

Summer 7-13-2019

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Shehu, Abdullahi bala and Gabasa, Paraya, "MOBILE BASED LIBRARY SERVICES IN NIGERIA: APPLICATION, PROSPECTS, AND CHALLENGES." (2019). *Library Philosophy and Practice (e-journal)*. 2857.
<https://digitalcommons.unl.edu/libphilprac/2857>

**MOBILE BASED LIBRARY SERVICES IN NIGERIA: APPLICATION,
PROSPECTS AND CHALLENGES.**

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***Abstract-** Mobile technology has provided faster access to information and communication and at the same time also challenging libraries to rethink and remodel their service by adopting*

technological changes. The study used a review of literature and personal observation as an academic librarian in nigeria. In this paper we have discussed about mobile technology, mobile library services its application, benefits and challenges in academic libraries in nigeria, Furthermore the paper went ahead to discuss mobile initiatives and application in advanced world which is far ahead of what is been practiced in nigerian academic libraries, at this juncture academic libraries in nigeria lack the capability to implement such technologies. Recommendation such as constant training on ICT, Alternative power supply, provision of up to date telecommunication devices and funding.

Keywords: Mobile Technology, Mobile Library Services, Academic Libraries, Nigeria.

INTRODUCTION

Library and Information Science (LIS) is an age known profession that dates back to the period before paper was invented in China. LIS is a profession that deals with the collection, organization, retrieval and use of information resources to clientele, with the advent of information technology in all sphere of Life, Libraries are not left out. Libraries all over the world are incorporating ICTS delivery so as to remain relevant in the 21st century. The rapid increase of mobile environment and its ubiquitous nature has made mobile devices an indispensable part of life. The pattern of communication today is changing - new technologies constantly emerge thereby changing the ways people communicate and organize information.

Mobile devices revolutionized Communication and changed the pattern in which information is been accessed, information can be accessed using mobile phone anywhere anytime in a convenient and timely manner.

Nigerian populace has overwhelmingly embraced the use of mobile devices as an integral part of their everyday lives. As at 2015, Nigeria ranks 7th in the world list of mobile phone users and 1st in Africa on the world list of internet users. Nigeria is also 7th with 86,436,611 internet users. Also in a 2015 profiling of countries that love smartphones by e-marketers, Nigeria was ranked 17th in the world. The country was said to have 23.1 million smartphones in 2015, and this figure is expected to increase to 39 million by 2019. A high percentage of the users of these mobile devices are found in institution of higher learning, therefore incorporating mobile information service in academic libraries in Nigeria is paramount therefore this paper will focus on library services offered with mobile technology in Nigerian university libraries, and also it would highlight some the mobile services in vogue in the developed world, and lastly benefits, barriers and the way forward.

MOBILE TECHNOLOGY

Mobile technology is defined as handheld information technology devices or artifacts that encompass hardware devices), software (interface and applications), and communication (network services), it encompasses all cellular communication technologies like Handheld devices, markup Language (Hdmi), Enhance data rates for global evolution (Edge), Code Division Multiple access (Cdma), Time division multiple access (Tdma) General packet radio (Gprs) and global system for mobile communication (Gsm)

Mobile technology is referred to as conduit and platform that make information and communication possible, information and communication are interloped and cannot function without the other, use of mobile devices offers flexibility, mobility, independence and

convenience. Though, the use of mobile devices is becoming ubiquitous, there are barriers to consider in the use of this technology in providing mobile library website to users

(Fox, 2010 cited in Iyabode et al 2014). These barriers include subscription to data plans, availability and maintenance of open source software, content choice and presentation and user needs (Hahn, 2008). Mobile devices are task specific in use in comparison to website which are more free form and flexible for the user to navigate, browse and search (Shrestha, 2007 cited in Iyabode et al 2014).

TYPES MOBILE DEVICES USED IN LIBRARIES

Beside laptop computers these are some of the mobile devices used In Academic Libraries

- PDAs (Personal Digital Assistant)
- Smart Phones
- iPods,
- MP3 players
- tablets

ADVANTAGES OF MOBILE LIBRARY SERVICES

Mobile technology is cheaper and easy to handle more than computers. Mobile devices are portable hence, can be access anytime and anywhere, there is no need to be in a fixed location (Verma &Verma, 2014). Mobile technology comes with a number of advanced features and inbuilt applications which enhances the way in which people communicate and retrieve information in a time saving manner, application of mobile technologies in libraries offers a lot

advantages such as improved working process, improved user participation, preservation of original copies, increased collaboration, enhanced marketing effective competitive advantage, and user friendly- aid. Nalluri and Gadam (2016), gave the advantages has

- Time saving,
- Personalized service,
- User friendly,
- Unlimited access,
- User participation,
- Location awareness,
- Ability to access information anywhere anytime.
- Students, faculty members having access to campus information,
- Individual based Learning
- Direct communication with instructor.

PREREQUISITES FOR IMPLEMENTINGMOBILEBASEDLIBRARY SERVICES

Mobile technology is not likely to be able to supply the necessary service on its own, but needs to be integrated with digital technology. The following prerequisites is necessary at least for the basic implementation in an information environment.

- Digitized information base
- Information products designed for an e-platform
- Electronic information service delivery

- Design of electronic access systems.
- Security and authentication is of paramount regarding mobile services particularly due to availability of web contents on a 24x7 basis to prevent damage or loss to the data.
- It is necessary to have a carefully planned feasibility study to know the practical situation like, the kind of services to be provided on mobile devices and type of devices to be used.
- Library must provide physical and virtual environment for using mobile devices and accessories.

It is important to optimize library OPAC, website, and databases for mobile devices and introduce new services wherever possible

MOBILE LIBRARY SERVICES IN ACADEMIC LIBRARIES IN NIGERIA

Sms alert service

In most federal universities libraries in Nigeria library professionals alert users for new book notice, overdue notices library circular, recently subscribed E-journal/Resources, change in library timings/information about upcoming events. University library in futminna and yola for example generate overdue notices automatically sent directly to library patrons.

Instant Messaging (IM for reference Service)

Academic libraries in Nigeria adopt instant messaging for reference service since mobile devices are useful for instant answers academic libraries in Nigeria use web based technology for instant messaging services from Google, yahoo, america online etc., but no IM in integration on library websites.

Mobile Opac

New mobile based OPACs are being developed for mobile users in various academic libraries, Baze university library abuja collaborated with software vendors to create mobile compatible vendors where student, researchers lecturers can access collection of the library using a specific IP address both within and outside the campus, other services are library virtual instructional tours, Wi-Fi internet access to mobile devices.

MOBILE LIBRARY SERVICES AND NEW WAYS OF DELIVERING INFORMATION IN ADVANCED COUNTRIES.

With the introduction of M learning in India because of the advancements in mobile technology that has given rise to so many different types and models of mobile devices with diverse features, students in India use these devices for everyday information needs as well as for academic needs. They have become an indispensable part of human life, Mobile learning or M-learning is an extended version of E-learning the difference is M learning is by using mobile technology for example, college students in India now receive formative evaluation and feedback from their instructors via a mobile device A face to-face course can be supported by Quick response (QR) codes that offer an Internet link to supplemental resources (Hwang, & Chang, 2011). Administrative tasks, such as checking attendance and learning progress can also be done with the use of mobile devices. QR code is the trademark term for Quick response code and it's also known as two dimensional barcodes The QR code is a two-dimensional code they can contain hundred times more data or information than simple barcode. Quick response codes are generated by the QR code generator and reading by the QR code readers by scanning using smart phones, tablets and computer. QR Code is capable to be store information (numbers, texts,

hyperlinks, contact details, calendar information, e-mail addresses, phone numbers, SMS, maps, social network information etc. in any direction i.e., horizontally and vertically, a lot of academic libraries all over the world like India,USA, Europe have implemented QR code in their daily library management affairs Some of the popular uses of QR codes in libraries follow: Library audio tour ,group study room scheduler ,marketing/promotional materials , linking from print to electronic journal holdings , providing an electronic alternative to physical books , promoting online audio visual materials ,embedding video help , Bringing external resources into the library, finding appropriate help ,taking the catalogue record with you, linking from course syllabi.

MOBILE AUGUMENTED REALITY.

Augmented reality has emerged as a new interactive technology and its unprecedented way of complementing the physical environment with virtual annotations offers innovative modes for accessing commercially-relevant content augmented reality is the phase of mobile based library services in advanced world Augmented Reality aims at simplifying the user's life by bringing virtual information not only to his immediate surroundings, but also to any indirect view of the real-world environment, such as live-video stream. (Madhusudhan,& Ahmad,2017)

Mobile Augmented Reality (AR) applications represent a profound opportunity for increased access to print and digital library collections. AR applications can deliver an engaging and interactive information experience. Applications that overlay graphical data are well suited for in-library engagement as well as off-site real world interaction with library content even though some of the applications are in testing phase some have already been deployed. Examples of this mobile application are

Facial Recognition

University of Illinois have introduced facial recognition, where librarians will know as soon as an individual walk in to the library, who they are, where they leave what book they have checked out and if any of their books are overdue by just merely scanning their face with a smart device .

Library Navigation

Library navigation even though library navigation is in testing phase, it intends to solve the problem of Library way-finding these way finding problems include understanding call marks or other library specific numbering and leading to a location of required item in the library by a means of GPS on mobile phone.

Optical Character Recognition

This mobile application use modified OCR software and check a suggestion database to identify library resources that will support the assignment or topical interest; checking against a database of course reserves for the class and other relevant sources of data (course specific help guides); and suggesting library resources and research databases that are relevant; this information package can be viewed on the phone, or students will have the option of sending the information to themselves via email or other social networking platforms; as students value collaboration and social aspects of research.

Mobile Services for Visual and Hearing Impairments

Another important use of the mobile technology is for academic libraries to use the devices to assist the persons with special abilities like visual or hearing. Many of such people are often unable to access information because there is no special interface for them. Mobile devices such

as smartphones which have screen readers that can help the disabled to access information. Visual or vibrating alerts, relay services and hearing aid compatibility devices make mobile phones accessible for the, while those with physical disabilities such as blindness need features such as voice recognition and auto text.

Mobile Printing

Mobile printing allows users to print documents from their mobile devices by wirelessly connecting to a printer that is network connected. However, the implementation of this technology is hindered because of its dependence on the capabilities of mobile devices. The operating systems of many mobile devices do not include print capabilities and the user must download software to enable this function.

Identify Building Services and Collections

Even though this application is in testing phase in universities like Harvard, Illinois, Yale this application can identify buildings by simply holding the phone's camera up to the building, could be particularly useful for a large university campus or institutions with multiple library sites. The user of this augmented reality app can use this to identify the name of the library building and the hours of the library building. It can tell users when it will be closing and overlay information such as current computer availability, technology availability or even seating availability in the library.

Mobile Instructions.

Library users' who don't have the time or inclination to attend an on-site workshop, can still get the most out of the library resources by accessing classes and tutorials on their mobile devices. libraries have begun distributing their knowledge and expertise with library systems and materials via MP3 and video files which patrons can take with them. The Washington State university Libraries offer patrons how-to help with library tools and resources through brief MP3 audio recordings which can be uploaded to iPods and other mobile devices.

BARRIERS TO MOBILE BASED LIBRARY SERVICES IN NIGERIA

Mobile based library services cannot be over emphasized however it will take a lot of effort and years to overcome challenges and barriers to compete with mobile library services in advanced world. Mobile library services is a 21st century reality and a step in the right direction for any academic library that wants to offer efficient and effective services beyond any logical argument. However, myriads of barriers have continued to impede its comprehensive integration in the operations of academic libraries in Nigeria. Barriers like electricity failure, lack of knowledge of ICT integration in the library; slow speed of internet; inadequate fund; unavailable staff and training opportunities in using mobile devices for marketing library and information products and services, unfavorable government policies have been identified as some of the constraints to mobile Library services delivery Shorunke, Ajayi and Akintola ,(2014) observe that bandwidth problem; poor funding; technophobia; lack of good maintenance culture, other factors that can hinder mobile information services in Nigerian academic libraries are unsustainable technology

strategies and policies; the problem of digital gap and insufficient IT training program power supply. Academic libraries in Nigeria can improve the quality of their services and widen their horizon by integrating mobile devices in their systems especially, because mobile access to the university resources makes good sense for both on-ground students, distance education population and students enrolled online.

CONCLUSION AND RECOMMENDATION

Mobile technology is an indispensable tool in the library and many academic libraries in Nigeria are already using basic mobile services like sms service, IM messaging, mobile OPAC, but in the present age mobile computing has revolutionized services offered by other academic libraries across the globe. The role, advancement of mobile technologies and initiative cannot be over emphasized, but at the present academic libraries in Nigeria lack the capability to offer ubiquitous interactive multimedia technologies like mobile augmented reality applications in the library already adopted by few academic libraries in the advanced world because of factors like funding, electricity, lack basic skills in ICT by academic librarian, no policy guiding acquisition and provision of up-to-date ICT facilities in the library. But the university library management can bridge the gap by providing alternative means to power supply timely and continuous ICT training should be encouraged to aid in the effective deployment use and management of mobile based application and services, university library management should provide good telecommunication facilities that will enhance and promote mobile library application and services.

REFERENCES

- Azubike, C.O. (2018). Mobile Information Services Delivery by Librarian in Nigeria: Some observations. *Automatic control and information science*.3 (1), 5-7. Retrieved March 13 2019 from <http://pubs.sciepub.com/acis/3/1/2>
- Bilawar, P. B. (2015). “Use of Mobiles by Library and Information Science Professionals: A Survey”, *DESIDOC Journal of Library and Information Technology* 35(6), 422-426.
- Hwang, G., & Chang, H. (2011). A formative assessment based mobile learning approach to improving the learning attitudes and achievements of students. *Computers & Education*, 56(4), 1023-1031.
- Kumbhar, S.S & Pawar, R.R. (2015). Mobile Based Services: Application and Challenges. Retrieved March 09 2019 from <https://www.researchgate.net/publication/271906602>
- Saxena, A., & Yadav, R. D. (2013). Impact of mobile technology on libraries: a descriptive study. *International Journal of Digital Library Services*, 3(4), 1-13.
- Shonhe, L., & Jain, P. (2017). Information Dissemination in the 21st Century: The Use of Mobile Technologies. In N. Mnjama, & P. Jain (Ed.), *Information and Knowledge for Competitiveness* (pp. 425-447). Gaborone: Department of Library and Information Studies-University of Botswana.
- Shorunke, O.A, Ajayi, S. A. and Akintola, A. O. (2014). Social media Literacy for Patrons in the Information Age: a Role for Academic Librarians in Nigeria. *Benue Journal of Library, Management and Information Science*. Vol. 4(2): 73-87.
- Maideen, S. (2017) Mobile Technologies for Academic Libraries. *Emerging Trends in Library and Information Science*. 124-125. Retrieved March 10 2019 from Verma, N. K., & Verma, M. K. (2014). Application of mobile technology in the Libraries. In M.Singh, P.

K. Singh, & A. Kumar (Ed.), *Libraries: Towards digital paradigm* (32-38).Uttar Pradesh: Bharati Publishers & Distributers.

Madhusudhan, M. & Ahmad, S.D. (2017) Mobile Information Services and Initiatives in University Libraries: A New Way of Delivering Information. *Journal of Library and Information Technology*. 37(2):109-118.Retrieved March 8 2019 from10.14429/djlit.37.2.11116.

Nalluri.S.R.& Gadam.B.(2016). Mobile Library Services and Technologies: A Study. *International Journal of Research in Library Science*.2(2),59-66.

Odu, J.O. & Omini, E. (2017). Mobile phone Applications and The Utilization of Library Services in The University of Calabar Library, Calabar Nigeria. *Global Journal of Education Research*.16(10):111119.RetrievedMarch112019fromhttp://dx.doi.org/10.4314/gjedr.v16i2.5.