



Influence of Computer Operation Skills of Library Staff and Private University Libraries' Electronic Service Delivery to Students in South-South, Nigeria

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Abstract

The study investigated computer operation skills as influenced by electronic service delivery among librarians in private university libraries in South-South, Nigeria. The ex-post facto research design was adopted for this study. The population of the study consisted of 1,392 respondents (67 ICT staff and 1,325 students) in the selected five private university libraries in South-South, Nigeria. A total sample size of 225 respondents (made up of 67 ICT staff and 158 students) was used for the study. The sample size was determined using a hybrid sampling technique. First, the purposive sampling technique was used to select five private universities (out of thirteen universities) for the studies. Second, census and incidental sampling techniques were used for ICT staff and students, respectively. The instrument for data collection was a questionnaire titled "Library Staff Computer Operation Skill Questionnaire (LSCOSQ) and Electronic Service Delivery Questionnaire" (ESDQ). The instrument was subjected to face validity by three research experts and was tested for reliability using Cronbach's alpha statistics to obtain a .84 reliability coefficient. The researcher and research assistants administered the copies of the questionnaire to the respondents in their offices. Research questions were

answered using mean and standard deviation, while hypotheses were answered using simple linear regression. All the hypotheses were tested at the 0.05 significance level. The result revealed that computer operation skills significantly influence service delivery. It was recommended, among others, that for effective and efficient service delivery, library staff should be trained on the use of computers for service operations in the library.

Keywords: Computer operation skills, electronic service, private university library.

Introduction

The university library is an essential component of any university. Being a vital infrastructure in the university, it is usually described as the hub of all the activities within the campus. Its functions are primarily to support the institution's curriculum. It makes relevant information available and accessible to its users that range from faculty members to students, administrative personnel, the alumni and the community members where it is located. Its relevance is embedded in its collection, which includes print, non-print, and electronic resources. The library provides distinctive programmes and services designed to meet the intellectual and cultural needs of an information-based society using relevant digital skills.

Computer operation skills are a set of knowledge, attitudes and ways of doing things, including abilities, strategies, values and awareness that are required when using information and communication technology (ICT) or digital media to perform tasks, solve problems, communicate and manage information. Digital skills as required by library staff include digital communication skills, as more current communication with library users is now digitally mediated (Cooper, 2014). From the way libraries communicate with their users and their role as teachers/educators to the delivery of new services such as institutional repositories, new digital skills are required by library staff to help facilitate their services better (Gregersen, 2013). Information professionals can have advanced digital skills strategies that will give them the ability to find quality online resources, the ability to handle troubleshooting and the ability to provide electronic services through e-mail and other social networking tools (Uzohue and Yaya, 2016). These digital skills, such as computer operation skills, enable the information professionals to guide users in intelligent information access, selection of sources and resources and decisions on information application tools, technologies and policies for the library.

Computer operation skill is the ability of the library staff to use computers efficiently and effectively for library operations to provide services. This skill is the basic foundation of every digitisation project, as digitisation hinges on computers and related technologies. Computer operation skills are used to launch scanner software, edit images with the help of image enhancement software, and analyse and sift documents through Optical Character Recognition (OCR) programmes and metadata. Furthermore, digitised resources are displayed, uploaded, downloaded and retrieved using computer skills. Hence,

the ability to operate a computer is a basic skill for electronic service delivery. The University of Tennessee (2016) emphasised that library staff should understand basic computer hardware components and terminology, understand the concepts and basic functions of a common computer operating system, start up, log on, and shut down a computer system properly, and use a mouse pointing device and keyboard, as all these make up computer operation skills. Furthermore, an academic librarian of this decade has to possess a portfolio of computer skills in order to complement and support the navigational skills. Such skills help library staff to manage the information more widely and, in turn, transfer these skills to the users as appropriate. These skills include word processing, desktop publishing, use of bibliographic software packages, spreadsheets, graphics, bulletin boards, familiarity with data and file manipulation, maintaining World Wide Web files, familiarity with local automated systems, information technology troubleshooting, and familiarity with different operating systems. With computer skills, the librarians can secure effective electronic service delivery.

Electronic services, as discussed in this study, refer to various offers made available to users by libraries electronically. These include all online services librarians render to users at any point of need. Electronic service is a means put in place to ensure that functions and activities carried out by university libraries are transmitted by the librarians to the library users electronically. Electronic library services make the work of academic librarians easy and ensure frequent access to library services by their users. In this era of technological progression, a university library that does not have online or digital platforms where digital library services are rendered could be said to lag behind or be in the dark. This is because virtual libraries, or digital libraries, do not only serve as links to other universities, libraries and librarians but also are minimising the storage space and also decreasing maintenance and resource distribution cost and manpower (Dhamdhare, 2012).

Moreover, the strength of any university library these days depends on its digital collections, the ease of accessing them, and the relationship of the librarians to develop and maintain the users who learn, use, and evaluate their resources. The importance of electronic library services cannot be overemphasised, especially in this era of technological advancement. It is against this background that this study is conducted to examine computer operation skills of librarians on electronic service delivery in private university libraries in South-South Nigeria.

Statement of the Problem

The presence of electronic services in academic libraries has made education and research lively activities in academic institutions. This is because the services have shown the capability to meet the crucial information yearnings of researchers in universities, as electronic services in libraries encourage access to numerous sources of information, which aids an increase in research productivity.

Today, it has been observed by the researcher that university libraries have made available electronic services, but users still leave the library not satisfied with these services rendered to them by the library workers. The researcher therefore wonders what could be the possible reason for this and therefore decided to embark on this study, which gears toward investigations on the computer operation skill of librarians on electronic service delivery in private university libraries in South-South Nigeria.

Objective of the Study

The main objective of the study is to examine the influence between computer operation skills of librarians and electronic service delivery in private university libraries in South-South Nigeria.

Research Question

What relationship exists between the computer operation skills of librarians and electronic service delivery to students in private university libraries in South-South, Nigeria?

Research Hypothesis

H₀₁ There is no significant influence on computer operation skills of librarians and electronic service delivery to students in private university libraries in South-South, Nigeria.

Literature Review

Information professionals have a crucial role to play in guiding and training users to help them find and use high-quality (both free and purchased) e-resources. Digital skills have become important in many job activities, particularly in information-related organisations like the library. This is due to developments in electronic information resources and communication systems. These developments meant that employees with information and communication technology (ICT) skills are a necessity in information-handling organisations like the library. Digital skills include word processing and desktop publishing skills; information, communication and presentation skills; and webpage design and maintenance skills to work efficiently in the information job market (Buarki *et al.*, 2011). The digital skills needed by library staff range from computer skills and knowledge of technologies, library automation and management software, online database searching, online cataloguing experience, information retrieval, word processing and desktop publishing skills, and webpage design and maintenance skills. There is need for information professionals to be equipped with a variety of digital skills such as computer operation skills.

Academic librarians of this decade have to possess computer operation skills in order to complement and support other digital skills. Such skills help library staff to manage the information more widely. These skills include word processing, desktop publishing, use of bibliographic software packages, spreadsheets, graphics, packages,

bulletin boards, familiarity with data and file manipulation, maintaining WWW files, familiarity with local automated systems, IT troubleshooting, and familiarity with different operating systems.

Chakraborty (2013) noted that the Library and Information Science Professionals need to respond to the changes and acquire skills in locating, organising, manipulating, filtering and presenting information. The LIS professionals need to constantly upgrade competencies and knowledge, learn about using new technology and employ new techniques. The author further suggests that LIS schools should re-orient the course content, which must be suitable to present LIS professions' needs. Boydston and Leysen (2014) identified the following as specific skills for the catalogue librarians: Data management skills, Ability to work with large data sets

Metadata management and record loading, ability to work with interoperable systems, web-scale discovery tools, digital repositories and resources, knowledge of markup languages such as XML, SQL or Perl scripting; knowledge of and flexibility with metadata schemas; developing crosswalk; digitisation standards; and preservation of metadata.

Wada in Koganuramath and Angadi (2014) viewed that the computer skills of a competent librarian fall within certain ranges of Information and Communication Technology and may even go beyond due to rapid changes in ICT trends, metadata standards, web technology, search technology, digital information resources, subject gateways, information portals and portals, e-learning (online learning), online information services, digital rights management, Wi-Fi and Radio Frequency Identification (RFID) technology. Also, Boumarafi (2015) capped that the 21st-century information professionals are expected not only to possess the generic IT skills but also to be able to use advanced technology such as digital and metadata and web design technology with fluency in web languages and related skills.

Ugboma and Ufuoma (2015) observed that library staff should know various computer operations, such as turning on the computer, opening a folder, copying a file from one disc to another, and scanning. He/she should also master the use of application software such as creating a new word processor document, print out a document and operate in a networked environment. The authors further listed skills required to use computers as skills for using software application programs, for example, word processing tools, graphic design tools, presentation software, web page development, scanning techniques, database creation and maintenance, software installation skills and knowledge of hardware basics and troubleshooting. They further added that skills of computer operation, application of barcode technology, creation of databases and updating, designing and updating of web pages, etc. are required by librarians.

Wada (2015) opined that library staff should be able to make use of computer operation skills to create charts, import graphics, and attach files, and so forth. They should know what is attached to their CPU and how it is attached, and they should be able to perform basic troubleshooting functions: power source, monitor adjustments, reboots,

printer response, and how to write down error messages. All librarians should be familiar with installing, configuring, and using a browser; all staff should be familiar with whichever version of Windows is run within the organisation; how to navigate through Windows (with and without a mouse); and how to manage files associated with Windows.

Oyovwe-Tinuoye *et al.* (2021) conducted a study to examine the influence of information and communication technology (ICT) skills on job performance among librarians in the university libraries in South-South, Nigeria. The findings revealed that there was no policy in place to regulate ICT training of librarians, where a majority were yet to attend training once in the last five years; hence, there was inadequate training of librarians on ICT skills. There was evidence in the study that training in ICT skill would engender improved service delivery, library administration, efficiency, job performance and reduction in job stress. The findings also revealed that inadequate training, poor planning and implementation, non-sponsorship of librarians and absence of policy for evaluation and assessment are factors militating against ICT skills acquisition.

Ayoku and Okafor (2015) conducted a study on ICT skills acquisition and competencies of librarians: Implications for the digital and electronic environment in Nigerian university libraries. The findings of the study revealed that many of the respondents do have knowledge and skills of email use and word processing tasks but lack knowledge of search engines and directories other than Google and Yahoo, respectively. Many of them do not know how to evaluate and catalogue e-resources; have no knowledge of subject gateways, specialised databases and some open-access library databases; have no knowledge of database management; are not skilled in Web design; and are equally not familiar with Web design applications. Oguche (2017) conducted a study on the assessment of levels of computer literacy skills of library personnel in university libraries of the North-Central Zone, Nigeria. A major finding of the study revealed that over 60% of the respondents were competent in sending emails, using search engines, and using Microsoft application software such as Ms Word and Ms PowerPoint. The study concluded that the level of ICT literacy competence among the library staff in the Nigerian federal university libraries studied is on average.

Methodology

The ex-post facto research design was adopted for this study. This study was carried out in private universities in South-South, Nigeria. The ones selected for the study include Topfaith University, Mkpatak, Akwa Ibom State; Arthur Jarvis University (AJU), Cross River State; Benson Idahosa University, Benin City; Edo State; Admiralty University; Ibusa Delta State; PAMO University of Medical Sciences, Port Harcourt; and Rivers State. They were selected because no research has previously been carried out using them as a case study. The population of this study consisted of 1,392 respondents (67 ICT staff and 1,325 students) in five private university libraries in south-south Nigeria. A total sample size of 225 respondents (made up of 67 ICT staff and 158 students) was used for the study. The sample size was determined using a hybrid sampling technique. First, the purposive

sampling technique was used to select five private universities (out of thirteen universities) for the studies. Second, census and incidental sampling techniques were used for ICT staff and students, respectively. The instrument for data collection was a researcher-developed questionnaire titled “Library Staff Computer Operation Skill Questionnaire (LSCOSQ) and Electronic Service Delivery Questionnaire” (ESDQ). The instrument was subjected to face validity by three research experts and was tested for reliability using Cronbach's alpha statistics to obtain a reliability coefficient. The researcher, with the help of research assistants, administered the copies of the questionnaire to the respondents in their offices. Research questions were answered using mean and standard deviation, while hypotheses were answered using simple linear regression. All the hypotheses were tested at the 0.05 significance level.

Results

Research Question One: What relationship exist between computer operation skills of Librarians and electronic service delivery in private university libraries in South-South, Nigeria?

Table 1: Regression Analysis of Library Computer Operation skill on Electronic Service Delivery **df = 2, 218; N=220**

Source of Variation	R	R Square
computer operation skill		
electronic service delivery	.79	.64

Source: Field data (2023)

A simple linear regression analysis was conducted to determine how computer operation skill relates to electronic service delivery in private universities. Table 1 reveals that the coefficient of determination (R^2) of 0.64 is obtained. This is interpreted as 64% being the overall contribution of all items on the library website design skill to electronic service delivery. With a percentage of 64, it therefore means that library computer operation skills relate strongly to electronic service delivery.

Hypothesis One: There is no significant relationship between computer operation skill and electronic service delivery in private university libraries in South-South, Nigeria

Table 2: Regression Analysis of Computer Skill on Electronic Service Delivery **df = 2, 218; n=220**

Source of Variation	Sum Square	of df	Mean Square	F	t	Significance
Regression	27.19	1	27.19	381.94	19.54	.000
Residual	15.52	218	0.71			
Total	42.71	219				

Source: Field data (2019)

The result in table 2 reveals the calculated t-value of 19.54 with a degree of freedom of 2 and 218, which is greater than the 0.05 level of significance. Therefore, the null hypothesis, which claims no significant relationship between the computer operation skill of librarians (ICT staff) and electronic service delivery, is rejected. Hence, there is a significant relationship between computer operation skill and electronic service delivery in private university libraries in South-South, Nigeria.

Discussions of Findings

The Relationship between Computer Operation Skill of Library Staff and Electronic Service Delivery

The result revealed a strong relationship between the computer operation skill of librarians and electronic service delivery. This means that the level of computer operation skills of librarians under study needs to be high for effective electronic service delivery in libraries.

This finding is in tandem with that of Oguiche (2017), who submitted that library staff are familiar with computer operations, which include Microsoft applications. Ayoku and Okafor (2015) supported the study by adding that librarians have word processing skills, but Ayoku and Okafor (2015) contradicted the study with the findings that librarians lack knowledge of search engines and directories. Oyovwe-Tinuoye et al. (2021) contradict this finding, stating that librarians are not skilful in system management, web applications and other computer operation tools.

Conclusion and Recommendation

Many factors need to be considered for library staff to be able to render their services effectively. These include being acquainted with the knowledge of information communication technology. Computer operation skill involves the ability to use information communication technology (ICT) or digital media to perform tasks, solve problems, communicate and manage information. It is therefore concluded that the computer operation skills of library staff workers are very crucial for effective electronic service delivery in the library. Based on the conclusion of the study, it was therefore recommended that for effective and efficient service delivery, library staff should be trained on the use of computers for service operations in the library.

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