

RELATIVE EFFECT OF ENVIRONMENTAL FACTORS, INFORMATION LITERACY, COURSE OF STUDY AND RESOURCES AVAILABILITY TO STUDENTS USE OF UNIVERSITY LIBRARIES IN NIGERIA

By

GEORGINA UCHEY OYEDUM Ph.D

Abstract

Effective use of university libraries is necessary for the academic development of the students. This paper, therefore, assessed the relative effect of the factors that affect the undergraduates students use of university libraries in Nigeria. The study also ascertained the factor that made the greatest contribution to student's use of the libraries. The survey research method was used for the study and the study population was 1,453 undergraduate students from across Arts, Education, Engineering, Law, Science and SocialScience Faculties in the selected universities. The main instrument used for the data collection was a questionnaire. Pearson Product Moment Correlation analysis was used in analyzing the data. Results revealed that resources availability, course of study, information literacy and noise made significant contribution while two factors, physical facilities and ventilation made contributions which are not significant. The study also revealed that of the six (6) factors considered together, library resources availability made the greatest contribution which is significant to undergraduate students use of the university libraries. To enhance the level of library use by the Nigerian undergraduate students, majority of the students indicated the need for provision of current and adequate library material, followed by provision of ICT facilities and provision of conducive atmosphere in order to attract the students to visit the university libraries.

Keywords: Environmental factors, Information literacy, Course of study, Resources availability, Undergraduate students, Use, University libraries, Nigeria.

Introduction

Information is a vital ingredient for success required by every student in all tertiary institutions. This is because it is mainly through having access and using of information that true knowledge can be acquired in a teaching and learning environment. University libraries are known for acquisition, preservation and dissemination of relevant information resources in order to support the teaching and learning process in the parent institutions. Put differently, the university

libraries support the academic programmes of the universities through the provision of relevant reading materials and making them accessible to readers (Idiodi and Igbinosa, 2003). University libraries assist the universities in the discharge of their functions by acquiring all the relevant information resources necessary for sustaining the teaching, learning and research functions of their universities. In other words, university libraries encourage teaching, research and conservation of knowledge in their parent institutions, thereby supporting in achieving the objectives of the universities.

However, for students to effectively use the university libraries there should be adequate ventilation, conducive physical facilities of the library such as library furniture and lighting that could influence the student use of library. Students, for instance, who use the library resources in carrying out some research work or doing any type of class assignment such as writing of projects, term papers, seminar and workshop papers, and other practical assignment will be encourage to do so if the library environment is conducive.

Good ventilation, an environmental factor is necessary for a conducive atmosphere that can encourage students to visit the library and stay for long periods. It is normally argued that there is a strong link between good ventilation and students use of library. Therefore, an ideal conducive learning environment can be described as that in which all the factors such as lighting, furniture, noise-free reading areas and good ventilation are adequately provided for learning purposes. It is generally argued that for effective learning to take place a conducive atmosphere is highly needed. Thus, where a conducive atmosphere such as good lighting system, temperature, sound and noise control environment is not properly incorporated into a university library design, this would negatively affect the users and deter learning (Nock, 1998). Also, the Organization for Economic Cooperation and Development (OECD) has observed that the planning and design of educational facilities for schools, colleges and universities has impact on educational outcomes (Fabiya and Uzoka, 2007).

There is no gainsaying the fact that any learning environment must be functional in design and inviting in appearance. It is only when such environment is in place that learning is encouraged. That is, library use is encouraged by adequacy of learning

resources and serenity of the environment. In the same vein, Nwalo (1997) found that environmental factors such as lighting, ventilation, reading space, conveniences and user friendly policies have great effect on library effectiveness. Therefore, anyone trying to measure library effectiveness needs to take into consideration the environmental factors which Nwalo has referred to as “operational Climate”.

Apart from environmental factors, information literacy is another variable that could motivate the students’ use of libraries in academic institutions. The association of College and Research Libraries (ACRL, 2005) refers to information literacy as the ability to “find, retrieve, analyze, and use information”. One cannot become information literate without first acquiring the basic skills and competencies traditionally associates with general education-critical thinking and reasoning abilities, written and oral communication skills, and so forth (Lindauer, 1998). Information literacy is a concept that librarians and educators developed over the last decade. It refers to a set of competencies students need to be effective information consumers and creators in the information society.

These information literacy competencies include understanding the structure of information and knowledge, creating and executing strategies for finding the needed information, analyzing and evaluating the information, and synthesizing and integrating information so it can be used to complete an assignment or solve a problem these competencies are essential to becoming a master student as well as to working and living successfully in an information society. They are the very skills needed for life-long learning (<http://www.lib.umn.edu/services/overview>). Unfortunately, Akinyode (1985) observed that in Nigerian universities, students ability to relocate, retrieve, evaluate or interpret and use information is generally poor and this definitely will affect life-long learning.

Computer literacy, as an aspect of information literacy refers to effectiveness in searching for needed information by using electronic sources (Saadi, 2002). Okwoche (2005) also argued that computer literacy is the acquisition of computer related knowledge for the purpose of solving the daily problems of our environments. According to Otokunefor (2005) “computer literacy refers to the levels of computer knowledge of individuals and the degree to which such

knowledge can be used in problem solving”. That is, the extents to which students are capable of conducting electronic information searches or use computer facilities to locate relevant sources and information for academic or research purposes.

Computer literacy, no doubt, is important for information searching in the libraries and it is gaining more prominence nowadays that the nature of information in the libraries is changing. Globally, some libraries are fully computerized and so it became clear that it is mainly library users who are computer literate would frequently visit and satisfy their information needs in these libraries. Thus, with information and communication technology (ICT) facilities available in most university libraries all over the world, students who are computer literate now find it easy to search for their information needs in the libraries.

User education or Library Use Instruction Programme (LUI) as an integral part of the information literacy programme is another variable that affects the students’ use of library in a university environment. Users education is a programme of information provided by libraries to users to enable them make efficient and independent use of the library resources and services. A programme of user education might include tours, lectures, exercises and the provision of support materials. It is also termed “library instruction” and “library orientation” (Montague, 1990).

Course of study of students has also been identified as one of the variables that affect student use of university libraries. Scholars generally have found that there is a relationship between course of study and library use. Some courses motivate students to use the library resources more than others. Chu (1994) reported, in his study, that researchers in the sciences use ICT facilities in their information searching more than those in the humanities. Similarly, Kerins, Madden and Fulton (2004) argued that engineers prefers using internet or electronic resources more than library resources in information searching.

Library resources availability is another variable that motivates the students’ use of libraries in academic institutions. Resources in this context refer to what Aina (2003) refers to information’s carriers such as books, journals, newspapers and magazines, encyclopedia, internet facilities and others that enable library users

satisfy their information needs in the libraries. To achieve adequate material resources a well-balanced collection should be provided for all subjects or courses offered in the university, after all availability of learning resources means ensuring their presence in Nigerian universities for immediate use (Aguolu and Aguolu, 2002). Kuh and Gonyea (2003) stressed that, the size of a collection is used as an indicator of academic quality.

The foregoing analysis has shown that the university library plays a very important role in supporting undergraduates' studies. The university library best achieves its goals where the use of the library by undergraduate students among other groups of users is high. Use of library by the students, on the other hand is determined by certain factors such as environmental factors, information literacy, course of study and resources availability. However, little attention has been given to these factors. This study therefore, investigated the relative effect of environmental factors, information literacy, course of study and resources availability to undergraduate student use of university libraries in Nigeria.

Literature Review

Studies have shown that certain factors such as environmental factors, information literacy, course of study and resources availability can influence student use of university libraries (Idiodi and Igbiosa, 2003, Shane, 2007 and Fabiyi and Uzoka, 2007). Adedipe (2007) in his study noted that inadequacy of some physical resources like libraries, laboratories, classrooms and other academic resources translates to poor results because it breeds over crowdedness. Unfortunately, the over crowdedness or the increase in number of the students enrolled in Nigerian universities is not matched with the necessary physical facilities and infrastructure (such as reading chairs and tables and lighting system) that is adequate for the teaching and learning activities in the universities. To further support this view, UNESCO (2002) asserted that without adequate physical facilities, no worthwhile learning can take place in the universities.

Fabiyi and Uzoka (2007) observed that for proper teaching and learning to take place in Nigerian universities, there must be adequate infrastructure to reduce the effect of over enrollment which has been in a common feature in the universities today. To buttress this point further (ALA, 2010) argues that, university or

undergraduates library services require appropriate facilities to accomplish their missions. Most university libraries according to ALA (2010) should have facilities that foster the collaborative nature of study, research and learning and that promote effective and interactive access and use of information resources. Safe, comfortable, well-lighted, clean space with adequate and appropriate study, research and collaboration space will ensure effective use of the library resources, including electronic resources.

Brenden, (2002) argues that information literacy is an intellectual framework for understanding, finding, evaluating and using information- activities which may be accomplished in part by fluency with information technology, in part by sound investigative methods, but most importantly, through critical discernment and reasoning. Information literacy according to Association of College and Research Libraries (ACRL) 2000 is increasingly important in the contemporary environment of rapid technology change and proliferating information resources. Because of the escalating complexity of this environment, individuals are faces with diverse, abundant information choices in their academic studies, in the workplace, and in their personal lives.

Library resources in the present IT era comprises of print and electronic materials and they would be effectively used by those students who can reason, think and take decisive decisions because they possess information literacy skill that facilitates the achievement of their personal objectives in life. This is why it is generally agreed that information literacy forms the basis for lifelong learning. The need for information literacy skill is common to all disciplines, to all learning environment and to all level of education. It enables learners to master content and extend their investigations, become more self-directed and assume greater control over their own learning. According to ACRL (2000) an information literate individual including a student is able to:

- Determine the extent of information needed
- Access the needed information effectively and efficiently
- Evaluate information and its resources critically
- Incorporate selected information into one knowledge base
- Use information effectively to accomplish a specific purpose

- Understand the economic, legal and social issues surrounding the use of information and access and use information ethnically and legally.

On the other hand, Baldwin (1988) maintained that computer literacy a component of information literacy should be seen as the ability to make use of the information that computers make available in ways that would allow the users to become into closer political and social contact with his or her community.

Similarly, application of computer literacy in library searching could be describes as the extent to which the students are capable of conducting electronic information searches or use computer facilities to locate relevant sources and information for academic or research purposes. In other words, a Nigerian undergraduate student who is computer literate could conduct electronic information searches or use computer facilities to locate relevant sources and information in the university library for academic purposes.

Norman (1984) argues that computer literacy can mean a hundred different things; there is not just a single concept involved, but a large variety of them. He equally proposed a schemes for four levels of computer literacy. The first level consisted of mastering what Norman (1984) believed to be basic, general concepts, to which the understanding of algorithms, architecture, and databases was key. The second level required an understanding of how to use a computer and accomplish something useful with it. The third level of computer literacy was the ability to program and the fourth level was the understanding of the science of computation, or “where the professional resides” Norman (1984) opined that every one should achieve at least the second level of his computer literacy scale.

Library instruction programme as another component of information literacy should improve the student ability to use library collection and services effectively, and should include instruction in the use of the full range of information and knowledge resources. Aguolu (2002) stated that instruction in library use aims at developing the bibliographic skill of library users so that they can make the most effective use of the library and its information resources. He argued that most students in Nigerian universities have never used any type of library before entering the university; some of them had never ever seen a library. Yet to be able to undergo a meaningful undergraduate education, they must learn how to exploit

the resources of the university library- this skill, if acquired is essential to lifelong education. This is an age when the knowledge of a subject has become no more important than the knowledge of where and how to find information upon the subject.

Instruction sessions may include one or more of the following:

- Using the library catalog
- Construction search strategies
- Choosing research databases
- Evaluating information resources
- Using the internet appropriately for academic research
- Tours of library facilities (<http://smu.edu/cul/uc>)

Studies have shown that there is relationship between course of study and students use of university libraries. For example, Kerins, Madden and Fulton (2004) reported that engineers prefer using internet or electronic resources more than library resources in information searching. They further stated that law students use the library resources more than the engineering students since their programme center on items such as reading lists, textbooks and course packs. The study revealed that law students expressed enthusiasm for, but in many cases, a lack of confidence in their ability to use electronic resources effectively. The study also revealed that the law students tended to display poor judgment in their choice of electronic resources when attempting to match information needs.

Libraries with appropriate and adequate collection of resources will tend to be patronized and used more than libraries that lack them. In other words, if the resources are not adequate for the needs of the users of the library, it is not likely that the library will be heavily used. With the advent of information technology, universities libraries are expected to provide both print and non-print materials to attract the users make maximum use of the libraries. The availability and use of information and other library resources as well as the ability to manipulate them electronically are necessary requirements for undergraduate student participation in use of libraries in this present age known as the “information technology” age which according to Jimba and Atinmo (2000) operates at a global level.

Objectives of the Study

The study aimed to achieve the following objectives:

- i. To find out the relative effect of environmental factors, information literacy, course of study and resources availability to undergraduates use of university libraries in Nigeria.
- ii. To identify ways of enhancing better utilization of the university libraries by the undergraduate students.

Hypothesis

The relative effect of environmental factors, information literacy, course of study and resources availability are not significantly related to students use of university libraries in Nigeria.

Methodology

The descriptive survey research was used to collect data in the study. The purposive sampling techniques was used to select six universities from the population of Nigerian universities, owned by the Federal Government, that had been stratified by the time/period they were established-two each from the first generation universities (established between 1948 and 1969, second generation universities (established between 1970 and 1979) and third generation universities (established between 1980s to date) (See Appendix A). the universities are: University of Ibadan (UI) and Ahmadu Bello University, Zaria (ABU) first generation universities selected from the south west and north west zones respectively; University of Jos (UNIJOS) and University of Maiduguri (UNIMAID) second generation universities selected from North-Central and North-East zones, respectively; and University of Uyo (UNIUYO) and University of Abuja (UNIABUJA)- third generation universities selected from the south-south zone and the Federal Capital Territory respectively. Thus, the South-East zone is the only one that did not have a representative university in the sample of universities.

Furthermore, six faculties were selected for the study and two departments were selected from each of the faculties. These faculties include Arts, Education,

Engineering, Law, Science and Social Sciences. Students were selected from the universities based on their areas of specialization and levels of study for adequate representation of the study population. The students were selected for the study through random sampling method. Departments of Physics, Biochemistry, Mathematics, Economics, Mass Communication, Theatre Arts, Music, History, English, Public and International Law, Library, Archival and Information Studies, Vocational and Technical Education, Private and Business Law, Physical and Health Education, Sharia Law, Political science, Science and Technology Education, Special Education, Religious studies, Archaeology and Anthropology, Communication language Arts, Computer science, Statistics, Teacher Education, Human Kinetics and Health Education, Creative Arts, Chemical Engineering, Electrical Engineering, Mechanical Engineering, Civil Engineering, Food Technology and Agricultural Engineering were involved in the study. The sample size for the six universities was: UI-202, ABU-199, UNIJOS-342, UNIMAID-355, UNIUYO-206 and UNIABUJA-149 giving a total of 1,453 respondents. Questionnaire, interview and observation instruments were used to collect data for the study. Questions were asked to obtain information on the relative effect of environmental factors, information literacy, course of study and resources availability to students use of university libraries as well as identify which of the factors made greatest contribution to students use of university libraries. The university librarians of the universities selected for the study were interviewed to find out the size of their collections including the ICT facilities available in the libraries. Observation technique was also adopted in the study in order to see the available library resources as well as ICT and physical facilities in the university libraries. Pearson product moment correlation analysis was used in analyzing data.

Data Analysis and Discussion

Hypothesis Testing

The null hypothesis was tested in the study at 0.05 level of significance. The result of the test was as follows:

H₀: The relative effect of environmental factors, information literacy, course of study and resources availability are not significantly related to students use of libraries.

The summary in figure 1 gives the result of the significance of the relative effect of the factors on students use of university libraries in Nigeria.

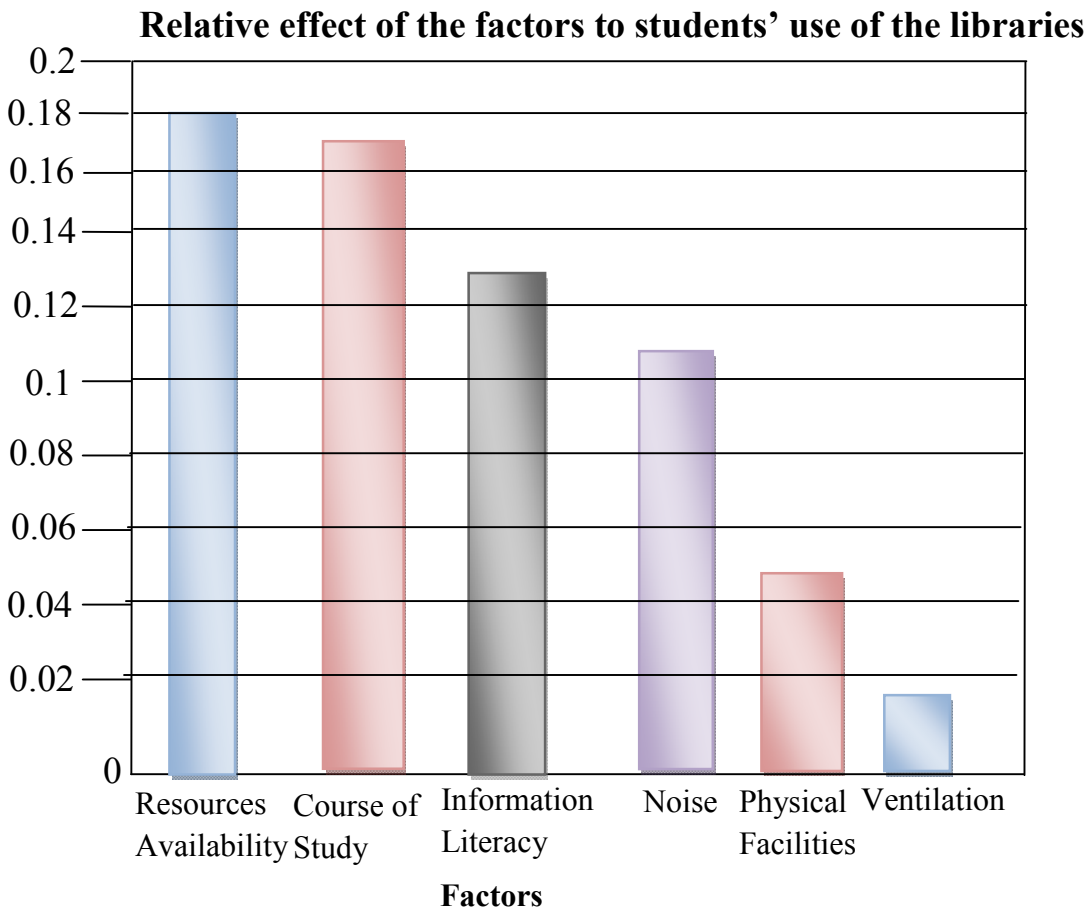


Figure 1: Bar Chart Showing the Comparison of Factors Contributing to Students' Use of Libraries.

After the statistical analysis of the 6 factors considered together, the analysis as it is illustrated on the bar chart revealed that resources availability made the greatest contribution ($\beta = 0.167; p < 0.05$). the third in the order of magnitude was made by information literacy ($\beta = 0.133; p < 0.05$). next in this decreasing order is the contribution of noise ($\beta = 0.108; p < 0.05$). these four factors contributed significantly to the undergraduates student use of the university libraries.

However, physical facilities came fifth ($F = 0.052; p > 0.05$) while ventilation made the lowest contribution ($F = 0.017; p > 0.05$). These two made contributions that are not significant. Therefore, four factors viz: library resources availability, course of study, information literacy and noise while it is not rejected for physical facilities and ventilation made contributions which are significant. The null hypothesis is rejected for library resources availability, course of study, information literacy and noise while it is not rejected for physical facilities and ventilation.

To identify the suggested ways of enhancing better utilization of the university libraries by the undergraduates, the respondents were requested to identify with a number of listed recommendations as in fig.2. They were asked to tick as many options as they considered pertinent.-

Suggested Ways of Enhancing Utilization of University Libraries by Undergraduate Students

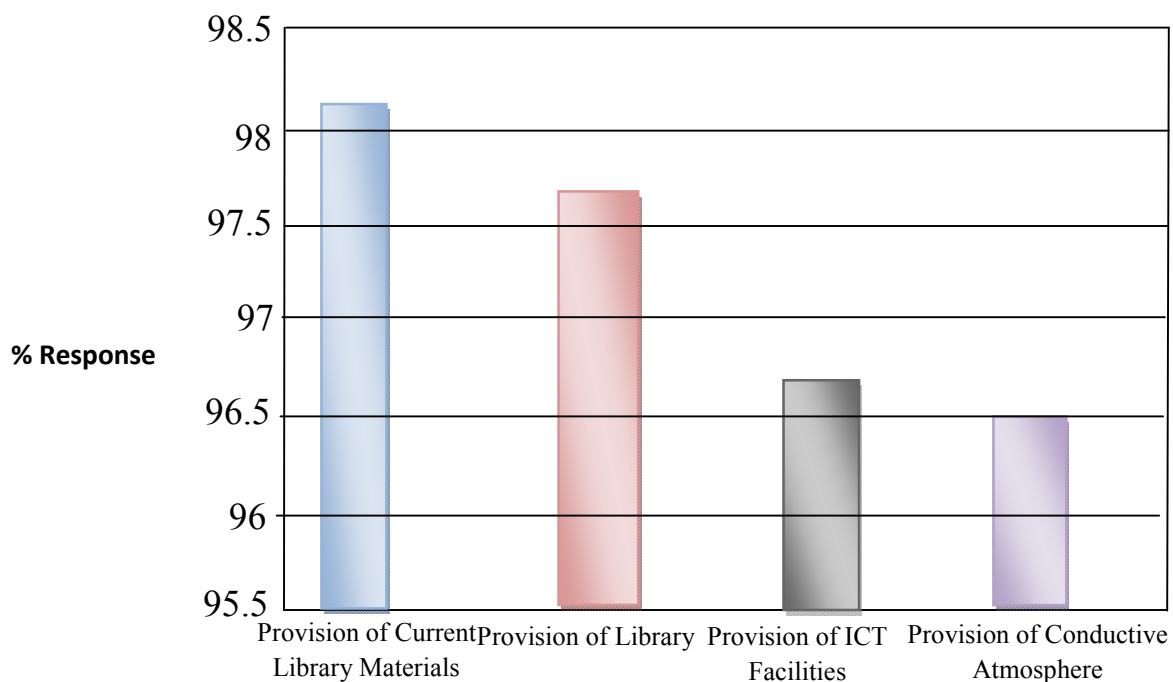


Figure 2: Bar Chart Showing the Suggested Ways of Enhancing Use of University Libraries by Students Recommendations

Figure 2 shows that majority of the students subscribed to all the suggested ways listed for enhancing utilization of the university library. A total of 98.1% of the respondents suggested provision of current library materials while 97.6%

suggested provision of adequate library stock. They also suggested the provision of ICT facilities (96.6% and provision of conducive atmosphere (96.5%).

The study revealed that majority of the respondents accepted all the suggested ways listed for enhancing the used of university libraries in Nigeria. Many of them indicated there is need for provision of current library materials, followed by those who ascribed to provision of adequate library stock. Others buttressed the need for provision of ICT facilities as well as conducive atmosphere. Perhaps, majority of the respondents called for adequate and current library stock as this would attract students to frequently use the library resources since most of the student would always want to learn more about their disciplines. To effectively achieve this, they need current and adequate library resources to support the classroom teachings. They also need ICT facilities such as the internet and conducive environment for a meaningful reading.

Discussion of Findings

In considering the six independent variables relatively to know the one that influences undergraduates use of university library most, the analysis revealed that resources availability made the greatest contribution to undergraduate student use of university libraries. This was followed by course of study, information literacy and noise in that order. Physical facilities and ventilation made the least contribution and are not significant to undergraduate students use of the university libraries. The reason for resource availability making most contribution could be because universities are generally known for impacting knowledge and to meaningfully acquire knowledge the undergraduates rely heavily on their libraries for provision of information materials needed to satisfy their information needs. Every student wants to acquire more knowledge in his or her area of specialization and as such they need adequate library resources to supplement the classroom teachings. Students are aware that they cannot satisfy their information needs only in the classrooms so using the library and its resources is highly significant. Put differently, if the Nigerian undergraduate student are in the universities to learn, there is no doubt that they would be frequently attracted to use the university libraries when there is sufficient and adequate library stock comprising of print and electronic resources. An adequate library resource is an indicator of academic

quality. This is why Adebimpe and Adeniran (2001) maintained that it is not out of place to say that the establishment of school/college libraries has a positive correlation with educational quality at school/college levels. This finding is corroborated by Whitmire (2001) who found that the undergraduate students were successful in locating their information needs in the library and this encouraged them to effectively use the library and its resources. Therefore adequate library resources are necessary for effective use of university libraries by the undergraduates students. Unfortunately, this is not the case with the Nigerian university libraries where as was observed have few library resources and the installation of the internet facilities in these library are yet to be adequately achieved. To support the observations, Oyewusi and Oyebade (2009) stated that "... there is little empirical data about how electronic/digital resources are used by Nigerian undergraduates based on the fact that most universities in Nigerian have not fully digitalized their library resources". According to Oyewusi and Oyebade (2009) library resources available in developed countries consists of print and electronic materials and they support the teaching and learning activities in the universities. Unfortunately, this is not the situation in most developing countries like Nigeria as the oral interview with the university librarians of the libraries studied also revealed that, most of the Nigerians university libraries are finding it difficult to acquire current materials as a result of the dwindling budgetary allocation to them and the financial constraints has always made the academic libraries struggles to survive.

Course of study as the second factor that significantly influences the undergraduate students use of universities libraries is certainly not by chance. After all, there is universal assumption according to Marchionin (1995) that man was born innocent or ignorant and should actively seek knowledge. Information seeking is thus a natural and necessary mechanism of human existence and because scholars want to acquire knowledge in their areas of specialization they tend to search for information mainly in the university libraries. Therefore, course of study significantly influences use of library probably because the undergraduate students offerings different courses or programmes in the universities are influenced to use the universities libraries in search for knowledge in their fields or related courses. This could be achieved through reading some library resources and doing some assignments, writing term papers, seminar papers or even group projects. The few

ICT facilities available in most university libraries in Nigerian today could possibly be an attraction of most students offering various courses to use the university libraries, especially as some students offering some courses rely so much in knowing the current developments in their areas of specialization.

The third factors is information literacy which is equally important to undergraduate students use of library. There is no doubt that if the students are aware of how to go about their information searching in the libraries they would frequently have the urge to use the library and its resources. The important of information literacy to use of library is not farfetched when one considered the fact that information literacy has to do with ability to locate, evaluate and use effectively the needed information and this would in turn make one to become independent lifelong learner. An information literate person has learnt how to learn and as such has known how to find, retrieve and use information in an information education center. For Nigerian undergraduate students to effectively achieve their university education objectives there is need for possession of high level of information literacy which Akinyode (1985) observed is generally low among the Nigerian undergraduates and this would always affect their academic pursuit. Possession of high level of information literacy would enable the students learn new things and also improve on the already acquired knowledge.

Similarly, to understand what one is reading and achieve better academic work there is need for absolute silence in the reading environment. This is why a noise-free library environment would always attracts the undergraduate students. Unfortunately, noise as revealed in this study contributes negatively to undergraduates use of library. This could be due to the overcrowded nature of most of the university libraries in Nigeria. It could also be as a result of inadequate seating capacity in these libraries. Thus, most students in the library without any seat could be found standing in between the book shelves browsing or reading. In this type of uncomfortable reading condition noise is bound to exist.

In addition, the introduction of mobile telephones in Nigeria has also contributed in no small way to the noisy atmosphere of the libraries as many students receive and make calls in the library in defiance of library rules and regulations. Therefore, noise in these libraries would end up preventing many students from frequent use

of the libraries, since it is generally agreed that noise and other distractions are fundamental obstacles in a library. This finding is in line with Evans (1997) who emphasized that studies have confirmed that noises has a negative effects on the students ability to learn. Every academics environment should be free from noise for any meaningful academic work and this is why Shane (2007) believes that the best sound for study is silence, especially when one needs to concentrate. Therefore, for effective library use to be achieved, noise in the Nigerian federal university libraries has to be controlled.

On the other hand, although ventilation and physical facilities in this study made the least contribution to undergraduate students use of university libraries they are still important for any effective reading to be done in any university library. Probably, as observed by the researcher all the universities sampled have comfortable reading chairs and broad tables as well as standby power generating sets to support the electricity. Thus, many times the libraryfans or air conditioners are functioning. Apart from this, the windows in these libraries are properly fixed and this allows proper ventilation across the reading areas of these libraries. This of course has made them in the present study not to be as significant to student use of library as the other four independent variables.

Conclusion

One can therefore conclude that since the environmental factors especially noise, information literacy, course of study and resources availability relatively have significant effect to students use of university libraries, efforts should be made to improve on the factors in the Nigerian libraries. The level of noise for instance, in the Nigerian university libraries should be reduced to the barest minimum. Resources availability that made the greatest contribution to students' use of university libraries should be improved. This implies that both electronic and print resources in various courses should be provided in the libraries for users. There is also the need to ensure that the level of information literacy of the students is improved by installing ICT facilities in the libraries and this would in turn, assist the students in their educational achievement in the universities. There is no doubt that when all these measures are put in place the use of university libraries by the undergraduate students would certainly improve.

On the basis of the specific findings of this study, the following recommendations are made;

- The library management should acquire and preserve current and sufficient number of library resources that would always satisfy the information needs of the users.
- The university management in Nigeria should endeavour to provide ICT facilities such as internet services in the university libraries in order to attract the students to frequently use the library resources. These electronic resources would always keep the students up-to-date in their field of study
- The library management of universities in Nigeria should ensure that the libraries environments are adequate for learning purposes.

References

- Adebimpe, O.A and Adeniran, D.A (2001), The Place of Libraries in the accomplishment of universal basic education programme. *Journal of Educational Development* 3:82-85
- Adedipe, N.O (2007). University quality assurance, finding strategy and task allocation being paper presented at the workshop on tertiary education financing. University of Lagos on April 23-24
- Aguolu, C.C and Aguolu, I.E (2002). *Libraries and information management in Nigeria: seminal essays on themes and problems*. Nigeria: Ed-inform services.
- Aguolu .L (2003). *Library and information science text for Africa*. Third world information services Ltd, Ibadan
- Akinyode, E.O (1985). User frustration in libraries: a case study of universities of Ilorin library. *Niger Biblios* 10.2:37-41
- Association of College and Research Libraries. (2000). Information literacy

- competency standards for higher education. Retrieved Dec. 4. 2010 from <http://www.ala.org/ala/mgrps/dvs/acrl/standards/inflitearcycompetency/cfm>
- Chu, H. (1994). Email in scientific communication in 15th National Online Meeting Proceedings- New York, May 10-12, 1994, Medford, NJ: *Learned Information*:77-86
- Fabiya, A and Uzoka, N (2007). State of physical facilities in Nigeria universities implication for repositioning tertiary institutions for global competition. Retrieved 5th April, 2011 from http://www.hernet.org/toward_quality_in_africa_higher_educaiton
- Idiodi, E.A and Igninosa, I.O (2003). Copying with users frustration in academic libraries in Nigeria: University of Benin experience. *Communicate: Journal of Library and Information Science* 5.1:2-3
- Jimba, S. and Atinmo, M (2000). The Influence of Information Technology Access on Agricultural Research in Nigeria. *Internet Research: Electronic Networking Applications and Policy* 10.1:63-71
- Kerins, G. Madden R and Fulton, C (2004). Information Seeking and Students Studying for Professional Careers: the cases of engineering and law student in Ireland. *Information Research*, 10.1: paper 208. Retrieved Sept. 10.2006. from <http://InformationR.net/ir/10-1/paper208.html>
- Kuh, G.D and Gonyea, R.M (2003). The Role of the Academic Library in promoting students engagement in learning. *College and Research Libraries*. July:257
- Lindauer, B.G (1998). Defining and Measuring the Library's Impact on Campus wide outcomes. *College and Research Libraries* 59.6:546-563
- Marchionini .G (1995). *Information Seeking in Electronic Environments*. UK: Cambridge University press, pp.3-10
- Montague, .H (1990). *Harrod's Librarians' Glossary*. U.S.A Gower pub. Coy. p.648

- Nock, G.I (1998). Assessment of Physical Facilities and Reader' Satisfaction in Kashim Ibrahim Library.Ahmadu Bello University, Zaria.*Library Focus* 1.15 & 16:1-11
- Norman D. (1984). *Worsening the Knowledge Gap in Computer Culture*. New York: New York Academy Sciences. Pp.3-16
- Nwalo, K.I.N (2001). Measures of Library Effectiveness in Nigerian Polytechnic Libraries with Emphasis on user satisfaction. *Journal of Librarianship and Information Science in Africa*, 1.1:41-50
- Okwoche, J.O (2005). The Role of Computer Literacy and Information Technology in National Development.*Knowledge Review* 10.3:26
- Otokunefor, H.O.C (2005). Information Literacy Rules the Networked World: The Implication for Librarians and Information Scientists.*Nigerbiblios*16.1&2:126-132
- Oyewusi F.O and Oyeboade S.A (2009). An Empirical Study of Accessibility and Use of Library Resources by Undergraduates in a Nigeria State University of Technology.*Library Philosophy and Practice*.Retrieved dec. 2, 2010. From <http://www.webpages.uidaho.edu>
- Saadi, M.L.K (2002). View from Bangladesh : the new literacy. ACM:Ubiquity magazine forum Retrieved July 10.2006 from <http://www.acm.org/ubiquity/views/m-saadi-1.html>