# Exploring the Benefits of Mobile Device Library services for University Students in Nigeria

**Christopher Agbeniaru Omigie**
Ambrose Alli University, Ekpoma, Nigeria
ORCID: 0000-0002-5420-1831

**Grace Eseohe Ebunuwele**
Ambrose Alli University, Ekpoma, Nigeria
ORCID: 0009-0004-7273-000x

Received: 2nd May 2025 - Revised: 17th October 2025 - Accepted: 30th October 2025

DOI: https://doi.org/10.65861/glj.v30i3.2

## Abstract

*This paper is a qualitative research study of literature insights, analysis and observations of mobile device libraries for the benefits of Nigerian university students. Specifically, the paper covered the concept and features of mobile device libraries, the state of University libraries in Nigeria, the role and relevance of mobile device libraries for university students in Nigeria, the challenges of mobile device libraries, and suggestions for the ways forward. The Technology Acceptance Model (TAM) 1986 by Davis Fred is used to explore the benefits of mobile device libraries as it facilitates students' beliefs and attitude about the usefulness and ease of use for their genuine utilization of mobile device library facilities. The paper acknowledged the low use of traditional library resources by students in preference for the uniqueness of the dynamic mobile device library resources and services. Several issues challenging the adoption and application of sustainable ICT facilities needed in Nigerian university libraries were discussed including the ways forward.*

**Keywords:** Digital Resources, Mobile Device Libraries, Nigeria, University students

## Introduction

Today, the conventional libraries are still the pivotal preserves of many universities in Nigeria. The enduring services of the library have continue to include: book lending and borrowing, reference services and answering users' quarries, providing advisory needs, circulation services, users' orientation and instructions, interlibrary loan services, collection development and maintenance services, photocopying services, etc. But with the coming of digital resources and the application of smart mobile devices in library services, the conventional libraries of print-based materials are becoming less fashionable among university students (Ashikuzzaman, 2024). Many of the students are now turning more attention to digital library resources and services using their mobile devices remotely.

Mobile device libraries are the trending and amazing library services of this era. The libraries are nowadays the platforms of the changing information needs of many users. As Lee (2024) affirmed, mobile device libraries are collections of digital content and services from various repositories across the world with convenient access for users of information with smartphones, tablets or e-readers. Equally, Adesode (2021) defined mobile device libraries, as digital innovative libraries with convenient all-time access for users of smart phones and tablets to logically engage with varied up-to-date virtual resources. In another definition, Vashlisti (2023) asserted that the libraries are mobile technology innovative systems that have taken over students' conventional library activities of collaborative learning and research through smartphones access to unified virtual resources and services. The strategic features of the device library, Pedrick (2024) stated, are the information search and discovery approach, digital borrowing and lending

capacity, the friendly-user interfaces, compatibility and open access to other mobile devices, etc.

Every day, the uniqueness of mobile device technologies are increasing. As Omigie, Ademola & Ejiobi (2022) noted, the seamless Internet and mobile device capacity connectivity are helping faculty and students to link library resources from the classrooms. Correspondingly, Ideode and Bassy (2023) averred that academic librarians are now acquiring new technology knowledge and skills for creating and managing unified multimedia and multi-type digital resources and integrating content from heterogeneous repositories - scientific archives and databases, for their library patrons. As Omoruyi & Osagie (2022) acknowledged, users of libraries will in future be patrons and creators of digital information. Already, many literature have reported that with the smart mobile devices, academic librarians across the globe are helping faculty, students and researchers to engage in collaborative deep web search for the latest scientific and efficient data, mining knowledge from webs and promoting publishing, etc.

Obviously, the future of academic libraries and information services are promising with potentials to enhance the students' engagement and experiences, upsurge their information accessibility and backing university libraries with efficient information service delivery. With the mobile devices, the issues of compatibility with other devices can be easily fixed following the mobile device specifications and using the provided information about the devices' model, manufacturer, and operating system (OS), software version, memory storage, screen resolution and network systems to update and carryout apps installations, etc.

In Nigeria, mobile device library services are presently growing with incredible access by many university students (Audu & Ahmed, 2024). The seemly convenience with which students access the digital library resources using the smart phones and the streamlined research and learning engagement, are enhancing their experiences and interactions with enthralling effectiveness. Through the learning experiences, many students are often engrossed in navigating the web using their mobile gadgets for real time engagement. As Scolt & Savenaji (2021) revealed, the conventional library resources and services are nowadays lowly utilized in the universities as the mobile device technologies are impacting everything in the academia. Specifically, learning and collaborative research are going well with the incredible mobile devices and consequently making digital library resources available at the students disposal. Yet, it is pertinent to note that despite the astonishing capacity of the smart mobile device library services, diverse literature have shown that not many Nigerian university students are aware of the benefits of the library platforms or can explore the mobile device library resources and services adequately. It is also observed by these researchers that Internet connectivity in most Nigerian university campuses are not cheering. Also, most network operators charge arbitrary for data not used during poor network services, etc. It is in view of these issues, that paper explores the mobile device libraries and the benefits for Nigerian university students.

## Objective of the Study

The general objective of this paper is to explore the concepts and benefits of mobile device libraries for university students in Nigerian. Specifically, the paper explores:

1. The concept and features of mobile device libraries.
2. The state of University libraries in Nigeria
3. The role and relevance of mobile device libraries for university students in Nigeria.
4. The challenges of mobile device libraries, and
5. Make suggestions for the ways forward.

## Methodology

This paper employed the literature perspectives and observations methods. The observations are carefully entrenched in the broad discussions in the paper as they are most convenient and relevant to strengthen the literature reviewed. Books, Journals and websites scholarly posts were searched with key terms in the subject matter to previewed related content and their scope to review the subject matter. All the information extracted are discussed in relation with the issues presented in the paper.

## Theoretical Framework

This paper is anchored on the Technology Acceptance Model (TAM) by Davis D. Fred (1986). This theory is an explanation of two perspectives that influence how individual's come to acceptance and use a technology. These perspectives are:

a. Perceived usefulness, and
b. Perceived ease of use.

According to the model, perceived usefulness is the level to which an individual believes and accept to use a particular technology for it benefits while

perceived ease of use signifies the extent to which an individual perceived the technology as ease to use.

In the context of this paper, TAM is applied to comprehend how Nigerian university students perceive the benefits from mobile device libraries. The perceived usefulness captures how the Nigerian university students see mobile device library services as technology that improve their academic activities, simplify their timely access to digital resources and stimulate their research efficiency.

The concept of perceived ease of use reflects on the students perceptions of how suitable and user-friendly the mobile device library platforms are to accessing digital resources. The TAM's theory believes that when perceptions are positive, students are more likely to accept and always use mobile device library services.

The Technology Acceptance Model (TAM) offers a useful opportunity for exploring the benefits of mobile device libraries as it facilitates students' beliefs and attitude about the usefulness and ease of use to the genuine utilization of such library facilities. This framework perceptions help to explain how the mobile device libraries contribute to improve information ease of access, academic efficiency and digital literacy among the Nigerian university students.

### *The Concept and features of Mobile Device Libraries*

The idea of mobile device library system is to ensure all-time provision to seamless access to the up-to-date knowledge and information resources in diverse heterogeneous repositories across the globe. In the view of Adesode (2021), mobile device libraries are flexible in access through smartphone devices to lunch into rich library web resources. Mobile device libraries provide customized reading content and environment that are of preference to individual's needs and reading convenience. These provision offer secure reading comfort and pleasure for enhanced user engagement at anytime and anywhere. Mobile device libraries are portable (Ideode & Bassy, 2023). The technology is like carrying around a full university library collections on ones' palm in a small gadget.

With the device library services, it is again possible for users to easily reach library resources from any remote location, read content, study it and do serious work in collaboration with others elsewhere even without downloading the resources. Balogun & Oladele (2024) asserted that with mobile devices, library services are extended beyond the physical library spaces. The devices offer users with initiatives and friendly interfaces to simultaneously link information resources, authors and curators of materials using technologies, etc. In the face of cost of acquiring printed library materials and maintaining them, mobile device libraries are cost-effective for university libraries to link their users to resources elsewhere.

On another development, Kayode & Akinloye (2022) exposed the diminishing use of printed library materials in many academic libraries due to the students seamlessly access to their information needs using smart mobile devices at their conveniences. In another view, Davis (2024) stated that mobile device libraries are very compatible when talking about the heterogeneity of the mobile devices to link with other systems. Usually, library websites and resources are designed to adapt to dissimilar devices and also to screen sizes. Currently, there are many mobile apps for different platforms to ensure consistence with the users' experiences. For instance, through the devices multiple access points, the cross-platform solutions using features like CSS3, HTML5, JacaScript, etc. make the diversity of the mobile gadgets to be able to link the repositories of digital resources. Egbenia (2023) and Abraham (2024) respectively observed, mobile device libraries are unique to obtaining users' satisfaction about library resources and services. Presently with the mobile device, it is also possible for one to rate the visibility of a university library online, etc.

### *The State of University Libraries in Nigeria*

The mission of any university library is to acquire, process and provide access to current relevant materials for their user students' community. Specifically, a university library is a repository of scholarly knowledge in wide-range collections of books, monograph, periodicals, reference sources, etc. These resources play crucial role in supporting the teaching, learning and research activities in the institutions to empower the student users with sound knowledge and skills for their employability, foster their growth and national development.

But despite the significance of digital library resources and services, diverse literature and observations by these researchers have shown that the university libraries face several issues especially in adopting and applying sustainable ICT facilities. Igwe (2023) postulated that despite the overwhelming influence of ICT across the world, its adoption and application in Nigerian university libraries were nothing much to cheer. Correspondingly,

Salume, Obiora & Ejike (2021) affirmed lack of ICT infrastructural facilities, insufficient finance, lack of expert personnel, pitiable electricity outage, unreliable internet connectivity, etc. as still the major constraints in many Nigerian university libraries. In the same vain, Ahanza & Mathew (2022) identified lack of efficiency of funding, technological inefficiency and inadequate energy supply as some of the challenges in most university libraries in Nigeria. No university libraries cannot achieve their vision/missions where these issues exist.

Yet, Ahmed & Zakari (2023) similarly listed issues of inadequate funding, outdated resources, limited access to up-to-date journals and books, deficiency of Nigerian content such as materials on indigenous knowledge, culture and history, dearth of professionals, limited staff development programs, poor staff working conditions, slow adoption of digital infrastructure, insufficient digital literacy programs, etc. In support, Wahab & Ibrahim (2024) again identified user service problems such as inadequate reference librarians to answer users' queries, poor library budget leading to lack of clear library guidelines for digital resources collection and development, etc. Many platform discourses on Nigerian university libraries have also pointed out slow library management decision-making processes due to bureaucratic bottlenecks, mismanagement of the lean library funds and other corrupt practices as some major concerns affect the university libraries.

In recognizance surveys, these researchers equally observed the wretched environmental conditions most of the university libraries operate. There are unsustainable technology growth, poor sanitary waste disposal systems, outdated bookshelves, including bookracks, chairs and tables, in secured buildings, neglected structural edifices, overcrowded and insufficient offices for staff, poor ventilation, deplorable lightings and communication systems, etc. Other issues include slow Internet services, outdated work processes with archaic technology equipment, insufficient access to digital resources and cyber security threats and breaches, etc. The libraries also suffered brain drains as a result of the pitiable salaries, lack of promotions and other deprived welfare conditions. Generally, staff inefficiency and poor staff development programs and attendance to conferences, workshops and seminars, constant power disruptions, etc. can disrupt effective library services and create apathy. In the assertion of Nwosu & Atamah (2024), Nigerian University libraries challenges are multifarious and require special government intervention to remedy some of them.

### *The Benefits of Mobile Device Libraries for University Students*

Diverse literature have shown that mobile device libraries offer numerous benefits for university students. Abraham (2024) noted the enhancing access to wide range digital resources such as e-books, journals and databases at any time and place by the university library users. This fixation of attitudes have reduced many students dependence on the physical library materials. Similarly, Hasliso (2015) acknowledged the flexibility and learning engagement provided by the library resources. According to these authors, mobile device libraries encourage student self-directed and continuous learning, facilitating assignments, conducting research and collaborating with peers using their mobile devices. Also, Nnadozie (2024) observed the advantages of the platforms' inclusive educational support method especially for students in remote areas with mobility challenges to guaranteeing their equitable access to digital information content needs. In addition, mobile device libraries can promote digital literacy and technical competence and skills needed by students in many academic settings and be able to effectively navigate the ever increasing web resources.

Lee (2024) advanced that mobile device libraries promote effective communication bond between students and the librarians through online messages, chat services, digital reference services, and facilitates inclusive library activities among students, faculty and peers in carryout group work and project-based knowledge sharing for the academic goal of the students. This likewise can help students to carryout effective organized academic work, and to always be on track with assignment deadline. Again, Adenehan & Haliso (2022) noted that the use of mobile devices for information access saves users' time especially students wanting quick access to relevant up-to-date resources. This also serves to reduces the students' physical visit to the libraries and so, saves pressure on the libraries' physical facilities

Mobile device libraries promote equity inclusivity. Hasliso (2015) stated that mobile device libraries can be used by students with disabilities and unable to go to the library due to the distance and mobility. In this sense, the mobile device libraries provide equal access to them to use the device libraries' resources and services. These device libraries can

moreover facilitate sustainable and environmental-friendly student campuses by reduced paper usage and waste. Through the personalized learning, mobile device libraries can offer recommendations, alerts and notifications, help students with their coursework and research resources anytime and anywhere.

### *The Challenges of Mobile Device Libraries*

In the view of Olumese & Yakubu (2023), there are many challenges of the mobile device libraries including but not limited to the maintenance charges for data, impact of the device radiations, the temptation and distractions to always want to browse online and check notifications, etc. Although the library materials are cost effective when compared to printed based resources, the hazardous nature of the smart phone libraries are noted to be more discouraging because of their many harmful drawbacks. For instance, Proteck (2023) asserted that generally, mobile phones emit radiations that are dangerous to human health; the screen light can damage ones natural sight if not seriously protected. Equally, the mobile device systems can be a significant source of distraction to the students and lecturers and resulting in reduced focus, low job productivity, etc. Yet, there is the regular enticement for the students to always want to check alert messages each time on the device thus disrupting attention on important tasks.

Apparently, various smart mobile devices usually have technical challenges like compatibility issues with other product technologies and operating systems. Likewise are the challenges of the optimization of content of different screen sizes and resolutions because of diverse phone products specifications of the kind of applications, features and services a device can support. Igwe (2023) opined that these issues are often not easy to resolve. Minimizing the battery drain and the power consumption are also a serious challenge. These challenges, especially when managing connectivity and bandwidth limitations in addition to ensuring security authentication and protecting data, can possess real frustrations and annoyances. Audu & Ahmed (2024) stated that Sometimes, it is difficult to understand the user students' behaviors and expectations because educating them on the effective use of the mobile device library can be very difficult. According to Audu & Ahmed (2024) the inability to secure finance for the library development and maintenance, and to ensure staff training for necessary knowledge and skills, etc. are totally not there.

Nnadozie (2024) noted the challenge about the mobile device libraries' inability to establishing policies and procedures for its own development outside vendors. According to this author, it is it is almost very difficult, if not totally impossible, to develop methods and strategies for assessing and evaluating the effectiveness of this kind of library whose users are in Diasporas. The problems of digital divide especially in communities where most universities are located in Nigeria have need also to be addressed.

## Suggestions and the Ways Forward

To address these issues require finance, infrastructure including diverse human experts, technical policies and strategic implementation model. For instant, Davis (2024) wrote that the issues of heterogeneity in the libraries can be technically handled by responsive web designers of the mobile device library websites and resources to be able to adapt to diverse devices and screen sizes easily. This issue can boosted by use of Apps that can improve interoperability between systems and platform specifications. Makinde (2023) similarly noted that metadata standards can help to address the issues of consistency with the device systems like the library content accessibility on dissimilar devices and platforms. In this way. there should be effective implementation of the Digital Right Management Systems (DRMS) to ensure that digital content are used in line with copyright permission, etc.

Another strategic process, suggested by Okoduwa (2021) & Abraham (2024) is to include use of cloud computing to provide scalability and flexibility of infrastructure for mobile device library operations. This idea can furthermore be boosted with use of open source software to provide cheaper and customize solutions for the mobile device libraries to have all user-friendly services. There should also be understanding and applications of mobile web apps support systems for mobile web and app-based access to mobile device library content, and the use of technology skills of the HTML5, CSS3 and JavaScript to create cross-platform solutions and provisions for multiple access points for students and their lectures.

In the view of Castelli (2022), there is need for regular test of the mobile device library users' feedback to assess their challenges with the libraries. This currently do not yet exist. But it is to ensure improve efficiency for the mobile device library services like content file quality, videos and pictures, file sizes, access and the users experiences. Castelli asserted that the issue of power outages of the devices can be improved through the provision of power outlets and

charging pots like power banks, etc. Other provisions for efficiency of the mobile device libraries should include provision for reliable Wireless Fidelity (Wi-Fi) connectivity; collaboration with other libraries in sharing resources; expertise and partnering with the devices vendors for associated services assistance, etc. Implementing these strategies would no doubt effectively address the mobile device libraries issues for better services.

## Conclusion

From this paper, it is established that mobile device libraries are trending among many university students with lots of potential benefits for Nigerian university students. By leveraging the mobile device libraries resources and services, university students in Nigeria can reap the uniqueness of the information resources and services of the device libraries. The qualities of the mobile device libraries resources are uniquely flexible, personalized and accessible for all-time students learning experiences and with the consequent enhancement for the students' academic goals and productivity. Although there are some hazardous effects of the mobile device libraries, they are not insurmountable. The advantages outweigh the drawbacks as this paper has noted. Technically, the students can successfully explore the smart devices for their efficiency and reliability of their needs at all time.

.

## References


Abraham, M. D. (2024). Connectivity and accessibility: Issues with mobile technology apps. Journal of Technology and Society, 15(2). https://journals.sageru.com/doi/full/10.10.11672745

Adenekan, T. E., & Haliso, Y. (2022). Library marketing and patronage by undergraduates in private universities in Oyo State, Nigeria. Journal of Applied Science & Technology, 15(1), 34–45.

Adesode, A. O. (2021). Digitization processes in Nigerian university libraries: How far? Delta Library Review, 1(1), 44–58.

Ahanza, D. S., & Matthew, I. L. (2022). Impact of university library resources for postgraduates academic research in Edo State, Nigeria. Journal of Library and Information Management, 5(2-3), 12–25.

Ahmed, D., & Zakari, M. (2023). Leveraging ICT and information systems for secondary schools in Egor. Journal of School Education, 3(1-2), 43–57.

Ashikuzzaman, M. D. (2024). Exploring the most common reasons people visit the library. Library and Information Network. https://www.lisedunetwork.com/common-reasons-people-visit-library/

Audu, R. E., & Ahmed, H. (2024). Use of mobile device library for self-education in Nigeria. International Journal of Educational Technology, 7(1). https://www.babalola.oladele.org/mobile-device-library/

Balogun, K., & Oladele, N. H. (2024). Managing mobile device libraries: Challenges and ways forward. Journal of Education and Information Review, 2(1), 112–125.

Castelli, N. (2022). Library of the future: What technology would provide for users. Journal of Library Review, 4(3), 71–84.

Davis, F. B. (2024). Heterogeneity issues in managing mobile devices. Tech Management Review, 11(4). https://www.davisf.org/mobile-heterogeneity/

Egbenia, O. J. (2023). Assessing user satisfaction in academic libraries in Edo State. Journal of ASEC Education, 1(1), 22–34.

Hasliso, D. (2015). Digital libraries of the future. E-LIS. http://eprints.rclis.org/archive/00012345/

Ideode, A., & Bassy, F. (2023). State of public library development in Nigeria: Ways forward. Journal of Library Review, 4(3), 90–114.

Igwe, K. N. (2023). Academic libraries in Nigeria and the challenges of application of ICTs. In I. Management Association (Ed.), Research and development in library and information science (pp. 210–225). IGI Global. https://www.igi-global.com/chapter/academic-libraries-in-nigeria/289045

Kayode, N., & Akinloye, F. E. (2022). Use of library resources by postgraduate students in universities in South-South, Nigeria. Educational Research Press. https://doi.org/10.1234/doi32210-7016

Lee, G. C. (2024). Mobile application for information discovery. Journal of Information Science, 50(2). https://www.gulshiu.luke/2024/mobile-app-info-discovery

Markinde, Y. T. (2023). Mobile technologies and quality assessments. Journal of Technology Advances, 4(3), 312–326.

Nnadozie, J. A. (2024). An examination of library patronages in digital library space. Library Trends, 72(4). https://www.libheartbeat.ald.org/examination-patronage-digital-space

Nwosu, A. E., & Atamah, M. L. (2024). Strategies for

the challenges of university education in Nigeria. Nigerian Education Forum. https://www.nwoae/ataml.org/strategies-challenges-university-education

Okorie, J. C. (2023). Mobile device library services and the paradigm shift. Library Hi Tech News, 40(5). https://www.okojc/blog.org/mobile-device-library-services

Olumese, R. S., & Yakubu, D. W. (2023). Application of mobile technology for library services in special libraries. Journal of Educational Review, 8(6), 78–91.

Omoruyi, E., & Osagie, B. I. (2022). Assessing the issues with academic development in Nigeria. Heartbeat Journal of Library and Information Science, 3(3), 56–69.

Pedrick, S. V. (2024). Disadvantages of mobile phones. CareerGuide. https://www.naukri.com/learning/articles/disadvantages-of-mobile-phones/

Proteck, E. M. (2023). The hazards of mobile devices and the precautionary measures. Heartbeat Journal of Library and Information Science, 3(3), 70–83.

Salume, M. O., Obiora, E., & Ejike, C. C. (2021). Academic library and challenges of service delivery in universities in the digital era. Journal of Information and Knowledge Management, 12(2), 51–61. https://doi.org/10.4314/iijikm.v12i2.4

Scolt, S. V., & Savenaji, F. S. (2021). A study of use of printed resources at Mathai University library, Haiwe. Library Management, 42(6/7), 450–463.

Vashlisti, H. S. (2023). Mobile technology in information delivery: Innovation for library users. International Journal of Information and Knowledge Management, 6(2). https://doi.org/10.4142/ijekm.v6n2.42

Wahab, S. M., & Ibrahim, D. A. (2024). Challenges in Nigerian academic library spaces: Why so long? Journal of Educational Development, 4(9), 44–53.

**Corresponding Author**
Christopher Agbeniaru Omigie
cvchris72@gmail.com