Students' Awareness and use of Electronic Information Resources in University Libraries: Case Study of University of Nigeria Nsukka

Harriet U. Igbo
Nwabuisi T. Imo

Abstract

The purpose of this study is to find out students' perception of the electronic information resources available at the University of Nigeria Libraries. The descriptive survey research design was adopted for this study. The population was made up of 10,374 undergraduate and 999 postgraduate students of the Nsukka and Enugu campuses of the University of Nigeria. The cluster sampling technique was used to draw samples of 385 undergraduates and 285 postgraduates from the fourteen faculties of the University. A questionnaire titled, "Students' Perception of Electronic Information Resources Questionnaire (SPEIRQ)" was used to collect the data for the study. The percentage and mean ratings were used to analyze the data generated. The findings of the study show that students' perception of electronic information resources of the University libraries was not encouraging. This stems from the fact that the library has not done much in creating the necessary awareness of the existence of these resources. Hence, the level of utilization of the resources as well as students' satisfaction is low. It is obvious that university libraries have to devise means of making its users have access to the variety of resources provided. This implies that they have to strategize on effective ways of not only sensitizing users but also mounting training programmes for developing/enhancing their technology literacy skills.

Keywords: Information Resources, Electronic Information Resources, University Library, Academic Library.

Introduction

The realities of the present information age as a result of the evolution of information and communication technologies (ICT) has brought about radical changes in teaching, learning, and research. This has invariably resulted to overwhelming transformation in information-based services so much so that the role of the traditional library has been redefined to key into the opportunities provided by technology to reshape information provision in line with the expectations of the new information society. In the view of Moyo (2004) and Sethi & Panda (2012), the traditional library has witnessed various initiatives and innovations which have changed its roles to serve as information system and/or knowledge center with much importance attached to providing services and support to virtual patrons by facilitating access to electronic information resources (EIR) and providing value-added support service structures for effective use of these resources.

The existence of internet connectivity and other numerous electronic resources and services within libraries have been identified as yardsticks for assessing the

credibility of these libraries. This is because in the opinions of Tella, Tella, Ayeni & Omoba (2007), availability and accessibility of electronic information resources and services provide opportunity for enhanced academic performance and promotion of scholarship. Thus electronic information resources and structures, especially the internet/web-based resources, have become very essential component of library collections, as they play vital roles in meeting the information needs of academics, researchers and students. These resources provide a wide range of current information from anywhere in the world and also enable the academic community to disseminate information to a wider audience around the globe. Describing EIR, Reitz (2004) asserts that they are materials consisting of data and/or computer programs encoded for reading and manipulation by a computer or such other techniques as the internet. Similarly, Appleton (2006) describes them as those kinds of documents in digital format which are made available to users through computer-based information retrieval systems. The commonly available EIR include e-journals, e-books, online databases, CD-ROMs, OPACs, newsgroup postings, e-newspapers/magazines, theses/dissertations, government publications, e-mail, internet resources, etc (Appleton, 2006, Dhanavandan, Esmail & Nagarajan, 2012, Haridasan & Khan, 2009, Reitz, 2004 and Swain & Panda, 2009). These resources have great potentials in scholarship. Sharma (2009) opined that the internet and other electronic resources are constantly influencing the development of scholarly communication; they have the potential for delivering vast goods as they overcome successfully the geographical limitations associated with the print media. In addition, the distribution time between product publication and its delivery has been drastically reduced and they have also been found less expensive and more useful for easy access to information.

In spite of the numerous advantages of electronic information resources and services, it is observed that most students do not utilize them when they are available in the libraries. Mohamed (2007) reported that the efforts of libraries and information centers in using ICT based resources and services to satisfy the diverse information needs of users have been marred by under-utilization. In the same vein, it has been observed that students have not fully embraced the opportunities offered by the availability of EIR in learning. This has been attributed to lack of awareness, low user acceptance and poor adaptation (Millawithanachchi, 2012). It is therefore necessary to identify student's level of awareness of the electronic resources available at the University of Nigeria, libraries; the extent of utilization of these resources as well as their level of satisfaction about the resources and services. More so, introduction of new learning environments in the form of e-learning and e-resource based learning require that studies be conducted on usage, user behavior, user acceptance and other factors that affect successful use of new technology in university education (Millanathanachchi, 2012). Knowledge of all these will help the library administration to assess its services and structures in order to discover areas of changes and modifications that will enhance effective and efficient service delivery to guarantee infinite possibilities in accessing information. It will also serve as a reference material for other library systems desirous of improving their electronic information service structures in Nigeria and other developing countries.

Overview of the Information Resources of the University of Nigeria Libraries.

The University of Nigeria Libraries consists of the Nnamdi Azikiwe Library (Main Library) and Enugu Campus Library including the Medical Library. Presently the Library System has about 735,157 volumes of books and 99,760 volumes of journals in different fields of study (http://www.unn.edu.ng/library).

To meet the challenges of the present digital age, the library has identified as one of its missions, to evolve an ICT-driven world class academic and research library and to become an access point institution to global information resources and services in all subject fields. Based on this the library has developed an information portal which is linked with other databases such as Nature Magazine available online. The library equally provides access to a number of other online databases, including Online Access to Research in the Environment (OARE), Access to Global Online Research in Agriculture (AGORA), Journal Storage (JSTOR), Health Internetwork Access to Research Initiative (HINARI) and EBSCOHOST [which is hosted by National Universities Commission (NUC)]. Each of these holds thousands of EIR consisting of academic journals and millions of articles accessible to users. Furthermore, the University Library is one of the beneficiaries of the Universities Connect initiative of the MTN Foundation which, is aimed at ensuring availability of electronic information resources for students and staff, thereby transforming university Libraries in Nigeria to meet the challenges of the digital era. The Library is linked to world class digital libraries across the world with access to electronic books, journals and other materials in various subject areas. The Library has web-enhanced OPAC and uninterrupted wireless internet access, including a computer laboratory which offers both staff and students the opportunity of having unrestricted access to web-based information. Given this scenario, the library has positioned itself to fulfill its mission of being an ICT-driven world class academic and research library.

Objectives of the Study

Given the above backdrop, the main objective of this study is to find out the perception of students about the electronic information resources of the University of Nigeria Libraries. The specific objectives of the study include,

1. To find out students' awareness of the existence of EIR in the University of Nigeria Libraries.
2. To identify the extent of utilization of EIR by student users of the University of Nigeria Libraries.
3. To find out student's level of satisfaction with the EIR of the University Libraries.
4. To identify the challenges encountered by students in utilizing EIR in the University Libraries.
5. To suggest strategies for enhancing student's utilization of EIR in the University Libraries.

Review of Related Literature

Several studies have been conducted on electronic information resources, their uses and user perceptions of these resources. Such studies include those of authors like, Dhavanandan, Esmail & Nagarajan (2012), Dillon & Hahn (2002), Hewitson (2002), Lau & Woods (2008), Mahe, Andrys & Chartron (2000), Majid & Tan (2002),

Millawithanachchi (2012), Natarajan, Suresh, Sivaraman & Sevukan(2010), Nikam & Pramodini (2007), Sharma (2009), Singh, Devi & Raychaudhury (2009), Swain & Panda (2009) and Tenopir (2003). Describing electronic resources, Swain & Panda (2009), assert that they are mines of information that are explored through modern ICT devices, refined and redesigned and more often stored in cyberspace in the most concrete and compact form which can be accessed simultaneously from infinite points by a great number of audience. The view of Haridasan & Khan (2009) indicate that e-resources are those information resources in which information is stored electronically and are accessible through electronic systems and networks. Similarly, Bavakenthy, Veeran & Salih (2003), quoting IFLA, stated that an electronic resource consists of materials that are computer-controlled, including materials that require the use of a peripheral like CD-ROM player attached to a computer. From the foregoing it is evident that electronic information resources enhance remote access to information resources which situates libraries and information centres at the vantage position of providing infinite/ limitless opportunities and possibilities for access to information at a global level.

Various types of electronic resources abound. IFLA asserts that data and programs are the two forms of electronic resources. While data entails information in the form of numbers, letters, graphs, images and sound, programs include online services and interactive multimedia (Bavakenthy, Veeram & Salih, 2003). Also EIR have been identified as e-books, e- journals, electronic personal papers, e-mail messages, newsgroup postings, newsletters, government publications, electronic theses/dissertations, e-newspapers, CD-ROM, online databases, web-based OPACs, internet, CDs/DVDs, sources from web pages and other resources that have similar characteristics (Appleton, 2006, Haridasan & Khan, 2009, Reitz 2004, and Swain & Panda, 2009).

They are found to be very beneficial for research and scholarly communication. In the opinion of Haridasan & Khan (2009), they are more up-to-date, can be accessed anywhere across all geographical boundaries and add value to research and development activities. Sharma (2009) added that they are less expensive and are useful especially to distant learners who have limited time to access the physical libraries from outside.

Knowledge of existing EIR is one of the major factors for adoption and use of the resources. This is attested by the studies conducted by Mahe, Andrys & Chartron (2000), which shows that scientists do not hesitate to use electronic resources when they feel they have sufficient knowledge of them. However, studies conducted by Dhanavandan, Esmail &Nagarajan (2012), Dillon & Hahn (2002), Majid & Tan (2002), Nikam & Pramodini (2007) and Sigh, Devi & Raychandhury (2009) have identified low level of awareness of electronic resources and services among undergraduates, academics, faculty and administrations of various universities studied. The above scenario invariably affects utilization of electronic resources.

Commenting on the state of utilization of EIR, Sharma (2009), reported that Hewitson (2002), Majid & Tan (2002) and Madhusudan (2008) have identified a low level of utilization of electronic resources by users of academic libraries. Specifically, Hewitson (2002), in a study of the electronic services of university academic staff of Leads Metropolitan Universities, discovered that apart from the information that can be obtained through the internet and downloaded online, the actual use of other sources like e-books was abysmally low. Similarly, Natarajan, Suresh, Sivaraman & Sevukan (2010),

surveyed use and user perception of electronic resources in Annamalai University and revealed that despite the availability of wide range of e-resources the frequency of their use was low.

User frustration has been linked to low level of utilization of electronic resources. Nikam & Pramodini (2007), in a study of the use of e-journals and databases by the academic community of university of Mysore, identified a general marginal use of these resources which are linked to low level of user satisfaction regarding the use of those resources. A number of factors have equally been identified as responsible for low satisfaction, resulting from low utilization of electronic resources. Sharma (2009), Naushad & Hassan (2003) and Singh, Devi & Raychaudhury (2009), have identified, poor internet facility, insufficient computers, low ICT skills of users, lack of training, guidance/orientation to users, poor power supply, slow internet speed/slow downloading of documents, difficulties in making full text download of materials and lack of awareness of resources as factors responsible for lack of user satisfaction in the use of electronic resources.

For effective use of EIR by students, Sharma (2009) and Singh, Devi & Rachaudhury (2009) have identified a number of measures, which include improving access speed and installation of more computer terminals with latest configuration, more e-resources for downloading, wider and well lit space for seating, printing facilities and frequent training. From the literature reviewed it is clear that the materials consulted were written primarily by authors from India and United States. This shows that not much has been done in the area of study locally. Hence, this work serves as one of the contributions to knowledge in this area from the Nigerian perspective. Most importantly, most university libraries are trying to stimulate the use of electronic resources in their systems, given the weaknesses identified in the preceding paragraphs, especially in developing countries like Nigeria.

Methodology

The descriptive survey research design was adopted for this study. The population was made up of a total of eleven thousand, three hundred and seventy three (11,373) student-registered users of both the Nsukka and Enugu Campus Libraries of the University of Nigeria. This comprises of ten thousand, three hundred and seventy four (10,374) undergraduates and nine hundred and ninety-nine (999) post-graduate students. The sample sizes of three hundred and eighty-five (385) and two hundred and eighty-five (285) undergraduates and post graduates respectively were determined using Yaro's Statistical formulae.

The cluster sampling technique was used to draw respective samples of 28 undergraduates and 20 post graduate students respectively from each of the fourteen faculties of the University to constitute the total samples of the study. A questionnaire titled, "Students Perception of Electronic Information Resources Questionnaire (SPEIRQ) was used as instrument for data collection. The instrument was divided into five sections which addressed the issues raised in the research objectives. The rating scale was the frequency tables and four point likert scales. The instrument was subjected to trial test using 20 undergraduate and 15 post-graduate students of the Nnamdi Azikiwe University Awka for correction of errors and modifications. The reliability coefficient was determined at 0.88 and 0.79, using the Chronbach Alpha Reliability coefficient. Out

of 385 and 285 respective copies distributed, only two hundred and fifty (250), representing 64 percent from the undergraduates and one hundred and seventy two form post-graduate students (60 percent) were returned and found useable for the analysis. The decision rule was established at 50% and 2.50. This implied that any item that failed to score 50% and above at the frequency table and 2.50 at four points scale was rejected and vice versa. The percentage was used to analyze the data generated for section 1 of instrument while mean rating was used to analyze data generated for sections 2-5 of instrument.

Presentation of Results and Discussion of Findings

Fig. 1: Students' Awareness of Electronic Information Resources.

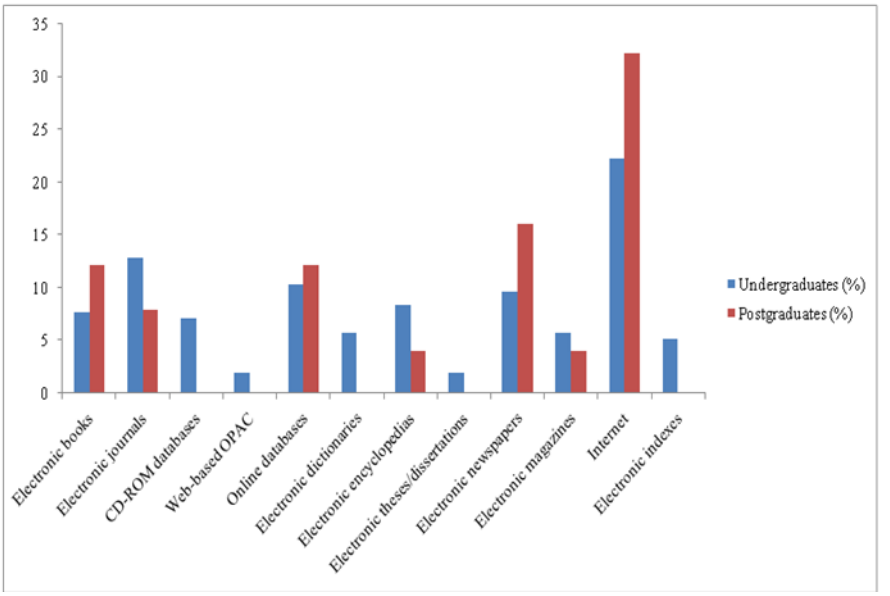
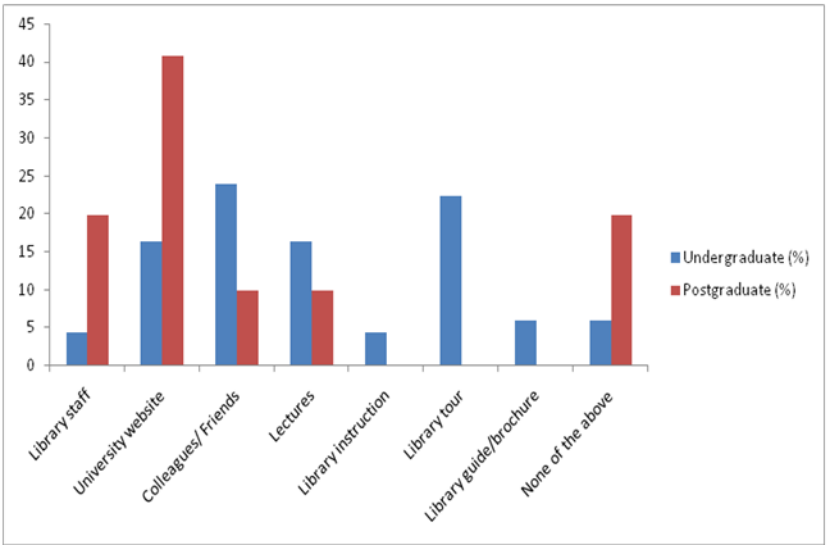


Figure 1 presents the result of student's awareness of electronic information resources. A consideration of the data in the figure above shows that the internet ranked highest among the electronic resources which the undergraduate students were aware of with 22.15%. This was followed by e- journals (12.82%) and online databases (10.26%), e-newspapers (9.62%), e-encyclopedias (8.33%) and e-books (7.69%). Others are CD-ROM databases (7.05%), e-magazines and e-dictionaries with 5.77% each and e-theses/dissertations and Web-based OPACs with 1.92% each. While none of the undergraduates was aware of electronic abstracts, 2.56% of them were equally not aware of any of the e- resources available in the libraries. Similarly, a greater percentage of the post-graduate students were aware of the internet (32.09%). This was followed by e-newspapers (16.05%), e-books and online databases with 12.09% each, e-journals (7.91%) and e-encyclopedias, e-magazines and e-abstracts which scored 3.95% each. While none of the post-graduates indicated having awareness of CD-ROM databases, web-based OPACs, e-dictionaries

and indexes, 7.91% indicated that they have no knowledge of any of the resources. All these indicate that the respondents have very low awareness of the existence of electronic resources in the libraries. This finding corroborates the findings of Dhavanandan, Esmail & Nagarajan (2012), Dillon & Hahn (2002), Majid & Tan (2002), Nikam & Pramodini (2007) and Singh, Devi & Rachaudhury (2009), which revealed that there is low awareness of electronic resources and services among undergraduates, academics, faculty and administration of universities. The implication of this finding is low utilization of the resources (see figure 3). It has been pointed out that adoption and application of electronic resources to a large extent depend on the knowledge about their existence. This point aligns with the finding by Mahe, Andrys & Chartron (2000), which indicates that scientists do not hesitate to use electronic resources when they feel they have sufficient knowledge about them.

Fig. 2: Students' Sources of Awareness of Electronic Resources



Data in figure 2 above show the sources of awareness of e-resources for students. It is clear from the above figure that awareness through colleagues/friends (23.88%) attracted the highest response from the undergraduate students. This was followed by library tour (22.39%). Lectures and university website as sources of awareness scored 16.42% each, library guide/brochure scored 5.79%, while library instruction and library staff scored 4.48% each. On the part of the post-graduate students, the result shows that awareness through the university website attracted the highest percentage of response at 40.70%. This was followed by awareness through library staff (19.76%), colleague/friends and lectures with 9.88% each. None of the post-graduate students indicated having been aware through library instruction, library tour and library guide/brochure, as 19.76% indicated that they are not aware of the resources through any of the identified sources.

This result further shows that the library has not done much in creating the necessary awareness as all the sources of awareness related to the library scored below 6% except library tour for undergraduate students. Library instruction which is given at the early years of student's life on campus cannot help them to acquire enough technological skills that will take them through their course of study in the university. So there is need for re-examination of this important source of students' awareness of information resources. This indicates that the library should strategize and find ways of getting the university management to accept and legislate on the idea/model of embedded librarianship. This model postulates that librarians should be assigned to a class as a member of the teacher-student team from the start of the semester through to the end (Kanya, Stilwell & Underwood, 2011). This will enable the librarian create awareness of resources in the library generally and the course in particular

Fig. 3: Mean Responses on Students' utilization of Electronic Information Resources

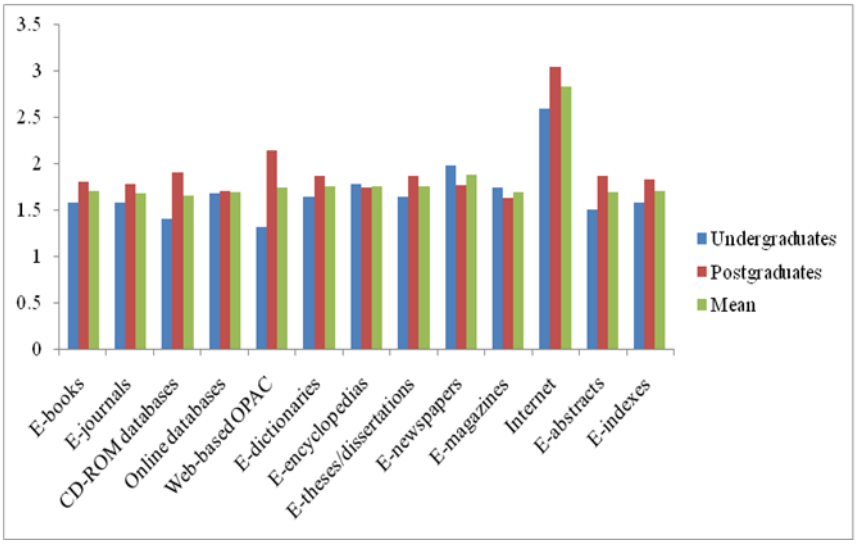
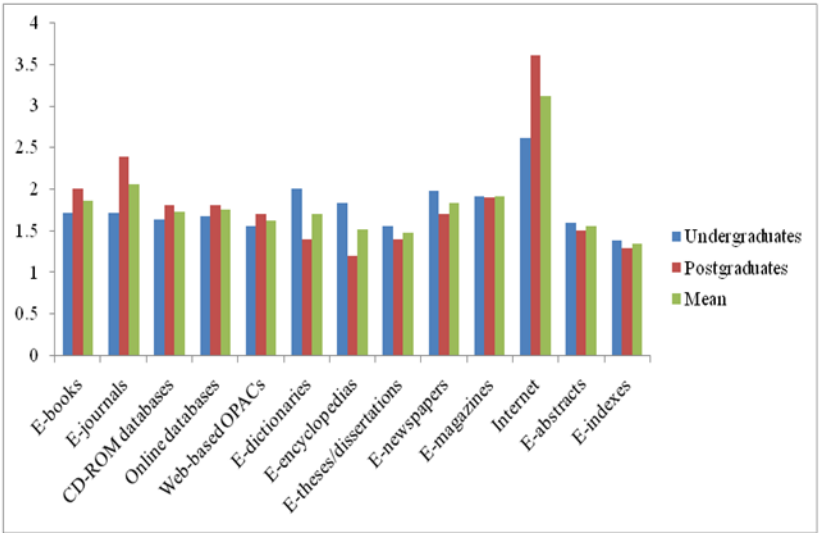


Figure 3 above displays the result of student's utilization of electronic information resources. Evidence from the figure shows that internet was the only resource that was highly utilized by both groups of respondents as shown in the grand mean value of 2.83. The extent of utilization of other resources like e-books, e-journals, CD-ROMs, web-based OPACs, e-dictionaries, e-encyclopedias, e-these/dissertations, e-newspapers/magazines e-abstracts/indexes was very low as shown in their respective mean scores below 2.50. This finding corresponds with the report given by Hewitson (2002) who discovered that apart from the information that can be obtained from the internet for browsing online, the actual use of other resources like e-books was abysmally low. It is obvious that the internet is more popular in use because most people use it for browsing, sending and receiving of electronic mails and for other social networking

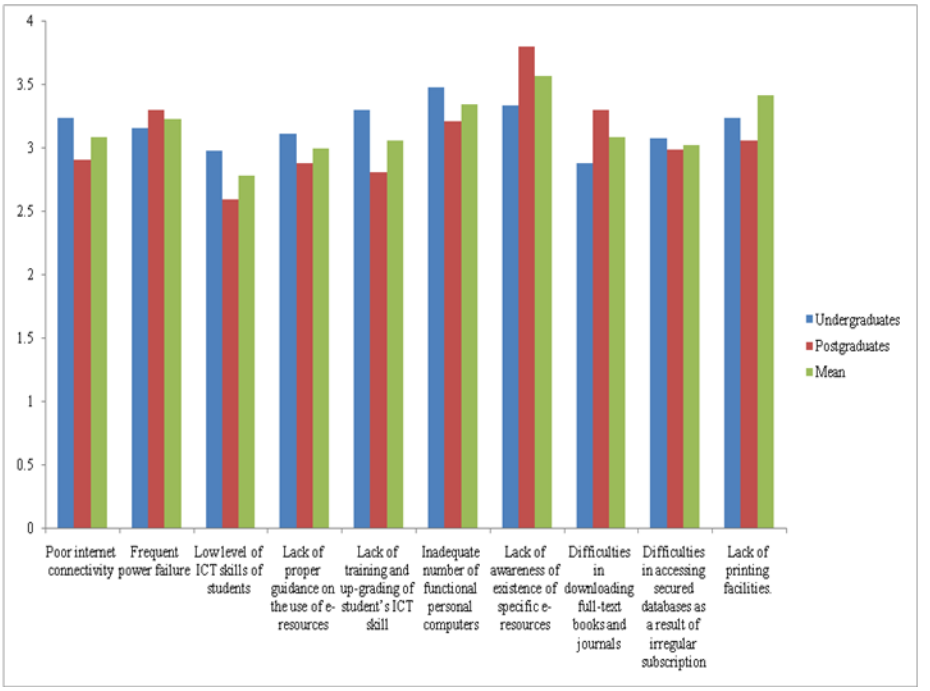
purposes like face book, twitter, blogging, etc. This is a pointer that libraries in developing countries should embrace the library 2.0 service model. This service model represents a significant paradigm shift in the way users view library services. It is a transition within the library world in which programmes and services are delivered to the users through new and innovative methods based on web 2.0 model (Kwanya, Stiwell & Underwood, 2011)

Fig. 4: Mean satisfaction of Students with Electronic Information Resources.



Data in figure 4 above shows student's level of satisfaction with electronic information resources. It is evident that internet has a very high acceptance level of satisfaction among all the other resources with grand mean value of 3.11. Low levels of satisfaction was indicated for other resources like e-books, e-journals, CD-ROM databases, online databases, web-based OPACS, E-dictionaries,e-encyclopedias,e-theses/dissertations,e-newspapers/magazinand e-abstracts/indexes with mean values below the criterion mean. This finding relates with the findings of Nikam & Pramodini (2007), which identified low level of user satisfaction regarding the use of e-resources as a factor for the general marginal use of e-journals and databases by the academic community of University of Mysore.

Fig. 5: Mean Factors Affecting Utilization of Electronic Information Resources by Students.



Data in figure 5 above shows the factors that affect utilization of electronic information resources by students. The result indicates that all the items yielded positive responses as factors that affect the use of electronic resources. Consideration of their grand mean values shows that lack of awareness of the existence of specific resources has the highest mean score of 3.57, followed by lack of printing facilities (3.42), inadequate number of functional personal computers (3.35) and frequent power failure (3.23). Others include poor internet connectivity and difficulties in downloading full-text materials, which scored 3.09 each; lack of training and up-grading of student's ICT skills (3.06); difficulties in accessing secured databases as a result of irregular subscription (3.03); lack of proper guidance on the use e-resources(3.00) and low level of student's ICT skills (3.06).These findings align with the findings of Sharma (2009), Naushad & Hassan (2003), and Singh, Devi & Rachaudhury (2009), which identified lack of awareness of electronic resources, poor internet facility, insufficient computers, low ICT skills of users, lack of training/orientation to users, poor power supply, slow internet speed, slow downloading of documents, difficulties in making full-text download of materials as challenges of utilization of e-resources.

Fig. 6: Mean strategies for Improving students' Use of Electronic Information Resources.

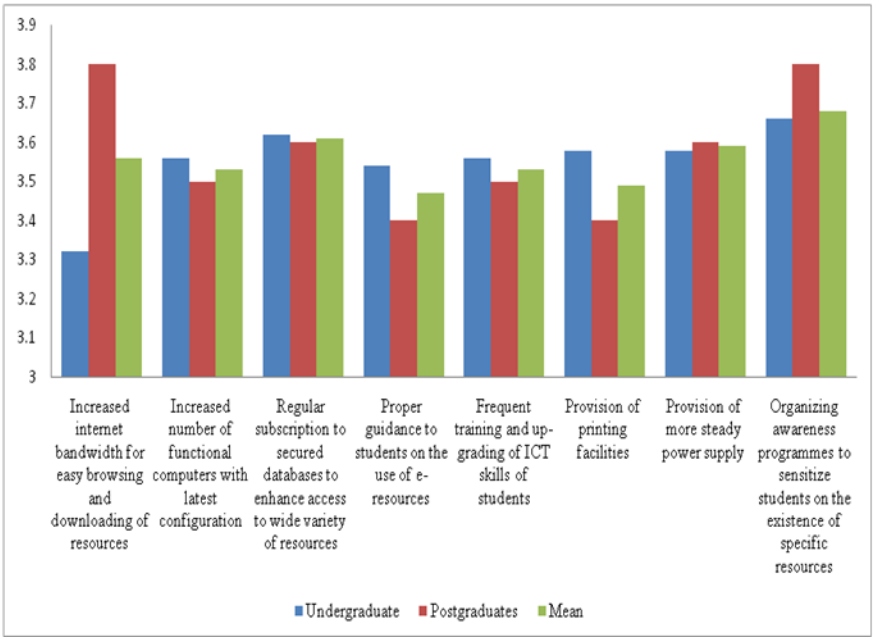


Figure 6 above shows the result of the strategies for improving the use of electronic resources by students. It is evident that all the identified strategies were relevant measures for improving the use of e-resources. Organization of awareness programmes for sensitizing students on the availability of e-resources was top among the items listed with grand mean of 3.68. This was followed by regular subscription to secured databases (3.61) and provision of steady power supply (3.59). Other strategies following include, increase in internet bandwidth (3.56), increase in the number of functional computers and frequent training/upgrading of student's ICT skills which scored 3.53 each, provision of printing facilities(3.49) and providing proper guidance to students while using e-resources (3.47). This finding is in agreement with views of Kaur (2006) as cited in Sharma (2009), Naushad & Hassan (2003) and Singh, Devi & Rachaudhury (2009) which equally outlined the above factors as strategies for improving the use of electronic information resources in libraries.

Conclusion

The conclusion to be drawn from the findings of the study is that both the postgraduate and undergraduate students' users of the University of Nigeria Libraries do not have encouraging perception of the electronic information resources available in the system. This stems from student's lack of awareness of the existence of the resources, low level of utilization of the resources as well as lack of satisfaction/user frustration from the use of the resources as a result of such factors as lack of awareness programme for sensitizing students on the existence of e-resources, low level of student's ICT skills, inadequate

number of functional computers, slow internet speed, difficulties in downloading full-text materials, lack of programmes for training and upgrading of student's ICT skills.

Recommendations

1. Based on the findings of the study, the following recommendations are made: University administrations should support the organization of university-wide awareness programme to sensitize the entire community on the existence of electronic information resources both in the library system and elsewhere in the knowledge world.
2. Libraries should use consultancy services to engage in advocacy program to sensitize the community on the availability of e-resources in their collections.
3. In conjunction with the University administrations libraries should mount regular training programmes like seminars and workshops to help both students and staff acquire skills in the use of electronic resources and to upgrade the skills of those who had already acquired such skills.

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