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Use of Electronic Information Resources for Academic Research by Postgraduate Students: Case Study of Delta State University, Abraka.

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Abstract
This study explores the challenges of using Electronic Information Resources (EIR) for academic research by post-graduate students in Delta State University Abraka Nigeria. One hundred and fifty (150) structured questionnaires were distributed amongst students that were available, as well as the interviews with some selected individuals within the institution. The study looks into post-graduate student's access to electronic information resources, the current status of EIR in their institution, how often they use these resources for academic research purposes, as well as the challenges that they encounter in using EIR. The findings showed that post-graduate students at the University are aware of the existence of EIR, but their optimal use of these resources is hampered by limited access to some EIR due to limited space, low bandwidth, and erratic power supply among others. It is therefore, recommended that the institution should provide adequate space, power supply and should address some of the issues deterring equitable access to EIR. The development of institutional repository and the use of open access resources would also improve access to scientific and electronic information.
Keywords: Electronic Information resources, Postgraduate Students, Delta State University.

1.1 Introduction

In recent times advances in information technology have changed the way information is accessed and disseminated. Electronic information resources have become an integral part of teaching and learning in most African colleges and universities. They have provided wider access to information irrespective of geographical location or time in universities for teaching, learning, and research than the traditional print. Electronic information environment facilitates enhancement in the speed of service, the number of users served, the quantity and exhaustiveness of information provided. The electronic media, by their very nature and characteristics, provide new and exciting opportunities for post-graduate students in finding the information related to their research areas (Varghese, 2008). Furthermore, electronic information resources are convenient to use, by the virtue of the fact that users are able to access information from anywhere; be it the library,

office, or at home. They also give the user an opportunity to explore various resources on related topic through different search techniques. Besides providing quick and easy access to information, electronic information resources provide access to current information that could be essential for knowledge generation and dissemination. Academic libraries in Nigeria are far from up-to-date in resources (books and journals) (Afolabi, 2007). This underscores the need for the development and use of EIR to facilitate access to vast collection of digital book and journal titles.

Despite the fact that the adoption and diffusion of electronic information resources in university libraries in Nigeria has not been rapid and smooth as in the advanced information societies, their use in Nigerian universities also warrant investigation. More so, Adomi, Omedeko and Otolo (2004), reports low usage of electronic information resources by undergraduate students in Nigeria, there is the need to investigate the use of EIR amongst postgraduates with a view to establish any difference or otherwise. This study therefore is an attempt to investigate the use of EIR amongst postgraduate students at Delta State University, Abraka, Southern Nigeria.

1.2 Objectives of the Study
The main objective of the study was to investigate the use of electronic information for academic research by postgraduate students at Delta State University, Abraka, Nigeria. Specifically, the study is aimed at investigating:
- The accessibility of electronic information resources by post-graduate students at Delta State University, Abraka
- The current status of electronic information resources in the University.
- The frequency of accessing electronic information resources by post-graduate students in the University.
- The problems/challenges post-graduate students face using electronic information resources in the University.

2.1 Review of Related Literature
Academic libraries are increasingly taking advantages offered by information and communication technologies (ICTs) to provide improved access to electronic information services to their users (Ndinoshiho, 2010). In the financially stringent environment, electronic journals have the potential to become a medium which is cheaper than the traditional printed journal since they can easily be circuited and disseminated through various networks for easy access and retrieval by students/ researchers. Hence, in the 1990s it became imperative that drastic measures needed to be taken in order to reverse the deteriorating situation in which most African institutions were becoming cut off from current research and thinking from elsewhere. Several initiatives to increase the availability of scholarly information in Africa emerged, mostly driven by donors and non-governmental / non-profit institutions. These efforts have resulted in a significant increase in the number of African institutions accessing these resources. Among the initiatives are: INASP's PERU program, eIFL. net, AJOL, JSTOR, schemes funded by commercial publishers and the UN, namely HINARI, AGORA and OARE (Masinde & Okoh, 2011).

A lot of research has been conducted on the Nigerian academia in tertiary institutions, and the dearth of books to carry out tuition and research. Tella, Owolabi and Attama (2009), stated that it is no longer news at this digital age that many libraries in tertiary education institutions are connected to the Internet or have plans to get connected soon.

This makes things easier for teaching and learning to take place. Lack of internet access had been identified by many researchers as a major factor that has denied Nigerian students access to the latest information for their learning and research. However several efforts are being made by Nigerian university libraries to support modern information provision with Internet application for efficient information access and retrieval by students through various initiatives such as the Nigerian Universities Network (NUNET), National Virtual Library Project (NVLP), Nigerian Virtual Library Consortium (VLC) etc. to provide reliable internet connectivity in Nigerian universities.

According to Okon (2010), though the Internet has been integrated into major academic activities in Nigerian universities within the past decade, there still exists a digital divide or inequitable access within the system. Most universities in Nigeria have yet to adopt a policy of providing equitable access to the Internet to their staff let alone their students, indeed those that are the most affected by the inequitable access to the Internet in these universities have in fact been the students. Afolabi (2007) noted that the dearth of current and up-to-date information for research in Nigerian university libraries have been a major source of concern to both the library management and research community. Bozimo (2007) also affirmed that, the usage statistics of electronic resources in the university libraries in Nigeria are very low.

Moreover, Okiy (2003) conducted a citation analysis study on a total of four thousand and twelve (4,012) citations in seventy (70) postgraduate dissertations in education submitted to the Delta State University Library between 1992 and 2002. The study revealed that most postgraduate students in education use more textbooks than other forms of library materials. Books and monographs were very highly cited, with a total of two thousand four hundred and eighteen (2,418) citations, while journals had only nine hundred and eighty-two (982) citations. These citations were mainly print format. The findings provide an insight to the low level of use of EIR for research purposes, though the study was silent on whether the students had access to EIR or not. This study therefore focused attention on the use of EIR for academic research by post graduate students.

3.1 Research Methodology

The descriptive survey research design was adopted for this study. A questionnaire and interview methods was designed and used for data collection. The population of the study comprised the 2,786 registered postgraduate students for the 215/2016 session. The purposive sampling technique was used to select 50 postgraduate students each from the faculties of Sciences, Social Sciences and Arts, making a total of 150 respondents for the study. The questionnaire was administered by the researchers.

This questionnaire was tailored towards exploring the challenges of using EIR by post-graduate students for academic research by determining whether the respondents had access to EIR, the current status of EIR in their institution, how often they use these resources for academic research purposes and the challenges of using EIR. The researchers also interviewed ten (10) individuals. Eight (8) of them were post-graduate students randomly selected by the researchers, and two (2) were library staff; one (1) of the staff is the head of ICT section in the library. Interviewees were asked about the challenges faced when trying to access the EIR at the institution. Descriptive statistics as well as bar charts were used to analyze data.

4.1 Findings and Discussion

4.2 Access to Electronic Information Resources

The first question was aimed at soliciting information on the accessibility of EIR by the postgraduate students of the institution in order to determine the EIR that the respondents could access. Figure 1, below shows a total of one hundred and forty (93.3%) of the respondents who indicated that they had access to E-journals, whilst ten (6.7%) of the respondents could not access E-journals. Ninety-six (64%) gave positive response on access to E-books whilst fifty-four (36%) respondents could not access E-books. Most of the respondents gave negative response on access to E-magazines and E-thesis at one hundred and thirty(86.7%) and ninety-three (62%) respectively. This means that only twenty (13.3%) could access E-magazines and fifty-seven (57%) could access E-thesis and dissertations. Bibliographic databases that are also in electronic format could be accessed by one hundred and thirty (88%) of the respondents, while eighteen (12%) could not access them.
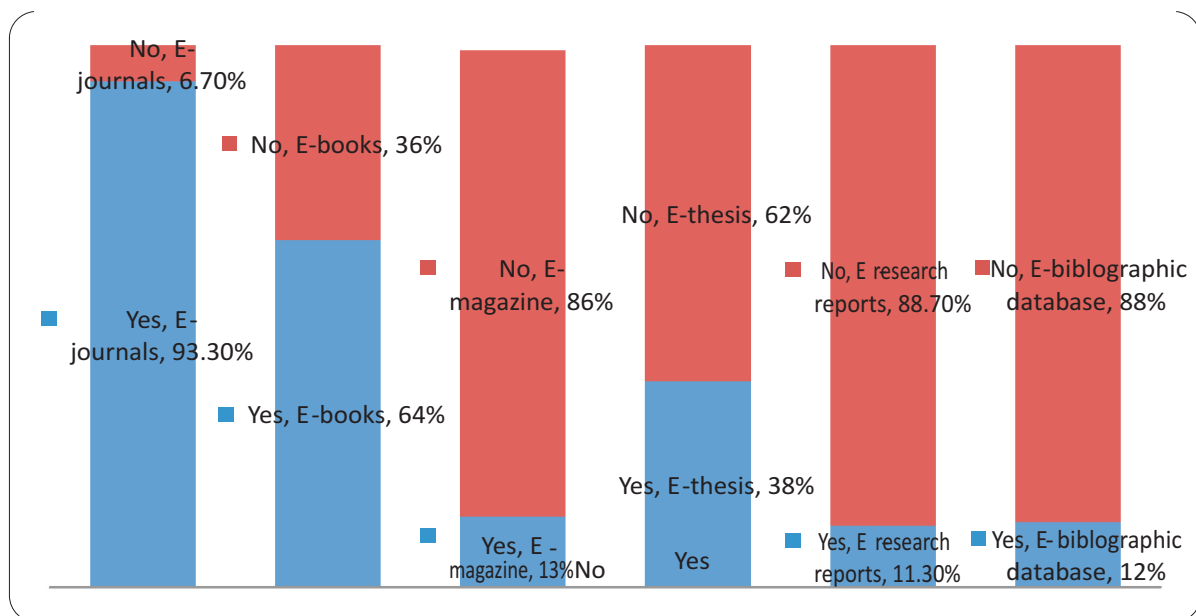

Figure 1: Access to Electronic Information Resources

These results indicate that the post-graduates had more access to E-journal and E-books, while access to E-thesis, E-magazine, and Bibliographic databases is minimal to most of the postgraduate students. E-journals are easily searchable and they offer increase in accessibility irrespective of time and location and even for those who are not within easy reach of the library. Generally, users prefer electronic journals because they make their work easier and give them the information they need. Rapid online access and the ability to download, print, and send articles electronically are some of the top advantages of electronic journals for all user groups.

Though, there are different types of access given to different people depending on different levels of subscription which allows access to abstracts only, or full text. E-books on the other hand are not easily and quickly

accessible as e-journals, but are portable and make it easy to access an entire library collection at ones fingertips, depending on the conditions set out by the e- book publishers. The low level of access to e-thesis and E-magazines might not necessarily mean that these resources are not available but that the post-graduate students do not know how to access them or they are not aware of their existence. Therefore, in order to determine the respondents' level of awareness and their knowledge of EIR, the respondents were asked to indicate to what extent they know about these resources. Two (1.3%) of the respondents indicated "to no extent", one hundred and seven (71%) responded "to some extent" and forty-one (27.3%) answered "to a large extent". This means that at least most of the respondents are aware of the existence of EIR at the institution.

4.3 The current status of Electronic Information Resources

As presented in Figure 2, in order for the researcher to ascertain the current status of electronic information in the institution, the respondents were asked to indicate if was at introduction, nascent or fully installed stage. According to their responses, seventy-two (81%) of the respondents indicated that electronic information resources is at introductory stage, however forty-nine (33%) of the respondents say it is at nascent stage. Only twenty-nine (19%) of the respondents responded that EIR is fully installed.
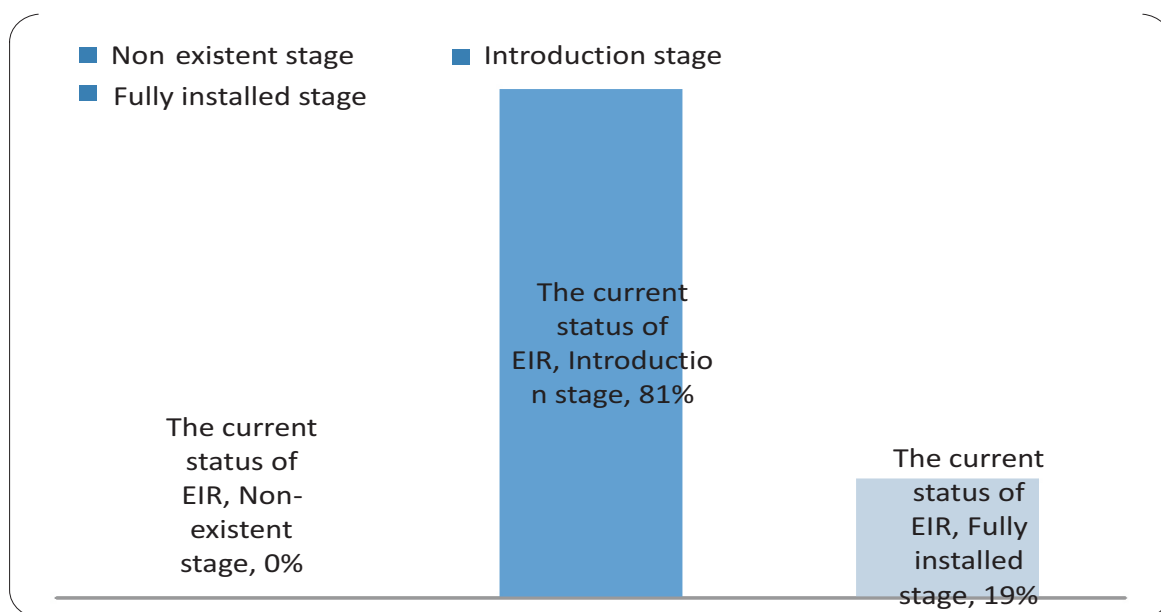

Figure 2: The current status of electronic information resources in the institution

Alasa and Kalechukwu (1999) observed that, the present state of information network in Nigeria is still pathetic with serious consequences on the socio-economic development in the country, and that the inability of our libraries to have access to current information for our researchers needs to be looked into by major stakeholders. Afolabi (2007) also corroborated with the observation that within the higher education in Nigeria, the libraries are far from up-to-date in resources; books, journals, abstracts and

other collections are not current; there are gaps in sequence, which could be critical for knowledge generation and dissemination.

Hence, providing a well-equipped library in terms of electronic information resources cannot be over-stressed. Kumar & Singh (2011) observed that electronic information resources form an integral part of libraries assisting the users in learning, teaching and research. So it is the responsibility of library to keep pace with technological developments and cope with the users demand for e-information. It is also, important to note that a well-established and organised library is essential for any academic institution because libraries have long-term experience in systematizing and mediating

information that is needed by universities for research and education. As such, scientific research and development depends on information; which can be made accessible via the library.

4.4 Frequency of accessing electronic information resources

With respect to the statement; "how often do you access electronic information resources?" one hundred and six (70.7%) respondents indicated often, a lower percentage of thirty-one (20.7%) of the respondent indicated always while the respondents that indicated rarely were thirteen (8.6%). None of the respondents indicated that they had never used electronic information resources.
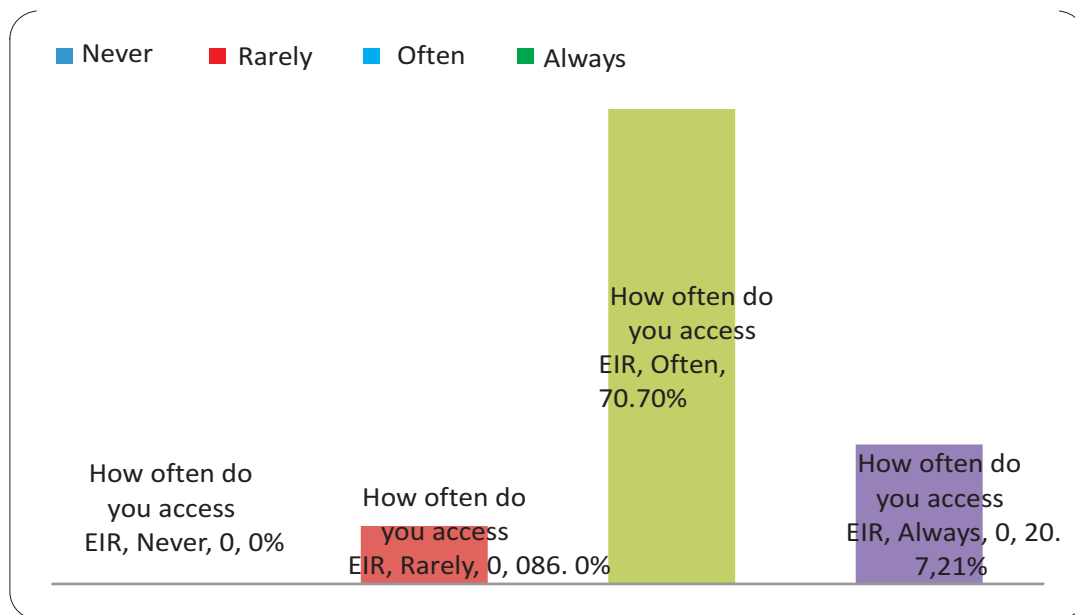

Figure 3: Frequency of Accessing Electronic Information Resources

It has been observed that the frequency of using electronic information resources is an important indicator of how electronic resources are utilized. This implies that majority of the post-graduate students use e-resources.

4.5 Problems Encountered

With respect to the statement, in one

sentence state what problems you encounter when trying to access electronic information resources, listed below are basically the response from the respondents. Most respondents, constituting one hundred and twenty-six (84%) indicated lack of training on the use of ICT and electronic information resources. Other factors that were highly noted by the entire respondents was slow

network, difficulty in downloading files which can be linked to some of the responses that indicated lack of access due to low bandwidth and inability to have access to full text. Lack of space, insufficient ICT equipment, and erratic power supply were also highlighted as some of the problems they encounter in trying to access electronic information resources in their institution.

Most of the respondents also indicated lack of training on the use of ICT and electronic information resources which results in finding irrelevant information or not finding anything at all when queries are made. This might be because of the inability to harness the various electronic information resources and frustrations encountered in using electronic information resources. These problems faced by the post-graduate students could be attributed to issue of digital divide (the gap between those individuals who have reasonable access to technology tools and those that do not) which results in unavailability or lack of awareness. Like most African countries, Nigeria is still struggling to key into opportunities available via the Internet.

Most lecturers and students indicated their dissatisfaction with IT infrastructure. This was attributed to inadequate provision of infrastructure occasioned by lack of adequate financial support for both hardware and software infrastructure. This could also be the reason why most lecturers still attach importance to print materials. Students were also asked to state some of the problems encountered in accessing the Internet and other facilities. Most of them mentioned limited connectivity to the Internet provided by the university which was only available in computer centres and some offices

4.6 Steps to Successful Implementation of Electronic Information Resources

Most of the respondents one hundred and twenty-six (84%) feel there should be constant training on how to use electronic information resources by the library staff. Some, ninety-six (64%) are also of the opinion that the institution should provide adequate space for users, install more equipment to facilitate usage and make provision for wireless connections so students could use their laptops. While majority of the respondents, one hundred and thirty-nine (92.7%) indicated that to check the issue of erratic power supply, a stand by generator should be made available by the institution. It was also noted by one hundred and seventeen (78%) of the respondents that the institution should increase subscription to other databases, and the internet bandwidth should be upgraded.

Providing adequate space for users, installing more equipment to facilitate usage and making provision for wireless connections so students could use their laptops were some of the responses from the respondents on steps the institution should take towards successful implementation of EIR. To further substantiate on the steps institutions can take to successfully implement electronic information resources, internet training is also needed to ensure that students acquire the essential skills for Internet use and libraries should acquire more databases, and computer centres should be made more widely available on campuses. A consortium to provide a high-speed internet to full-text scholarly journals that covers all disciplines is also essential to improve access to electronic information resources.

According to Haneefa (2007) most libraries were hampered by lack of funds, lack of infrastructure, and lack of skilled professionals to embark on automation of all library management activities and application of ICT, also a good number of the library users were not satisfied with the application of ICT in their libraries and indicated "inadequate

ICT infrastructure" as their major reason for dissatisfaction.

However, in this study with regards to the respondents, they indicated from their observation what they think are the hurdles to effective implementation of electronic information resources, majority of the respondents forty-four (29.3%) indicated lack of understanding of electronic information resources and it benefits, while thirty-six (24%) of the respondents are of the opinion that changing people's behaviour from the use of print is the biggest hurdle in the implementation of effective EIR. However, most of the respondents fifty-one (34%) are positive that lack of top management commitment to electronic information resources that poses the biggest hurdle in effective implementation of EIR, whereas, only nineteen (12.7%) of the respondents thinks over-coming technological limitations is the biggest hurdle in effective implementation. The major reason attributed to these problems could be based on lack of commitment of top management and also lack of understanding of electronic information resources and its benefits, which could also be as a result of not having sufficient funds to set in place the facilities that will enhance effective utilization of electronic resources.

It appears that digital services are not being fully utilized either by university librarians or researchers. Both parties lack skills and awareness regarding utilizing digital knowledge resources available to them at their fingertips. Okoye and Ejikeme (2011) indicated that with open access, articles can be accessed online free of charge. They identified inadequate skills to navigate the internet, unstable power supply, unavailability of internet facilities, permanence of open access movement due to unstable financial support and lack of knowledge of the existence of open access journals in the internet as constraints to the use of open access journals by researchers.

Conclusion

As observed from the literature, it is obvious that the use of electronic information resources improves and impacts on academic research. However, despite the availability of electronic information resources, the post-graduate students in the Delta State University, Abraka still experience problems due to inability to access certain information because they are subscription based, low Internet bandwidth, inadequate space, lack of training, erratic power supply etc. It is evident from the analysis that increasing the Internet bandwidth, provision of adequate infrastructure and space, training on how to use are essential for better use of electronic information resources.

The findings of the study also indicates that electronic information resources provide a wide range of opportunities for the post-graduate students and is easily accessible irrespective of time or place. However, certain problems have been observed as hindrance to the effective use of EIR in the institution studied and it is believed that if these aforementioned problems are tackled by the institutional library, the post-graduate students will not only do better but will be able to compete with post-graduate students in other part of Africa and the world in general. It will not only enable them to improve on their research but will help them to ascertain if they are producing research that conforms to world standard.

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