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Influence of Information and Communication Technology (ICT) on some Library Services in Libraries of Federal Universities in South-South Nigeria

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Abstract
This study investigated Influence of Information and Communication Technology (ICT) on some Library Services in Libraries of Federal Universities in South-South Nigeria. Two objectives were stated and two null hypotheses were formulated to guide the study. Correlational research design was employed in carrying out this study. The population of the study is 169 librarians of South-South Federal Universities in Nigeria. All the 169 librarians from the universities were used for the study. The study made use of two researcher-made rating scales Pearson "r" statistic was used to answer the research questions raised so as to establish the degree of relationships existing between the variables using the Statistical Package for the Social Sciences (SPSS) version 21 via the computer while the t-test significance of Pearson "r" statistics was used to test the hypotheses at the 0.05 level of significance. Result of the analysis revealed that there is a high relationship between availability of ICT facilities and lending services, there is a moderate relationship between availability of ICT facilities and reference services in libraries of Federal University in South-South, Nigeria. All the relationships were found to be significant. It was recommended among others that the government, the management of tertiary institutions and other education stakeholders should be encouraged to take the provision of adequate ICT facilities in all the academic libraries in Nigeria as policy matter. This will enable the libraries to have the needed ICT resources for smooth running of the library hence, their influence to library services.
Keywords: *ICT facilities, University Library Services*

1.1 Introduction

Information and Communication Technology (ICT) has permeated all nooks and crannies of our society and is applied in all aspects of human life, be it education, health, transportation tourism, trade and commerce, industry and aviation. ICT is an electronic and communication tool invented by man to assist him in the performance of various tasks which ordinarily were cumbersome, time consuming and complex if carried out manually.

The university system, among other

things, is saddled with one of the greatest responsibilities of creating knowledge and producing the human resource of any nation and these functions of the University are realized through the services of a University library. According to Omagbemi, Akintola and Olayiwola (2004), before the emergence of ICT, the functioning of libraries in Nigeria has been time wasting and cumbersome, without giving any room for flexibility. But with the introduction of ICT in Nigeria, particularly at the higher educational institutions, there is simultaneous access for many users at the same time. This also helps to close the global information gap and create brighter future for students.

With the advent of ICT, library services are now available online through internet and can be accessed from any part of the world. Librarians can have access to the catalogue of various libraries attached to the universities in the world and accordingly place request for their users. The increase in the cost of documents for many disciplines in recent years has meant that libraries have been able to provide less and less access to research literature through their in-house collections (Ferris, 2002).

With the invention and growth of ICT, librarians and libraries now have to adapt to the use of various types of technologies to aid the services they render to their clienteles accurately and as fast as possible unlike the traditional library services which are characterized by delay and errors in the provision of services to clients. Oduwole and Akpati (2003) affirmed this by noting that before the advent of ICTs, University libraries were using manual services (systems) and it has become obvious that manual library system is inadequate for preservation, dissemination and or retrieval of massive volume of information. Daily technological advancement affects the way information is being handled and disseminated in libraries and information centres. Library archives and

records are now preserved using computers which gives efficient and effective spread of information.

In terms of management, ICT has also aided in the running of libraries making it easier than before. Ojedekun and Okafor (2011) reported that ICT has radically transformed most of the services provided by a library. ICT is heavily utilized in the storage, processing and dissemination of information and has made the organization of information very efficient, the delivery of basic information services more effective and the dissemination of information to users easier. It has eliminated a lot of routine and repetitive tasks in the library. In other words, many libraries either have gone electronic or are going electronic. Nigerian universities as knowledge creators and their libraries as gate keepers of knowledge are rapidly witnessing the introduction of various information technologies. Some have moved to implement integrated library system to build digital collections, Institutional Repositories (IR), and to provide electronic services such as access to internet, online journals, e-mail, and workstations for general computing like word processing, spreadsheet, data analyses and a host of other computer-based applications. In other words, libraries are now putting more emphases on electronic and digital information resources (Ojedekun & Okafor, 2011).

Based on the foregoing, it is clear that the introduction of ICT to library services had led to positive change in the work patterns and demand for new skills. Many tertiary institutions around the world are now exploring ways in which ICT can be mainstreamed to give students and stakeholders easy access to a wide range of educational resources and services. Nigerian universities are not left behind in the embrace of ICT in carrying out their library activities but the impact of these ICT facilities on the library services of these universities may not

be the same. It is against this background that this study is set to determine the impact of ICT on information dissemination in libraries of Federal Universities in South-South Nigeria.

1.2 Objectives of the Study

The main purpose of this study is to examine the influence of ICT on some library services of Federal Universities in South-South, Nigeria. Specifically, this study sought to;

1. ascertain the relationship between availability of ICT facilities and lending services in libraries of Federal University in South-South, Nigeria;
2. ascertain the relationship between availability of ICT facilities and reference services in libraries of Federal University in South-South, Nigeria; and

1.3 Hypotheses

In line with the objectives of the study, the following null hypotheses were formulated to establish the significance of the solutions:

Ho$_1$: There is no significant coefficient of relationship between availability of ICT facilities and lending services in libraries of Federal University in South-South, Nigeria.

Ho$_2$: There is no significant coefficient of relationship between availability of ICT facilities and reference services in libraries of Federal University in South-South, Nigeria.

2.1 Review of Related Literature

Information and Communication Technology (ICT) as a concept has attracted different definitions from different scholars because it is applied in various ways to perform various task. Electronic sources of information and low cost microcomputers have introduced unprecedented changes to the services and operation in information systems. According to Utulu (2008), the term ICT evolved from Information Technology (IT) when the processing of information with electronic technology integrated with telecommunications technology. He went further in saying that the evolution has brought about unprecedented and unmatched speed with which information is created, acquired, stored and disseminated. Oketunji (2002) defined information and communication technology as an electronic means of capturing, processing, storing and communicating information. He went further in saying that ICT is a convergence between computing and communication technologies. He said that one early example of ICT convenience is the crossing of the photocopy machine and telephone, leading to creation of fax machine. But the most spectacular achievement in this area is the convergence of computer and telephone that resulted to the upsurge of the internet.

Aina (2004) noted that the use of computers and communication technologies in information handling and processing has arisen because of increased workload involved in coping with information explosion around the world. Okoye (2010) stated that information technology in libraries refers to the use of technologies in the management of information revolution. The application of internet services to library services would enhance users' information utilization potentials hence their satisfaction. Library and computer can contribute towards efficiency in the dissemination of information. According to Kumar and Kaur (2005) the internet and its various information resources over the past few decades has thus become an all important technological tool in the production, marketing and the use of information worldwide.

Documents are carriers of information. If the documents required by information seekers are not available to them, the information in the documents may not be

known to them. The library therefore renders lending services to their clientele. The use of the manual system in lending over the years has not been very effective. ICT has provided the solution for the problem of delays in information access, use and the return of loaned materials. To know if a book is on loan, the author's computer-given number will be matched with the accession number of the book. A renewal can be done by moving the book card into a later date-due in a back sequence automatically by changing the date on loan record (Raji, 2011). With the advent of ICTs into library services, lending services are gradually being replaced by document delivery services. ICT- based-document delivery services have become easy, timely and very reliable. Current collections owned by automated libraries can be searched on the internet by their counterparts. ICTs enable the delivery of such documents in digitalized format through the electronic mail. The document can be received by the subscribing library in soft copy or electronic form. When the need arises, the downloaded soft copy can be printed.

One of the identified agents through which the world will constantly experience change is technology. In the business of trying to make information available in the personal and organizational levels, and at the right time, the bid to cope with great flood of information has led to the need for a more sophisticated way of handling information faster and better. Considering the continuously growing mass of information into what is known as information explosion which was brought by electronic age, dependence on conventional reference services will mean denial of current information. Anyaogu (2007) discovered that technological developments have affected not only the format and sources of the information that libraries use to provide Reference services, but also where we provide the service. This is pointing to the fact that unless reference librarians reorganize their work to be available to their clientele, not only will they become irrelevant, but the wealth of print resources stored in libraries for use will go unused, thereby threatening the very role of the library itself. Abid (2002), states that it is now common to find reference resources such as dictionaries, encyclopedia, gazettes, journals and guides in electronic form. Most information materials in traditional format have been replaced or supplemented by digital formats.

2.2 Information Technology in Reference Services

Reference service has long been a cornerstone of the library profession and as such, library users now expect reference librarians to make use of electronic resources to find the information they need. The invent of information technology has made the information needs of every library patron unique and as such, services rendered by librarians are now geared towards satisfying these needs with the use of information technology. Ashcroft and Watts (2005) opined that the digital reference services aim at pooling the resources of various libraries into a common and easily accessible database by which users are given access to information and resources hitherto unavailable in their local libraries. Collaboration is at the heart of the digital reference service system and it requires that libraries use it within local groups or join the global consortium if taking it on an individual basis. These developments indicate the importance of users focus into wider areas of collaboration. According to them, the examples also indicate the increasing importance of ICT skills.

In-spite of the fact that the use of ICT for scholarly work has to a large extent contributed to the growth and development of Nigerian University libraries, there are still

some problems which affect its full usage and adoption. Aluko (2004) listed the following ICT problems: Lack of capacity development – managing the technology which has to do with ICT training, education and usage, on-the-job for-the-job and training the trainers and retraining of those who use the technologies in organizations. Ochogwu (1994) in his write ups pointed out that lack of technical know-how and show-how among many librarians affect the development of ICT. He went further in saying that it sometimes leads to a socio-psychological fear of job displacement among professional librarians and non professional.

ICT has become an integral and accepted part of everyday life for many people. ICT is increasing in importance in people's lives and it is expected that this trend will continue to the extent that ICT literacy will become a functional requirement for people's work, social and personal lives.

3.1 Research Methodology

Correlational research design was employed in carrying out this study. According to Nworgu (2015), correlational research design establishes the linear and non linear relationship between dependent and independent variables of a study. The population of the study is 169 librarians of south-south federal universities in Nigeria and the universities are: federal university of Benin Edo State, Federal University of Calabar, Cross Rivers State, Federal University of Uyo, Akwa Ibom State, Federal University of Port-Harcourt, Rivers State, Federal University of Otuoke, Bayelsa State and Federal University of Petroleum Effurun, Delta State. All the 169 librarians from the involved universities were used for the study, which is called census enumeration. The 4-point rating scale was used to collect data that provided answers to the research questions and hypotheses raised in this study. To answer the research questions so as to determine the linear relationship between dependent and independent variables of the study, PPMCC was used while the hypotheses were tested using t-test at 0.05 level of significance.

4.1 Data Analyses and Presentation

Research Question 1: What is the extent of relationship between availability of ICT facilities and lending services in libraries of Federal University in South-South, Nigeria?

Ho_1: There is no significant coefficient of relationship between availability of ICT facilities and lending services in libraries of Federal University in South-South, Nigeria.

Table 1: *Summary of Analyses Concerning Research Question 1 and Hypothesis 1*

Var	n	R	r^2	D f	t_{cal}	t_{tab}	Decision
1	169	0.6 6	0.43 (43%)	167	11.27	1.96	High Relationship
2	169						Reject H_0

It is shown on table 1 that with sample size of 169, the correlation coefficient of 0.66 was obtained with a coefficient of determination of 0.43. The coefficient of determination of 0.43 implies that 43% of the variation in lending services could be attributed to availability of ICT facilities. The conclusion is that there is a high relationship between availability of ICT facilities and lending services in libraries of Federal University in South-South, Nigeria.

The table also shows that with a high relationship of 0.66 at 167 degree of freedom, the t-cal of 11.27 is significantly greater than the t-tab of 1.96, leading to the rejection of the null hypothesis and concluding that there is a

significant coefficient of relationship between availability of ICT facilities and lending services in libraries of Federal University in South-South, Nigeria.

Research Question 2: What is the extent of relationship between availability of ICT facilities and reference services in libraries of Federal University in South-South, Nigeria? Ho_2: There is no significant coefficient of relationship between availability of ICT facilities and reference services in libraries of Federal University in South-South, Nigeria.

Table 2: *Summary of Analyses Concerning Research Question 2and Hypothesis 2*

Var	N	R	r^2	Df	t_{cal}	t_{tab}	Decision
1	169	0.52	0.27	167	7.82	1.96	Moderate Relationship
2	169		(27%)				Reject H_0

It is shown on table 2 that with sample size of 169, the correlation coefficient of 0.52 was obtained with a coefficient of determination of 0.27. The coefficient of determination of 0.27 implies that 27% of the variation in reference services could be attributed to availability of ICT facilities. The conclusion is that there is a moderate relationship between availability of ICT facilities and reference services in libraries of Federal University in South-South, Nigeria.

The table also shows that with a moderate relationship of 0.52 at 167 degree of freedom, the t-cal of 7.82 is significantly greater than the t-tab of 1.96, leading to the rejection of the null hypothesis and concluding that there is a significant relationship between availability of ICT facilities and reference services in libraries of Federal University in South-South, Nigeria.

4.2 Discussion of Findings

It was revealed in this study that there is a high relationship between availability of ICT facilities and lending services in libraries of Federal University in South-South, Nigeria and the relationship was found to be significant. This could imply that ICT may have impacted the lending services of these university libraries in the following ways: the library offer ICT-base-document services), library collections can be searched online,

library users are free to download information via laptops, phones, from anywhere, the library renders Inter library loan services, Information is accessed quickly without delay, due to increased rate in the use of soft copies of library materials, the rate of library resources theft has greatly reduced, there is an automatic notice when borrowed item is due.

It was further found in this study that there is a moderate relationship between availability of ICT facilities and reference services in libraries of Federal University in South-South Nigeria. However, the relationship was found to be significant. The finding of the study may imply that the following reference services may have been in place to a moderate extent: Virtual reference service, Document delivery service, Inter library loan service, E-mail services, Photocopying services, Electronic resource sharing, Online chart reference services, using web-based contact software, Video-conferencing or web-cam services, Voice Over Internet Protocol (VOIP), Provide online referral services, Provide support for users who are not familiar with online tools and online user education. This finding is in line with Mole (2006) who states that the face of reference has changed over the time. With the advent of ICT, library and information providers have been able to serve patrons not only face to face but also virtually. It also

corroborates Anyaogu's (2007) finding that technological developments have affected not only the format and sources of the information that libraries use to provide reference services, but also where we provide the service.

Recommendations

Based on the findings from the study, the researchers wish to recommend as follow:

1. The government, the management of tertiary institutions and other education stakeholders should be encouraged to take the provision of adequate ICT facilities in all the academic libraries in Nigeria as policy matter. This will enable the libraries to have the needed ICT resources for smooth running of the library hence, their impact to library services.

2. The librarians should be encouraged to explore the use of ICT resources for information delivery, management and for educational benefits.

3. There is a need for periodic ICT orientation, workshop, and seminars for users and staff of the libraries to sensitize and acquaint them with the use of ICT facilities. This is a kind of instruction that will keep them abreast of the new changes in ICT usage and operation.

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