

EXTENT OF USE OF ICT RESOURCES FOR LIBRARY SERVICES IN SPECIAL LIBRARIES

Chibuikem Emmanuel Mgbemena (CLN)

E- Library

University of Agriculture and Environmental Sciences,

Umuagwo, Imo State Nigeria

Abstract

The study examined the extent of use of ICT resources for library services in Special Libraries in Owerri Municipal council. Adopting a survey research design, the study was guided by two research questions and one hypothesis. The sample size comprised 53 librarians in private libraries in Owerri municipal council Imo State. The instruments used for data collection were a 7-item checklist of ICT tools currently available and in use in special libraries and a 7-7item rating scale on the extent of use of ICT tools among Librarians in Special Libraries all constructed by the researchers. The rating scale was subjected to a reliability test using Cronbach alpha statistics which yielded a coefficient of 0.81. The research questions are answered using frequency counts, percentages, mean and standard deviations while the hypothesis was tested using one sample t-test at 0.05 level of significance. The major findings are that ICT resources are highly available in many of the private libraries in Owerri municipal, and the extent of use of ICT resources among librarians in private libraries is high. The researchers recommended among others that management of special libraries should continually provide training for their library staff on evolving ICT tools for job efficiency.

Introduction

A special library is seen as an institution or information repository where majority of people run to in order to access special information in a specialized way for the purpose of satisfying their curiosity. It can also be seen as an authoritative storehouse or building

containing collections of knowledge or information resources from the previous centuries, present and possibly predicted information that might be useful in future (Mundi, 2022). According to Mommoh and Egbunu (2023), special libraries are established to obtain and exploit specialized information for the advantage of the organization which provides their financial support. Special libraries are basically established to provide services to the parent organizations and are devoted to the information requirements for both present and future users in the organization.

Library professionals in the last few decades only understand the importance of controlled paper resources, while the subsequent generations of users have prioritized accessing information with ease and speed above meticulously produced and original print compilations (Mundi, 2022). In this regard, understanding what tasks and functions that evolves in a technological sense is one of the most pressing project requirements that guarantee an effective special library. This same old architecture of collection is laborious and its role is drastically shifting to a more improved trend of managing resources. Despite the increasing transformations recorded in ICT use, one consistent issue that remains is to find ways through which information resources can be accessed to the highest level for research fellows. It is therefore very important to device means through which library services can be reformed to provide increased verified files and documents that will meet the demands of clients for genuinely valuable information. This should be a battle that

needs to be fought if libraries must be classified as special in this digital age (Abdullahi & Mamza, 2014).

The role of technology is very much significant for cooperative acquisition, cooperative processing (cataloging and classification), exchange of information materials (e-resources), joint publications, networking, joint training of personnel, interchange of staff for seminars, and workshops (Igwe, 2020). The need to have ICT in special libraries makes a great difference in having a total control of information flow. Information and communication technology is a broader term for Information Technology (IT) which, refers to all communication technologies such as the internet, wireless networks, cell phones, computers, software, middleware, video-conferencing, social networking, and other media applications and services that allow users to access, retrieve, store, transmit, and manipulate information. However, the concepts, methods, and tools used for ICTs are constantly evolving daily. These ICT tools are also indispensable to professions and researchers because of the current volume and complexity of information available from different sources (Adeleke & Olorunsola, 2020). Success in using ICT for effective library operations by the library staff cannot be feasible without having ICT literacy. The term information communication technology (ICT) literacy skills is the capacity to utilize, identify; manage; incorporate; assess; build and convey information in a moral and professional way to operate within the global context, using digital technologies (Oyedokun, Oyewum, Akanbi & Laaro, 2018). This paradigm shift in the way things are done in virtually

every aspect of human life underscores the need for a holistic assessment of the level of ICT application in special libraries and its impact on service delivery to the users.

Despite the awareness of ICT tools use and the publicized relevance of ICT tools for improved job efficiency, gaps remain regarding the application of ICT in present day Library services. While some libraries boast of having these ICT tools readily available, some libraries still struggle to make the use of ICT tools a regular work affair. It is on this premise that the researchers decided to check the ICT tools currently in uses among librarians in private libraries and the extent to which these ICT tools are used.

Research questions

1. What are the ICT tools currently in use for service delivery in Special libraries in Owerri Municipal council?
2. What is the extent of use of the available ICT tools for service delivery in special libraries in Owerri municipal council?

Hypothesis

Ho1: The mean responses of librarians on the extent of use of ICT tools for service delivery in special libraries is not significantly greater than the criterion mean 17.50.

Review of Literature

The landscape of information management has undergone a seismic shift, primarily driven by the rapid advancement of Information and Communication Technology (ICT), which has

redefined the parameters of data acquisition, storage, and dissemination. Historically, special libraries functioned as physical repositories of niche literature; however, the contemporary era has forced a transition toward a digital-centric paradigm. According to Igwe (2020), ICT is no longer just a supportive tool but the very infrastructure upon which modern specialized information services are built. This shift is characterized by a move from "ownership" of physical materials to "access" to global digital networks.

For special libraries, which serve specific professional, corporate, governmental, or research communities, the integration of ICT is not merely a technical upgrade but a strategic necessity for survival. Unlike academic or public libraries, special libraries operate within high-stakes environments where the timeliness and precision of information are paramount. Ahmad et al. (2021) argue that in the corporate and research sectors, information has become a critical factor of production; therefore, any delay in retrieval due to manual systems can result in significant professional or financial loss.

The Necessity of ICT for Institutional Survival

The "necessity for survival" stems from the exponential growth of data, often referred to as the "information explosion." Adeleke and Olorunsola (2019) posit that the sheer volume of specialized technical reports, patents, and legal precedents makes manual indexing and retrieval humanly impossible. ICT resources, such as Integrated Library Management Systems (ILMS) and AI-driven search engines, allow special librarians to filter through "noise" to provide high-value, curated intelligence to their parent organizations.

Furthermore, the shift has been accelerated by the changing expectations of specialized users, such as lawyers, doctors, and engineers, who increasingly require remote, 24/7 access to information. Affum and Dwoomoh (2023) emphasize that special libraries that fail to adopt robust ICT frameworks risk becoming "information silos" that are bypassed by professionals who prefer the speed of independent web-based searching, even if those web results lack the peer-reviewed authority of library databases.

Competitive Advantage and ICT

In the corporate world, the extent of ICT use is often tied to the library's ability to provide a competitive advantage. Singh and Kumar (2020) observe that through tools like Selective Dissemination of Information (SDI) and Electronic Document Delivery (EDD), special libraries have transformed from passive warehouses into proactive intelligence units. This transformation ensures that the library remains an indispensable asset to the organization's research and development (R&D) goals, thereby securing its continued funding and relevance in an increasingly automated world.

Key Areas Where ICT Supports Special Libraries

Some of the areas where ICT supports special libraries are;

1. Administrative and Housekeeping Operations: ICT has revolutionized special library operations by replacing labor-intensive manual processes with automated systems. Integrated Library Management Systems (ILMS) now drive administrative efficiency,

specifically through real-time order tracking and digital cataloging via Online Public Access Catalogs (OPAC) (Mulla, 2021). These tools enhance bibliographic control and resource discovery for specialized users (Zaid, 2021). Furthermore, the integration of barcode and Radio Frequency Identification (RFID) technologies has streamlined circulation, ensuring superior accuracy and transaction speed (Affum & Dwoomoh, 2023). By automating these "housekeeping" tasks, special libraries reduce human error and pivot toward high-value information consultancy, ensuring institutional relevance in an increasingly digital professional landscape (Ogbomo & Ogbomo, 2022).

2. Resource Management and Digitization: ICT has fundamentally shifted special library collections from physical formats to digital-first environments. Institutions now prioritize e-resources, including specialized databases like Westlaw and PubMed, which are nearly universal in well-funded institutions (Olanrewaju, 2019). This transition is facilitated by the growth of digital repositories using platforms like DSpace and Greenstone to curate institutional research and grey literature (Adeleke & Olorunsola, 2019). Digitization ensures that niche materials are not only preserved but are accessible to remote professionals 24/7 (Igwe, 2020). By managing these specialized digital assets, libraries transition from local storage centers to global information hubs, providing the authoritative content required for high-stakes decision-making.

3. Specialized Service Delivery: The hallmark of a special library is its ability to provide pinpointed, proactive information. ICT has facilitated Selective Dissemination of

Information (SDI) through automated alerts and personalized dashboards, ensuring researchers receive exact data based on their specific profiles. Furthermore, Virtual Reference Services utilizing email, instant messaging, and AI-driven chatbots have made information delivery possible 24/7 (Singh & Kumar, 2020).

The integration of ICT has fundamentally altered the efficiency and effectiveness of special libraries. Studies consistently show that specialized software allows tasks like stock verification and periodical control to be performed more rapidly (Adebayo, 2023). This technological shift bypasses the constraints of physical location and time, providing users with remote access to high-quality resources. Consequently, research in specialized environments, such as judiciary libraries, indicates that ICT applications significantly improve the job performance of librarians and the satisfaction levels of the professionals they serve (Ahmad et al., 2021). By leveraging these tools, special libraries transition from reactive service providers to proactive intelligence partners, directly contributing to the success of their parent organizations.

Challenges to Full ICT Integration

Despite the clear benefits, the integration of ICT into special library operations is often limited by several recurring barriers, particularly in developing economies.

1. **Financial Constraints:** High initial costs for hardware and software, coupled with the recurring costs of licensing e-databases, remain a major hurdle. Many special libraries

struggle with limited budgets that cannot keep pace with the rapid cycle of technological obsolescence (Adeleke & Olorunsola, 2019).

2. Technical Skills and Digital Literacy: A persistent gap exists between the availability of technology and the skills required to use it. While many librarians possess basic ICT skills, there is a lack of advanced competency in areas like metadata management, server maintenance, and web development (Chisenga, 2024).

3. Infrastructure and Reliability: In many regions, erratic power supply and poor internet bandwidth prevent libraries from offering stable digital services. Without a reliable power grid or high-speed connectivity, even the most sophisticated ICT tools remain underutilized (Nworie, 2022).

Methods

A descriptive survey research design was adopted for this study. The population of the study comprises all the 53 librarians working in special libraries e.g. medical institutions, banking institutions, legal institutions etc. in Owerri municipal council. The sample size for the study is made up of 53 Librarians in the special libraries in Owerri municipal. The researchers adopted a census sampling technique where all the librarians in the special libraries were used for the study.

Two instruments were used for data collection viz: a 7-item checklist of ICT tools currently available and in use in special libraries and a 7-7item rating scale on the extent of use of ICT tools among Librarians in Special Libraries. The rating scale is organized in a

four-point likert scale format of Very High extent (VHE) = 4 points, High Extent (HE) = 3 points, Low Extent (LE) = 2 points and Very Low Extent (VLE) = 1 points. The number of items on each section of the rating scale (7) was multiplied by the four-point Likert criterion mean of 2.50 to generate a general criterion of 17.50 to test the hypothesis. The instruments were validated by specialists in Library and information science. The rating scale was subjected to a reliability test using Cronbach alpha statistics which yielded a coefficient of 0.81. The research questions are answered using frequency counts, percentages, mean and standard deviations while the hypothesis was tested using one sample t-test at 0.05 level of significance.

Results and Discussion

Research question 1: What are the ICT tools currently in use for service delivery in Special libraries in Owerri Municipal council?

Table 1: ICT tools currently in use for service delivery in special libraries in Owerri Municipal council

S/N	ICT tool	Frequency	% availability
1	Integrated Library System (e.g., Koha, Liblime) for managing core library functions (cataloging, circulation, etc.)	48	90.60
2	Online Public Access Catalog for users to search the library's collection electronically	41	73.40
3	Dedicated internet access and a local area network (LAN) or Wi-Fi for library staff and/or patrons	44	83.00
4	Subscription to or provision access to any online databases, e-journals, or e-books	48	90.60

5	Use of email, a website, or a social media page for communicating with patrons and disseminating information	53	100.00
6	Availability of computers or workstations for research, internet Browse, or accessing library resources	53	100.00
7	Scanners, printers, or photocopiers for digitizing materials, printing documents, or document delivery services	53	100.00

Data on table 1 show the available ICT tools currently in use by Librarians in private libraries in Owerri municipal council. The data show that 90.60% of the respondents ticked Integrated Library systems and online journal subscriptions as available. All the respondents have emails, websites or social media pages, computers or workstations and scanners, printers and photocopiers. The table generally shows that ICT tools are available in many of the private libraries. This result indicates a paradigm shift from the traditional information and communication approaches to modernization and digital transformation in special libraries. The use of ICT tools without doubt enhances efficiency, accessibility, and user engagement. This is in line with the findings of Ebhonu, Omosekejimi and Dada (2021) who in a similar study found out that digital tools such as OPAC and private internet access are readily available in academic libraries in Nigeria. In the same vein, Adamu, Mohammed, Daudu, Umar, and Mu'azu (2024) recorded adequate availability of digital information resources in special libraries in Kaduna state Nigeria. However, studies from Ekere et al. (2019) showed that ICT resources were being underutilized among librarians in special libraries in the south east. This suggests some disparities in use of these resources based on location.

Research question 2: What is the extent of use of the available ICT tools for service delivery in special libraries in Owerri municipal council?

Table 2: Extent of use of the available ICT tools for service delivery in special libraries in Owerri municipal council

S/N	Item statement	Mean	SD	Remark
	To what extent do librarians in special libraries use the following?			
1	OPAC for retrieving information about the library's collection	2.99	0.55	High extent
2	Internet by librarians to assist patrons with reference questions and provide research support	3.36	0.88	High extent
3	subscribed e-journals, e-books, and online databases promoted and utilized by patrons for their research needs	2.90	0.86	High extent
4	Use of Integrated Library System (ILS) for managing daily circulation activities such as borrowing, returning, and managing patron accounts	3.06	0.64	High extent
5	Use of digital communication tools (e.g., email, website, social media) used for announcing new arrivals, events, and other library services	3.27	0.96	High extent
6	Provision of training for staff and/or patrons on how to effectively use the available ICT tools	2.26	0.23	Low extent
7	Use of scanners and other digital tools used to digitize special collections or unique materials for wider access and preservation	3.00	0.88	High extent
	Grand mean	2.97		

Corresponding hypothesis

Ho1: The mean response of librarians on the extent of use of ICT tools for service delivery in special libraries is not significantly greater than the criterion mean 17.50.

Table 3: One sample t-test of significance of librarians' responses on extent to which ICT resources are used in the special libraries for service delivery.

Variable	N	Mean	S.D	Df	t-statistic	p-value	Decision
Extent of use of ICT resources in special libraries	53	20.84	5.00	52	42.615	0.000	Ho is rejected

Data on table 2 show the responses of librarians in private libraries on the extent of use of ICT tools in their libraries. The data show that all the items have their mean responses above the criterion mean of 2.50 except item 6 which has a mean score of 2.26. This implies that majority of the respondents do not provide training for staff and patrons on the use of the available ICT tools. the standard deviation scores are low which implies homogeneity in the response of the librarians. The grand mean is 2.97 which is also greater than 2.50. This implies that majority of the respondents use the available ICT tools to a high extent. The corresponding hypothesis in table 3 is the result of the one sample t-test of significance on the responses of the librarians on extent of use of ICT resources/tools in special libraries. The mean is 20.84 which is greater than the criterion mean of 17.50. Moreso, the p-value is 0.000 which is less than 0.05 level of significance. Since the p-value is less than 0.05, the null hypothesis is rejected and it is therefore concluded that the mean responses of the librarians on the extent to which ICT resources are used in special libraries is significantly greater than and different from 17.50.

High usage suggests strong digital literacy and a proactive approach to service delivery. It also implies that ICT tools are well-integrated into daily operations. The extensive use of these ICT tools places special libraries as dynamic knowledge hubs while

improving remote access and digital archiving in libraries. This finding validates the findings of Okoroafor (2024) who recorded high extent of use of ICT resources among library users in south-east Nigeria. Also, Ebhonu, Omosekejimi and Dada (2021) attributed extensive use of ICT resources in university libraries in Nigeria.

Recommendations

Based on the findings, the following recommendations are made:

1. Management of special libraries should continually provide training for their library staff on evolving ICT tools for job efficiency.
2. Associations of Librarians should promote collaborative platforms for librarians to share best practices.
3. Managers of private institutions should reward ICT proficiency among librarians so as to enhance interest and motivation of staff in the use of ICT tools.

Conclusion

Based on the positive results of this study, it can be concluded that the ICT use has become indispensable in special libraries. The findings showed that 90.60% of the librarians confirmed the availability and active use of ICT resources. This is further substantiated by majority of the respondents utilizing these resources to a high extent and this gives credence to the fact that the digital age calls for proactiveness in the use of ICT resources in various areas of service delivery.

These findings carry significant implications for the future of special libraries. The high rate of availability and use of ICT resources suggests that the conversation has shifted from the mere necessity of implementing ICT to the strategic optimization of these resources. This implies that future efforts can now concentrate on enhancing the efficiency and accessibility of ICT services. This includes refining digital platforms, improving information literacy training for both staff and patrons, and leveraging advanced technologies to provide more personalized and impactful services. In essence, the special libraries in this study have firmly established themselves as hubs of information powered by technology. Future research should therefore investigate the specific impact of high ICT utilization on user satisfaction, and service delivery outcomes.

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