DIGITAL COMPETENCE AND INFORMATION SERVICE DELIVERY BY LIBRARY PERSONNEL IN SELECTED RESEARCH INSTITUTES IN OYO AND LAGOS STATE, NIGERIA.

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Abstract

Purpose: Information service delivery is one of the core reasons of establishing libraries in research institutions. However, it has been observed that information service delivery in research institutes is not at a desired level. Several studies have investigated service delivery and digital competence of staff in academic libraries. However, there is a dearth of literature investigating the influence of digital competence of library personnel on information service delivery in special libraries. The study was carried out to investigate digital competence and information service delivery by library personnel in selected research institutes in Lagos and Oyo states, Nigeria.

Design: The study adopted the descriptive survey design. The total enumeration sampling technique was used to elicit information from 109 library personnel in the selected research institutes in Lagos and Oyo states.

Findings- The study indicated a moderate level of competence among library personnel. The study showed that library personnel are proficient in managing computer folders and sending or assessing mails. However, most of them lack the knowledge needed to manage integrated library systems and maintain web pages. The study also revealed that library personnel have a positive outlook towards the adoption of technology in delivering information services. Most library personnel expressed readiness to use technology to meet users' information needs and confidence in delivering information services with the use of technology.

Originality/value: The research shows that there is a significant relationship between digital competence and information service delivery among library personnel hence the need for librarians to acquire relevant digital skills to enhance service delivery.

Keywords: digital competence, Information service delivery, research institute, research libraries

Introduction

Research libraries are information managing institutions set up to provide services to their parent organisations. They supply resourcesthat meet present and future needs of users in these organisations. Das (2017) defined a special library as one that is built, organized and managed by governmental or non-governmental agencies set up to address specific issues peculiar to a group of people. The collections of special libraries are often restricted to the interest of the host organization. Special libraries house collections that are focused on specific subject areas and their users are those who have a deep interest in the specific subject area. Special libraries enjoy the support and financial backing of their parent institute. According to Egbunu and Mommoh (2023), libraries are referred to as special if they covera specialised collection or special subject areas. Dishon (2022) opined that the users of special libraries are mostly educated people and professionals like business moguls, researchers, product developers,

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project managers, scholars and authors. They have high expectations from which makes it imperative for special libraries and librarians to exceed their users' expectations by delivering quality information services so as to ensure continuous patronage from their users.

Information services refer to activities carried out in the library to assist information users as they use information resources. They are designed to satisfy the information needs of users and facilitate the inter-operability of library systems. Ogar and Dushu (2018) noted that Information service delivery refers to the manner with which information professionals, interact, relate with and behave towards the library users, colleagues, other organisations and the society at large. Information service delivery in libraries can be affected by factors. These factors including personnel attitude, adoption of technology, and digital competence among others. Services delivered in special libraries include: Indexing and Abstracting services, Current Awareness Services (CAS), literature search, bibliographic services, literature search, bibliographic search and provision of web access services.

Digital competence is the comprehensive knowledge of the use of the computer to carry out information services like information retrieval, access to information users and dissemination of information through the internet, online or offline (Okwu et al 2022). Nzewi (2022) revealed that some of the information communication and technology (ICT) skills needed by librarians include management of databases, networking skill, cloud computing skills, managing and providing virtual reference services, management of open access resources, management of metadata, web designing skills, and ability to manage

library software such as MARC 21, Z39.50, Dublin Core, etc.

Statement of the problem

Information service delivery refers to library processes and activities that are deployed by library personnel to deliver information to support research in the organisation. Information service delivery is one of the core functions of libraries in research institutes. The level of information service delivery affects the level of patronage a library enjoys as these services are designed to meet users need. Users are most likely to visit libraries that house materials that can meet their information needs. The effective delivery of services is affected by different factors which could be human or facility-based. These factors include adoption of technology and the level of digital competence of the library staff.

Despite the importance of information service delivery in research libraries, studies have shown that the level of information service delivery in special libraries are low. This could be affected by the digital competence of the library personnel. The high level of digital competence by library personnel could enhance effective delivery of information services. Hence, this work investigated digital competence and information service delivery by Library personnel in selected research institutes in Oyo and Lagos state, Nigeria.

Research questions

The following research questions were formulated to guide the study:

1. What are the types of information services delivered by library personnel in selected research

institutes in Oyo and Lagos states, Nigeria?

2. What is the level of information services delivered by library personnel in selected research institutes in Oyo and Lagos states, Nigeria

3. What is the level of digital competence of library personnel in selected research institutes in Oyo and Lagos states, Nigeria?

Review of Literature

According to Salau (2021), Information services are the library activities that help to facilitate the use of the library and its resources. They includes all the library and information functions designed to meet users information needs to facilitate the inter-operability of the library systems. Services delivered in special libraries include: Literature Search, Current Awareness Services (CAS), indexing and abstracting services, and bibliographic services among others. The level of Information services delivery can be influenced by a number of factors which include; personnel attitude, adoption of technology, academic and professional qualification of personnel, personnel training and digital competence among others. Egbunu and Mommoh (2023) reported that information service delivery in special libraries are not effectively and efficiently delivered. The author further revealed that factors influencing these can include: inadequate fund, digital incompetence, inadequate infrastructure, inadequate power supply, and irregular training and re-training of staff.

This is in agreement with Ademola (2019) who opined that the level of information service delivery in libraries is low. The author opines that technophobia, lack of training of library personnel, inadequate facilities and poor internet connectivity are some of the challenges facing the delivery of information services in the library. Okafor (2020) further explained that the major problem militating effective service delivery in libraries Africa includes apathy from the side of library personnel and inadequate government funding. Other factors that affect the effective delivery of library and information services are technology adoption, the digital competence of library personnel and funding.

Digital competence refers to a set of skills that enable people to use digital space to succeed in their personal, academic, and professional lives. Digital competence is synonymous to digital literacy. It is expected of 21st century Librarians to have good people skills to ensure they interact seamlessly with users, a knack for information organization, literature search skills and willingness to assist users. However, librarians need to do more as information services have metamorphosed beyond the use of reference resources, and carrying out daily routines to meet to users' needs. Salau (2021) opined that librarians now make use of information and communication technology in the delivery of information services to their library users. The author further revealed that information professionals need to possess the needed digital skills like ability to use computer systems, ability to access and manage databases, ability to digitise local contents and the ability to create metadata among others. The author further asserted that possessing this skill will help to increase the productivity of the librarian. Findings of the study carried out by Yadav (2022) to investigate the required skills, knowledge and abilities needed by LIS professionals show that five major areas of KSAs are required. They include: traditional library

skills, computing skills, research skills, soft skills and data management skills. The researcher reiterates that library automation, computing skills and library digitization are non-negotiables for LIS professionals.

Oyovwe-Tinuoye et al. (2021) examined the impact of ICT skills on librarians' job performance in university libraries in Nigeria's South-South region. Findings of the study reveal that there is need for librarias to possess the necessary ICT skills as this resulted in enhanced service delivery, better work performance library administration, efficiency, and reduced job stress. It is recommended that ICT skills training be prioritized, with internal training programs at the university library is strongly supported.

Design of the study

The study adopted the descriptive survey design. The total enumeration technique was used for this study. The population of the study were 109 professional and para-professional library personnel in the selected research institutes in Oyo and Lagos states. The libraries include; Nigerian Institute of Social and Economic Research (NISER) library, National Horticultural Research Institute (NIHORT) library, Cocoa Research Institute of Nigeria (CRIN) library, Forestry Research Institute of Nigeria (FRIN) library, Institute of Agricultural research and Training (IAR &T) library, Institute for Advanced Medical Research and Training (IAMRAT) library, Nigerian Building and Road Research Institute (NBBRI), Nigerian Institute for Medical Research (NIMR) library, Centre for Management and Development (CMD) library, Federal Institute for Industrial Research (FIIRO) library, and National centre for Genetic resources and biotechnology (NACGRAB) library.   .

Findings of the study

Table 1:   Types of information services delivered in the selected research institutes

S/N	Information services	Not available	Available
1	Selective dissemination of Information (SDI)	1 1.0%	103 99.0%
2	Abstracting services	15 14.4%	89 85.6%
3	Literature search	2 1.9%	102 98.1%
4	E-mail/ Internet services	57 54.8%	47 45.2%
5	Current awareness services	6 5.8%	98 94.2%
6	Bibliographic Services	10 9.6%	94 90.4%
7	Online document search	48 46.2%	56 53.8%

Source: Field survey, 2024.

Findings of the study show that selective dissemination of information (SDI) was the major information service delivered in almost all the research libraries, and was

followed in succession by literature search, current awareness services, bibliographic services, abstracting services, online document search, and lastly e-mail/internet services respectively. The findings of this study is in tandem with the submission of Dada (2023) who opined that libraries provide a wide range of information services to their users. These services include the provision of reference services like selective dissemination of information (SDI) and current awareness services (CAS). This also aligns with the findings of Oden and Owolabi (2021) who highlighted that library services offered to users include indexing and abstracting services, selective dissemination of information (SDI), reprographic services,

current awareness services (CAS) and serial control.

Akinsoji (2014) carried out a study on the Use of ICT for effective information service delivery of public libraries in Oyo and Osun states. Findings of the study revealed that generally information services delivered in libraries include current awareness services (CAS), selective dissemination of information (SDI), bibliographic services and email/internet services. The author further stated that library services like bibliographic services, email/internet services, online document search and resources sharing were not readily available.

Table 2:   Level of delivery of information services in the selected research institutes

S/N	Information services	ND	MD	HD	VHD	$\bar{x}$	S.D.
1	Selective dissemination of Information (SDI)	-	22 21.2%	44 42.3%	38 36.5%	3.15	0.747
2	Abstracting services	11 10.6%	26 25.0%	50 48.1%	17 16.3%	2.70	0.869
3	Literature search	2 1.9%	24 23.1%	50 48.1%	28 26.9%	3.00	0.763
4	E-mail/ Internet services	46 44.2%	13 12.5%	27 26.0%	18 17.3%	2.16	1.175
5	Current awareness services	-	20 19.2%	51 49.0%	33 31.7%	3.13	0.706
6	Bibliographic Services	2 1.9%	25 24.0%	46 44.2%	31 29.8%	3.02	0.788
7	Online document search	27 26.0%	13 12.5%	31 29.8%	33 31.7%	2.67	1.178
Weighted Mean =2.83							

Note: VHD: Very Highly Delivered, HD: Highly Delivered MD: Moderately Delivered; Not Delivered

Findings of the study revealed that the analysis of the level of delivery of various information services within the library. Selective Dissemination of Information (SDI) shows a progressive increase in delivery level, with a notable percentage of respondents indicating very high delivery. Abstracting services exhibit a similar trend,

with a significant proportion of library personnel reporting high delivery and very high delivery. This is in line with the findings of Dada (2023) who opined that in special libraries, the most highly delivered services are reference services like selective dissemination of information (SDI) and current awareness services (CAS). The result

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also shows that E-mail/Internet services show a lower proportion of library personnel indicating that they are not frequently delivered in libraries.

This aligns with the findings of Akinsoji (2014) who carried out a study on the Use of ICT for effective information service delivery of public libraries in Oyo and Osun states. Findings of the study revealed that the information services mostly delivered in libraries include circulation services, current awareness services (CAS), selective dissemination of information (SDI), bibliographic services and email/internet services. The author further explained that

library services like bibliographic services, email/internet services, online document search and resources sharing were not readily available. This is in line with the findings of Salau (2021) who carried out to examine interpersonal communication, digital literacy skills and service delivery by library personnel in research institutes in Ibadan, Oyo state, Nigeria. The findings of the study showed that research libraries in Ibadan mostly offer reference services. The author further suggested that there is need for research libraries to widen the scope of the information services they render as that will ensure that the needs of users are adequately catered for.

Table 3a: **Level of digital competence of library personnel in the selected research institutes**

Digital Competence	Not true	Some what true	True	Very true	$\bar{x}$	S.D.
Knowledge of digital tools (Weighted Mean =2.30)						
I have the knowledge of the basic structure and use of an integrated library system	34 32.7%	31 29.8%	27 26.0%	12 11.5%	2.16	1.016
It is easy for me to use different digital tools like social media platforms, library databases and RFID technology	21 20.2%	42 40.4%	25 24.0%	16 15.4%	2.35	0.973
I have the knowledge of how digital resources are acquired, managed and accessed	26 25.0%	29 27.9%	19 18.3%	30 28.8%	2.51	1.157
I understand the principles of web page design and maintenance.	30 28.8%	35 33.7%	28 26.9%	11 10.6%	2.19	0.976
Digital skills possessed (Weighted Mean =3.19)						
I can install printers, scanner and computer systems	6 5.8%	8 7.7%	25 24.0%	65 62.5%	3.43	0.868
I can search through different databases to get information.	5 4.8%	15 14.4%	25 24.0%	59 56.7%	3.33	0.897
I can install and replace new operating systems.	22 21.2%	18 17.3%	26 25.0%	38 36.5%	2.77	1.159
I can create metadata	14 13.5%	27 26.0%	19 18.3%	44 42.3%	2.89	1.105
It is easy for me to type and save information	6 5.8%	10 9.6%	25 24.0%	63 60.6%	3.39	0.886
I know how to create, name and save files in different folders.	5 4.8%	6 5.8%	20 19.2%	73 70.2%	3.55	0.811
I can send and receive emails	4	6	26	68	3.52	0.776

					$\bar{x}$	S.D.
	3.8%	5.8%	25.0%	65.4%		
I can upload documents on online platforms	7 6.7%	7 6.7%	25 24.0%	65 62.5%	3.42	0.889
I use different storage media (USB flash drives and cloud storage) to store digital content.	5 4.8%	10 9.6%	29 27.9%	60 57.7%	3.38	0.851
In my library, I can use technology to catalogue and classify information resources.	10 9.6%	12 11.5%	29 27.9%	53 51.0%	3.20	0.989
I can digitise local content and upload them to an archive.	6 5.8%	13 12.5%	36 34.6%	49 47.1%	3.23	0.884
I can manage databases.	14 13.5%	21 20.2%	19 18.3%	50 48.1%	3.01	1.110
I can make use of instant messaging technology (IM)	14 13.5%	26 25.0%	27 26.0%	37 35.6%	2.84	1.062

VT = Very True; T = True; ST = Somewhat True; NT= Not True

Table 3b: Level of digital competence of library personnel in the selected research institutes

Digital Competence	Not true	Some what true	True	Very true	$\bar{x}$	S.D.
Digital skills possessed						
Microsoft office tools like one drive, excel and word are examples of tools that I use in delivering information services.	7 6.7%	6 5.8%	32 30.8%	59 56.7%	3.38	0.872
I can create online instructional materials skills	9 8.7%	15 14.4%	30 28.8%	50 48.1%	3.16	0.977
I confidently create and update resources on the institutional Online public access catalogue (OPAC)	14 13.5%	16 15.4%	29 27.9%	45 43.3%	3.01	1.066
I have the ability to access open-source software	13 12.5%	16 15.4%	28 26.9%	47 45.2%	3.05	1.056
I have the ability to manage electronic database/records management skill	16 15.4%	13 12.5%	32 30.8%	43 41.3%	2.98	1.079
I can confidently install library software	18 17.3%	10 9.6%	25 24.0%	51 49.0%	3.05	1.135
Through vendors or open-source operating systems, I can acquire software	15 14.4%	14 13.5%	28 26.9%	47 45.2%	3.03	1.083
I know how to market library services using social media.	5 4.8%	6 5.8%	32 30.8%	61 58.7%	3.43	0.810
Attitude towards digital tools (Weighted Mean =3.00)						
I am always ready to use technology to meet users' information needs.	6 5.8%	5 4.8%	28 26.9%	65 62.5%	3.46	0.835
Technology tools are too expensive therefore my library does not need to acquire them for service delivery.	61 58.7%	6 5.8%	19 18.3%	18 17.3%	1.94	1.213
I use technology tools to search for and access information resources	9 8.7%	11 10.6%	29 27.9%	55 52.9%	3.25	0.963

I am willing to educate my users on different technology tools they can use to access information.	7 6.7%	10 9.6%	30 28.8%	57 54.8%	3.32	0.906
Some technology tools are too complicated for me to learn how to use them.	49 47.1%	6 5.8%	22 21.2%	27 26.0%	2.26	1.292
I use technology tools to communicate to users and my colleagues.	7 6.7%	10 9.6%	29 27.9%	58 55.8%	3.33	0.908
I can confidently deliver information services to users without the use of technology.	7 6.7%	6 5.8%	27 26.0%	64 61.5%	3.42	0.878

VT = Very True; T = True; ST = Somewhat True; NT= Not True

Findings of the study showed that there is a moderate level of competence among personnel. Analysis of individual statements revealed variations in competence levels. The study also shows that a significant number of library personnel claim to have knowledge of basic integrated library system structures, fewer express confidence in understanding principles of web page design and maintenance. This is in line with the opinion of Dada (2023) who opined that the most prominent digital skills possessed by librarians in universities in Southwestern Nigeria include downloading of files, creating and naming files, creating electronic presentations with Power points and using word processing tools.

These findings differ from the opinion of Emiri (2017) who carried out a study on the digital competence and computer literacy skills among librarians in University libraries in Edo and Delta states. The researcher opined that generally, the level of computer proficiency among librarians was low. The study shows that some librarians get digital skills through assistance from colleagues or by trial and error. The findings of the study also differ from the findings of Akinsoji (2014) who revealed that library personnel lack the needed digital knowledge and skills. The author further explained that the lack of the needed information and technology skills are one of the leading problems affecting service delivery.

RECOMMENDATIONS

Based on the findings of the study, the following recommendations are made:

1. To further maintain the high rate of information service delivery in research institutes, the management of research institutes should ensure that the facilitating technology and resources like internet, laptops and printers are made available.
2. To ensure that information services are delivered effectively, only librarians with the right knowledge and skill set should be employed in libraries.
3. To further improve the digital competence of library personnel, library management and management of the research institutes should provide training opportunities that will equip them with the knowledge and skills needed to deliver information services effectively.

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