



EFFECTS OF USE OF MOBILE TECHNOLOGIES ON REFERENCE SERVICES DELIVERY AT THE HEZEKIAH OLUWASANMI LIBRARY, OBAFEMI AWOLOWO UNIVERSITY, ILE - IFE, OSUN STATE, NIGERIA

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ABSTRACT

This study examined the effects of mobile technologies on provision of reference services at Hezekiah Oluwasanmi Library, Obafemi Awolowo University Ile-Ife. It was guided by four objectives. Descriptive survey was employed in the conduct of this research. The population of the study comprised of 37 library staff (Librarians and Library Officers) of the University. Total enumeration technique was adopted for the study because the population was manageable. A set of questionnaire was used for data collection, which was analysed using the descriptive statistics. Its findings established that the types of mobile technologies available for the provision of reference services in the Library are smart phones, laptops and tablets, USB Drive, Global System for Mobile Technology (GSM) and Wireless Fidelity (Wi-Fi). Findings revealed that there are many types of reference services offered through mobile technologies in the Library, which include inter-library loan, consultancy, user education, current awareness, selective dissemination of information, referral, reprographic, information, documentation and bibliographic services. However, the challenges associated with these technologies in the provision of reference services include power outage, inadequate knowledge of ICT by library staff, lack of e-resources, as well as the lack of Internet connectivity, training and maintenance culture. The study therefore recommended, among others, that alternative source of power should be provided for the library in order to eradicate power outage in use of mobile technology in position of reference services. Also, the library management should prioritise the training of staff member in ICT so as to use



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technological devices with ease in providing reference services through the mobile technology.

Keywords: Mobile technology, ICT, Reference services

Introduction

Technology is rapidly changing the ways people do things. Individuals, institutions and organisations now adopt new technologies to work in order to improve their efficiencies and for better service outputs. Akhtar (2023) Increased use of mobile technology has brought great transformation to industries including the academic libraries. The library is known for information service delivery to library users in diverse ways. One of the services of the library to its users is known as reference service. Reference services are personal assistance given to library users in pursuit of information by a librarian in charge of reference section. It is a one on one assistance given to library users by the staff in the reference section of the library using reference recourses. These services include reader education, meeting users request for specific information and assistance, and the management of the use and loan of library materials (Dhar, 2020).

The library's reference section, headed by the reference librarian, is an important section that houses and takes care of reference information resources that are used for consultation of pieces of information. Examples of these information resources include Encyclopaedias, Bibliographies, Biographical sources, Gazetteers, Dictionaries, Maps and Almanacs. These reference resources cannot be given to users on loan, they are meant to be used within the library and returned. This is as a result of the nature of these tools. Some of them are really expensive and some are in volumes as such could be difficult to replace if they are lost, defaced or mutilated. The libraries in institutions of higher learning (academic libraries) now adopt the use of new technologies such as mobile technologies in rendering reference services to its users. The changing world requires dynamic and new ways of doing things and this necessitates the academic libraries' use of mobile technologies in providing reference services. Akhtar (2023) stated that mobile reference services enable users to send reference questions to librarians via text.

Irena (2024) averred that mobile digital technologies useful services delivery to library users. The use of technologies has led to improved utilisation of reference resources and services, there should be provision of computer and Internet services and, a periodic formal interaction with the users, stressing that the academic reference librarians must transform their approach for reference resources and services to be effective and efficient. The extent of utilisation of library and its resources depends on the relevance, comprehensiveness and scope of the library collection. Tamunoene (2022) opined that mobile technology is a new wave in the expansion of opportunities for invention through the Internet which has made information transfer possible in time and space and it is considered as a next step into the evolution of information technology. Mobile technologies are capable of supporting all forms of information access, storage and transmission and provide help to researchers and users of research content to the



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strengthening of their relationship and providing enhanced user oriented services to existing users. Mobile technology is technological devices that are portable and transportable. They are devices that can be moved from one place to another to do a wide variety of tasks. This technology allows tasks to be performed via mobile phone, e-book reader, tablet PC, and laptops. Mobile technology refers to the devices that are portable and provide instant access to information.

The use of new technology allows participation in the fast changing world where technology has become essential to human lives (Ibrahim, 2019). Academic libraries globally are incorporating technology into their operations because it removes the physical barrier between the library users and the library. With this, there is great improvement in clientele satisfaction as their information needs are met at the comfort of their homes and at any location and any time. Some academic libraries are only experimenting with new ways of providing reference services with mobile technology to clientele. As a result of the increasing and diverse kinds of mobile devices, some of these services can be accessed via smartphones for easier and adaptable features. However, despite the effects of mobile technology on provision of reference service delivery in academic libraries, it is not certain, if all academic libraries in Osun State have keyed into its use. Moreover, the level of use of these devices at the Hezekiah Oluwasanmi Library, Obafemi Awolowo University, Ile-Ife is not recorded. Hence, this study investigated the effects of mobile technologies on reference service delivery in the Library.

Objectives of the Study

The study sets out to:

1. identify the types of mobile technologies used for the provision of reference service in Hezekiah Oluwasanmi Library, Obafemi Awolowo University Ile-Ife;
2. determine the types of reference services offered through mobile technologies in Hezekiah Oluwasanmi Library, Obafemi Awolowo University Ile-Ife;
3. examine the impact of mobile technology on provision of reference service in Hezekiah Oluwasanmi Library, Obafemi Awolowo University Ile-Ife; and
4. identify the challenges associated with the use of mobile technology in provision of reference service in Hezekiah Oluwasanmi Library, Obafemi Awolowo University Ile-Ife.

Review of Related Literature

In the last two decades, mobile devices have become essential part of communication for both telephone service users and the Internet users. Some of the reasons behind the success of mobile technology are the benefits derived from its use, such as mobility and ubiquity (Obinyan, 2021). Mobile technology is equally used in most academic libraries across the world to render services to users due to its convenience to both library users and the librarians. One of the most important services rendered in the library is the reference service. According to Wittaker (2019), it is referred to as the most essential service that a library provides. It is also considered as the heart of the library services. It is a service facilitated by a reference librarian, to meet the information needs of



users in all areas as demanded. Reference services are usually provided at reference desk or information desk of the library to the library users by the reference librarian and other library staff attached to the reference librarian. During the provision of reference services, the reference staff provides direction to the library users about the library materials. Advices are also given on library collections and use of same as well as expertise on multiple kinds of information from multiple sources.

According to Bunge (2019), reference service is also referred to as reference and information service. It is the personal assistance provided to users in the pursuit of information in the library. The patrons are assisted in the location and retrieval of information relevant to their information needs. This enables the patrons to navigate their ways in the library with ease without wasting their time. Reference service is an integral part of any library aimed at educating users on the use of reference materials to help them get factual information at the possible best way and at the right time. The reference service is that type of library service that connects the library staff with the users. It is a primary practice in the library organization as it is closely related with the users in fulfilling their needs (Deng, 2021). Reference service gives the users the opportunity to relate personally with the library staff and express in clear terms the information needs. With the use of technology, the user and the reference librarian can exchange mails and texts as well as other means of communication.

Katz (2019) averred that the kind and nature of reference services provided in a library depends to a large extent on the curriculum of the institution's research programme available, the teaching method and the objective of the institution. Therefore, selection of information resources in is usually based on the institution's policy as it relates to the scope and definition of materials as well as the provision of essential services such as resource sharing, users' education, preparation of abstracts and index and more. Bunge (2018) has categorised reference services into three, namely: Information services that involve either finding the required information on behalf of the users, or assisting users in finding information; Instruction in the use of library resources and services; and User guidance, in which users are guided in selecting the most appropriate information sources and services. Types of reference services rendered in the library also include reprography, selective dissemination of information, user education, inter-library loan and document delivery, current awareness, and information services. Similarly, some of the services that required the use of mobile technology include bibliographic verification and documentation services, computerised reference, mobile collections and databases, mobile interfaces and online public catalogue, short message system reference mobile instructions and mobile tours of the library. Xiaotian (2023) averred that these services are conveniently carried out with the use of mobile technology.

Mobile Technology Used for Reference Services

There are varieties of mobile technologies that are used for reference services and these include mobile phone, eBook reader, Tablet PC, and laptops. (Coates, et al, 2019). "iPods, MP3 players, Personal Digital Assistants, USB Drive, e-Book Reader, Smart Phone, Ultra-Mobile PC, and Laptop/ Tablet PC", are examples of the mobile technology (Adeeb & Hussain, 2019). Smartphones



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and Personal Digital Assistants (PDAs) are mobile devices that enable real-time communication (Chang, 2021). These devices are very effective for reference service especially in real-time reference service provision. Mobile devices are very important in libraries. They have proven useful by providing users with timely access to communication and information. New ways to access and handle library information are now possible through the use of this technology. These includes Bluetooth, Global System for Mobile Communication (GSM), General PacketRadio Service (GPRSA), and third generation (3G) communication technology for facilitating access to information and providing services via mobile devices. Da Silva (2024) posited that libraries use mobile technology devices to serve users in the capacity of lending services and answering queries and that the COVID-19 health crisis accelerated this need for virtualization of library in service delivery and management.

However, Sahabi and Ootobo (2021) pointed out some associated challenges of the use of these technologies that lack of efficiency on the part of the library staff, technological inefficiency and inadequate energy supplies are associated with this digital society. Thus, there is need for librarians to acquire ICT skills through personal training to be relevant and defend their profession. It is a common knowledge that human resources are the most important resources in any organisation and the success of the organisation is dependent on it because the utilisation of the technological devices is to be handled by men to experience positive effects of technology in service delivery.

Methodology

The descriptive survey research design was employed for this study. The study's population comprised of 35 staff members of Hezekiah Oluwasanmi Library, Obafemi Awolowo University Ile-Ife, including 17 librarians and 18 library officers. Total enumeration sampling method was adopted for the study as a result of the small and manageable size of the population. A well-structured questionnaire was used to elicit data for the study. The responses obtained from the survey were analysed using descriptive statistics such as frequency count and simple percentages. Out of the 35 copies of the questionnaire prepared, 27(77%) were retrieved and used for the analysis and the results of findings were presented in Table 1.

Table 1: Types of Mobile Technologies used for Reference Service Provision (A=Agreed, D=Disagreed)

Types of Mobile Technologies	A	%	D	%
Smart phones	21	78.00	6	22.00
Laptops and tablets	23	85.00	4	15.00
MP3 players	18	67.00	9	33.00
Personal Digital Assistants	15	56.00	12	44.00
USB Drive	23	85.00	4	15.00
E-Book Reader	17	63.00	10	37.00
Ultra-Mobile PC	19	70.00	8	30.00
Multimedia Messaging Service	18	67.00	9	33.00
Global System for Mobile Technology	22	81.00	7	19.00
Wireless Fidelity	23	85.00	4	15.00

Field Survey, 2024



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Table 1 revealed various types of mobile technologies that are being used to perform reference services in the Library, which found that laptops, tablets and USB drives were mostly used with 87% of the respondents' affirmation. Majority (85.00%) responded positively to the use of Wi-Fi, while 81% affirmed the use of GSM technology, in which 78% indicated that smartphones were used. The result also found that 70% confirmed the use of Ultra-Mobile PC, just as MMS and MP3 were among the types of mobile technologies that are used to perform reference services even as 67% others also affirmed these while 63% affirmed the use of e-Book Reader while 56% indicated the use of Personal Digital Assistants.

Table 2: Types of Reference Services Provided via Mobile Technologies (A=Agreed, D=Disagreed)

Types of Reference Services	A	%	D	%
Inter-Library loan	25	93.00	2	7.00
Consultancy Services	24	89.00	3	11.00
User education	23	85.00	4	15.00
Current Awareness Services	25	93.00	2	7.00
Selective Dissemination of Information	25	93.00	2	7.00
Referral Services	20	74.00	7	26.00
Reprographic service	27	100.00	0	0.00
Information service	19	70.00	8	30.00
Documentation service	24	89.00	3	11.00
Bibliographic service	26	96.00	1	4.00

Field Survey, 2024

Report of the findings as recorded in Table 2 revealed the types of reference services provided via mobile technologies in the library. It was found that found that Reprographic service, inter library loan and Bibliographic services were among the highest types of reference services performed via mobile technologies with 100%, 96% and 93% affirmations, respectively. It was also revealed that SDI as well as CAS provided via mobile technologies with both services having 93% of the respondents' affirmation. Consultancy and Documentation services both recorded 89% each, while user education had a response of 85% affirmation. Also, Referral services recorded a response of 74% affirming the fact that it was provided via technology to users.

Table 3: Effects of Mobile Technology Use on Reference Services Provision (A=Agreed, D=Disagreed)

Effects of Mobile Technology	A	%	D	%
Makes reference services easy for the librarians	25	93.00	2	6.00
Helpful to students who are shy	20	74.00	7	26.00
Eliminates the issue of time constraint	23	85.00	4	15.00
Saves the time of the librarian and the users	21	78.00	6	22.00
It helps to provide personalised assistance to users	25	93.00	2	7.00
Flexible and easy to use	21	78.00	6	7.00
Accessible remotely and at anytime	27	100.00	0	0.00
Eliminates the issue of distance barrier	27	100.00	0	0.00
Geographical location is no longer a barrier	27	00.00	0	0.00

Field Survey, 2024



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Results as presented in Table 3 indicated the impact of mobile technology on provision of reference service in the library. All the respondents affirmed that with the use of mobile technology in providing reference there is opportunity for remote access at any time, geographical location is no longer a barrier. Also, the issue of distance barrier is eliminated. It was found that 93% responded that the use of mobile technology in providing reference make reference services easy for the librarians. Similarly, 93% also affirmed that using mobile technology to provide reference services helps to provide personalised assistance to users. While 85% responded that the issue of time constraint is eliminated with the use of mobile technology in providing reference, 74% others agreed that the use of mobile technology in providing reference is helpful to students who are shy as they can access library services without having to face the librarians.

Table 4: Challenges with Mobile Technology Use in Reference Service Provision (A=Agreed, D=Disagreed)

Challenges of Mobile Technology	A	%	D	%
Irregular power supply	27	100.00	0	0.00
Lack of ICT knowledge by library staff	19	82.00	9	18.00
Inadequate Infrastructure	22	81.00	7	19.00
Irrelevant Information Resources	6	22.00	21	78.00
Lack of e-Resources	12	44.00	15	56.00
Lack of Internet connectivity	16	59.00	11	41.00
Inadequate finance for the library	21	78.00	6	22.00
Lack of training of staff members	23	85.00	4	15.00
Lack of maintenance culture	24	89.00	3	11.00

Field Survey, 2024

Data on Table 4 showed the challenges associated with the use of mobile technology in provision of reference service to the library users, where all the respondents agreed that irregular power supply was a challenge to the use of mobile technology in provision of reference service to the library users. This was followed by 89.00% others who indicated lack of maintenance culture, lack of training of staff members (85.00%), lack of ICT knowledge by library staff (82.00%), inadequate infrastructure (81.00%) as well as inadequate finance for the library (78.00%) and lack of Internet connectivity (59.00%).

Discussion of the Findings

The study revealed that the Hezekiah Oluwasanmi Library, Obafemi Awolowo University Ile-Ife, Osun State made use of mobile technology in provision of reference services to the users. This corroborates the study of Da Silva (2024), which also found that libraries use mobile technology devices to serve users in providing lending services and answering queries among others. This is also in agreement with Adeeb and Hussain (2019), who listed some of the examples of mobile technologies used to provide references service to include Smart phones, Laptops and tablets, MP3 players, Personal Digital Assistants, USB Drive E-Book Reader, MMS, and GSM. This study also revealed different reference services that were provided via mobile technology. These include consultancy services, inter-library loan, user education, current awareness services, selective dissemination of information, referral services, reprographic service, information service and documentation services. This corroborates the work of Odeinde (2022). The study's findings made



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it known that the use of mobile technology in providing reference services to the users has some positive impact such as mobility and ubiquity of the mobile devices, elimination of distance barrier between the users and the library. This corroborates with the work of Carillo et al. (2021) and Deng (2021), who stated that mobile technology is beneficial to the provision of reference service to the users.

The use of mobile technology to provide reference service in this Library has some attendant challenges, which the findings listed to include the lack of staff training, inadequate knowledge of ICT, irregular supply of power, inadequate infrastructure, to mention just a few. Nabutto (2024) stated that librarians must be knowledgeable about IT applications and development in libraries and should be knowledgeable about AI tools and technology, data analytics competence, library management, user behaviour and system design. Rahmani (2023) also supported this claim that libraries should emphasize staff training in technology, which also agrees with the findings of Kumbhar and Pawar (2022), which also identified the issues of using mobile technology in providing reference services as inadequate training of library staff.

Conclusion

The study concluded that the rapid increase in mobile technology penetration demonstrates that mobile technology plays a critical role in improving the quality of services for academic purposes. Academic libraries are making good use of the opportunity to boost their services as much as possible. Hezekiah Oluwasanmi of Obafemi Awolowo University Ile-Ife, Osun State uses these devices to provide reference service which is one of the most important services provided in the library. The effects of using these technologies cannot be over emphasized though with some attendant challenges. It makes the work of the librarians easier and more effective by removing stress while saving time.

Recommendations

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

1. The library should provide alternative source of power for the library in order to eradicate power outage in use of mobile technology in position of reference services.
2. The library management should prioritise the training of staff member in ICT so as to use technological devices with ease in providing reference services through the mobile technology.
3. The library management should provide adequate infrastructure in the library in order to use mobile technology in provision of reference services.
4. Relevant information resources should provide the library management.
5. More electronic resources should be made available in the library in order to use mobile technology in provision of reference services.
6. The library management should look into the issue of Internet connectivity and increase the bandwidth in the library.



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