

Role of Mobile Information Services for Achieving Sustainable Development Goals in Libraries of Assam

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Abstract

The purpose of this research is to explore the use of mobile information services in libraries across Assam (India) to promote sustainable development goals. The study aims to accomplish several objectives, including identifying the various types of mobile information services available in libraries, evaluating their readiness to adopt these services, analyzing the potential benefits of these services in promoting literacy and knowledge dissemination, and identifying challenges faced in implementing them. The study's results showed that e-resource access is the most widely available mobile information service in the surveyed libraries, but other services such as mobile catalogue access, account management, and digital library services are less available. Despite this, the majority of library users actively use these services, indicating a growing demand.

Keywords: Mobile Information Services, Sustainable Development Goals

1. Introduction

Libraries play a crucial role in the development of any society. They are not just repositories of knowledge but also serve as access points for information dissemination. Gayan, Jhamb, and Devi (2016) noted that libraries have continuously taken on the responsibility of integrating new technologies, modern equipment, and automating services to better their services and make them more accessible and of high quality for their users. According to Mahanta (2020), libraries that use ICT technology offer several advantages to their users. These include quick and convenient access to information, the ability for users to access library resources remotely, 24/7 access, access to a vast amount of information from various sources, flexibility in how individuals can use and adapt the information to their needs, and simplified reformatting and merging of data from multiple sources. As time passes, technology continues to evolve, and it has become increasingly necessary to incorporate technological tools in libraries in order to provide users with more efficient service while minimizing their time spent (Brahma and Singh, 2013).

With the advent of mobile technology, mobile information services have emerged as a powerful tool for achieving sustainable development goals in libraries. In 2017, the United Nations unveiled the Sustainable Development Goals (SDGs) as a worldwide framework. Comprising 17 interlinked aims, these goals delineate



precise targets and indicators, functioning as standards to gauge advancements toward a sustainable future. Libraries are essential in promoting education, diversity, economic development, gender parity, community involvement, fairness, and international collaboration, thereby advancing the Sustainable Development Goals and building a fairer and more sustainable world for everyone.

Hinz (2023), mentioned that one of IFLA's objectives is to increase public awareness of the SDGs, including among non-library users. IFLA also seeks to educate library staff about the SDGs so that libraries can effectively embody and work towards achieving these goals. Hijji and Hinaai (2023) emphasize the valuable contribution of libraries and professional library organizations towards attaining the UN SDGs 2030. Their contribution involves aligning services and programs with the goals, exchanging knowledge and best practices, establishing partnerships, and gathering and monitoring data. These endeavors are instrumental in promoting a more sustainable, fair, and prosperous global community.

Library and information services play a crucial role in supporting the achievement of the Sustainable Development Goals (Omona, 2020). They are vital for national development, serving as facilitators and integral elements in the pursuit of the SDGs. In the state of Assam, the role of mobile information services in libraries has become increasingly important, especially in the context of achieving the sustainable development goals. In this article, we will explore the role of mobile information services in libraries of Assam for achieving sustainable development goals.

1.1. Mobile Information Service in Libraries and Sustainable Development Goals

According to a report by the International Federation of Library Associations and Institutions (IFLA), libraries can leverage mobile technology to provide access to information and promote literacy, education, and lifelong learning, thereby contributing to SDGs such as quality education, reduced inequalities, and sustainable communities. For instance, mobile-based library services can help reach underserved populations, such as rural communities and refugees, who may have limited access to physical libraries. Mobile library services can provide access to e-books, online databases, and other digital resources, enabling users to acquire new skills and knowledge. Moreover, mobile-based library services can also promote environmental sustainability by reducing the need for physical infrastructure and transportation. As per the IFLA report, "Mobile library services can be an effective way to reach underserved communities, reduce inequalities, and promote environmental sustainability" (IFLA, 2019). Overall, mobile information services can serve as a valuable tool for libraries to advance sustainable development goals and promote equitable access to information and education.

2. Scope and Significance of the study

The scope of this study is to explore the role of mobile information services in libraries of Assam for achieving sustainable development goals. The study focuses on the libraries in Assam and their current use of mobile information services for achieving sustainable development goals. The study examines the challenges faced by libraries in Assam in implementing mobile information services for sustainable

development and identifies best practices for overcoming these challenges. The study also explores the impact of mobile information services on the sustainability of libraries in Assam and the role of librarians in the successful implementation of these services. The study is limited to libraries in Assam and will not include other regions in India or other countries.

3. Review of Related Literatures

Singha and Das (2024) put forward a proposal to redefine the role of libraries. Their vision is to view libraries as dynamic hubs of knowledge that are constantly evolving and adapting, rather than just static repositories. They believe that incorporating eco-consciousness into user-centered design is not a compromise, but a natural step towards a future where libraries represent progress, balance, and positive change.

Das and Singha (2023) explores the challenges associated with transitioning to cloud-based solutions, such as concerns regarding data protection, connectivity limitations, and the need for staff training. The study examines how cloud computing is being adopted and implemented in academic libraries situated in Assam. The main emphasis of the study revolves around three prominent cloud-based library management systems - Koha, DSpace, and cloud-hosted library websites. They have found that libraries that have transformed to cloud based systems, such as KOHA, witnesses notable enhancements in accessibility, operational efficiency and user satisfaction.

Paul, Aldarathi and Sinha (2022) revealed that libraries have expanded their digital information services and transitioned towards providing digital content and services to their users. Across all categories, there was a favourable attitude and perception towards the benefits of utilizing Digital Reading Devices (DRDs) during the Covid-19 pandemic period. The authors aimed to investigate the usage and awareness of DRDs, as well as the impact of DRDs on library utilization.

In the research paper George and Onyema (2022) explores the relationship between Digital Library services and Sustainable Education, covering the definition of digital library services, the platforms utilized for delivering them, the contribution of libraries to enhancing education quality, the competencies required by librarians to provide digital library services, and the anticipated future directions in digital service provision.

The objective of Omona's (2020) study is to investigate the potential role of library and information services in supporting the achievement of Sustainable Development Goals (SDGs) as described in Uganda Vision 2040. The researcher found that library and information services play a crucial role in fostering human resource development by providing necessary training in business, entrepreneurship, technology and social competencies, all of which are integral for achieving socio economic progress.

4. Research Gap

Although mobile information services have become increasingly popular in libraries around the world for achieving sustainable development goals, there is a dearth of research on the role of mobile information services in libraries of Assam. Despite the fact that Assam is a rapidly developing state in India, with a

growing number of libraries, there is a lack of understanding of how mobile information services can be effectively integrated into library services to achieve sustainable development goals. Therefore, this study aims to bridge the research gap by exploring the role of mobile information services in libraries of Assam for achieving sustainable development goals.

5. Objectives

1. To identify the different types of mobile information services in the libraries under studies.
2. To assess the current state of libraries in their readiness to adopt mobile information services for sustainable development.
3. To analyze the potential benefits of integrating mobile information services in libraries for promoting literacy and knowledge dissemination.
4. To identify the challenges and barriers faced by libraries in Assam in implementing mobile information services for sustainable development.

6. Methodology

This study employed a survey research method. As part of the research, five libraries from different categories such as school library, State Open University Library, central university library, special library and public library were selected. These libraries include Saint Francis de Sales School Library, K K Handique State Open University Library, Tezpur University Library, Asian Institute of Nursing Library, and Barpeta District Library. To collect data, a structured questionnaire was prepared and distributed among the library professionals, and M S Excel was used as a tool for statistical analysis.

7. Data Analysis and Interpretation

7.1. Identification of different types of mobile information services

Table 1: Types of Mobile Information Services available in the Library

What types of mobile information services are currently available in your library?	Saint Francis De Sales School library	K K Handique State open university	Tezpur university	Asian Institute of nursing education	Barpeta district library
Mobile Catalogue Access	Yes	No	Yes	No	No
E-resources Access	Yes	No	Yes	Yes	No
Account Management	No	No	Yes	No	Yes
Digital Library Services	No	Yes	Yes	No	No

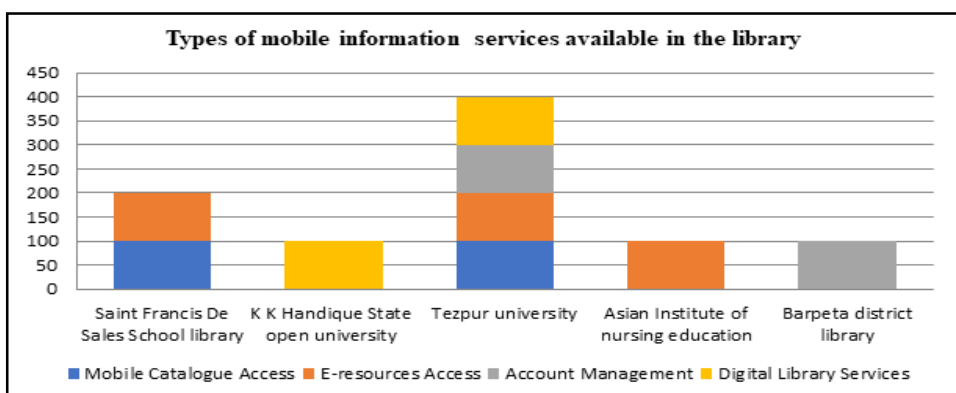


Fig 1: Types of Mobile Information Services available in the Library

Table 1 indicates that the most available (common) mobile information service in the libraries is the e resource access. According to the data, only 2 libraries have Mobile catalogue access, 2 libraries have account management and 2 libraries have digital library services.

Table 2: Frequency of mobile services accessed by the users

How frequently are these mobile information services accessed by library users?	Saint Francis De Sales School library	K K Handique State open university	Tezpur university	Asian Institute of nursing education	Barpeta district library
Daily	Yes	No	Yes	No	No
Several times a week	Yes	No	Yes	Yes	No
Occasionally	No	Yes	Yes	No	Yes
Rarely	No	No	No	No	No
Never	No	No	No	No	No

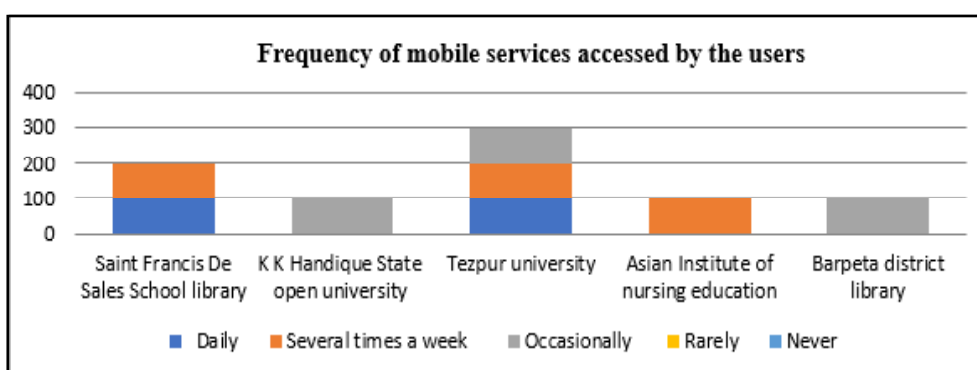


Fig 2: Frequency of mobile services accessed by the users

According to the data presented in Table 2, it appears that the majority of users are accessing the mobile information services provided by libraries. Out of the 5 libraries surveyed, it was found that users at 2 of the libraries utilize these services on a daily basis. Additionally, it was observed that there is no library among the 5 where users never use mobile library services.

7.2. Assessment of library readiness to adopt mobile information services for sustainable development

Table 3: Dedicated resources for implementing mobile information services

Does your library have dedicated resources for implementing mobile information services?	Saint Francis De Sales School library	K K Handique State open university	Tezpur university	Asian Institute of nursing education	Barpeta district library
Yes/ No	Yes	No	Yes	Yes	No

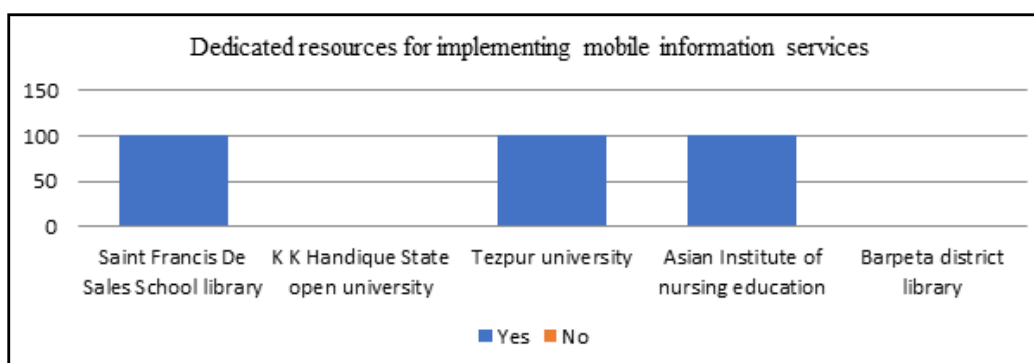


Fig 3: Dedicated resources for implementing mobile information services

Table 3 indicates that among the 5 selected libraries, only 3 libraries have dedicated resources for implementing mobile information services whereas 2 libraries do not have any dedicated resources.

Table 4: Types of dedicated resources available for implementing mobile information services

If yes, what are the dedicated resources available for implementing mobile information services?	Saint Francis De Sales School library	K K Handique State open university	Tezpur university	Asian Institute of nursing education	Barpeta district library
Staff	Yes	No	Yes	Yes	No
Budget	No	No	Yes	No	No
Technology	Yes	No	Yes	Yes	No
Infrastructure	Yes	No	Yes	Yes	No

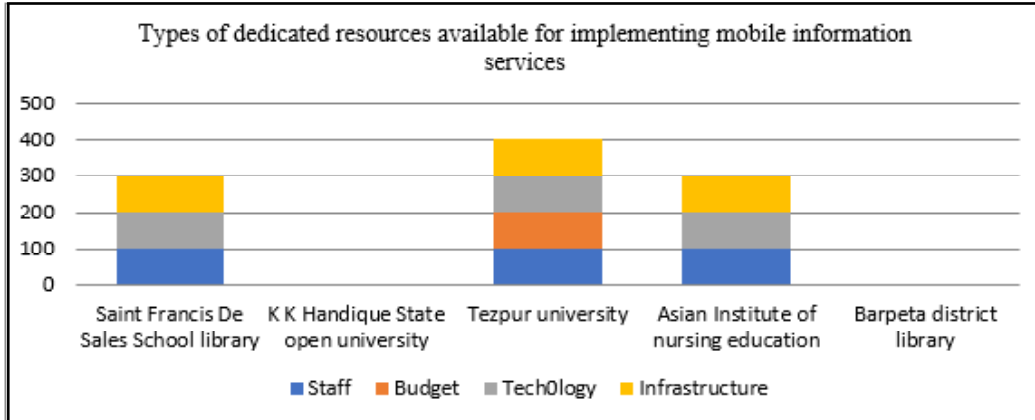


Fig 4: Types of dedicated resources available for implementing mobile information services

Based on the findings presented in Table 4, it can be observed that three libraries have allocated resources specifically for the implementation of mobile information services. These resources include staff, technology, and infrastructure, all of which are available in all three libraries. However, only one library has the budget necessary to support the implementation of mobile information services.

Table 5: Accessibility and inclusivity of mobile information services for diverse user groups

How does your library ensure the accessibility and inclusivity of mobile information services for diverse user groups, including marginalized communities?	Saint Francis De Sales School library	K K Handique State open university	Tezpur university	Asian Institute of nursing	Barpeta district library
Offering alternative formats	No	No	No	Yes	No
Providing assistive technologies	Yes	Yes	Yes	Yes	No
Offering tailored training program	No	No	Yes	Yes	No
Partnering with community organizations	No	Yes	Yes	No	Yes
Designing user friendly interfaces	Yes	No	Yes	No	No

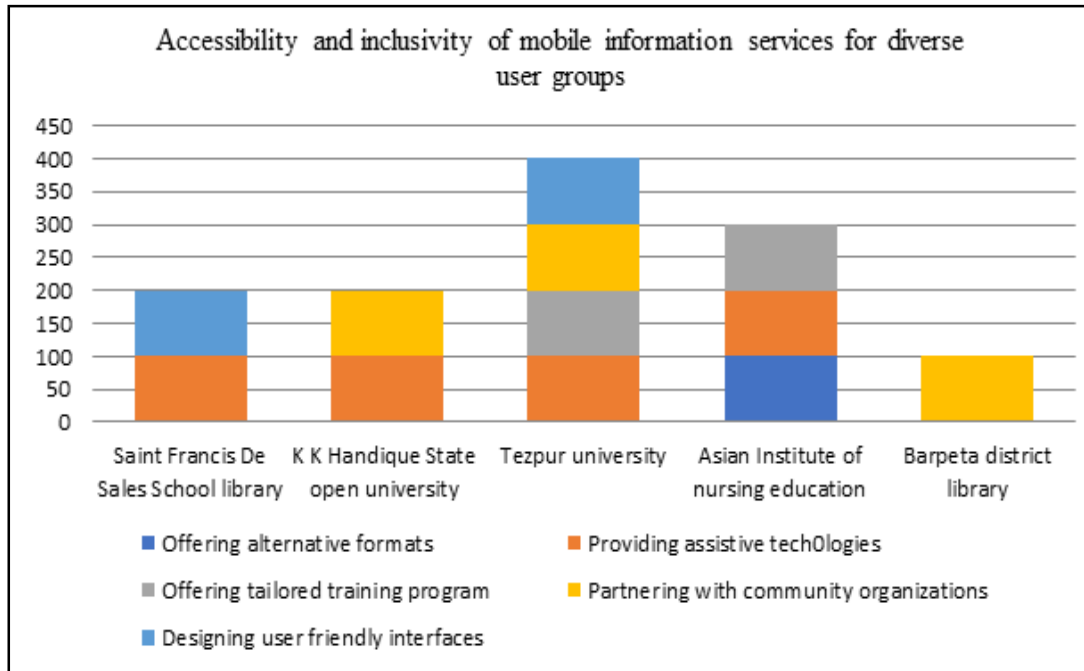


Fig 5: Accessibility and inclusivity of mobile information services for diverse user groups

Table 5 indicates that, there seem to be different approaches among libraries when it comes to making mobile information services accessible and inclusive. Some libraries prioritize the provision of assistive technologies, tailored training programs, and partnerships with community organizations to ensure accessibility and inclusivity. However, there are also other libraries that are not as proactive in these areas and lag behind in these efforts.

Table 6: Existing policies or guidelines in place regarding the adoption and management of mobile information services

Name of the libraries	Are there any Existing Policies and Guidelines in your library?
Saint Francis De Sales School library	No
K K Handique State open university	No
Tezpur university	No
Asian Institute of nursing education	No
Barpeta district library	No

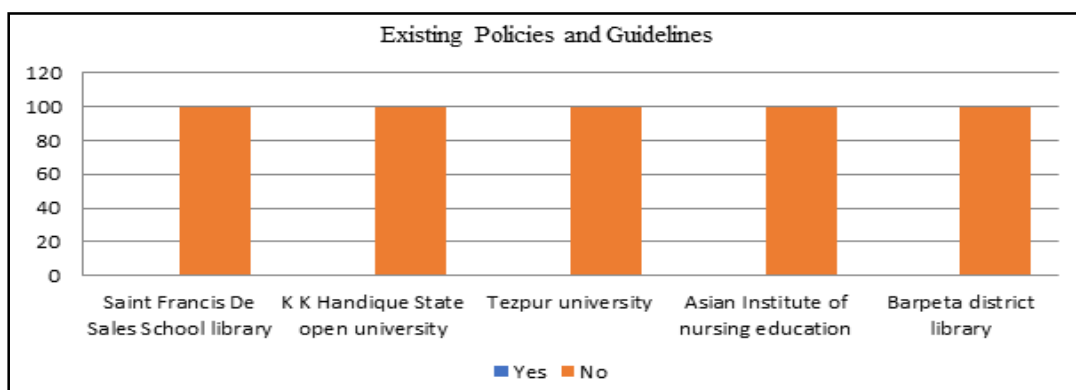


Fig 6: Existing policies or guidelines in place regarding the adoption and management of mobile information services

Table 6 indicates that there are no existing policies or guidelines for the adoption and management of mobile information services for sustainable development in any one of the libraries under study.

7.3. Analysis on benefits of mobile information services in libraries

Table 7: Mobile information services to promote literacy

In what ways do you think integrating mobile information services can promote literacy among library users?	Saint Francis De Sales School library	K K Handique State open university	Tezpur university	Asian Institute of nursing education	Barpeta district library
Accessibility	Yes	Yes	Yes	Yes	No
Convenient	Yes	Yes	Yes	No	No
Diverse content	Yes	No	Yes	Yes	No
Interactive learning	Yes	No	Yes	Yes	No
Personalization	Yes	No	Yes	No	Yes

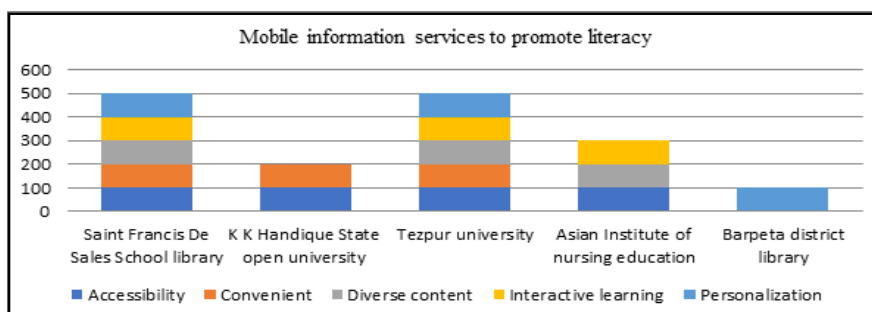


Fig 7: Mobile information services to promote literacy

According to Table 7, both Saint Francis De Sales School library and Tezpur University library believe that promoting literacy among library users can be achieved through the integration of accessibility, convenience, diverse content, interactive learning, and personalization in mobile information services. Similarly, K K Handique State Open University agrees with the importance of accessibility and convenience. Meanwhile, Asian Institute of Nursing Education emphasizes the significance of accessibility, diverse content, and interactive learning. On the other hand, Barpeta District Library suggests that personalization can be the key to integrating mobile information services to promote literacy among library users.

Table 8: Role of mobile information services in disseminating knowledge and information to a wider audience

How do you perceive the role of mobile information services in disseminating knowledge and information to a wider audience?	Saint Francis De Sales School library	K K Handique State open university	Tezpur university	Asian Institute of nursing education	Barpeta district library
Multimedia content	Yes	No	Yes	Yes	No
Real time update	Yes	Yes	No	Yes	No
Global reach	Yes	Yes	Yes	No	No
Collaborative learning	Yes	No	Yes	Yes	Yes
Inclusivity	No	Yes	Yes	No	No

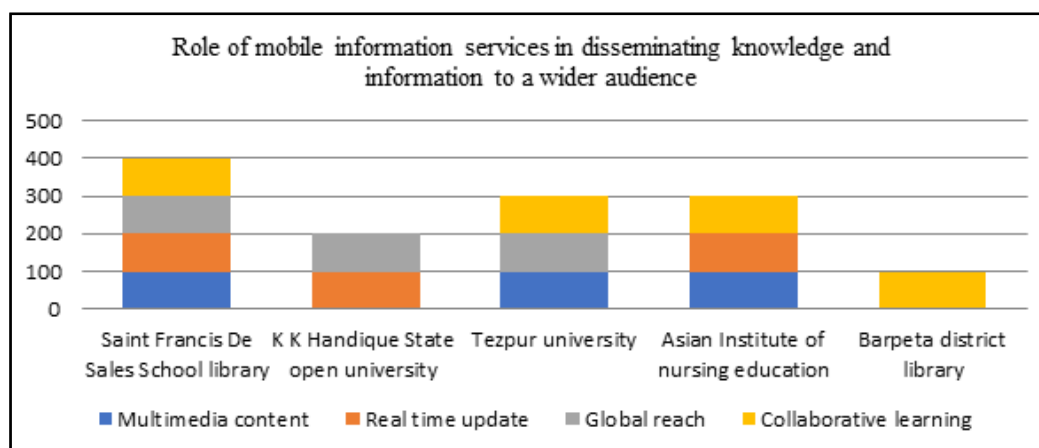


Fig 8: Role of mobile information services in disseminating knowledge and information to a wider audience

According to Table 8, it has been found that the SFS library employs various techniques such as the use of multimedia content, real-time updates, global reach, and collaborative learning in order to disseminate knowledge and information to a wider audience. On the other hand, K K Handique State Open University focuses on employing real-time updates, global reach, and inclusivity. Tezpur University, on the other hand,

utilizes multimedia content, global reach, collaborative learning, and inclusivity in its approach. Similarly, the Asian Institute of Nursing Education also employs multimedia content, real-time updates, and collaborative learning. Lastly, the Barpeta District Library solely focuses on the use of collaborative learning.

7.4. Identification of challenges and barriers faced by libraries in implementing mobile information services for sustainable development

Table 9: Challenges in implementing mobile information services

What challenges do you foresee in implementing mobile information services in your library?	Saint Francis De Sales School library	K K Handique State open university	Tezpur university	Asian Institute of nursing education	Barpeta district library
Technological infrastructure	Yes	Yes	Yes	Yes	Yes
Digital divide	Yes	No	Yes	No	No
Content acquisition and licensing	Yes	No	No	Yes	No
User privacy and data security	Yes	No	No	Yes	No
Staff training and support	Yes	No	No	No	Yes

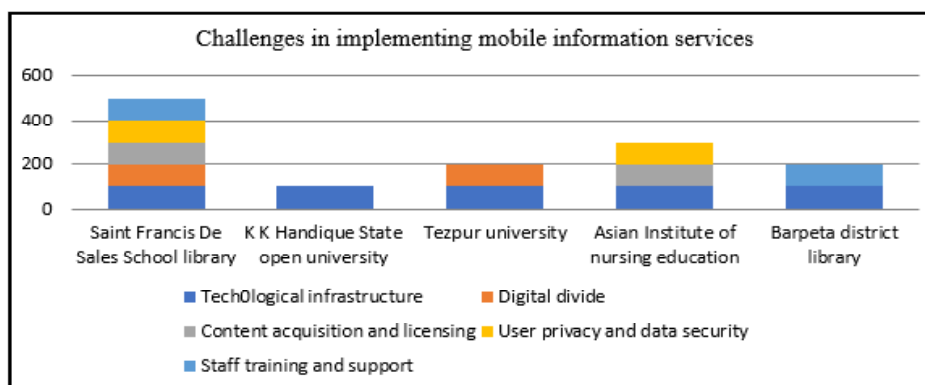


Fig 9: Challenges in implementing mobile information services

Table 9 indicates that the primary obstacle in introducing mobile information services across all five libraries is related to their technological infrastructure. However, the Saint Francis De Sales School library is facing additional challenges such as acquiring and licensing content, ensuring user privacy and data security, bridging the digital divide, and providing adequate training and support for their staff. Likewise, the Tezpur university library is also struggling to bridge the digital divide. On the other hand, the Asian Institute of Nursing Education is encountering challenges in acquiring and licensing content, as well as ensuring user privacy and data security. Finally, staff training and support is another obstacle faced by the Barpeta district library.

Table 10: Barriers or limitations hindering the adoption of mobile information services

Name of the libraries	Are there any specific barriers or limitations hindering the adoption of mobile information services in your library?	
Saint Francis De Sales School library	Yes	
K K Handique State open university		No
Tezpur university	Yes	
Asian Institute of nursing education	Yes	
Barpeta district library		No

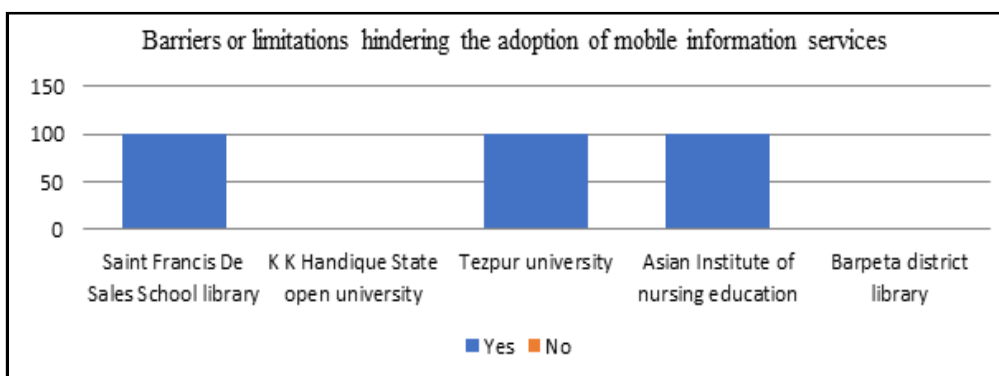


Fig 10: Barriers or limitations hindering the adoption of mobile information services

Table 10 indicates that Saint Francis De Sales School library, Tezpur university library and Asian Institute of nursing education library have barriers or limitations hindering the adoption of mobile information services in your library.

Table 11: Barriers for adopting mobile information services

If yes, what are the barriers or limitations hindering the adoption of mobile information services in your library?	Saint Francis De Sales School library	K K Handique State open university	Tezpur university	Asian Institute of nursing education	Barpeta district library
Limited fund	Yes	No	Yes	Yes	No
Digital literacy gap	No	No	Yes	No	No
Infrastructure challenges	Yes	No	No	Yes	No
Resistance to change	No	No	Yes	No	No
Accessibility barriers	No	No	No	No	No

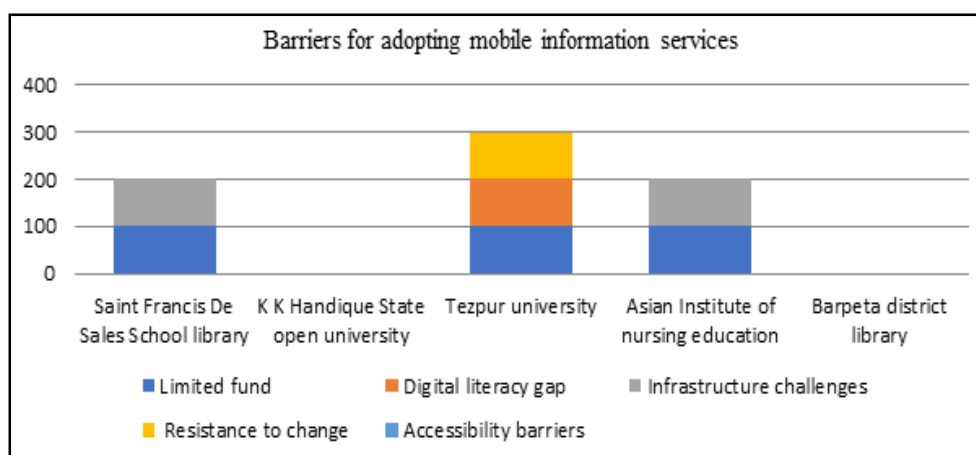


Fig 11: Barriers for adopting mobile information services

Table 11 highlights barriers to adopting mobile information services in libraries. Both Saint Francis De Sales School and Asian Institute of Nursing Education libraries face limited funds and infrastructure challenges. Tezpur University faces limited funds, a digital literacy gap, and resistance to change.

8. Findings and Discussion

The following is an overview of the findings

8.1 Library Services (Tables 1-3):

- ❖ The most common mobile information service is e-resource access, while other services like mobile catalogue access, account management, and digital library services have limited availability.
- ❖ The majority of users across libraries are accessing mobile information services, with daily usage observed in two libraries.
- ❖ All libraries have some resources dedicated to implementing mobile information services, though not all have dedicated budgets.

8.2 Resource Allocation (Table 4):

- ❖ Three libraries have allocated resources, including staff, technology, and infrastructure, for mobile information service implementation.
- ❖ Only one library has the necessary budget to support these services.

8.3 Accessibility and Inclusivity (Table 5):

- ❖ Different libraries have different approaches to accessibility and inclusivity.
- ❖ Some libraries prioritize assistive technologies, tailored training, and community partnerships for accessibility, while others lag in these efforts, potentially hindering inclusivity.

8.4 Policy Framework (Table 6):

- ❖ There are currently no policies or guidelines for the sustainable development of mobile information services across all libraries.

8.5 Promoting Literacy (Table 7):

- ❖ Different libraries emphasize various factors in promoting literacy through mobile information services, including accessibility, convenience, diverse content, interactive learning, personalization.

8.6 Dissemination Strategies (Table 8):

- ❖ Libraries employ various techniques for disseminating knowledge and information, such as multimedia content, real-time updates, global reach, and collaborative learning.

8.7 Challenges in Implementation (Tables 9-11):

- ❖ The primary obstacle across all libraries is the technological infrastructure.
- ❖ Additional challenges include content acquisition, user privacy, bridging the digital divide, and staff training.

9. Discussion

The study findings demonstrate a combination of challenges and strategies related to the implementation of mobile information services within libraries. A notable challenge pertains to the technological infrastructure, which requires substantial enhancements across all libraries. Furthermore, libraries must address concerns regarding content acquisition, user privacy, staff training, and the digital divide. The emphasis on employing diverse dissemination strategies and approaches to promote literacy underscores the importance of tailoring services to effectively meet user needs. Additionally, the absence of policy frameworks highlights the urgent requirement for comprehensive guidelines to ensure the sustainable development of mobile information services in libraries.

Moreover, the study underscores the varied approaches libraries take to promote literacy and knowledge dissemination through mobile services. These include the use of multimedia content, real-time updates, global reach, and collaborative learning, all of which are vital in reaching a wider audience and fostering interactive learning environments. However, the inconsistent adoption of assistive technologies and tailored training programs indicates a need for more inclusive strategies to cater to diverse user groups, particularly marginalized communities. The absence of a unified policy framework further emphasizes the necessity for strategic guidelines to ensure the effective and equitable implementation of mobile information services. By addressing these challenges and leveraging the identified strengths, libraries in Assam can significantly contribute to achieving sustainable development goals, enhancing literacy, and empowering communities through improved access to information.

10. Conclusion

This study highlights the key role of mobile information services in promoting sustainable development goals within libraries across Assam. In order to fully realize the potential of these services, it is essential to

increase financial investment and develop strategic plans that address the challenges faced by libraries. By doing so, libraries can enhance the accessibility, inclusivity, and effectiveness of mobile information services, which can ultimately lead to the empowerment of communities through the dissemination of knowledge and information. Overall, this study emphasizes the need for continued efforts to support and strengthen mobile information services in libraries across Assam, and their essential role in driving sustainable development.

To fully realize the potential of mobile information services, it is essential to increase financial investment and develop strategic plans that address the identified challenges. Libraries should prioritize resource allocation, including budget, staff training, and technology upgrades, to support the seamless implementation of these services. Strengthening partnerships with community organizations and designing user-friendly interfaces are also crucial to broadening the reach and inclusivity of library services. Furthermore, the development of comprehensive policy frameworks will provide a structured approach to the sustainable integration of mobile information services in libraries. Future research should focus on exploring innovative solutions to overcome the technological and financial barriers identified in this study. Investigating the impact of mobile information services on specific user groups, such as marginalized communities and rural populations, will provide deeper insights into their effectiveness in promoting sustainable development. Additionally, longitudinal studies to assess the long-term benefits and challenges of mobile information services in libraries will be valuable for continuous improvement and adaptation of these services. By addressing these areas, future research can contribute significantly to the enhancement of library services and their role in achieving sustainable development goals.

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