

Challenges Affecting the Adoption of social media For Information Service Delivery in Academic Libraries: Evidence from Federal University Dutsin-Ma Library

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Abstract—This study examined the challenges affecting the adoption of social media for information service delivery in academic libraries, using the Federal University Dutsin-Ma (FUDMA) Library as a case study. A descriptive survey research design was adopted, involving one hundred (100) professional and para-professional library staff selected through total enumeration sampling. Data were collected using a structured questionnaire and analyzed using descriptive statistics, including frequencies, percentages, and mean scores. The findings revealed that poor internet connectivity, unstable electricity supply, inadequate ICT facilities, insufficient digital competencies, limited staff training, and inadequate institutional support constitute major challenges affecting social media adoption in the library. The study further established that infrastructural availability and digital literacy significantly influence the effective utilization of social media for information service delivery. Measures identified for improving adoption include provision of stable internet facilities, regular staff training, development of social media policies, and increased institutional support. The study concluded that effective adoption of social media in academic libraries depends largely on adequate technological infrastructure, staff digital competencies, and institutional commitment. The study recommends improved ICT infrastructure, continuous staff training, and the establishment of formal social media policies to enhance information service delivery.

Index Terms—social media, Academic Libraries, Information Service Delivery, ICT Infrastructure, Digital Skills.

I. INTRODUCTION

The rapid advancement of information and communication technologies (ICTs) has transformed the creation, access, storage, and dissemination of

information in contemporary society. Among the most influential digital innovations is social media, which has significantly reshaped communication patterns across education, business, healthcare, and library environments. Platforms such as Facebook, WhatsApp, Telegram, YouTube, Instagram, LinkedIn, and Twitter/X have become essential tools for interaction, collaboration, and information sharing within academic communities.

Academic libraries, as key information service institutions in universities, are increasingly expected to integrate digital technologies into their operations to meet the changing information needs of users. The traditional role of libraries has evolved from custodianship of print materials to the provision of technology-driven services that support virtual learning, online communication, and remote access to information resources. Consequently, social media has emerged as an important channel for delivering services such as reference assistance, current awareness services (CAS), selective dissemination of information (SDI), user education, and library outreach.

The adoption of social media offers several benefits to academic libraries, including improved communication between librarians and users, increased visibility of library resources, enhanced access to information, and real-time interaction irrespective of geographical boundaries. In Nigeria, platforms such as WhatsApp and Telegram are widely used because of their accessibility, affordability, and compatibility with mobile devices. However, despite these benefits, the effective adoption of social media for information service delivery in many academic libraries remains constrained by challenges such as poor internet connectivity, unstable electricity supply,

inadequate ICT facilities, insufficient digital competencies, lack of institutional support, and absence of clear social media policies.

At the Federal University Dutsin-Ma (FUDMA) Library, social media platforms such as Telegram and WhatsApp have been introduced to support information service delivery. Nevertheless, evidence suggests that their utilization remains limited due to operational and institutional barriers. While previous studies have examined social media use in academic libraries, limited empirical attention has been given to the specific challenges affecting its adoption at FUDMA Library. Therefore, this study examines the challenges affecting the adoption of social media for information service delivery in academic libraries, with particular reference to the Federal University Dutsin-Ma Library.

Statement of the Problem

The emergence of social media has significantly transformed communication and information service delivery in academic institutions across the world. Academic libraries are increasingly expected to adopt social media platforms to improve user engagement, facilitate real-time communication, promote library resources, and support virtual access to information services. Platforms such as WhatsApp, Telegram, Facebook, YouTube, and Twitter/X provide libraries with opportunities to extend their services beyond physical spaces and meet the digital expectations of students and researchers.

Despite the recognized benefits of social media in academic libraries, its effective adoption for information service delivery remains a major challenge in many Nigerian university libraries. Although some academic libraries have introduced social media platforms into their operations, their utilization is often limited, inconsistent, and not fully integrated into library service systems. Challenges such as inadequate ICT infrastructure, unstable internet connectivity, irregular electricity supply, insufficient funding, lack of institutional policies, and low digital competencies among library staff continue to hinder effective adoption and utilization of social media tools.

At the Federal University Dutsin-Ma (FUDMA) Library, efforts have been made to incorporate social media platforms such as Telegram and WhatsApp into

information service delivery. However, preliminary observations indicate that the use of these platforms is still constrained by several operational and institutional challenges. Many library staff continue to rely on traditional methods of communication and service delivery, while the full potential of social media for virtual reference services, current awareness services, outreach, and user engagement has not been adequately realized.

Furthermore, there is limited empirical evidence specifically examining the challenges affecting the adoption of social media for information service delivery at FUDMA Library. Existing studies have focused largely on general awareness and use of social media in academic libraries, with little attention given to the combined influence of infrastructural limitations and digital skill factors on adoption within the institution. This gap in knowledge creates the need for a focused investigation into the specific barriers affecting social media adoption in the library.

Therefore, this study seeks to examine the challenges affecting the adoption of social media for information service delivery in academic libraries, using the Federal University Dutsin-Ma Library as a case study.

Objectives of the Study

The main objective of this study is to examine the challenges affecting the adoption of social media for information service delivery in academic libraries, using the Federal University Dutsin-Ma Library as a case study. The specific objectives are to:

1. Identify the challenges affecting social media adoption for information service delivery at FUDMA Library.
2. Examine how infrastructural and digital skill factors affect social media adoption among library staff.
3. Propose measures for improving social media adoption in academic libraries.

II. LITERATURE REVIEW

Concept of social media in Academic Libraries:

Social media refers to internet-based platforms that enable users to create, share, and exchange information within virtual environments. Kaplan and Haenlein (2010) define social media as web-based applications built on Web 2.0 technologies that facilitate the creation and exchange of user-generated content. Platforms such as WhatsApp, Telegram,

Facebook, YouTube, Instagram, LinkedIn, and Twitter/X have transformed communication and information dissemination across different sectors, including academic libraries.

In academic libraries, social media has become an important tool for enhancing communication and delivering information services in real time. According to Aharony (2012), social media enables libraries to interact with users more effectively, improve visibility, and provide virtual services beyond physical library spaces. In Nigeria, the growing use of smartphones and internet technologies has further encouraged libraries to adopt social media for reference services, user education, outreach, and information dissemination (Baro, Idiodi, & Godfrey, 2013).

Social Media Adoption for Information Service Delivery:

The adoption of social media in academic libraries involves integrating digital communication platforms into library operations to improve information service delivery. Academic libraries utilize social media for services such as reference assistance, current awareness services (CAS), selective dissemination of information (SDI), document delivery, user education, and library marketing. According to Khan and Bhatti (2012), social media platforms provide libraries with opportunities to improve communication, expand access to information resources, and strengthen engagement with users.

Empirical studies suggest that social media adoption improves accessibility, visibility, and user interaction in academic libraries. Aina and Adigun (2023) observe that social media platforms enable libraries to deliver timely information and maintain effective communication with users in digital learning environments. However, adoption remains inconsistent across Nigerian academic libraries due to infrastructural deficiencies, limited digital competencies, and inadequate institutional support.

Challenges Affecting Social Media Adoption in Academic Libraries:

Although social media offers significant opportunities for academic libraries, its effective adoption is constrained by several challenges. One major challenge is inadequate ICT infrastructure. Many academic libraries in developing countries experience

unstable internet connectivity, limited bandwidth, inadequate digital facilities, and irregular electricity supply. Akinyemi and Izuagbe (2021) argue that poor internet infrastructure significantly limits the ability of librarians to provide uninterrupted online services through social media platforms.

Another important challenge is inadequate digital competence among library staff. Effective social media utilization requires competencies in online communication, digital engagement, content creation, and platform administration. Yakubu and Alhassan (2020) observed that inadequate digital skills among librarians reduce confidence and hinder the professional use of social media for information service delivery. This challenge is compounded by inadequate staff training opportunities and lack of continuous professional development in digital technologies.

Institutional barriers also affect social media adoption. These include insufficient funding, lack of management support, and absence of formal social media policies. Omeluzor, Alarape, and Dika (2017) note that many academic libraries adopt social media informally without structured implementation strategies, resulting in inconsistent use and poor coordination of digital services. Similarly, privacy concerns, misinformation, and cybersecurity risks may discourage active engagement with social media platforms (Chigbu & Dim, 2021).

Resistance to technological change further affects adoption in some academic libraries. Ezeani and Igwesi (2016) found that preference for traditional service delivery methods and lack of institutional innovation culture often limit the integration of social media into library operations. These challenges collectively hinder the effective utilization of social media for information service delivery in academic libraries.

Infrastructural and Digital Skill Factors Affecting Social Media Adoption:

Infrastructure and digital competencies are important determinants of successful social media adoption in academic libraries. Effective utilization of social media depends on reliable internet access, stable electricity supply, availability of ICT facilities, and technical support systems. Mtega et al. (2013) emphasize that inadequate infrastructure remains a

major obstacle to digital service delivery in many developing countries.

Digital competence is equally important, as librarians require skills in social media management, online communication, and digital literacy to effectively engage users. Ayoun and Boateng (2021) note that familiarity with digital technologies increases librarians' confidence and willingness to adopt social media for professional purposes. Regular ICT training and professional development programmes therefore play critical roles in strengthening digital competencies among library staff.

Measures for Improving Social Media Adoption in Academic Libraries:

Improving social media adoption in academic libraries requires a combination of infrastructural support, staff capacity development, and institutional commitment. Regular ICT and digital literacy training should be organized to strengthen librarians' competencies in social media management and online engagement. Academic libraries should also establish clear social media policies to guide professional communication and service delivery. Furthermore, improved internet connectivity, adequate ICT facilities, stable electricity supply, and increased management support are necessary to ensure effective and sustainable use of social media for information service delivery (Okojie & Ogbomo, 2022).

III. METHODOLOGY

A descriptive survey research design was adopted for this study to examine the challenges affecting the adoption of social media for information service delivery in academic libraries, using the Federal University Dutsin-Ma (FUDMA) Library as a case study. The design was considered appropriate because it enables the collection of data regarding respondents' opinions, experiences, and perceptions on existing conditions (Creswell, 2014).

The population of the study comprised all professional and para-professional library staff directly involved in information service delivery at the Federal University Dutsin-Ma Library, including staff from the E-library, Reference Services, and Reader Services units. According to records obtained from the university library administration, the total population consisted of one hundred (100) staff members.

Table 1: Population Distribution of Library Staff

S/N	Section in the Library	Population
1	E-library	60
2	Reference Services	30
3	Reader Services	10
Total		100

Given the relatively small and accessible population, the study adopted a total enumeration sampling technique (census sampling), whereby all one hundred (100) library staff members constituted the sample size. This approach was adopted to eliminate sampling error and ensure comprehensive representation of respondents (Babbie, 2010).

Data were collected using a structured questionnaire developed based on the objectives of the study and relevant literature. The instrument consisted of closed-ended and Likert-scale items designed to elicit responses on challenges affecting social media adoption, infrastructural and digital skill factors, and measures for improving social media utilization in academic libraries. The Likert-scale items were structured on a five-point scale ranging from Strongly Disagree (1) to Strongly Agree (5).

To ensure validity, the questionnaire was subjected to face and content validation by experts in Library and Information Science and Measurement and Evaluation. Their observations and recommendations guided revisions to improve clarity and relevance of the instrument.

A pilot study involving ten (10) library staff members from another academic institution outside the study area was conducted to determine the reliability of the instrument. Using Cronbach's Alpha reliability test, a coefficient of 0.81 was obtained, indicating acceptable internal consistency (Nunnally, 1978).

The researcher personally administered the questionnaires to respondents to ensure a high response rate and provide clarification where necessary. Participation was voluntary, and confidentiality of responses was assured.

Data collected were coded and analyzed using descriptive statistics, including frequencies, percentages, and mean scores. The results were presented in tables and interpreted in line with the objectives of the study.

IV. RESULTS AND DISCUSSION

4.1. Introduction

This Section presents the analysis and interpretation of data collected from library staff of the Federal University Dutsin-Ma (FUDMA) Library on the challenges affecting the adoption of social media for information service delivery in academic libraries. The data were analyzed using descriptive statistics such as frequencies, percentages, and mean scores in line with the objectives of the study. Out of the 100 questionnaires distributed, 89 copies were correctly completed and returned, representing a response rate of 89%.

4.2. Response Rate

Table 4.1: Questionnaire Response Rate

Questionnaires	Frequency	Percentage (%)
Administered	100	100
Returned	89	89.0
Not Returned	11	11.0
Total	100	100

Table 4.1 shows that out of the 100 questionnaires distributed to respondents, 89 were returned and found useful for analysis, representing a response rate of 89%. The high response rate indicates active participation of respondents and provides a reliable basis for the analysis of the study.

4.3. Challenges Affecting Social Media Adoption for Information Service Delivery

This section presents the challenges affecting the adoption of social media for information service delivery at FUDMA Library.

Table 4.2: Challenges Affecting Social Media Adoption

S/N	Challenges	Agree F (%)	Disagree F (%)
1	Poor internet connectivity affects social media use	78 (87.6%)	11 (12.4%)
2	Inadequate ICT facilities hinder adoption	74 (83.1%)	15 (16.9%)
3	Unstable electricity supply affects usage	80 (89.9%)	9 (10.1%)

S/N	Challenges	Agree F (%)	Disagree F (%)
4	Lack of digital skills limits effective use	69 (77.5%)	20 (22.5%)
5	Lack of training opportunities affects adoption	72 (80.9%)	17 (19.1%)
6	Absence of social media policy affects utilization	66 (74.2%)	23 (25.8%)
7	Limited institutional support affects adoption	70 (78.7%)	19 (21.3%)

The results in Table 4.2 reveal that respondents strongly agreed that poor internet connectivity, inadequate ICT facilities, unstable electricity supply, lack of digital skills, inadequate training opportunities, absence of social media policies, and limited institutional support are major challenges affecting the adoption of social media for information service delivery at FUDMA Library.

The findings suggest that infrastructural and institutional limitations significantly affect the effective utilization of social media platforms within the library.

4.4. Infrastructural and Digital Skill Factors Affecting Social Media Adoption

This section examines how infrastructural and digital skill factors affect social media adoption among library staff.

Table 4.3: Infrastructural and Digital Skill Factors

S/N	Statement	Mean Score	Decision
1	Availability of stable internet enhances social media adoption	4.42	Agree
2	Adequate ICT facilities improve effective use of social media	4.31	Agree
3	Digital literacy skills influence social media adoption	4.25	Agree
4	Staff training improves social media utilization	4.37	Agree
5	Technical support encourages effective adoption	4.18	Agree

Criterion Mean = 3.00

Table 4.3 shows that all the items recorded mean scores above the criterion mean of 3.00, indicating agreement among respondents. The findings imply that infrastructural availability and digital competencies significantly influence the adoption of social media for information service delivery in academic libraries.

4.5. Measures for Improving Social Media Adoption in Academic Libraries

This section presents respondents' opinions on measures for improving social media adoption in academic libraries.

Table 4.4: Measures for Improving Social Media Adoption

S/N	Measures	Agree F (%)	Disagree F (%)
1	Provision of stable internet facilities	84 (94.4%)	5 (5.6%)
2	Regular staff training on digital technologies	82 (92.1%)	7 (7.9%)
3	Development of social media policies	76 (85.4%)	13 (14.6%)
4	Increased institutional support and funding	81 (91.0%)	8 (9.0%)
5	Provision of adequate ICT facilities	83 (93.3%)	6 (6.7%)

The results in Table 4.4 indicate that respondents agreed that provision of stable internet facilities, regular staff training, development of social media policies, increased institutional support, and provision of adequate ICT facilities are important measures for improving social media adoption in academic libraries.

Discussion of Findings:

The discussion of findings is presented in line with the objectives of the study.

Challenges Affecting Social Media Adoption for Information Service Delivery

The study revealed that several challenges affect the adoption of social media for information service delivery at FUDMA Library. Major challenges identified include poor internet connectivity, unstable

electricity supply, inadequate ICT facilities, lack of digital competencies, insufficient staff training, absence of social media policies, and limited institutional support. The findings suggest that infrastructural and organizational barriers significantly hinder the effective utilization of social media platforms for library services.

This finding is consistent with the study of Akinyemi and Izuagbe (2021), who identified poor ICT infrastructure and unstable internet services as major barriers to digital service delivery in Nigerian academic libraries. Similarly, Ezeani and Igwesi (2016) reported that inadequate institutional support and resistance to technological innovation negatively influence social media adoption in libraries. The implication of this finding is that despite the increasing relevance of social media in information service delivery, libraries may struggle to fully integrate these technologies without adequate infrastructural and institutional support.

Infrastructural and Digital Skill Factors Affecting Social Media Adoption

The study further revealed that infrastructural and digital skill factors significantly influence the adoption of social media among library staff. Respondents agreed that stable internet connectivity, adequate ICT facilities, technical support, digital literacy skills, and staff training enhance effective utilization of social media for information service delivery.

This finding supports Ayong and Boateng (2021), who found that digital competencies positively influence librarians' confidence and willingness to adopt social media technologies. The result also agrees with Mtega et al. (2013), who emphasized that inadequate infrastructure remains a major obstacle to digital information services in developing countries. The finding suggests that the effectiveness of social media adoption depends not only on availability of digital tools but also on the technical competence of library personnel responsible for service delivery.

Measures for Improving Social Media Adoption in Academic Libraries

The study identified several measures for improving social media adoption in academic libraries. These include provision of stable internet facilities, regular staff training on digital technologies, development of formal social media policies, increased institutional

support and funding, and adequate provision of ICT facilities.

This finding corroborates Okojie and Ogbomo (2022), who argued that institutional investment in ICT infrastructure and staff capacity development is essential for sustainable digital transformation in academic libraries. The finding further indicates that effective social media adoption requires a coordinated approach involving infrastructural development, professional training, and institutional commitment. Such interventions would strengthen the ability of libraries to utilize social media effectively for information service delivery.

V. CONCLUSION

This study examined the challenges affecting the adoption of social media for information service delivery in academic libraries, using the Federal University Dutsin-Ma (FUDMA) Library as a case study. The study revealed that although social media platforms have the potential to improve communication, user engagement, and accessibility of library services, their effective adoption is constrained by several infrastructural, institutional, and technological challenges.

The findings showed that poor internet connectivity, unstable electricity supply, inadequate ICT facilities, lack of digital competencies among library staff, insufficient training opportunities, and limited institutional support significantly affect the adoption of social media for information service delivery at FUDMA Library. The study further established that infrastructural availability and digital literacy skills play important roles in determining the extent to which social media platforms are utilized effectively within the library.

The study also identified several measures capable of improving social media adoption in academic libraries. These include the provision of stable internet facilities, regular staff training on digital technologies, and development of institutional social media policies, increased funding and administrative support, and provision of adequate ICT infrastructure.

Based on the findings, the study concludes that the successful adoption of social media for information service delivery in academic libraries depends largely on the availability of adequate technological infrastructure, continuous staff capacity development,

and strong institutional support. Therefore, academic libraries must adopt strategic approaches aimed at strengthening digital competencies and improving infrastructural facilities in order to maximize the benefits of social media for effective information service delivery.

VI. RECOMMENDATIONS

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

1. FUDMA Library should strengthen ICT infrastructure, particularly internet and electricity support.
2. Regular digital literacy and social media training should be organized for library staff.
3. The university library should establish formal social media policies to guide professional information service delivery.

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