

Influence of Information and Communication Technology on Bibliographic Search Services in Libraries of Federal Universities in South-South Nigeria

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Abstract

Purpose: This study was carried out to investigate the Influence of Information and Communication Technology (ICT) on Bibliographic Search Services in Libraries of Federal Universities in South-South Nigeria. An objective was stated and a null hypothesis was formulated to guide the study.

Design/Methodology/Approach: The Correlation research design was employed in carrying out this study. An objective was stated and a null hypothesis was formulated to guide the study. The population of the study is 169 librarians of South-South Federal Universities in Nigeria. All the 169 librarians were used for the study. Instruments for data collection included two well-structured researcher-made rating scales. All the rating scales distributed to the respondents were returned. Pearson "r" statistic was used to answer the research question 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 hypothesis at the 0.05 level of significance.

Findings: The results revealed that, there is a low relationship between availability of ICT facilities and bibliographic search services in libraries of Federal University in South-South, Nigeria and the relationship was found to be significant.

Implication: Since libraries are widely considered as a very vital part of the process of knowledge acquisition around which schooling revolves, ICT compliant level of every academic library has to be high because some of these ICT resources are necessary for academic excellence.

Originality/Value: 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 on library services.

Keywords: *ICT facilities, university libraries, Bibliographic Search*

Paper type: *Empirical research*

INTRODUCTION

Nigerian universities as knowledge creators and their libraries as knowledge_ keepers are rapidly witnessing the introduction of various information technologies. Information and Communication Technology (ICT) has become the golden egg of the society,_ this is because Information and Communication Technology (ICT) has made its mark in all aspects of our societal life. It is quite interesting to know that ICT has influenced lives of rural dwellers, the market women, the educated and non- educated, etc. Based on this fact therefore, our present society has been rebranded as an information society.

Before the emergence of ICT, library activities were slow, uninteresting and full of errors,

users had to sieve through a large number of documents. There was problem of delay in information access, use and the return of loaned materials. Information seekers will have to visit the library physically before they will have access to and use library collections. ICT has greatly eliminated routine and repetitive tasks. Also, information seekers will not have to wait for borrowed materials to be returned before they will have access to them._ 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 clientele 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._ 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).

According to Emmanuel & Anele (2018),- the university system,- among other things, is saddled with the responsibilities of creating knowledge and producing the human resource of any nation and these functions of the university are realized through the services of university library. Tertiary institutions' libraries serve as centres of communication ensuring practical means of acquiring knowledge leading to understanding the minds of individuals and groups. Tertiary institutions' libraries set up their services to enhance the teaching and research missions of the institutions, particularly for users.

Based on the ongoing, it is understood that the introduction of ICT to library services had led to positive changes 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 because, for any library to be tagged modern-, it's ICT complaint level has to be high. 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_ influence of- ICT on_ bibliographic search services in federal universities libraries in South-South Nigeria.

1.2 Objective of the Study

The main purpose of this study is to examine the influence of ICT on bibliographic search services in federal universities in South-South, Nigeria. Specifically, this study sought to: ascertain the relationship between availability of ICT facilities and bibliographic search services in federal universities libraries in South-South, Nigeria.

1.3 Hypothesis

In line with the objective of the study, the following null hypothesis was formulated to establish the significance of the solution:

HO₁: There is no significant coefficient of relationship between availability of ICT facilities and

bibliographic search services in federal universities libraries in South-South, Nigeria

2.1 Literature Review

According to Ndukwe (2002), ICTs have been the basis for human existence from time immemorial and this has driven man to continuously seek ways to improve the processing of information and communicating such information to one another irrespective of distance and on a real-time basis. Surviving in the information age depends on access to national and global information networks. ICTs are the bedrocks for the survival and development of any nation in a rapidly changing global environment, and it challenges us to devise initiatives to address a host of issues (Federal Republic of Nigeria, 2001).

The concept of ICT has attracted various definitions and descriptions from different people in diverse fields of human endeavors. However, all these definitions and descriptions are based on the utilization, efficiency and effectiveness of these technological facilities in the performance of different functions. Igun (2010) defines ICT as the convergences of data processing techniques, electronic media and telecommunication consisting of computer and specific data processing application accessible through computers (e-mail, internet, word processing, telephone, etc). The World Bank (1991) defines ICT as a set of activities which is facilitated by electronic means, the processing, transmission and display of information. Wood (2005) confirms this by saying that ICT consists of technologies and tools that people use to share, distribute, gather information and communicate with one another using computer and other interconnected computer networks. Hawkins (2004) defines ICT as electronic gadgets in a gamut of sophisticated technologies, which facilitates teaching, learning and research through the gathering, processing, storage and retrieval of information contents in the new formats. ICT can be seen as a way through which knowledge or facts are shared or exchanged through scientific and industrial methods through the use of computers and other electronic devices.

Rory (2015) states that technology has rapidly changed the way people communicate in so many ways. ICT has changed the way people conduct their businesses, social lives, and personal lives: people can now talk, text, or e-mail over an internet link or telephonic connection to anyone nearly anywhere in the world, order a vast number of items from or doing business with, companies on any one of the five continents. We can visit places (virtually) that we would never have conceived of visiting. Educational method has also changed. A

vast number of blended learning courses open to anyone with a computer or smart phone and a connection to the internet. Information is now freely available to any and all with an internet connection. Computers along with their programmes and the internet have created educational opportunities that were not available to previous generation. According to Rory (2015), "Global Village" became a reality.

With technological consciousness, everybody is searching for one thing or the other on the web. In order to satisfy this desire, search providers like Yahoo and Google are also providing various ways of connecting their users to valuable materials in data base silos. Madu & Adeniran (2005) defined bibliography as "a list of published information resources". The computer can assist library staff in rendering bibliographic services such as compilation of bibliographies and reading lists of various types. The services are better when rendered in a timely way. Hence, when bibliographic services are rendered manually, it brings about delays, difficulties, errors as well as library staff and patrons' dissatisfaction. To avert these setbacks, many libraries have resorted to the use of ICTs in rendering bibliographic services. The bibliographic lists could be in electronic form: Online or on CD-ROM and by so doing, collection development librarians, reference librarians, students and researchers can conveniently and effectively access them.

Mejabias quoted by Otolu & Anie (2009) saw bibliographic services as information utilities that are essentially library on disk. He went further to say that, bibliographic services are available virtually at any time especially in places where there are computers with "modem" (Modulator and demodulator) which is the device attached to your computer that converts information from your PC (via the telephone line) from analogue to digital information. It also works much like a telephone box in that, it actually does the dialing for the computer, to connect to the server of your internet service provider. So, through bibliographic services, many users can access information at the same time.

Given the centrality of computers to information flow, the use of ICT to facilitate research becomes indispensable. As a result of the introduction of the web, there are three basic levels of library search. The first level includes the MONOLITHIC SEARCH SYSTEM. In this level of search, the operator provides access of indexed data to enable search within a particular search engine which can be library catalogue, electronic print repositories, etc. This level of search is centred on

individual feature and functions and the implication of this is that the focus is on features instead of the overall experience which increases search cost. In this, the overall value of resources will not be realized.

The second level is the META SEARCH where the search operator provides data and search with a user interface which interacts with the search. This level of library search is an attempt to correct the fragmentation caused by MONOLITHIC. In this search, an additional layer is added which helps to reduce search costs. It also reduces functionality thereby leveling what can be done across databases. The cost of Meta search is high in terms of configuration, maintenance and system.

The third level of library search is the DATA STUDIO. This is where data is transferred to another search and user interface operator. This is the most technical aspect of the search level (Madu, 2004).

ICT has made it possible for business to be automated giving clients access to a website or voicemail 24 hours a day, 7days a week. This means that a business can be open anytime, anywhere, giving a customer the capability to make a purchase from different countries thus making it easier and more convenient. It also means that you can have your goods delivered right to your doorstep from places that you would never have had access to before.

3.1 Research Methodology

Correlation research design was employed in carrying out this study. According to Nworgu (2015), correlation research design establishes the linear and nonlinear 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 researcher made rating scale was used to collect data that provided answers to the research question and hypothesis raised in this study. To answer the research question so as to determine the linear relationship between dependent and independent variables of the study, PPMCC was used while the hypothesis was tested using t-test at 0.05 level of significance.

4.1 Data Analyses and Presentations

Research Question: What is the extent of relationship between availability of ICT facilities and bibliographic search services in federal universities in South-South, Nigeria?

HO: There is no significant coefficient of relationship between availability of ICT facilities and bibliographic search services in federal universities in South-South, Nigeria.

Table 1:
Summary of Analysis Concerning the Research Question and the Hypothesis

Var	N	R	r ²	Df	t _{cal}	t _{tab}	Decision
1	169	0.36	0.13	167	4.97	1.96	Low Relationship
4	169		(13%)				Reject H ₀

It is shown on table 3 that with sample size of 169, the correlation coefficient of 0.36 was obtained with a coefficient of determination of 0.13. The coefficient of determination of 0.13 implies that 13% of the variation in bibliographic search services could be attributed to availability of ICT facilities. The conclusion is that there is a low relationship between availability of ICT facilities and bibliographic search services in federal universities in South-South, Nigeria. The table also shows that with a low extent of relationship of 0.36 at 167 degree of freedom, the t-cal of 4.97 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 bibliographic search services in federal universities libraries in South-South, Nigeria.

Discussion of Findings

It was revealed in this study that there is a low relationship between availability of ICT facilities and bibliographic search services in federal universities libraries in South-South, Nigeria. However, the relationship was found to be significant. This may imply that, to a low extent, ICT has made searching easier, ICT provides multiple access point, ICT has increased the quantity of information obtained in the library, the use of ICT in bibliographic search makes current resources available, use of ICT in bibliographic search saves time (speed), the use of ICT in bibliographic search is cost effective, with ICT, the library offers e-journal aggregator services which offer searchable data bases of contents of e-journal (e.g Emerald, OCLC and J-Gate). ICT has made full text searching and downloading of articles possible and the use of ICT in bibliographic search gives access to many users at the same time. This finding however, agrees with Mejabi (1992) cited in Otolu and Anie (2009) which says that bibliographic services are available virtually at any time especially in places where there is a computer with a modem. Edem (2009) in his study

reported that internet is now the fastest medium of transferring and receiving information about an on-going research, outcome of research and publication of all kinds and so librarians must not be left out in this application for the provision of quality library services. In the same line, Plaffeubach (2009) predicted that in no distance time, Software will no longer be stationary on local computers or mobile end devices but rather on an “on-demand” basis as “web ware” in and via the internet.

Summary of Findings

The following finding was made from this study:

There is a low relationship between availability of ICT facilities and bibliographic search services in federal universities libraries in South-South, Nigeria since the coefficient of 0.36 found is low. When tested, the relationship was found to be significant.

Recommendation

Based on the findings from the study, the researcher wishes to recommend that:

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 they 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.

REFERENCES

- Edem, N.B. (2009). Use of information technology amongst librarians in selected Nigerian university libraries. *Heartland Journal of Library and Information Science*, 3(1&2) June and December.
- Emmanuel, V. & Anele, E. (2018), Influence of Information and Communication Technology (ICT) on some Library Services in Libraries of Federal Universities in South-South Nigeria. *International Journal of Applied Technologies & Information Management* 4, 2, 02-09-16
- Federal Republic of Nigeria (2001). Nigeria National Policy for Information Technology (IT). www.nitda.gov.ng/nigeria_policy.pdf. made 2000 and fapothynnda 1999.
- Hawkins, Robert, (2004). *Ten lesson for Information and Communication Technology in development*. World Washington, D.C., World Bank.
- Igun, S.E. (2010). Challenges posed to Nigerian university librarians by the utilization of Information and Communication Technology (ICT). *Communicate Journal of Library and Information Science*, 12(1), 9-20.
- Madu, E.C. (2004) (ed) *Technology for Information Management and Services*. Ibadan: EviEoleman Publication.
- Madu, E.C. & Adeniran, T.N. (2005). *Information technology: Uses and preservation of resources in libraries and information centres*. Ibadan: Evi-Coleman Publishers.
- Ndukwe, E. (2002). Application of information technology. *The pointer*, 28 October, p16.
- Nworgu, B.G. (2015). *Educational research: Basic issues and methodology (Third Edition)*. Nsukka, Enugu: University Trust Publishers.
- Ojedekun, A.A. & Okafor, V.N. (2011). Relevance and adequacy of IT skills of librarians in Southern Nigeria in the digital and electronic environmental in Nigeria. Nigerian Library Association 49th National Conference Proceedings.
- Otolo, P.U. & Anie, S.O. (2009). Computer application to library services: Health hazards and solutions. *Heartland Journal Of Library And Information Science*, 3(1&2), 151 – 165.
- Plaffeubach, B. (2009). Prospect and opportunities of Information and Communication Technologies and Media International Delphi Study. Federal Ministry of Economics and Technology (BMWl).
- Wood, P. (2005). Gender and Information and Communication Technology. Towards an analytical framework. In *gender evaluation methodology for internet and ICTs: A learning tool for change and empowerment*. Pp. 41-49. Melville: APC WNSP. (Online), Available: <http://www.apcwomen.Org/gem.wikipedi> a. (Accessed: 20th June, 2012).
- World Bank (1991). *World development reports 1998/1999: Knowledge for development*. Washington DC: Oxford University Press: 38.