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USE OF MOBILE INSTANT MESSAGING APPLICATIONS IN NIGERIAN UNIVERSITY LIBRARIES: CHALLENGES AND STRATEGIES FOR EFFECTIVE READER SERVICES DELIVERY

By

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Abstract
Mobile instant messaging applications (MIMAs) such as WhatsApp, Telegram, and Facebook Messenger are increasingly integrated into library services. This study examines their use in university libraries in South-South Nigeria, focusing on challenges and strategies for enhancing reader services. A mixed-methods design combined questionnaires with interviews involving librarians, heads of libraries, and reader services departments. Findings show that MIMAs support reference queries, current awareness services, and user education. However, librarians face significant challenges, including unreliable electricity, poor internet connectivity, limited technical training, and the absence of institutional policies. Proposed solutions include enhanced ICT infrastructure, a sustainable power supply, ongoing training, and strengthened administrative support. The study contributes contextual evidence on MIMA adoption in resource-constrained academic environments, linking barriers to actionable strategies and extending perspectives on technology use in higher education. Practical implications highlight the need for librarians to exploit MIMAs for responsiveness, administrators to strengthen infrastructure and policy support, and policymakers to integrate mobile technologies into educational strategies.

Keywords: ***Mobile instant messaging, reader services, university libraries, Nigeria, challenges, strategies***

Introduction

The environment of library services has changed dramatically over the last two decades, owing largely to the widespread adoption of digital and mobile technologies. University libraries, which were formerly primarily reliant on physical venues and print-based resources, are now incorporating mobile platforms to fulfil the changing demands of students and academics in real time (Ezeani & Ezeani, 2023). Mobile instant messaging applications (MIMAs) like WhatsApp, Telegram, and Facebook Messenger have developed as effective tools for providing reader services because they enable instant, interactive, and multimedia-based communication (Ofua & Ngwuchukwu, 2025). These applications enable librarians to reply quickly to information queries, share updates on library resources, and communicate with patrons in ways that traditional service models cannot (Kerkar, Dhuri, & Lobo, 2021).

MIMAs have gained popularity in academic settings around the world because of their accessibility, low cost, and capacity to enable collaborative learning (Tang & Hew, 2022). In Nigeria, where infrastructural constraints such as unpredictable power supply and insufficient ICT resources persist, MIMAs provide a flexible alternative that ensures service continuity (Ubogu, 2025). For students and researchers in South-South Nigeria, where digital differences persist, mobile platforms offer an opportunity to bridge communication gaps between librarians and users. This is consistent with Ranganathan's Fourth Law of Library Science, which emphasises saving users time by providing quick access to information.

Studies undertaken during and after the COVID-19 epidemic emphasised the need for mobile messaging platforms in maintaining communication between librarians and clients while

physical access to libraries was limited (Dookhani, Asnafi, Hariri, & Nooshinfard, 2021). However, obstacles remain, such as inadequate librarian training, inconsistent internet access, and a lack of institutional regulations governing the use of mobile platforms in service delivery (Soyemi & Awoyemi, 2025).

Despite the extensive usage of MIMAs in everyday communication, there has been little empirical research on their application in Nigerian university libraries, particularly in the South-South region. Most existing research focuses on general ICT adoption but does not particularly investigate how MIMAs are used to improve reader services or what measures may be employed to alleviate the obstacles associated with their use (Ezeani & Ezeani, 2023; Ofua & Ngwuchukwu, 2025). This study explores the extent to which librarians in South-South Nigerian institutions use MIMAs, discusses the challenges they confront, and recommends measures for better reader service delivery.

Literature Review

1. Mobile Instant Messaging and Library Services.

   Mobile instant messaging apps (MIMAs) are transforming academic libraries by providing real-time, low-cost, and interactive services. Kerkar, Dhuri, and Lobo (2021) discovered that WhatsApp services improved librarians' ability to communicate with users during the COVID-19 pandemic. Similarly, Dookhani, Asnafi, Hariri, and Nooshinfard (2021) found that MIMAs promote user engagement and access to library resources in higher education institutions.

2. Implementation of MIMAs in Nigerian University Libraries

In Nigeria, MIMAs have been critical to maintaining contact between librarians and users. According to Ofua and Ngwuchukwu (2025), WhatsApp and Telegram are commonly used for alert distribution, query response, and research help. Ubogu (2025) emphasised that MIMAs work as "libraries in the palm," allowing customers to access services despite infrastructure difficulties.

2. Advantages of MIMAs in Reader Services

MIMAs facilitate rapid communication, multimedia support, and collaborative learning. Tang and Hew (2022) found that mobile messaging improves both peer-to-peer and librarian-to-user collaborations. These benefits have a direct impact on service responsiveness and user satisfaction in Nigerian university libraries.

Challenges in Using MIMA

Despite these advantages, difficulties remain. Poor internet access, unpredictable power supply, and poor ICT infrastructure continue to be hurdles to broad adoption (Ubogu, 2025). Many librarians lack advanced digital literacy, and institutional regulations governing professional use are missing (Soyemi & Awoyemi, 2025).

Strategies for Effective Deployment.

Scholars advocate investing in ICT infrastructure, regular training, and strong administrative support to improve MIMA-based services (Ofua & Ngwuchukwu, 2025; Soyemi & Awoyemi, 2025). Tang and Hew (2022) also advocate for organised policy frameworks that balance accessibility, privacy, and ethical requirements.

Most Nigerian studies focus on ICT adoption in general, but do not look specifically at MIMAs for reader services in Southern Nigeria. This paper fills this gap by analysing both difficulties and practical options for successful deployment.

Methodology

This study used a mixed-methods research methodology, integrating quantitative and qualitative methodologies, to gain a thorough understanding of the use of mobile instant messaging applications (MIMAs) in university libraries in South-South Nigeria. The quantitative component used a descriptive survey approach, whilst the qualitative component used semi-structured interviews.

The population for this study comprised librarians from federal and state university libraries in South-South Nigeria. Respondents were selected using stratified random sampling to ensure representation from both federal and state organisations. In total, 284 librarians participated, with 121 from federal universities and 163 from state universities.

Two instruments were used for data collection.

Questionnaire: A standardised questionnaire with a four-point Likert scale (Strongly Agree = 4, Agree = 3, Disagree = 2, Strongly Disagree = 1) was distributed to the librarians. The questionnaire addressed two primary topics: barriers to the use of MIMAs and strategies for improving their effectiveness.

Interview Guide: We conducted semi-structured interviews with university library heads and reader services heads to validate and supplement the survey results. While the

questionnaire was validated by three experts, two from the department of library and information science and one from measurement and evaluation in the faculty of Education, and a pilot test with 20 librarians from outside the study area yielded a Cronbach's Alpha coefficient of 0.87, indicating high internal consistency.

The study used descriptive statistics (mean and standard deviation) to answer research questions and independent samples t-tests to test hypotheses at a 0.05 level of significance. A mean score of 2.50 or higher indicated agreement, while a score below 2.50 indicated disagreement. Qualitative interview responses were analysed thematically and integrated into the discussion for context.

Results and Discussion of Findings

Research Question 1 (RQ1):

What are the challenges hindering the use of Mobile Instant Messaging Applications for readers' service delivery by university libraries in South-South, Nigeria?

Table 1: Mean and Standard Deviation of Respondents on the Challenges Hindering the Use of Mobile Instant Messaging Applications for Readers' Service Delivery by University Libraries in South-South, Nigeria

S/N	Item Statement	School Type		Overall Mean	Remark
		Federal Mean (SD)	State Mean (SD)	Mean	
1	Epileptic power supply in the libraries	3.02 (.90)	3.20 (.83)	3.12	
2	Poor attitude of librarians towards work and users	3.26 (.94)	3.32 (.97)	3.29	
3	Insufficient ICT infrastructure in university libraries	3.34 (.84)	3.28 (.86)	3.31	

S/N	Item Statement	School Type	Overall Mean	Remark
4	Bureaucratic processes are delaying implementation after a decision to adopt MIM	2.98 (1.00)	3.25 (.90)	3.13
5	Poor internet bandwidth to drive the implementation of MIM in libraries	3.28 (.83)	3.23 (.86)	3.25
6	Lack of IT experts to implement mobile instant tools in libraries	2.42 (.85)	2.33 (.84)	2.37
7	Poor competencies in the use of MIM in libraries	3.05 (.89)	3.03 (.98)	3.04
8	Inadequate funding in the library	3.11 (.93)	3.07 (1.02)	3.08
9	Security issues	3.02 (.87)	3.17 (.83)	3.11
10	Technophobia	3.18 (.95)	3.37 (.90)	3.29
11	Poor technical support in using MIM in libraries	2.94 (.88)	2.71 (.87)	2.81
	Cluster Mean	3.05 (.32)	3.09 (.34)	3.07

The results show that respondents agreed that 10 out of 11 items represented challenges hindering the use of MIMAs in university libraries. Only item 6 (lack of IT experts) was disagreed upon. Challenges include epileptic power supply, poor attitude of librarians, insufficient ICT infrastructure, poor internet bandwidth, technophobia, and inadequate funding. The relatively low standard deviations (.84–.98) suggest homogeneity in responses.

Hypothesis One (H01):

There is no significant difference in the mean response of librarians in federal and state universities on the challenges hindering the use of Mobile Instant Messaging Applications for readers' service delivery by university libraries in South-South, Nigeria.

Table 2: Independent t-Test on the Challenges Hindering the Use of MIMAs in Federal and State Universities

School Type	N	Mean	SD	Df	t-value	P
Federal	121	3.05	.32	282	-0.843	.400
State	163	3.09	.34			

The result shows no significant difference between federal and state university librarians ($t(282) = -0.843$, $p > .05$). This indicates that challenges are common across both federal and state universities.

The findings confirm that systemic infrastructural issues—such as erratic power supply, insufficient ICT facilities, and poor internet connectivity—are the primary barriers to MIMA adoption. These findings align with Ubogu (2025), who emphasised that infrastructural instability continues to undermine ICT-driven services in Nigerian universities. Furthermore, technophobia and poor attitudes reflect a need for continuous training and cultural change, as highlighted by Soyemi and Awoyemi (2025).

The findings from the qualitative data align closely with the quantitative data regarding the challenges hindering the use of mobile instant messaging applications for readers' service delivery by university libraries in South-South Nigeria. The interviews reveal a strong consensus among respondents regarding the various obstacles that hinder the effective implementation of these applications. Librarians identified several key challenges. For example, one librarian stated, "The most important problem is epileptic power supply in the library (RESP1)." Another respondent noted, "We face issues with poor internet bandwidth, which disrupts our communication (RESP2)." A different librarian mentioned, "Insufficient ICT infrastructure in the university library makes it difficult to utilise these applications effectively (RESP3)." Additionally, one librarian remarked, "The poor attitude of librarians towards work can hinder the adoption of mobile instant messaging tools (RESP4)." Lastly, another respondent highlighted, "Bureaucratic processes delay implementation after a decision to adopt mobile instant messaging applications (RESP5)." Therefore, the responses underscore that these challenges significantly impact the ability of university libraries to deliver effective reader services through mobile instant messaging applications. Addressing these obstacles is crucial for improving service delivery and enhancing user engagement in library settings.

Research Question 2 (RQ2):

What are the strategies to enhance the use of Mobile Instant Messaging Applications for readers' service delivery by university libraries in South-South, Nigeria?

Table 3: Mean and Standard Deviation of Respondents on Strategies to Enhance the Use of MIMAs

S/N	Item Statement	Federal Mean (SD)	State Mean (SD)	Overall Mean	SD Remark
1	Provision of adequate power supply	3.15 (.92)	2.98 (1.01)	3.04	.97 Agree
2	Development of a positive attitude of librarians towards work and users	3.19 (.85)	3.18 (.81)	3.19	.83 Agree
3	Provision of sufficient ICT infrastructure in the university libraries	3.52 (.70)	3.35 (.72)	3.42	.71 Agree
4	Prompt implementation of MIM	3.26 (.98)	2.99 (.98)	3.10	.99 Agree
5	Provision of strong internet bandwidth	3.24 (.96)	3.26 (.89)	3.25	.92 Agree
6	Employment of IT experts	3.35 (.79)	3.21 (.81)	3.27	.80 Agree
7	Imbibing competencies in the use of MIMAs	3.10 (.71)	3.20 (.73)	3.15	.72 Agree
8	Adequate funding for MIMA maintenance	3.33 (.71)	3.33 (.75)	3.33	.74 Agree
9	Provision of adequate security	3.31 (.69)	3.42 (.69)	3.37	.69 Agree
10	Confidence in using technology	3.17 (.79)	3.10 (.81)	3.13	.80 Agree
11	Adequate technical support	3.27 (.76)	3.12 (.80)	3.19	.79 Agree
	Cluster Mean	3.26 (.34)	3.20 (.32)	3.22	.33

Interpretation:

Respondents agreed that all 11 items were valid strategies. These include the provision of ICT infrastructure, improved internet bandwidth, employment of IT experts, adequate funding, and strengthening security. The narrow SD range (.69–.99) indicates consistent responses.

Hypothesis Two (H02):

There is no significant difference in the mean response of librarians in federal and state universities on the strategies to enhance the use of MIMAs for readers' service delivery by university libraries in South-South, Nigeria.

Table 4: Independent t-Test on Strategies to Enhance MIMA Use

School Type	N	Mean	SD	Df	t-value	P
Federal	121	3.26	.34	282	1.699	.090
State	163	3.20	.32			

Interpretation:

The results show no significant difference between the two groups ($t(282) = 1.699$, $p > .05$). Thus, librarians across federal and state universities share similar perspectives on strategies for effective adoption.

Discussion (RQ2):

The strategies identified reflect practical solutions to infrastructural and attitudinal barriers. These results align with recommendations by Tang and Hew (2022), who argued for strong ICT infrastructure and librarian training as drivers of effective technology adoption. Similarly, Ofua

and Ngwuchukwu (2025) emphasised the importance of continuous funding and technical support in sustaining MIMA use.

The findings from the qualitative data align closely with the quantitative data regarding the strategies to enhance the use of mobile instant messaging applications for readers' service delivery by university libraries in South-South Nigeria. The interviews indicate a strong consensus among respondents about various strategies that can improve the effectiveness of these applications in library services. Librarians highlighted several key strategies. For example, one librarian stated, "Provision of adequate power supply is essential for ensuring consistent access to these applications (RESP1)." Another respondent noted, "Developing a positive attitude among librarians towards their work and users is crucial for effective implementation (RESP2)." A different librarian mentioned, "We need to provide sufficient ICT infrastructure in the university libraries to support the use of mobile messaging tools (RESP3)." Additionally, one librarian remarked, "Prompt implementation of mobile instant messaging applications is necessary to keep up with user needs (RESP4)." Lastly, another respondent emphasised, "Employing IT experts to implement mobile messaging tools in libraries will enhance our capabilities significantly (RESP5)." Therefore, the responses underscore that implementing these strategies is vital for enhancing the use of mobile instant messaging applications in university libraries, ultimately leading to improved reader service delivery and user engagement.

Conclusion

This study looked at the use of MIMAs for reader services in South-South Nigerian university libraries. The findings revealed that, while MIMAs have significant potential to improve communication and service responsiveness, they are hampered by infrastructural, technological, and attitudinal barriers. The lack of significant disparities across federal and state colleges indicates that these difficulties are widespread and systemic. The study suggested practical methods such as reliable power, strong internet access, ICT infrastructure, sufficient budget, librarian training, and policy frameworks. To maximise the potential of MIMAs, librarians, administrators, and policymakers must work together to implement these methods. Finally, tackling these difficulties will improve not only the efficacy of Nigerian university libraries but also their relevance in the digital information economy.

RECOMMENDATIONS

Based on the study's findings, numerous recommendations are made to help policymakers, university administrators, and librarians optimise the use of mobile instant messaging applications (MIMAs) for effective library service delivery in South-South Nigeria.

Recommendations to Policymakers

MIMAs should be recognised by policymakers at the national and state levels as strategic tools for improving access to information and advancing learning in higher education. The government should create regulations that clearly support the incorporation of mobile technology into academic library services, with a focus on enhancing ICT infrastructure, expanding internet coverage, and resolving unpredictable power supply. Furthermore,

targeted financing initiatives and collaborations with telecommunications companies can considerably improve the digital capability of Nigerian university libraries.

Recommendations For Library Administrators

To support the seamless use of MIMAs, university administration and library administrators should prioritise investment in ICT infrastructure, reliable internet access, and sustainable power solutions. Institutional norms and guidelines should be developed to govern professional use, assure ethical behaviour, and promote accountability. Administrators are also encouraged to offer ongoing professional development opportunities, allocate money for staff training, and reinforce administrative support.

Recommendations for librarians

Librarians should proactively use MIMAs to provide user-centred services such as reference assistance, current awareness dissemination, and user education. They are encouraged to participate in ongoing professional development to increase their technical skills and digital literacy. Collaborative networks of librarians from various institutions should be formed to allow the exchange of best practices and creative ideas for the professional use of mobile technologies.

Effective adoption of MIMAs in Nigerian university libraries necessitates coordinated action at all levels. Policymakers must establish enabling frameworks, administrators must foster supportive institutional contexts, and librarians must demonstrate competency and inventiveness in service delivery. Collectively, these initiatives will guarantee that MIMAs

are optimised to promote service responsiveness, customer satisfaction, and university libraries' digital relevance.

Contribution to Knowledge

This study contributes to knowledge by giving empirical evidence on the use of mobile instant messaging applications (MIMAs) in university libraries in South-South Nigeria, an area that has received little attention in library and information science research. By connecting specific obstacles such as inconsistent energy, poor internet connectivity, insufficient training, and a lack of institutional regulations to actionable tactics, the study goes beyond reporting problems and offers real recommendations for enhancing library services. It broadens theoretical perspectives on technology adoption in resource-constrained situations by illustrating how librarians adapt mobile technologies to sustain service delivery despite infrastructure limitations. The findings further emphasise the importance of administrative and regulatory support in ensuring the successful integration of MIMAs into academic libraries. Overall, the study contributes to the literature on digital innovations in higher education, provides insights that can guide decision-making by library managers and policymakers, and emphasises the potential of MIMAs to enhance user satisfaction, strengthen library relevance, and improve access to information in developing countries.

Directions for further research

While this study sheds light on the use of mobile instant messaging applications (MIMAs) in university libraries in South-South Nigeria, certain areas require additional investigation.

Future study could focus on the following directions:

1. Comparative studies among regions

Further research should compare the uptake and effectiveness of MIMAs in university libraries throughout Nigeria and other developing countries. Such comparisons would help to broaden our understanding of regional differences and find context-specific solutions.

2. User perspectives and experiences.

This study largely targeted librarians and administrators. Future research should look at student and faculty perspectives to assess user happiness, preferences, and MIMAs' overall impact on information-seeking behaviour and academic performance.

3. Longitudinal research

Long-term studies are required to examine the long-term viability of MIMA adoption, particularly in light of technological advancements, infrastructure upgrades, and changing user needs.

4. Evaluation of policy implementation.

Research could look at the effectiveness of institutional and governmental rules that might be implemented to guide the professional use of MIMAs. Such research would provide evidence of how policies affect library service delivery.

5. Integration of emerging technologies.

Future research may look into how MIMAs can be combined with other digital

advancements like artificial intelligence, cloud computing, and digital repositories to improve library services.

Future study in these areas can help to improve our understanding of mobile technology uptake in academic libraries, provide more comprehensive methods for tackling existing issues, and boost libraries' role in advancing higher education.

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