Research in the Environments	
14	Database of African Theses and Dissertations (DATAD)	
15	The Essential Electronic Agricultural Library (TEEAL)	
16	International Network for Availability of Scientific Publication (INASP)	
17	Database for Africa Theses and Dissertations (DATAD).	
18	Directory of Open Access Journals	
19	Sage Publication	
20	Emerald Group Publishing	
21	IGI Publication	
22	Online Public Access Catalogue (OPAC)	
23	Institutional Repository	

*Handwritten notes in red ink:*  
 you really get the answers by using the method I suggest. I will send you the details. Let discuss it. However, see \*1.

**EXAMPLE**

S/NO	EIR	pls tick the various facilities available
1	E-bks	
2	e-journals	
3	DOAJ	
4	AJOL	

*Handwritten note in red ink:* let discuss this.

**SECTION C**  
Extent of availability of EIRs in your university library.

S/NO	Statement	Please indicate from ( serial number 1-8) the numbers of each of the EIRs available in your library.				
1	CD ROMs					
2	E-theses					
3	E- dissertations					
4	E-books titles					
5	E-journals titles					
5	E-dictionaries titles					
6	E-encyclopedias titles					
7	E-conference reports					
8	E-seminar reports					
<b>Database subscription</b>						
	<b>Please tick (✓) the range bracket of database subscription in your library</b>	1-2months	2-4 months	4-6 months	8 months and above	none
10	Access to global online research in Agriculture (AGORA)					
11	Access to Research Initiative (HINARI)					
12	EBSCO Host Resources					
13	AJOL					
14	Online Access to Research in the Environments					
15	Database of African Theses and Dissertations (DATAD)					
16	The Essential Electronic Agricultural Library (TEEAL)					
17	International Network for Availability of Scientific Publication (INASP)					
18	Database for Africa Theses and Dissertations (DATAD).					
19	Directory of Open Access Journals					
20	Sage Publication					
21	Emerald					
22	IGI Publication					
	<b>Please state other database that are available in your library and tick the range of subscription</b>					
23						
24						
25						
26						

*Use only databases not the e-bk, journals they consist the databases.*

*Find out properly the licensing and Negotiation for each of the databases then you can scale in.*

*Prof. D. O. Bodojima  
27th June 2012*



**QUESTIONNAIRE FOR LECTURERS AND POSTGRADUATE STUDENTS**

Department of Library and Information  
Science,  
Nnamdi Azikiwe University,  
Awka.  
25<sup>th</sup>, June, 2012.

Dear Respondents,

**Utilization of Electronic Information Resources (EIRs) in University Libraries in South- South, Nigeria Questionnaire (UEIRs)**

I am a postgraduate student currently pursuing a doctorate degree in Library and Information Science in the above mentioned institution. This questionnaire is aimed at gathering information on Utilization of EIRs by Lecturers and Postgraduate Students in University Libraries in South- South, Nigeria.

Kindly, respond to the items by ticking the appropriate responses. You are guaranteed of strict confidentiality of any information provided.

Thank you.

Yours Sincerely,

**Tiemo, Pereware Aghwotu.**

08032384130.

Pere\_tiem@yahoo.com

QUESTIONNAIRE FOR LECTURERS AND POSTGRADUATE STUDENTS

SECTION A

Extent of Utilization of EIRs by Lecturers and Postgraduate Students in University Libraries in South-South, Nigeria.

This questionnaire is for lecturers and postgraduate students only. It is meant to elicit information regarding the extent of utilization of EIRs in their university libraries.

Bio Data

Introduction: Please tick (✓) the appropriate response or fill the blank spaces provided.

1. Name of University .....
3. Status of University: Federal ( ) State ( )
4. Sex: Female ( ) Male ( )
5. Department .....
6. Degree in View .....
7. Status: University Lecturer ( ) PG student ( )

*Do they have a place in your research also delete them*

SECTION B: Utilization of EIR

Please tick (✓) the types of EIRs that you utilize in your university library.

S/N	EIRs and database	Types utilized	EIRs and database	Types utilized
1	CD ROMs		16 African Journals Online (AJOL)	
2	E-theses		17 Access to global online research in Agriculture (AGORA)	
3	E-book titles		18 MIT <i>Open CourseWare</i>	
4	E-journals titles		19 Online Access to Research in the Environments	
5	E-dictionaries		20 Database of African Theses and Dissertations (DATAD)	
6	E-encyclopedias		21 The Essential Electronic Agricultural Library (TEEAL)	
7	E-conference reports		22 International Network for Availability of Scientific Publication (INASP)	
8	E-seminar reports		23 Directory of Open Access Journals	
9	Online Public Access Catalogue (OPAC)		<i>reference</i> Please state other database that you used in your library	
10	Institutional Repositories		25	
Online data-base such as:			26	
12	Access to Research Initiative (HINARI)		27	
13	EBSCO host		28	
14	Sage Publication		29	
15	Emerald Publications		30	
16	IGI Publications		31	

*Pls include e-books*

**SECTION C: Frequency of use of EIRs**

Please tick (✓) one of the statements below, to indicate how often you use the EIRs in your library

S/N	Statement	How often
1	I use the EIRs daily	
2	I use the EIRs 2-3 times a week	
3	I use the EIRs once in a month	
4	I use the EIRs 2-3 times a month	
5	I use the EIRs once in 2 or 3 months	
6	I use the EIRs once in several (more than 3) months	

Will not provide the needed data for the period 5 and 6

**SECTION D: Purposes for which EIRs are utilized.**

Please tick (✓) the purposes for utilizing EIRs in your university library.

S/N	Statement	Purposes
1	Writing of articles <i>Journal what type of article</i>	
2	Preparing for seminars	
3	Preparing for conferences	
4	Preparing for workshops	
5	Group discussion	
6	To write my thesis	
7	To write my dissertation	
8	To update my knowledge	
9	To share knowledge	
10	Preparing lectures	
11	For teaching	
12	To write my assignments	
13	Preparing for examinations	
14	Writing of books <i>for recreation/leisure</i>	
	Please state other additional purposes which you use the EIRs for in your library	
15		
16		

Will not provide response tick (✓)

**QUESTIONNAIRE FOR THE UNIVERSITY LIBRARIANS**

Department of Library and Information  
Science,  
Nnamdi Azikiwe University,  
Awka.  
25<sup>th</sup>, June, 2012.

Dear Respondents,

**Availability of Electronic Information Resources (EIRs) in University Libraries in South- South, Nigeria Questionnaire (AEIRs)**

I am a postgraduate student currently pursuing a doctorate degree in Library and Information Science in the above mentioned institution. This questionnaire is aimed at gathering information on Availability of EIRs in University Libraries in South- South, Nigeria.

Kindly, respond to the items by ticking the appropriate responses. You are guaranteed strict confidentiality of any information provided.

Thank you.

Yours Sincerely,

**Tiemo, Pereware Aghwotu.**

08032384130.

Pere\_tiem@yahoo.com

**QUESTIONNAIRE FOR UNIVERSITY LIBRARIANS**

**SECTION A**

This questionnaire is meant for the university librarians only. To elicit information regarding the availability of EIRs in their university libraries.

**Background information**

**Introduction:** Please tick (✓) the appropriate response or fill the blank spaces where need.

1. Name of University .....
2. Status of University: Federal ( ) State ( )

**SECTION B**

**Types of EIRs in your University library**

S/NO	EIRs and database	The Items numbered 1-23 are various types of EIRs and database that could be found in a library. Indicate by ticking (✓) those facilities that are available in your university library in each of the areas.
1	CD ROMs	
2	E-theses	
3	E- dissertations	
4	E-books titles <i>E-books</i>	
5	E-journals titles	
5	E-dictionaries titles	
6	E-encyclopedias titles	
7	E-conference reports	
8	E-seminar reports	
9	Access to global online research in Agriculture (AGORA)	
10	Access to Research Initiative (HINARI) -	
11	EBSCO Host Resources	
12	AJOL	
13	Online Access to Research in the Environments	
14	Database of African Theses and Dissertations (DATAD)	
15	The Essential Electronic Agricultural Library (TEEAL)	
16	International Network for Availability of Scientific Publication (INASP)	
17	MIT <i>Open Courseware</i>	
18	Directory of Open Access Journals	
19	Sage Publication	?
20	Emerald Group Publishing ✓	?
21	IGI Publication <i>why this</i>	
22	Online Public Access Catalogue (OPAC)	xxx
23	Institutional Repository	

## SECTION C

Extent of availability of EIRs in your university library.

S/NO	EIRs	Please indicate from (serial number 1-8) the numbers of each of the EIRs available in your library.				
1	CD ROMs					
2	E-theses					
3	E- dissertations					
4	E-books titles <i>in Libraries</i>					
5	E-journals titles					
5	E-dictionaries titles					
6	E-encyclopedias titles					
7	E-conference reports					
8	E-seminar reports					
<b>Database subscription</b>						
Please tick (✓) the available fees or free database you subscribe to and also specify the duration of subscription of the fees base in your library		Subscription		Duration of Subscriptions of Fees base		
		Fees base	Free base	1 yr	2 yrs	3 yrs
9	Access to global online research in Agriculture (AGORA)					
10	Access to Research Initiative (HINARI)					
11	EBSCO Host Resources					
12	AJOL					
13	Online Access to Research in the Environments					
14	Database of African Theses and Dissertations (DATAD)					
15	The Essential Electronic Agricultural Library (TEEAL)					
16	International Network for Availability of Scientific Publication (INASP)					
17	MIT					
18	Directory of Open Access Journals					
19	Sage Publication					
20	Emerald Group of Publishing					
21	IGI Publication					
22	Online Public Access Catalogue (OPAC)					
23	Institutional Repository					
Please state other fees or free database that are available in your library and tick the duration of fees base subscription						
24						
25						

### Details of Validation of Instrument for University Librarian

Sources of Correction	Suggested Corrections	Correction Done
Title the questionnaires	Questionnaire for University Librarian	Affected
Availability of EIR in federal and state university library in South-South, Nigeria Questionnaire (front page of the questionnaire)	It should be known as availability of EIR databases in federal and state university library in South-South, Nigeria Questionnaire	Affected
E-books titles ( Item 4 Section B)	It should be known as E-books	Affected
Database of African Theses and Dissertations (DATAD) (item 14 and 15 are the same in Section B).	14 or 15 should be deleted	Item 15 deleted
MIT (Item 17 in Section B)	It should be known as MIT Open Course Ware	Affected
IGI Publication (Item 21 in section B)	Should be deleted	Deleted
Online Public Access catalogue (Item 22 in section )	Should be deleted	Deleted

### Details of Validation of Instrument for Lecturers and Postgraduate students

Sources of Correction	Suggested Corrections	Correction Done
Department and Degree in view in section A item 5 and 6	Should be deleted	Deleted
EIR and database in section B	Should be corrected as EIR Database types	Affected
Access to global online research in Agriculture in section B, item 17	Should be corrected as Access to Global online Research in Agriculture (AGORA)	Affected
The statement in section C on frequency of use of EIRs was a general statement	The frequency of all the EIR databases should be specified one by one. All the EIR databases should be listed	Affected
“writing of Articles” in section D item 1	Should be corrected as writing of Journal Articles	Affected
For Recreation/Leisure in section D.	For recreation and leisure was to add to the item	Affected



**APPENDIX F: LETTER TO THE UNIVERSITY LIBRARIANS.**

APPENDIX VI LETTER TO THE HEADS OF DEPARTMENT



**DEPARTMENT OF LIBRARY AND INFORMATION SCIENCE**

Faculty of Education

**NNAMDI AZIKIWE UNIVERSITY**

P.M.B. 5025, AWKA, ANAMBRA STATE

E-mail: [dllisunizik@yahoo.com](mailto:dllisunizik@yahoo.com)

MOTTO: *Information Intermediation for all*

24/02/12

Our Ref:..... Your Ref:..... Date:.....

**TO WHOM IT MAY CONCERN**

Mr. Pereware, A. Tiemo is a Postgraduate student in the Department of Library and Information Science, Faculty of Education, Nnamdi Azikiwe University, Awka.

He is currently conducting a research on 'Availability and Utilization of Electronic Information Resources (EIRs) in University Libraries in South – South, Nigeria,' for his dissertation. Do please give him all necessary assistance he may require from you.

Thanks.

*Yours faithfully,*

**Revd Dr. Obiora Nwosu**  
HOD., L.I.S.

He is a Postgraduate student in the Department of Library and Information Science, Faculty of Education, Nnamdi Azikiwe University, Awka.

He is currently conducting research on 'Availability and Utilization of Electronic Information Resources (EIRs) in University Libraries in South – South, Nigeria,' for his dissertation. Do please give him all necessary assistance he may require from you.

APPENDIX G: LETTER TO THE HEADS OF DEPARTMENT

APPENDIX VI LETTER TO THE HEADS OF DEPARTMENT



DEPARTMENT OF LIBRARY AND INFORMATION SCIENCE

Faculty of Education

NNAMDI AZIKIWE UNIVERSITY

P.M.B. 5025, AWKA, ANAMBRA STATE

E-mail: [dlisunizik@yahoo.com](mailto:dlisunizik@yahoo.com)

MOTTO: *Information Intermediation for all*

24/02/12

Our Ref:..... Your Ref:..... Date:.....

TO WHOM IT MAY CONCERN

Mr. Pereware, A. Tiemo is a Postgraduate student in the Department of Library and Information Science, Faculty of Education, Nnamdi Azikiwe University, Awka.

He is currently conducting a research on 'Availability and Utilization of Electronic Information Resources (EIRs) in University Libraries in South – South, Nigeria' for his dissertation. Do please give him all necessary assistance he may require from you.

Thanks.

*Yours faithfully,*

**Revd Dr. Obiora Nwosu**

**HOD., L.I.S.**

**APPENDIX H: DETAILED COMPUTATION OF THE RELIABILITY (PEARSON'S PRODUCT MOMENT CORRELATION COEFFICIENT) FOR LECTURERS AND POSTGRADUATE STUDENTS.**

**Section C: Frequency of use of EIR databases**  
Respondents and Scores

	<b>X</b>	<b>Y</b>	<b>XY</b>	<b>X<sup>2</sup></b>	<b>Y<sup>2</sup></b>
1.	37	34	1258	1369	1156
2.	48	48	2304	2304	2304
3.	36	37	1332	1296	1369
4.	50	54	2700	2500	2916
5.	48	52	2496	2304	2704
6.	38	42	1596	1444	1764
7.	54	56	2024	2916	3136
8.	50	48	2400	2500	2304
9.	42	36	1512	1764	1296
10.	44	42	1848	1936	1764
11.	34	37	1258	1156	1369
12.	34	34	1156	1156	1156
13.	56	54	3024	3136	2916
14.	38	40	1520	1444	1600
15.	44	42	1848	1936	1764
16.	34	37	1258	1156	1369
17.	34	34	1156	1156	1156
18.	36	37	1332	1296	1369
19.	48	46	2208	2304	2116
20.	48	50	2400	2304	2500
21.	34	37	1258	1156	1369
22.	52	50	2600	2704	2500
23.	36	34	1224	1296	1156
24.	46	48	2208	2116	2304
25.	38	42	1596	1444	1764
26.	37	37	1369	1369	1369
27.	34	34	1156	1156	1156
28.	36	38	1368	1296	1444
29.	50	48	2400	2500	2304
30.	42	36	1512	1764	1296
	1258	1264	53621	53238	54690

$$\frac{N\sum XY - \sum X \sum Y}{\sqrt{N\sum X^2 - (\sum X)^2 (N\sum Y^2 - (\sum Y)^2)}}$$

$$\frac{30 \times 53621 - 1258 \times 1264}{\sqrt{30 \times 53238 - (1258)^2 - 30 \times 54690 - (1264)^2}}$$

$$\frac{1608630 - 1590112}{\sqrt{(1597140 - 1582564) (1640700 - 1597696)}}$$

$$\frac{(14576) (43004)}{\sqrt{626826304}} = 25036.5$$

$$r = \frac{18518}{25036.5} = 0.74$$

### Section D: Purposes for which EIR databases are utilized

#### Respondents Scores

	<b>X</b>	<b>Y</b>	<b>XY</b>	<b>X<sup>2</sup></b>	<b>Y<sup>2</sup></b>
1.	28	30	840	784	900
2.	30	26	780	900	676
3.	26	28	728	676	784
4.	30	28	840	900	784
5.	28	26	728	784	676
6.	26	30	780	676	900
7.	28	24	672	784	576
8.	24	24	576	576	576
9.	26	30	780	676	900
10.	30	28	840	900	784
11.	28	26	728	784	676
12.	30	30	900	900	900
13.	30	28	840	900	784
14.	26	24	624	676	576
15.	28	28	784	784	784
16.	30	26	780	900	676
17.	28	30	840	784	900
18.	26	30	780	676	900
19.	30	28	840	900	784
20.	26	24	624	676	576
21.	22	26	572	484	676
22.	26	26	676	676	676
23.	28	26	728	784	676
24.	28	30	840	784	900
25.	26	24	624	676	576
26.	28	30	840	784	900
27.	26	28	728	676	784
28.	28	28	784	784	784
29.	30	30	900	900	900
30.	28	26	728	784	676
	826	822	22784	22968	22660

$$\begin{aligned}
 & \frac{30 \times 22784 - 826 \times 822}{\sqrt{(30 \times 22968 - 682276)(30 \times 22660 - 675684)}} \\
 & \frac{683520 - 678972}{\sqrt{(6764)(4116) - 27840624}} = 4548 \\
 & = \frac{4548}{5276.4} = 0.86
 \end{aligned}$$

**APPENDIX I: LETTER TO THE UNIVERSITY LIBRARIANS TO ALLOW THE RESEARCHER USE THE LECTURERS AND POSTGRADUATE STUDENTS LIBRARY REGISTER IN ORDER TO ADMINISTER THE INSTRUMENTS.**

APPENDIX VI LETTER TO THE HEADS OF DEPARTMENT



**DEPARTMENT OF LIBRARY AND INFORMATION SCIENCE**  
Faculty of Education  
**NNAMDI AZIKIWE UNIVERSITY**  
P.M.B. 5025, AWKA, ANAMBRA STATE  
E-mail: ddisunizik@yahoo.com  
MOTTO: *Information Intermediation for all*  
24/02/12

Our Ref:..... Your Ref:..... Date:.....

**TO WHOM IT MAY CONCERN**

Mr. Pereware, A. Tiemo is a Postgraduate student in the Department of Library and Information Science, Faculty of Education, Nnamdi Azikiwe University, Awka.

He is currently conducting a research on 'Availability and Utilization of Electronic Information Resources (EIRs) in University Libraries in South – South, Nigeria', for his dissertation. Do please give him all necessary assistance he may require from you.

Thanks.

*Yours faithfully,*

**Revd Dr. Obiora Nwosu**  
HOD., L.I.S.

TO WHOM IT MAY CONCERN

Mr. Pereware, A. Tiemo is a Postgraduate student in the Department of Library and Information Science, Faculty of Education, Nnamdi Azikiwe University, Awka.

He is currently conducting a research on 'Availability and Utilization of Electronic Information Resources (EIRs) in University Libraries in South – South, Nigeria', for his dissertation. Do please give him all necessary assistance he may require from you.

Thanks.

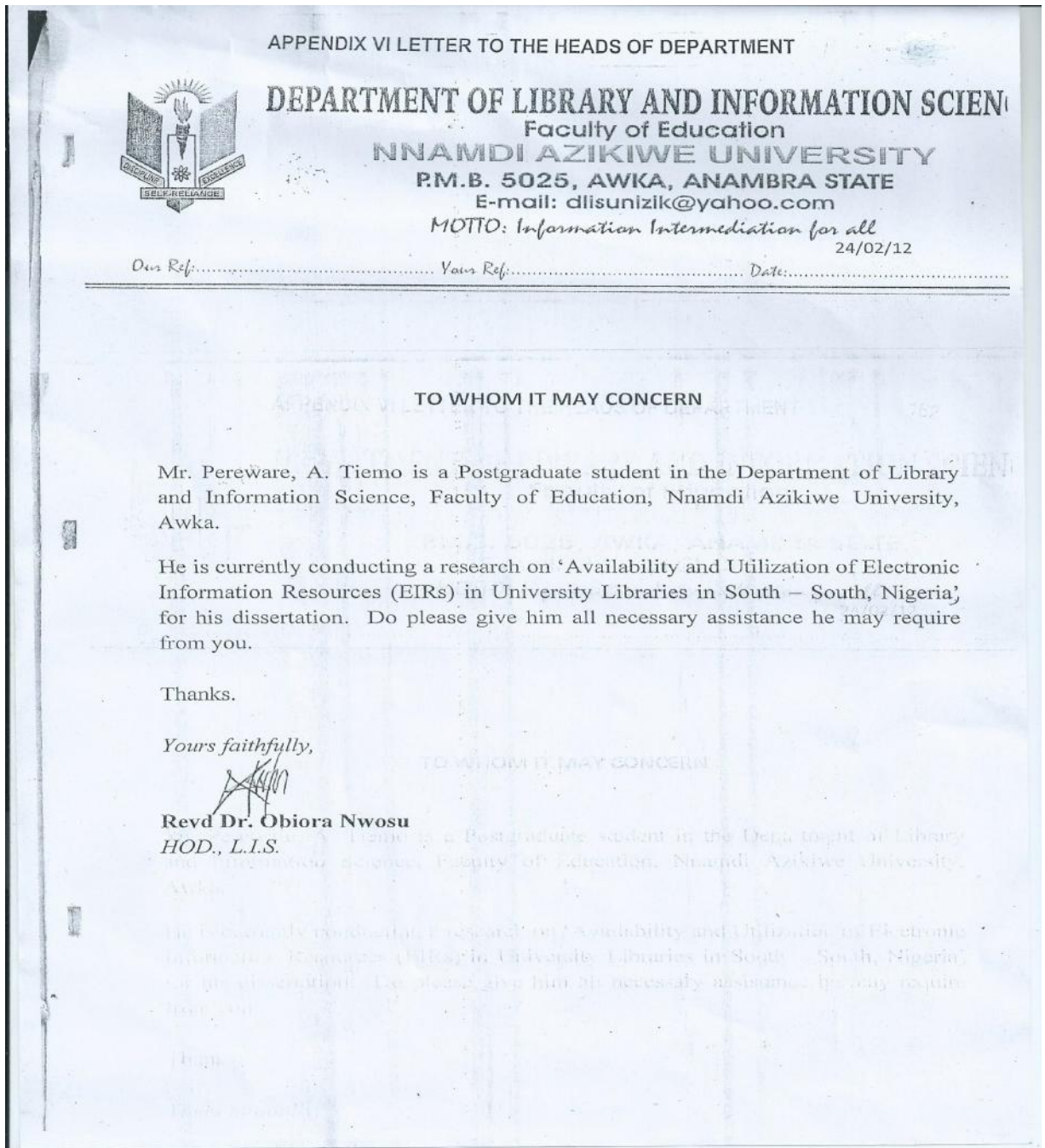
*Yours faithfully,*

**Revd Dr. Obiora Nwosu**  
HOD., L.I.S.

TO WHOM IT MAY CONCERN

APPENDIX J

LETTER TO THE HEADS OF DEPARTMENT TO ALLOW THE RESEARCHER ADMINISTER THE INSTRUMENTS TO THE LECTURERS AND POSTGRADUATE STUDENTS THAT ARE REGISTER WITH THE LIBRARY.





**APPENDIX K****Number of Questionnaire Distributed to University Librarians and Response Rate**

<b>Universities</b>	<b>No of Copies Administered</b>	<b>No of Copies Returned</b>	<b>Percentage of copies returned</b>
Federal	4	4	100
State	3	3	100
Total	7	7	

## APPENDIX L

**Number of Questionnaire Distributed to Lecturers and Postgraduate Students and their  
Response Rate in the Federal and State Universities.**

OWNERSHIP OF UNIVERSITIES	LECTURERS				POSTGRADUATE STUDENTS			
	No of copies administered		No of copies returned		No of copies administered		No of copies returned	
FEDERAL	1005		620		582		345	
STATE	416		311		340		224	