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Chidaka Okachukwu Nyemezu Dr

*Department of Library and Information Science, Rivers State University, Nkpolu-Oroworukwo, Port  
Harcourt, chikadanyemezu@gmail.com*

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# ATTITUDE OF LIBRARY AND INFORMATION SCIENCE STUDENTS TOWARDS ELECTRONIC INFORMATION RESOURCES IN SELECTED UNIVERSITY LIBRARIES IN RIVERS STATE

**Chidaka Okachukwu Nyemezu PhD**

Lecturer,

Rivers State University, Nkpolu-Oroworukwo, Port Harcourt.

[Chidakaonyemezu@gmail.com](mailto:Chidakaonyemezu@gmail.com)

## ABSTRACT

*This study focused on attitude of library and information science students towards electronic information resources in selected university libraries in Rivers State. The design adopted for the study is descriptive survey. The population of the study consists of the registered regular library and information science undergraduate students of the selected university libraries. The study was made up of 325 registered undergraduate students of Library and Information Science department in University of Port Harcourt; 314 registered undergraduate students of Library and Information Science department in Rivers State University and 229 registered Library and Information Science Undergraduate student of Ignatius Ajuru University of Education making it a total of 868 LIS undergraduate students in all. The sample size consists of a total of three hundred and forty-seven (348) students. 40% was used to select the subjects that formed the sample that is 130 for UNIPORT; 126 for RSU and 92 for IAUE. The proportionate random sampling technique was adopted for the study. A structured questionnaire was used for the study. The research questionnaire was administered to the undergraduate students of library and information science of the universities under study. The data was collated and analyzed using mean and real limits of numbers for ranking. The findings of the study showed that the attitude of library and information science students in University of Port Harcourt, Rivers State University and Ignatius Ajuru University of Education has an influence on their perception and the frequency of utilization of electronic information resources. This has resulted to low performance due to non-use of electronic resources and lack of skills. The study recommended that the university library should establish adequate e-library facilities for the students' use. This can be achieved by getting financial aid or provision of those electronic information resources from the university administration or other private organization who are interested for the course.*

**Keywords:** Attitude, LIS Students, Electronic Information Resources, University Libraries.

## Background of the Study

The main purpose of the university library is to support the objectives of the university which is to promote teaching, learning and research. Thus the university library is meant to serve the undergraduates, postgraduates, lecturers and other members of the university community. A university community library is regarded in the university as the heart of the intellectual life of the university. The quality of the university is measured largely by the quality of its library because of its unique role in the university system.

The university library provides variety of information resources. Ekere (2014) stated that university library collections are always large and for a university library to organise its large resources and provides services to various groups of users, the librarian must be highly qualified.

It is not surprising therefore to find the highest calibre of librarians working in university libraries. Librarians working in the university libraries are usually numerous and they specialize in different disciplines and areas of the library to provide information to its users.

Information is the hinge on which the survival of any society rest. It remains the major element in taking decision, and assist in reducing the degree of doubt. The use of Information is as old as man. In the words of Olatokunbo and Asiru (2011), without information, there cannot be communication. Information can be documented or presented in an oral form. Information resources are those materials which provide information for learning, teaching and research such as books, journals, encyclopaedias, films or pictures. According to Bennett (2003) the revolution in information technology is changing information delivery in education. Information and communication technologies are, a diverse set of tools and resources used to communicate, create, disseminate, store, and manage information. The embrace of technology has led to the explosion of information resources electronically available.

Electronic information resources are those resources used electronically. Electronic Information resources is defined as an information retrieval system operating with a computer terminals, communication lines and links, models, disk drives, and databases in machine-readable form that are accessible in an online, interactive mode (Harper,2006). Electronic information sources according to Ekwelem, Okafor, and Ukwuoma (2009), may be defined as information sources that are available and can be accessed electronically through computer network facilities, such as online library catalogue, the internet, the world wide web, digital libraries, government portals and websites, CD-ROM databases, online academic databases such as Medline online, or commercial bases such as LEXIS and NEXIS. Electronic information resources can therefore be defined as various infrastructures used in the creation, processing, storage, dissemination of information and various services rendered by these infrastructures. The last few years have seen a number of changes in the University sector. These changes necessitated the importance of electronic resources in this age and they include the following: Rapid growth in undergraduate students' numbers with little or no relative increase in the number of library and information services staff and inflation in the cost of printed materials. Growing number of academic publications, fall in library budgets as a percentage of the total institutional budgets, changes in the teaching and learning methods, towards a greater emphasis on the undergraduate students' centred learning, and technological developments.

Electronic information resources offer many advantages. According to Brophy, (1993) an advantage of electronic resources is that the information needed can be delivered from the most appropriate source to the user. The user can re-specify his or her needs dynamically. The information is obtained when it is wanted, and so becomes just in time, In addition, the user selects only the information needed to answer the specific question and the information is only stored if the user wishes. Electronic information can therefore provide a number of advantages over print based resources. According to Brophy, Electronic information resources are often faster than consulting print indexes, especially when searching retrospectively. They are straight forward when wishing to use a combination of keywords open and open the possibility of searching multiple files at one time. Electronic resources can be printed and searches saved to be repeated at a later date. They are updated more easily and more often than conventional resources. One main advantage, especially for those with limited time to access the library and distance learners, is their availability from outside the library by dial-up access. Mobile phones

and the internet are seen as easier and more convenient in the coordination of activities, for example, in planning, seeking information and communication.

Electronic resources also generate opportunities to find new interests, activities and friends which might be positive in terms of one's quality of life. According to Brophy (1993), electronic resources provide an access to unlimited sources of information through search engines, which are continuously being upgraded to provide efficient ways to help users find what they want. The electronic equivalent offers the ability to integrate text with charts, graphs, photographs, sound, video and other forms of multimedia. The use of electronic information resources as an extension of the classroom or as a vehicle for higher education is increasingly widespread.

In universities, undergraduate students are motivated to make use of electronic information resources. Undergraduate students need electronic information resources because of their flexibility, dynamism in information retrieval, storage and processing. Electronic information resources are important to undergraduates because they need to have access to timely, accurate and relevant academic information (Adomi, Omodeko Otolu, 2004). Computer services like internet and other electronic sources have greatly increased the speed of searching out information. They have brought considerable relief to students in universities, as students can conveniently walk into any library that has its holdings on the internet and have access to unlimited information sources (Ezeji, 2008).

Electronic resources have much to offer, but their utility depends on attitudes of users, how they feel about them. Attitudes are ways that people think and feel about something. According to Taiwo in Nnadi (2018), attitudes are inclinations and feelings, prejudices or bias, preconceived notions, ideas, fears and conviction about any specific topic. Attitudes represent the conceptual value of these technologies in the minds of students and not the values of the technologies themselves. Positive attitudes are fundamental in implementing new technologies. Students constitute one part of society who is fortunate to have access to a variety of electronic information resources. Universities use considerable proportions of their budgets to provide this technology for their students to assist in the learning process. The question then is what is the level of use of this type of resources? How do students themselves feel about various issues surrounding electronic resources, which may require the acquisition of new skills to utilize them effectively, and whether attitude change depends upon the availability of these resources? Little is known about attitude of LIS students towards this form of information provision and without a better understanding; it is difficult for service providers to know if they are meeting the needs of students effectively.

### **Statement of the Problem**

The development of electronic information resources especially in universities has continued to transform the pattern and scope of learning and research. Universities in Nigeria must maintain and support the instructional and research needs of their faculties and students. Having ready access to varieties of information is essential in any university. A typical Nigerian student like his counterparts in America wants specific bits of information as quickly as possible. However, cost of periodicals and indexes continue to mount, publishing costs continue to grow, making the cost of books higher. The solution to this however is the use of electronic resources which sometimes are free or are sometimes open to access without subscription. Attitude could be positive or negative. Attitude towards a particular phenomenon can enhance or mar human

approach to such phenomenon. Positive attitudes of undergraduate students can strongly enhance effective use and integration of electronic information resources in teaching and learning.

Despite the benefits of electronic resources to university education, student's attitude towards these resources could change to the negative if they are not aware of the importance of these resources and if they don't possess the necessary skills involved in making use of them. In all the efforts made by different Nigerian universities towards integration of electronic information resources, it appears that very little progress has been made by the undergraduate students. Preliminary observation shows that most students have negative attitude towards electronic information resources. This shows that there is still a gap to be filled in order to achieve a maximum utilization of these resources.

Previous researchers have carried out studies on the attitude of librarians and research scholars towards usage of electronic resources, but little or nothing known to the researcher has been carried out on attitudes of LIS undergraduate students toward this form of information provision. Hence, there is the need for this study in order to contribute to the limited information on the students' attitude of electronic information resources, and how it can help to improve them academically.

### **Purpose of the Study**

The main purpose of this study is to find out the attitude of LIS undergraduate students towards electronic information resources in selected university libraries in Rivers State.

The specific objectives of the study are to:

1. Find out what electronic information resources the undergraduate students prefer to use in the library.
2. Ascertain the factors that determine the use of electronic information resources for information retrieval.
3. Establish the frequency of use of the electronic information resources by the students.
4. Identify the problems associated with the use of electronic information resources for learning and research.
5. Proffer the strategies towards improvement on the academic use of electronic information resources by the undergraduate students in the university.

### **Review of Literature**

#### **University library**

A university library is a kind of academic library that serves the information needs of the university community through provision of information resources that supports learning, teaching and research. The university library is usually centrally located where students can access the library with ease. According to Curzon and Quinonez-Skinner (2009) a university library is a library that is attached to a higher education institution which serves two complementary purposes to support the school's curriculum, and to support the research of the university faculty and students. A university library, being a complex institution must have large

quantities of materials to meet the demands of the numerous students, lecturers, faculty officers and the host community.

University libraries provide a wide variety of services important to serve the needs of its users. The primary aim of a university library is to promote and support the objectives of the university which is based on learning, teaching, research and services. Aina (2004) asserts that the quality of a university is measured by the services provided by the library because of its unique position in the over-all university system. Universities produce knowledge for problem-solving, economic activity, guidance and direction, and the ability to escape ignorance and superstition and protect and advance the common good. University libraries have an important role in the teaching, research, and service that universities undertake. The library is highly regarded as the heart and brain box of the intellectual activities of the university.

For a University library to perform its several functions, its collection must not only include books but also other materials such as general and specialised reference collections, made up of journals, newspapers, manuscripts, historical maps, government publications, clippings, letters, thesis, and audiovisual materials. University library also provides research materials and other bibliographic services to help both staff and students in the areas of their research interest. They also provide collections for leisure, recreation and personal development, provision of accommodation to enhance learning and reading. Librarians working in the university libraries are usually numerous and they specialize in different disciplines and areas of library and information science (Ekere, 2014). Owing to the fact that the university library houses a whole lot of resources including the electronic information resources, that serve the university community as the primary user, it is pertinent to look at the attitude of students towards these resources.

### **Attitude**

Attitudes are enduring systems of positive or negative evaluations, emotional feeling and tendencies with respect to social objects. Attitude can be described as settled behavior or manner of acting, as representation of feeling or opinion. It refers to certain predisposition to act or react in a positive or negative way towards certain situations and ideas. Reactions can be pre-conceived notions, ideas, fears, convictions etc. Behavioral scientists have given high importance to the study of human beings and his surroundings in the context of attitude. Consequently, Attitude according to Venes (2001) is a behavior based on conscious or unconscious mental views developed through cumulative experience. Closely related to attitude are beliefs and opinions, with all these involving some aspects of an individuals' cognitive organisation of his/her world. However, they vary mainly along two dimensions viz: the degree to which they are explicitly expressed; and the amount of affective tone they contain.

Attitudes are enduring systems of positive or negative evaluations, emotional feeling and tendencies with respect to social objects. Attitude can be described as settled behaviour or manner of acting, as representation of feeling or opinion. It refers to certain predisposition to act or react in a positive or negative way towards certain situations and ideas. Reactions can be pre-conceived notions, ideas, fears, convictions etc. Dark (2005) also defined attitude as "an enduring, learned predisposition to behave in a consistent way toward a given class of objects, or a persistent mental and/or neutral state of readiness to react to a certain class of objects, nor as they are but as they are conceived to be". On a psychological note, attitude can be seen as a

propensity to favorably or unfavourably respond towards a selected class of stimuli such as a national or ethnic group, a custom or an institution.

### **Electronic information resources**

In view of the advances in technology, and the changing needs of the community, universities, and university libraries are delighted to provide access to the internet and other information technologies to support the educational, recreational, and cultural needs of the community. According to Ezeji (2008), the use of computer services in academic work means the utilization of computer accessories such as the internet, CD-ROM, and on-line information search engines and facilities in research and learning.

Electronic information resources are products of Information and communication technologies and they have been found relevant to the learning and research process in universities. Hence, its universal acceptability in the world of research is synonymous with the university education. Shuling (2007) stated that in recent years, electronic information has gradually become a major resource in every university library. Various people have need for electronic information resources. Undergraduate students make high use of EIR among Nigerian universities. Various electronic information resources used for academic purposes include CD-ROM, internet/www, online public access catalogue (OPAC), Local access network (LAN), WAN, wire radio phone, portals, modems, News group, digital libraries, online academic databases. Higher education is changing rapidly with the advent of technology.

Electronic information resources offer today's students different opportunities compared to their predecessors. Liew, Foo and Chennupati (2000) is of the opinion that reading an e-journal is not the same as reading a printed one, many are beginning to acknowledge the possibility that electronic documents offer users advanced features and novel form of functionality beyond what is possible in printed form. Preference to electronic information resources covers not only the issues around physical and financial access for the broadest range of people and locations but includes also having all groups in society seeing the relevance and potential for benefiting from them, and their meaningful contents. The sources of electronic information resources include the Laptop, phone, cyber café, library, personal computer, departmental laboratory or libraries.

Access to these resources can be through home, school, and work place or through a range of community locations, and this to a large extent helps to determine the preference to a particular electronic information resources. It includes an adequate technical infrastructure in all parts of the country, and people developing the skill base necessary for optimum use of ICT. Indeed, access to these services has become a vital issue. This is because we live in a rapidly changing world, where information is power and access to it is a basic human right (Dike, 2000). The question is, what access do students have to electronic sources for their academic work? In response to the changing needs of the students, University libraries are delighted to provide access to the internet and other information technology to support the educations, recreational and research needs of universities.

### **Student's attitude towards electronic information resources**

Attitudes represent the conceptual value of these technologies in the minds of students, and not the values of the technologies themselves. Attitudes are "inclinations and feelings, prejudices or bias, preconceived notions, ideas, fears and convictions about any specific topic" (Taiwo in

Nnadi, 2018), In other to utilize the growing range of information from electronic sources, students must acquire the right attitude and practice the skills necessary to exploit them. Dutton (1990) suggested that skills required to maximize the potential of electronic resources are much greater than those required for searching printed sources. These skills include a knowledge of the structure of the database and the instructions which must be input into the computer by the researcher, as well as an understanding of the ways in which the instructions are linked with one another.

Universities and their libraries now live in a superior new world. The rapid advancement of information and communication has brought a revolutionary change in the information scenario giving rise to a number of options to the users to handle varied information sources conveniently and effortlessly. According to Swain and Panda (2009), the attitude to information is gradually shifting from the printed documents to electronic resources and thus, it has been the prerogative to know the details of the availabilities and organization of e- resources like online journals and databases, electronic theses and dissertations (ETDs), government publications, online newspapers, etc. Attitude could be positive or negative. Attitude towards a particular phenomenon can enhance or mar human approach to such phenomenon.

Many factors influence attitudes. Some students have negative attitude towards e-resources. Negative attitude is caused by lack of interest and lack of ICT skills. Age and gender is a relevant factor in examining use of electronic information resources. Sex seems to affect electronic information resource use. Ford, Miller and Moss (2001) found that females tend to experience more difficulty finding information online, tend to feel competent and comfortable using the internet, use the internet less frequently than males and make use of a less varied set of internet application. In universities, with increase use of technology, it is important to understand how technologically rich environments are influencing students attitude toward e- resources access. To make use of growing range of electronic resources, students must acquire and practice the skills necessary to exploit them (Okello-Obura and Magara, 2008). These skills include knowledge of the structure of the database instructions which must be input into the computer by the searcher as well as understanding of the ways in which the instructions are linked to one another. Some students have poor attitude towards e-resources as a result of insufficient training. For this reason, Uwaifo (2010) suggested that government should enforce compulsory ICT training at all levels of education. The students on their own can also apply for ICT training.

In this 21st century, students must adopt a positive attitude towards the use of e-resources. Students especially need to be trained and re-trained in the use of e-resources in order to take part in the modern technology. Students need to be trained in the use of searching tools like e-database, the use of online catalogues etc. In this regard, Omoniyi and Akinboro (2009) reiterated the need for acquisition of skills and competence in the use of e-resources by the students for quality and efficient information search. The introduction of open access journals and other resources for instance is creating another attitudinal tendency towards e-resources. Attitudes toward electronic resources could be attributed to problems faced when accessing e-resources. For instance, in a situation where there is an inadequate computer technology to access e-resources or poor internet connections, student's positive attitudes could be affected. That is why the problems that affect e-resources access are addressed in universities. The arguments for students using electronic resources are compelling. An adequate knowledge of computers and retrieval techniques is desirable to search these resources effectively.



### **Problems associated with the use of electronic information resources**

In order to utilize the growing range of electronic resources, students must acquire and practice the skills necessary to exploit them. “For students using a variety of on-line database, it is as though they were parking lot attendants, where every vehicle is not only a different make and model but has a different configuration” (Blandy and Libutti, 1995). “In some cases, they seem to think that there is a button they can press and it will write an essay for them .So to such students, It is a big disappointment. There appears to be an emerging over reliance upon electronic information resources at the expense of the more traditional forms of information. For some students, they just want it up on the screen, and if they cannot get it up on the screen, they are not interested. However, the importance of print-based information must not be dismissed, and it is essential for students to be aware that electronic resources and print-based resources complement each other.

One of the challenges experienced by LIS students is lack of user education or orientation. User’s education is a process whereby potential users of the library are made to learn how to make efficient and effective use of the library and its resources through the acquisition of knowledge and skills in identification, location, retrieval and exploitation of information. According to Iheaturu (2012), in a situation where the users are not aware or educated about the library will result to the under utilization of library facilities. The library needs to conduct user education for students especially when they are in their first year in school so they will become acquainted on various strategies of making use of library facilities effectively.

Poor provision of library resources and services to the students and the university community at large is one of the challenges facing the students in accessing library resources. Ukonu et al. (2012) emphasized that the major challenge affecting the use of library facilities are that students are not aware of the facilities available for use and the library staffs do little to inform them about them. This always increase students negative attitude towards the use of library resources.

### **Strategies for improving the academic use of electronic resources by the students**

Internet use as an extension of the class room or as a vehicle for higher education is becoming increasingly widespread. Libraries are using the internet to create gate ways to what has been termed a massive library system, where people can roam through the electronic equivalent of book stacks via a desktop workshop. The electronic equivalent offer the ability to integrate texts with charts, graphs, photographs, sound, video and other forms of multimedia. In order to develop positive attitude towards the use of electronic information resources, there is need to develop skills. Dutton (1990) suggests that the skills required to maximize the potential of electronic resources are much greater than those required for searching printed sources. These skills include a knowledge of the structure of the database and the instructions which must be input into the computer by the searcher, as well as an understanding of the ways in which the instructions are linked with one another. Ray and Day, (1998) on the other hand, suggest that there is need for current awareness services. Alasa and kelechukwu (1998) suggest that the mass should be educated on the skills involved on the use of ICT resources. The internet contains a wealth of online course materials that are easily available to students from a distance.

Courses that are highly demanding, densely woven and multidimensional can be delivered instantaneously to student to reinforce and enhance the traditional components of University teaching and learning. Okiyi (1998) recommends that the necessary EIR should be acquired and installed in the library and the library should be funded by the federal government and also by the school in order to procure the necessary EIR. Equally, electronic resources is playing a significant role in the emerging theories of education, where the academics act as facilitators, providing guidance, drawing students and steering discussions. Universities have a responsibility to exert leadership in the imaginative and thoughtful uses of the best of the new technology for the purposes of better teaching and learning. With all these factors in mind, universities are making conscious decision and efforts to take the teaching role in preparing our academics for the challenge.

### **Methodology**

The design adopted for this study is the Descriptive Survey design. This design was adopted for this study because it helped to describe the existing situations through opinions, attitudes, and beliefs of people so as to identify problems and make systematic evaluations that will lead to proffering solutions to the problems identified. The study was made up of 224 registered undergraduate students of Library and Information Science department in University of Port Harcourt; 476 registered undergraduate students of Library and Information Science department in Rivers State University and 229 registered Library and Information Science Undergraduate student of Ignatius Ajuru University of Education making it a total of 929 LIS undergraduate students in all. The sample size consists of a total of three hundred and forty-seven (372) students. 40% was used to select the subjects that formed the sample that is 90 for UNIPORT; 190 for RSU and 92 for IAUE. The proportionate random sampling technique was adopted for the study. The target populations were stratified as follows. A structured questionnaire was used for the study. The questionnaire was structured in such a way as to elicit information from the respondent on attitude of library and information science students towards utilization of electronic information resources. The questionnaire contains two sections: section A contains demographic information of respondent, and section B contains information of subject area in line with the objective of the study. The research questionnaire was administered to the undergraduate students of library and information science of the universities under study. The questionnaires were collected after one week by the researcher. The data was collated and analyzed using mean and real limits of numbers for ranking.

### **Data Presentation, Analysis and Discussion of Findings**

The data collected for this study are presented in tables and analyzed using Mean. The presentation and analysis were based on the five research questions formulated for the study. A total of 372 questionnaires were distributed to the respondents and 348 copies were returned and found useable, thus 94% return rate.

### **Results Obtained From the Research Questions**

**Cluster one:** What electronic information resources do LIS undergraduate students prefer to use for academic purposes in the library?

**Table 1:** Mean response of electronic information resources LIS undergraduate students prefer to use for academic purpose in the library

| S/N | ITEMS                     | UNIPOINT |      |                  |    | RSU |      |                  |    | IAUE |      |                  |    |
|-----|---------------------------|----------|------|------------------|----|-----|------|------------------|----|------|------|------------------|----|
|     |                           | T        | X    | R                | D  | T   | X    | R                | D  | T    | X    | R                | D  |
| 1   | CD-ROM                    | 83       | 2.88 | 9 <sup>th</sup>  | SP | 180 | 3.45 | 4 <sup>th</sup>  | SP | 85   | 3.68 | 2 <sup>nd</sup>  | HP |
| 2   | Internet /www             | 83       | 3.56 | 3 <sup>rd</sup>  | HP | 180 | 3.62 | 2 <sup>nd</sup>  | HP | 85   | 3.70 | 1 <sup>st</sup>  | HP |
| 3   | OPAC                      | 83       | 3.63 | 2 <sup>nd</sup>  | HP | 180 | 3.82 | 1 <sup>st</sup>  | HP | 85   | 3.61 | 3 <sup>rd</sup>  | HP |
| 4   | LAN                       | 83       | 3.88 | 1 <sup>st</sup>  | HP | 180 | 3.36 | 6 <sup>th</sup>  | SP | 85   | 3.38 | 4 <sup>th</sup>  | SP |
| 5   | WAN                       | 83       | 3.55 | 4 <sup>th</sup>  | HP | 180 | 3.43 | 5 <sup>th</sup>  | SP | 85   | 2.86 | 5 <sup>th</sup>  | SP |
| 6   | Wire radio phone          | 83       | 3.00 | 6 <sup>th</sup>  | SP | 180 | 3.15 | 7 <sup>th</sup>  | SP | 85   | 2.78 | 6 <sup>th</sup>  | SP |
| 7   | Portals                   | 83       | 2.89 | 8 <sup>th</sup>  | SP | 180 | 3.55 | 3 <sup>rd</sup>  | HP | 85   | 2.72 | 7 <sup>th</sup>  | SP |
| 8   | Modem                     | 83       | 2.98 | 7 <sup>th</sup>  | SP | 180 | 2.89 | 9 <sup>th</sup>  | SP | 85   | 2.71 | 8 <sup>th</sup>  | SP |
| 9   | News Group                | 83       | 2.59 | 10 <sup>th</sup> | SP | 180 | 2.75 | 11 <sup>th</sup> | SP | 85   | 2.70 | 9 <sup>th</sup>  | SP |
| 10  | digital libraries         | 83       | 3.50 | 5 <sup>th</sup>  | HP | 180 | 2.77 | 10 <sup>th</sup> | SP | 85   | 2.68 | 10 <sup>th</sup> | SP |
| 11  | online academic databases | 83       | 3.56 | 3 <sup>rd</sup>  | HP | 180 | 3.12 | 8 <sup>th</sup>  | SP | 85   | 2.64 | 11 <sup>th</sup> | SP |

From the above table, it is evident that in UNIPOINT, LAN, OPAC, the internet, online academic databases, WAN and digital libraries are highly preferred by undergraduate students with the mean weight of 3.88, 3.63, 3.56, 3.56 3.55 and 3.50 respectively. In RSU, OPAC, Internet, Portals, CD-ROM and WAN are highly preferable with the mean weight of 3.82, 3.62, 3.55, 3.45 and 3.43 respectively. In IAUE, Internet, CD-ROM, OPAC, LAN and WAN are highly preferred with the mean weight of 3.70, 3.68, 3.61, 3.38 and 2.86 respectively.

**Cluster two:** What factors determines the use of electronic information resources for information retrieval?

**Table 2:** mean response of the factors that determines the use of electronic information resources for information retrieval

| S/N | ITEMS | UNIPOINT |   |   |   | RSU |   |   |   | IAUE |   |   |   |
|-----|-------|----------|---|---|---|-----|---|---|---|------|---|---|---|
|     |       | T        | X | R | D | T   | X | R | D | T    | X | R | D |

|   |   |    |      |                 |   |     |      |                 |   |    |      |                 |   |
|---|---|----|------|-----------------|---|-----|------|-----------------|---|----|------|-----------------|---|
| 1 | Provision of quick access to information                | 83 | 3.55 | 2 <sup>nd</sup> | A | 180 | 3.44 | 3 <sup>rd</sup> | A | 85 | 3.89 | 2 <sup>nd</sup> | A |
| 2 | Currency of information                                 | 83 | 2.92 | 6 <sup>th</sup> | A | 180 | 3.60 | 2 <sup>nd</sup> | A | 85 | 3.98 | 1 <sup>st</sup> | A |
| 3 | It is less expensive                                    | 83 | 2.74 | 7 <sup>th</sup> | A | 180 | 3.80 | 1 <sup>st</sup> | A | 85 | 3.81 | 3 <sup>rd</sup> | A |
| 4 | Assisting other ones to get research materials          | 83 | 3.00 | 4 <sup>th</sup> | A | 180 | 3.04 | 6 <sup>th</sup> | A | 85 | 3.77 | 4 <sup>th</sup> | A |
| 5 | High quality of resources                               | 83 | 3.56 | 1 <sup>st</sup> | A | 180 | 3.40 | 4 <sup>th</sup> | A | 85 | 3.55 | 5 <sup>th</sup> | A |
| 6 | Provision opportunity to get different meaning of terms | 83 | 3.44 | 3 <sup>rd</sup> | A | 180 | 3.12 | 5 <sup>th</sup> | A | 85 | 2.97 | 6 <sup>th</sup> | A |
| 7 | It provides regular information                         | 83 | 2.98 | 5 <sup>th</sup> | A | 180 | 2.52 | 7 <sup>th</sup> | A | 85 | 2.81 | 7 <sup>th</sup> | A |

From the table above, it can be seen in UNIPORT, that high quality of resources was highly accepted as the factors that determines the use of electronic information resources with the mean weight of 3.56. also, provision of quick access to information, currency of information, it is less expensive, assisting other ones to get research materials, provision of opportunity to get different meaning of terms, it provides regular information was accepted with the mean weight of 3.55,2.92, 2.74, 3.00, 3.44 and 2.98 respectively. In RSU, less expensive, currency of information, provision of quick access to information, high quality of resources and provision opportunity to get different meaning of terms were highly accepted with the mean weight of 3.80, 3.60, 3.44, 3.40 and 3.12 respectively. In IAUE, currency of information, provision of quick access to information, it is less expensive, assisting other ones to get research materials and high quality of resources were highly accepted with the mean weight of 3.98, 3.89, 3.81, 3.77 and 3.55 respectively. All the results in the table indicate that they are motivated to use electronic information resources.

**Cluster 3:** What is the frequency of use of the electronic information resources by the students?

**Table 3:** mean response of the frequency of use of the electronic information resources by the students

| S/N | ITEMS | UNIPORT |   |   |   | RSU |   |   |   | IAUE |   |   |   |
|-----|-------|---------|---|---|---|-----|---|---|---|------|---|---|---|
|     |       | T       | X | R | D | T   | X | R | D | T    | X | R | D |
|     |       |         |   |   |   |     |   |   |   |      |   |   |   |

|    |                           |    |      |                 |    |     |      |                  |    |    |      |                  |    |
|----|---------------------------|----|------|-----------------|----|-----|------|------------------|----|----|------|------------------|----|
| 1  | CD-ROM                    | 83 | 3.63 | 1 <sup>st</sup> | O  | 180 | 3.44 | 3 <sup>rd</sup>  | O  | 85 | 3.89 | 2 <sup>nd</sup>  | O  |
| 2  | Internet /www             | 83 | 3.56 | 2 <sup>nd</sup> | O  | 180 | 3.60 | 2 <sup>nd</sup>  | O  | 85 | 3.98 | 1 <sup>st</sup>  | O  |
| 3  | OPAC                      | 83 | 3.56 | 2 <sup>nd</sup> | O  | 180 | 3.80 | 1 <sup>st</sup>  | O  | 85 | 3.81 | 3 <sup>rd</sup>  | O  |
| 4  | LAN                       | 83 | 2.99 | 7 <sup>th</sup> | OC | 180 | 3.04 | 6 <sup>th</sup>  | OC | 85 | 3.77 | 4 <sup>th</sup>  | O  |
| 5  | WAN                       | 83 | 2.98 | 8 <sup>th</sup> | OC | 180 | 3.40 | 4 <sup>th</sup>  | OC | 85 | 3.55 | 5 <sup>th</sup>  | O  |
| 6  | Wire radio phone          | 83 | 2.44 | 9 <sup>th</sup> | R  | 180 | 3.12 | 5 <sup>th</sup>  | OC | 85 | 2.97 | 6 <sup>th</sup>  | OC |
| 7  | Portals                   | 83 | 3.56 | 2 <sup>nd</sup> | O  | 180 | 2.52 | 7 <sup>th</sup>  | OC | 85 | 2.81 | 7 <sup>th</sup>  | OC |
| 8  | Modem                     | 83 | 3.55 | 3 <sup>rd</sup> | O  | 180 | 2.48 | 8 <sup>th</sup>  | R  | 85 | 2.72 | 8 <sup>th</sup>  | OC |
| 9  | News Group                | 83 | 3.13 | 5 <sup>th</sup> | OC | 180 | 2.24 | 9 <sup>th</sup>  | R  | 85 | 2.70 | 9 <sup>th</sup>  | OC |
| 10 | Digital libraries         | 83 | 3.00 | 6 <sup>th</sup> | OC | 180 | 2.16 | 11 <sup>th</sup> | R  | 85 | 2.67 | 10 <sup>th</sup> | OC |
| 11 | Online academic databases | 83 | 3.50 | 4 <sup>th</sup> | O  | 180 | 2.20 | 10 <sup>th</sup> | R  | 85 | 2.63 | 11 <sup>th</sup> | OC |

From the above table, it can be seen that in UNIPORT, CD-ROM, internet/www, OPAC, portals, modem and online academic databases were used often with the mean weight of 3.63, 3.56, 3.56, 3.56, 3.55 and 3.50 respectively. However, wire radio phone was rarely used with the mean weight of 2.44. In RSU, OPAC, Internet and CD-ROM, are often used with the mean weight of 3.80, 3.60 and 3.44 respectively. In IAUE, Internet, CD-ROM, OPAC, LAN and WAN are used often with the mean weight of 3.98, 3.89, 3.81, 3.77 and 3.55 respectively.

**Cluster 4:** What are the problems associated with the academic use of electronic information resources by the undergraduate students?

**Table 4:** mean response of the problems associated with the academic use of electronic information resources by the undergraduate students

| S/N | ITEMS                               | UNIPORT |      |                 |   | RSU |      |                 |   | IAUE |      |                 |   |
|-----|-------------------------------------|---------|------|-----------------|---|-----|------|-----------------|---|------|------|-----------------|---|
|     |                                     | T       | X    | R               | D | T   | X    | R               | D | T    | X    | R               | D |
| 1   | Limited access to computer terminal | 83      | 3.45 | 1 <sup>st</sup> | A | 180 | 3.44 | 3 <sup>rd</sup> | A | 85   | 3.89 | 2 <sup>nd</sup> | A |
| 2   | Lack of IT                          | 83      | 3.40 | 2 <sup>nd</sup> | A | 180 | 3.60 | 2 <sup>nd</sup> | A | 85   | 3.98 | 1 <sup>st</sup> | A |

|    |   |    |      |                  |   |     |      |                  |   |    |      |                  |   |
|----|---|----|------|------------------|---|-----|------|------------------|---|----|------|------------------|---|
|    | knowledge to effectively utilize the services                     |    |      |                  |   |     |      |                  |   |    |      |                  |   |
| 3  | I avoid electronic resources due to my inability to use them      | 83 | 3.35 | 3 <sup>rd</sup>  | A | 180 | 3.80 | 1 <sup>st</sup>  | A | 85 | 3.81 | 3 <sup>rd</sup>  | A |
| 4  | There are few computers with internet facilities                  | 83 | 3.30 | 4 <sup>th</sup>  | A | 180 | 3.04 | 6 <sup>th</sup>  | A | 85 | 3.77 | 4 <sup>th</sup>  | A |
| 5  | Downloading and printing information is too expensive             | 83 | 3.25 | 5 <sup>th</sup>  | A | 180 | 3.40 | 4 <sup>th</sup>  | A | 85 | 3.55 | 5 <sup>th</sup>  | A |
| 6  | I lack skills required for electronic application                 | 83 | 3.00 | 6 <sup>th</sup>  | A | 180 | 3.12 | 5 <sup>th</sup>  | A | 85 | 2.97 | 6 <sup>th</sup>  | A |
| 7  | There is inadequate time due to pressure from academic work       | 83 | 2.98 | 7 <sup>th</sup>  | A | 180 | 2.52 | 7 <sup>th</sup>  | A | 85 | 2.81 | 7 <sup>th</sup>  | A |
| 8  | There is irregular power supply                                   | 83 | 2.95 | 8 <sup>th</sup>  | A | 180 | 2.48 | 8 <sup>th</sup>  | R | 85 | 2.72 | 8 <sup>th</sup>  | A |
| 9  | The server/system is not fast enough in searching for information | 83 | 2.93 | 9 <sup>th</sup>  | A | 180 | 2.24 | 9 <sup>th</sup>  | R | 85 | 2.70 | 9 <sup>th</sup>  | A |
| 10 | Slow internet connectivity  | 83 | 2.90 | 10 <sup>th</sup> | A | 180 | 2.16 | 11 <sup>th</sup> | R | 85 | 2.67 | 10 <sup>th</sup> | A |
| 11 | Finding relevant information is                                   | 83 | 2.88 | 11 <sup>th</sup> | A | 180 | 2.20 | 10 <sup>th</sup> | R | 85 | 2.63 | 11 <sup>th</sup> | A |

|           |  |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------|--|--|--|--|--|--|--|--|--|--|--|--|--|
| difficult |  |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------|--|--|--|--|--|--|--|--|--|--|--|--|--|

The above table shows the problems associated with the academic use of electronic information resources by LIS undergraduate students in which at UNIPORT, limited access to computer terminal was highly accepted with the mean weight of 3.45. Others such as Lack of IT knowledge to effectively utilize the services, I avoid electronic resources due to my inability to use them, there are few computers with internet facilities, etc were also accepted with the mean weight of 3.40, 3.35, 3.30 respectively. In RSU, I avoid electronic resources due to my inability to use them; lack of IT knowledge to effectively utilize the services; limited access to computer terminal; downloading and printing information is too expensive and I lack skills required for electronic application were highly accepted with the mean weight of 3.80, 3.60, 3.44, 3.40 and 3.12 respectively while in IAUE, lack of IT knowledge to effectively utilize the services; limited access to computer terminal; I avoid electronic resources due to my inability to use them; there are few computers with internet facilities and downloading and printing information is too expensive were highly accepted with the mean weight of 3.98, 3.89, 3.81, 3.77 and 3.55 respectively.

**Cluster 5:** What are the strategies for enhancing the academic use of electronic information resources by the students?

**Table 5:** mean response of the strategies for enhancing the academic use of electronic information resources by the students

| S/N | ITEMS  | UNIPORT |      |                 |    | RSU |      |                 |    | IAUE |      |                 |    |
|-----|--|---------|------|-----------------|----|-----|------|-----------------|----|------|------|-----------------|----|
|     |  | T       | X    | R               | D  | T   | X    | R               | D  | T    | X    | R               | D  |
| 1   | Students should be given more education on the use of Electronic Information resources for academic work | 83      | 3.56 | 8 <sup>th</sup> | VA | 180 | 3.44 | 3 <sup>rd</sup> | VA | 85   | 3.89 | 2 <sup>nd</sup> | VA |
| 2   | Personnel providing the services should be competent   | 83      | 3.63 | 7 <sup>th</sup> | VA | 180 | 3.60 | 2 <sup>nd</sup> | VA | 85   | 3.98 | 1 <sup>st</sup> | VA |
| 3   | The cost of access of the services should be   | 83      | 3.81 | 5 <sup>th</sup> | VA | 180 | 3.80 | 1 <sup>st</sup> | VA | 85   | 3.81 | 3 <sup>rd</sup> | VA |

|    |  |    |      |                  |    |     |      |                  |    |    |      |                  |    |
|----|--|----|------|------------------|----|-----|------|------------------|----|----|------|------------------|----|
|    | made affordable  |    |      |                  |    |     |      |                  |    |    |      |                  |    |
| 4  | More computers should be provided for students use in the university libraries | 83 | 3.94 | 1 <sup>st</sup>  | VA | 180 | 3.04 | 6 <sup>th</sup>  | A  | 85 | 3.77 | 4 <sup>th</sup>  | VA |
| 5  | Availability of internet connectivity in the university                        | 83 | 3.80 | 6 <sup>th</sup>  | VA | 180 | 3.40 | 4 <sup>th</sup>  | A  | 85 | 3.55 | 5 <sup>th</sup>  | VA |
| 6  | Providing constant power supply  | 83 | 3.85 | 4 <sup>th</sup>  | VA | 180 | 3.12 | 5 <sup>th</sup>  | A  | 85 | 2.97 | 6 <sup>th</sup>  | A  |
| 7  | Providing access to computer terminal  | 83 | 3.85 | 4 <sup>th</sup>  | VA | 180 | 2.52 | 7 <sup>th</sup>  | A  | 85 | 2.81 | 7 <sup>th</sup>  | A  |
| 8  | Reducing the cost of downloading and printing information                      | 83 | 3.88 | 3 <sup>rd</sup>  | VA | 180 | 2.48 | 8 <sup>th</sup>  | FA | 85 | 2.72 | 8 <sup>th</sup>  | A  |
| 9  | Regular use of electronic resources  | 83 | 3.90 | 2 <sup>nd</sup>  | VA | 180 | 2.24 | 9 <sup>th</sup>  | FA | 85 | 2.70 | 9 <sup>th</sup>  | A  |
| 10 | Providing faster internet connectivity.  | 83 | 3.44 | 10 <sup>th</sup> | A  | 180 | 2.16 | 11 <sup>th</sup> | FA | 85 | 2.67 | 10 <sup>th</sup> | A  |
| 11 | Providing relevant information more easily.                                    | 83 | 3.50 | 9 <sup>th</sup>  | VA | 180 | 2.20 | 10 <sup>th</sup> | FA | 85 | 2.63 | 11 <sup>th</sup> | A  |



From the above table, it can be seen that more computers should be provided for students use in the university libraries, Regular use of electronic resources, reducing the cost of downloading and printing information, etc were very appropriate as the strategies for enhancing the academic use of electronic information resources by the LIS students in UNIPORT with the mean weight of 3.94, 3.90 and 3.88 respectively. Providing faster internet connectivity was also appropriate with the mean weight of 3.44. In RSU, personnel providing the services should be competent; students should be given more education on the use of Electronic Information resources for academic work; the cost of access of the services should be made affordable; availability of internet connectivity in the university and providing constant power supply were very appropriate with the mean weight of 3.80, 3.60, 3.44, 3.40 and 3.12 respectively. In IAUE, personnel providing the services should be competent; students should be given more education on the use of Electronic Information resources for academic work; the cost of access of the services should be made affordable; more computers should be provided for students use in the university libraries and availability of internet connectivity in the university with the mean weight of 3.98, 3.89, 3.81, 3.77 and 3.55 respectively.

### **Conclusion**

From the study, it is seen that the attitude of library and information science students in University of Port Harcourt, Rivers State University and Ignatius Ajuru University of Education has an influence on their perception and the frequency of utilization of electronic information resources. This has resulted to low performance due to non-use of electronic resources, lack of skills. Some of the resources are outdated and obsolete, some students inability to pay fees on time have denied them the privilege of using them and unavailability of most resources needed also denied them the opportunity to become aware and make use of them. On account of this, there is need for total review of the library facilities usage policy, organization of training for users, accessibility of the information resources should be open to all and not for only those who has paid school fees, replacement of outdated books and materials and the library should be modernized and furnished.

### **Recommendation**

Based on the findings of this study, the researcher has made the following recommendations.

1. The university library should establish adequate e-library facilities for the students' use. This can be achieved by getting financial aid or provision of those electronic information resources from the university administration or other private organization who are interested for the course.
2. First year students should be trained on the use of Information resources. This will help to educate the students in the use of electronic information resources for academic purposes. This can be achieved by making it part of their program in the courses they study so that at the course of their study, they would be able to practice and train well.
3. More networked computers and laptops with easy internet connectivity should be provided by the universities in the libraries. The library can get aid from private organization to achieve this.
4. Provision of steady power supply to the universities or alternative power source should be provided to checkmate the erratic power supply in the universities. This can be achieved by providing a standby generator to ensure constant power supply.

5. Libraries should motivate the students to use Electronic Information Resources for their academic work. This can be achieved by giving the students assignments which will prompt them to make use of the electronic information resources in the library
6. Provision of free access to internet services for the students with their own laptops within the university library.

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