

Extent of Digital Information Resources Usage by Undergraduates Of Selected Higher Institutions In Delta And Edo States, Nigeria

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Abstract

The article was on the extent of digital information resources (DIRs) usage by undergraduates of selected higher institutions in Delta and Edo states, Nigeria. This study adopted descriptive survey research design. The study was conducted in Federal and State University Libraries in Delta and Edo states in the south-south geopolitical zone of Nigeria. The sample for the study comprised one thousand and eighty-eight hundred (1,088) users drawn from four universities. Purposive sampling technique was used to select two universities from Delta and Edo states respectively. Proportionate stratified sampling technique was used to select respondents from each of the federal and state university libraries used for the study. The instruments used for the collection of data was structured questionnaire. The major findings include that some Digital Information Resources (DIRs) were available in the university libraries visited by the researcher are the following: e-conference papers, e-zines, e-newsletters e-reference materials, e-projects, e-journals, e-seminar papers, e-books and e-dissertation. More specifically, Ambrose Alli University Library (AAU) have ten(10) types of DIRs; John Harrison Library in University of Benin (UNIBEN) eight of DIRs are available either through inter-library loan (ILL), or online subscription. Federal University Petroleum Resources Library do not have any of the DIRs because the digital library was just newly established and under structuring; but they are using it as cybercafé for students to search academic information with the Internet facilities. The findings also revealed that students make use of DIRs to a low extent. The constraints encountered by students towards the accessibility of DIRs in the four libraries are epileptic power supply, none availability of online databases, lack of formal training in Internet skills among students, slow bandwidth and so on.

Keywords: Digital Information Resources, Uses, Undergraduates, Higher Institutions and Nigeria.

Introduction

The major function of libraries, irrespective of type, is to provide the right materials (resources in all formats) to meet the information needs of users. A university library aims at serving students and researchers at all levels, hence, librarians must be ready to acquire and make available necessary databases for teaching and research for the university communities (Devi & Singh, 2004). Devi and Singh further stated that information explosion and information technology revolution leading to the emergence of digital information era has made several library resources available for clientele.

In a digital library, resources are stored and made available in digital forms, and the services of the library are also made available electronically. Rosenberg (2005) noted that these services are made available frequently over the Internet so that users can access electronic materials remotely. This refers to e-services which most libraries are trying to embrace in the digital environment. Rosenberg further stated that as libraries embrace the digital environment, their most crucial role is not that of providing e-resources, but of establishing services that facilitate access to available information. According to Fabunmi, Paris and Fabunmi_(2006), library digitization has become part of the work of librarians, and most libraries are involved in digitization. Libraries in Nigeria universities are not left out in this trend of digitization.

Digital Information Resources(DIRs) connotes those information resources which before now were in print form, but currently found in non- print form (soft copy) and are accessible through computer machines and

other corresponding ICT tools (Obaseki, Umeji & Krubu, 2010). Similarly, Digital Information Resources (DIRs) includes music's, games, stories, articles from magazines, published journals and books, encyclopaedias, pamphlets, cartographic materials and other published resources that are in soft copies. They also often include sound animated graphics, pictures and movies.

The aim of digitizing library materials is for preservation and easy access by students, researchers and other users. In the words of Fabunmi, Paris and Fabunmi (2006:30) stated that:

Digitization improves access to library resources. By digitizing library collections, information will be accessible to all instead of a group of researchers. Digital projects allow users to search for collections rapidly and comprehensively from anywhere at any time. Digitization makes the invisible to be visible. Several users can access the same material the same time without hindrance. It also removes the problem of distance, as users do not have to travel to libraries that possess the hard copies of library materials before they can access and use such materials.

Okwaro (2010) while discussing issues relating to digital libraries and development, draw attention to the key principle of the World Summit on the Information Society (WSIS) which emphasized the common desire and commitment of the world to build a people - centred, inclusive and development-oriented information society. According to him, it would facilitate a situation where everyone can create, access, utilize and share information which is aimed at enabling individuals and communities to achieve their full potential in promoting sustainable development. Therefore, Digital Information Resources (DIRs) of an institution's library has a lot of positive effects. In addition to this, Imo and Igbo (2011) stated that digitalization promotes access to information for the end user such as researchers, lecturers and more especially undergraduates and also enhances the status of the institution engaged in the initiative at the global level. A digital information resource of African origin involves diverse kinds of materials. In studies conducted by Fatoki (2007), the materials considered for digital resources include, published articles, theses, dissertations, conference papers, reports, technical and working papers, photographs, newspapers, government official publications, data/ statistics, artefacts, maps, charts, artistic paintings, historical documents and African documents and manuscripts.

Omekwu (2002: 100) also pointed out that:

Traditional domains of librarians and libraries have always been in the printed page. The strength of services has also been on delivery of library- held information resources to the clientele system. So it is understandable when librarians talk excitingly about the largeness of their collection and the membership of their clientele system. But these two factors – the printed page and their provision to users are already at a crossroad with the challenges which ICT information systems pose to the traditional orientations.

In effect, there is an obvious shift from the traditional collection development and services approaches to modern trends in library and information and documentation services. Libraries, until the past two decades, were basically discharging their functions via the provision of printed materials and rendering of traditional services which made it compulsory for face to face contact with the users before they could receive any service (Ukachi, 2011). According to Ukachi (2011), presently the service delivery of libraries especially that in higher education sector has taken another dimension. Information needs of learners and knowledge seekers are met through a plethora of sources Digital Information Resources (DIRs), that is, library resources in electronic formats, are now acquired by libraries to compliment the printed materials.

Digital Information Resources (DIRs) play a prominent role in facilitating access to required information by the users in an easy and expeditious manner of undergraduate students. Negahban and Mysore (2009) asserted that digital Information Resources (DIRs) in reality have become the backbones of many academic institutions. They serve as a motivating factor to students as they provide them opportunity to transmit, acquire or download, process and disseminate information on any subject of interest. Further, Ukachi, (2011) however stated that, the use of Digital Information Resources (DIRs) aid the users to keep abreast with current developments in their respective subject fields, in contrast with print media which are not regularly updated like the electronic ones. Gbaje (2007) and Ya'u (2003) pointed out that digital library provides value-added solutions for all higher education institutions and facilitates on-line access to enormous current volume of academic information. Digital library has the capability to address the scarcity of teaching and research materials in the libraries of institutions of higher education in Nigeria. As such this study is set out to investigate the extent of digital information resources (DIRs) usage by undergraduates of selected higher institutions in Delta and Edo states, Nigeria.

Purpose of the study

- i. the extent to which students make use of Digital Information Resources (DIRs) available in their institutions.
- ii. the constraints to effective use of Digital Information Resources (DIRs) by undergraduate students in university libraries.

Review of Related Literature

Use of Digital Information Resources (DIRs)

It is a known fact in this digital era that any student at the higher level who intends to better achieve and go further in academics should have the ability to explore the digital environment. Adeyinka, Adedeji, Ayen, and Omoba, (2008) stated that students' ability to find and retrieve information effectively is a transferable skill useful for their future life as well as enabling the positive and successful use of the digital resources while at school. Students' use of information systems can be in the form of communicating or posting of information or material by way of electronic mail, bulleting boards, world wide web or other such electronic tools (Mischnick, 2000).

Digital information resources serve as a motivating factor to students as it provides them opportunity to transmit, acquire or download, process and disseminate information on a subject of interest. Digital information resources offer today students greater opportunities that are quite different from their predecessors (Ray & Day, 2003). Other uses according to authors include the fact that "digital information resources are often faster than consulting print indexes, especially when searching retrospectively, and they are straight forward when wishing to use combination of keywords. They open up the possibility of searching multiple files at one time, a feat accomplished more easily than when using printed equivalents. It could be said that "improved data transmission facilities will go a long way to reduce the incessant hardship faced by students in the acquisition and generation of data which serves as the basis for research and academic performance improvement (Day & Bartle, 2003). This is because the use of digital information by students of today enhance their performance in academic activities. Furthermore, Day and Bartle, (2003) revealed that the academic community has accepted that electronic information resources have an impact on their work. However, services currently available to academic staff and students are not being used to their full potential and some are hardly being used at all.

Waldman (2003), when drawing inference from Bandura's position, asserted that "students with high self-efficacy regarding computers would also be more likely to explore new technologies, software or databases. Additionally, they would be more likely, for example, to explore a library's website and find that the library has specialized resources, and they might even try some searches on those resources without, or with less, prompting from professors or librarians and without necessary taking library workshops." General user opinion towards the use of electronic information resources, in particular, CD-ROM, has been positive, with students enjoying using these sources and finding relatively few problems while using them.

METHODOLOGY

This study adopted descriptive survey research design. The study was conducted in Federal and State University Libraries in Delta and Edo states in the south- south geopolitical zone of Nigeria. The Federal and State Universities in the zone are located in Abraka, Benin City, Ekpoma, and Ugbomro. The sample for the study comprised one thousand and eighty-eight hundred(1,088) users drawn from four universities. The selection of the four universities was based on the fact that they are government owned institutions and are in the position to follow the trend of digital information age because they are better equipped than private universities. Purposive sampling technique was used to select two universities from Delta and Edo states respectively. Proportionate stratified sampling technique was used to select respondents from each of the federal and state university libraries used for the study.

The instruments used for the collection of data was structured questionnaire and Thereafter the copies of the final version of the questionnaire were administered with the help of research assistant in each school to undergraduates of the library as at the time of administration. The data obtained for this study were analyzed and presented based on the research question and hypothesis that guided the study. Descriptive statistics was used to answer all the research questions and inferential statistics was used in testing the hypotheses. The research hypothesis were tested using Z- test method. Out of 1,088 questionnaires distributed, 972 was duly completed and returned. This shows 89.5% return rate.

Analysis of Data

Table1: Mean scores(x) of extent of students use of digital information resources (DIRs) in the institutions.

S/N Digital Information Resources	Mean	Remarks
1. e- Projects	2.68	High Extent
2.e- Journals	2.60	High Extent
3.e- Reference materials	2.70	High Extent
4. e- Seminar Paper	2.67	High Extent
5. e- Books	2.62	High Extent
6. e- Newsletters	2.51	High Extent
7. e- Thesis	2.54	High Extent
8. e-Zines	2.06	Low extent
9. e- Conference papers	2.40	Low extent
10. e-Technical reports	2.49	Low extent
11.e- Grey_Document	2.17	Low extent
12.e- Conference proceedings	2.17	Low extent
13.e- Dissertation	2.36	Low extent

The result presented in table 1 shows that students use e- Projects; e- Journals; e-Reference materials; e-Seminar papers; e-Books; e- Newsletters; and e- Thesis to a high extent in the institutions, thus the mean scores of 2.68; 2.60; 2.70; 2.67; 2.62; 2.57; and 2.54 respectively. Undergraduates also use e-zines; e- Conference proceedings; e-Grey document; e-Dissertation; e-Conference papers; e-Technical to a low extent, in the institutions, thus the mean scores of 2.40, 2.49; 2.17; 2.06; 2.17 and 2.36 respectively. A grand mean of 2.46 shows that students use Digital Information Resources in the University libraries to a low extent.

Table 2: Mean scores(\bar{X}) of students on the constraint face by students in use DIRs

S/N	Digital Information Resources	Mean	Remarks
1.	Epileptic power supply	2.96	Agree
2.	None availability of online databases	2.69	Agree
3.	Inadequate or slow band width	2.68	Agree.
4.	Inadequate number of computers to access digital information resources in my library	2.57	Agree
5.	Network problems	2.63	Agree
6.	Lack of skills to access digital information resources in the both local /foreign databases of my library	2.64	Agree
7.	Lack of formal training in Internet use	2.68	Agree
8.	Server slowness	2.62	Agree
9.	Frequent breakdown	2.52	Agree

The result presented in table 2 shows that the respondents agreed that epileptic power supply; non-availability of online databases; inadequate number of computers to access digital information resources; inadequate bandwidth; Network problems; lack of skill to access digital information resources in local and foreign databases; Lack of formal training on internet use; Server slowness and frequent breakdown of digital resources are constraints to students effective use of digital information resources in University libraries, thus the mean scores of 2.96; 2.69; 2.68; 2.57; 2.63; 2.64; 2.68; 2.62; and 2.52 respectively.

This shows that the students agree that all the listed nine constraints for accessing digital information resources were encountered by them as they tried to access the digital information resources.

Research Hypothesis 1:

HO1: The mean scores of federal and state university students on the extent of their usage of Digital information resources will not differ significantly.

Table 3: Z-test Analysis of extent of students' use of Digital Information Resources by University Ownership

DIRS in University	University Ownership	N	Mean	Std. Dev	Df	Z-cal	Z-crit	Decision
e. Project	Federal	506	2.87	1.01	970	5.997	1.96	Accepted
	State	466	2.48	1.01				
e-Conference paper	Federal	506	2.47	.99	970	2.416	1.96	Accepted
	State	466	2.31	1.04				
e. Journals	Federal	506	2.76	1.00	970	4.645	1.96	Accepted
	State	466	2.44	1.13				
e.Technical Report	Federal	506	2.56	1.03	970	2.055	1.96	Accepted
	State	466	2.42	1.10				
e. Reference Materials	Federal	506	2.73	1.08	970	.389	1.96	Rejected
	State	466	2.70	1.13				
e_ Seminar paper	Federal	506	2.57	1.05	970	-2.988	1.96	Rejected
	State	466	2.77	1.03				
e_ Conference proceedings	Federal	506	2.18	.95	970		1.96	Rejected
	State	466	2.17	.96				
e_ Zines	Federal	506	2.12	.99	970	1.925	1.96	Rejected
	State	466	2.00	.92				
e_ Books	Federal	506	2.60	1.04	970	-.612	1.96	Rejected
	State	466	2.64	1.13				
e_ Newsletters	Federal	506	2.54	1.08	970	.894	1.96	Rejected
	State	466	2.47	1.06				
e_Grey_ Document	Federal	506	2.29	1.01	970	3.723	1.96	Accepted
	State	466	2.05	1.00				
e_ Thesis	Federal	506	2.63	1.00	970	2.895	1.96	Accepted
	State	466	2.45	.95				
e_ Dissertation	Federal	506	2.44	1.02	970	2.731	1.96	Accepted
	State	466	2.27	.99				

Table shows that there is a significant difference between federal and state Universities in their extent of utilization of Digital Information Resources (DIRs), as the calculated z-values at 0.05 level of significance, for eight out of the thirteen forms of digital information resources (DIRs) ranged from 2.055 to 5.997) are greater than the critical z- with value 1.96. Calculated z- value five forms of DIRs were not greater, and thus rejected. It is thus concluded that federal and state University differ significantly in terms of utilization of Digital Information Resources(DIRs) by their students.

Discussion of Findings

The result obtained reveals that students use of the following DIRs to low extent: e-Zines; e-Conference papers; e-technical reports; e-Grey documents; e- Proceedings and e- Dissertation. The reason is because of inadequate infrastructures and lack of skills among students to access DIRs in the library. This study is in line with Achonna(2008) which found out that access and usage of e-resources among undergraduates was low because of lack of skills; inadequate provision of computers and power outage and so on were the problems faced in use of e-resources at Yaba College of Technology, Library Yaba Lagos Nigeria.

The result obtained show that there are various factors which hinder students from accessing DIRs in Delta and Edo state University libraries. These factors include epileptic power supply, network problems, and inadequate computer for students, slow bandwidth, lack of skills, and lack of formal training in Internet use, server slowness as well as frequent breakdown of facilities of Internet connectivity. This study agrees with Imo and Igbo (2011) which identified similar problems in the utilization of DIRs among undergraduates in Nigerian Universities. Among the identified problems are lack of skills and knowledge of digital and electronic resources development and management by librarian, inadequacy of funds for the projects, unstable electricity supply, lack of written policy framework guidelines for the project, lack of maintenance, fear of copy-right violation, and non- availability of training programmes for up-dating of skills of staff. This study also is line with Owoeye and Oguntuase(2008) which identified the problems of DIRs usage by students as technical problems, poor telecommunication link, trained technical staff to help students are inadequate, poor attitude to the training of professional staff, and administrative problem. However, the testing of hypothesis reveals that there is no significant difference on constraints encountered by undergraduates in Federal and State University Libraries. Therefore, the findings show that DIRs accessibility is very difficult for undergraduates because of the numerous hindrances.

Conclusion and Recommendation

Digital Information Resources (DIRs) are available in Ambrose Alli University Library (AAU) and John Harrison Library in University of Benin(UNIBEN) in Benin City. Delta State University Library (DELSU) has only four types of DIRs which include e-journals, e-proceedings, e-books and e-newsletters. Furthermore, DIRs are used to a moderate extent in AAU and UNIBEN libraries. In Delta State University Library the students make use of DIRs to low extents. Federal University Petroleum Resources Library (FUPR) do not have any of the DIRs available for their students and that is why their students use cybercafé for academic information. Based on the conclusion the researchers recommended the following to higher institutions in Delta and Edo states and others in Nigeria:

1. The university management of Federal University of Petroleum Resources Library (FUPR) and Delta State University Library (DELSU) should look into the development and growth of the digital library as a matter of urgency through the process of free downloading and subscription of online databases. Some of the free databases include UNESCO libraries portal, HIGHWIRE (<http://highwire.stanford.edu/lists/devecom.dtl>), ALUKA, JSTOR, HINARI, Database of African Thesis and Dissertations (DATAD), World Digital e-Library (<http://elibrary.worldbank.org>), British library of development studies(BLDS) , and EBSCOHOST.
2. It was argued that lack of skills to access DIRs hinder undergraduate students to make use of e-resources therefore, the researcher suggests that management of the four university libraries in the study should try to train their students in up- to-date 21st century skills of Information Communication technologies (ICTs). This will help to solve the problems of ICTs skills among undergraduates.

References

- Achonna, T. (2008). Awareness, access usage of e-journal resources of the library, by the students of yaba college of technology, Yaba-Lagos Nigeria. *Samaru Journal of Information Studies*, 8(1), 26-34.
- Adeyinka, T, Adedeji, T. , Ayen, C.O. & Omoba, R.O. (2008). Self-Efficacy and Use of Electronic Information as Predictors of Academic Performance. *Online Electronic Journal of Academic and Special Librarianship*, 8(2), 1-17.
- Day, J.& Bartle, C. (2003). The Internet as an electronic information service: its impact on academic staff in higher education. Retrieved from <http://www.sosig.ac.uk/iriss/papcrs/paperO6.htm>.
- Devi, T.S. and Singh, S.T. (2004). Problems and prospects of digital library in Manipur: a conceptual study. Online publication 2nd convention planner Manipur University.
- Fabunmi, B.A., Paris, M. & Fabunmi, M (2006). Digitization of library resources: Challenges & implications for policy and planning. *International Journal of African & African American Studies*. 5(2), 23-36.
- Fatoki, O. C. (2007). Digitalization of library materials in Nigeria: Issues and heritage of University of Nigeria, Nsukka: Issues and current status. A paper presented at the Nigeria library Association (NLA) 4th Annual National Conference and AGM 26-31 July 2009 Ibadan.
- Gbaji, E. S. & Ukachi, N.B. (2011) An assessment of technological skills competency of academic libraries in Nigeria. A paper presented at the 49th NLA national conference/ AGM 10th- 15th July. Awka.
- Imo, N. T. & Igbo H.U. (2011). Challenge of digitalizing information resources in Nigeria university libraries. A paper presented at the 49th NLA National Conference/ AGM 10th- 15th July. Awka.
- Mischnick, E. (2000). Responsible use of computers and information system. Executive Memorandum, from University of Nebraska website: Retrieved from http://www.nebraska.edu/about/exec_memo16.pdf
- Obasike T.I, Umeji, C.E & Kurbu, D. (2010). Electronic resources: affording Nigerian academic libraries a competitive edge. *Madonna Journal of Research in Library and Information Science*, 1 (1) , 35-47.
- Okwaro, D. P. (2010). Digitalization libraries/archives and development. In Waker, C.W. & Pickover, M. (eds) *Proceeding of the first International Conference on African Digital Libraries and Archives (ICADLAD)*. AddisAbaba. United Nations conference centre.
- Omekwu, C.O. (2002). The challenges of information systems in modern libraries. In Madu, E.C. and Dirisu, M.B. (eds) (2002) *Information science & technology for library schools in Africa*. Ibadan: Evi- coleman publications.
- Owoeye & Oguntuase(2008). Digitalization library information resources as solution to preservation and conservation problem in libraries. *Owena Journal of Library and Information Science*, 3(1), 20-27.
- Ukachi, N.B. (2011) Electronic information resources and undergraduate users' patronage in university of Lagos library: A survey. *Madonna Journal of Research in Library and Information Science*, 1 (2) 21-34.
- Waldman, M. (2003). Freshmen's use of library electronic resources and self-efficacy. information research. Accessed from <http://www.informationr.net/ir/8-2/paper150.html>
- Ya'u, Z.Y. (2003). Towards a virtual library for Nigeria. Accessed from <http://www.portal.unesco.org/en/ev.php>

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