

# Pathways to Openness: A Research Proposal on Open Access and Digitization in Nigerian Libraries

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## Abstract

Open access and digitization play pivotal roles in widening access to information and supporting research and education. Despite their potential impact in Nigeria, there remains a dearth of understanding regarding the current landscape of open access and digitization initiatives within Nigerian Public Libraries. This research aims to address this gap by conducting a comprehensive mapping of open access and digitization practices in Nigerian Public Libraries.

The study will delve into various key areas including current practices for providing open access and digitized resources, existing policies and procedures, staff attitudes, funding mechanisms, and infrastructure. The project will specifically align with Wikimedia Projects by fostering greater collaboration and integration of open access resources into Wikimedia platforms.

To achieve this, the research will employ interview, survey, and case study methods, drawing upon the researcher's prior experience and professional connections with different libraries. Sample interview and survey questions will be provided, and potential participant libraries will be identified to ensure the success and relevance of the study.

## Introduction

Free Knowledge Africa's proposed research on open-access practices and digitization of public domain works in Nigerian Public Libraries is an important and timely initiative. Open access to knowledge is essential for education, research, and economic development, and digitization is a crucial tool for making this knowledge more accessible. Nigerian Public Libraries play a vital role in providing access to information, and they have the potential to be major drivers of open access and digitization in Nigeria.

Addressing the challenges faced by librarians in Nigeria regarding the utilization of open-access digitized resources is crucial for Wikimedia projects for several reasons. Firstly, Wikimedia projects, including Wikipedia, Wikidata, and Wikimedia Commons, rely heavily on open-access content for their databases. By understanding the obstacles librarians encounter in accessing and digitizing resources, this research can inform strategies to enhance the availability and accessibility of relevant content for Wikimedia projects. Secondly, Nigerian Public Libraries serve as important repositories of knowledge, and their digitization efforts can significantly contribute to expanding the pool of open-access resources available for Wikimedia projects. Thirdly, empowering librarians to join the movement as contributors to Wikidata and other Wikimedia platforms can enrich the diversity of content available,

ensuring a more comprehensive representation of Nigerian culture, history, and heritage. Therefore, addressing these challenges not only aligns with the core values of Wikimedia projects, which prioritize open access and knowledge sharing but also strengthens the global Wikimedia community by fostering collaboration with librarians in Nigeria.

The specific research questions are as follows:

1. What is the current availability of public domain and openly licensed works in Nigerian public libraries suitable for digitization and upload to Wikimedia projects?
2. How can Nigerian public libraries identify and prioritize works for digitization based on their relevance and potential impact on Wikimedia projects?
3. What are the technological and infrastructural requirements for effective digitization and uploading of works to Wikimedia Commons, and how can these be optimized for better efficiency?
4. What are the key challenges faced by Nigerian public libraries in digitizing and uploading works to Wikimedia Commons, such as limited funding, infrastructure constraints, or resistance to change?
5. How can these challenges be addressed and overcome through capacity-building initiatives, resource mobilization, and advocacy efforts to empower libraries to participate effectively in digitization and contribution to Wikimedia projects?
6. What strategies and best practices from other contexts can be adapted and implemented to support Nigerian public libraries in overcoming barriers to digitization and contribution to Wikimedia projects?

By addressing these research questions, the proposal aims to identify opportunities for collaboration between Nigerian public libraries and Wikimedia projects, ultimately enhancing the accessibility and availability of knowledge on Wikimedia platforms.

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## Related work

There is a growing body of research on open access and digitization in libraries, both in Nigeria and internationally. Some of the most relevant work includes:

- Open GLAM in Nigeria — developments and opportunities for open access (Oloruntimilehin, 2020) This study provides an overview of the current state of open access in Nigerian Public Libraries and identifies some of the challenges and opportunities for further development.
- Case Study of Open Access Practices: Limitations and Opportunities in Public Libraries in Nigeria (Oloruntimilehin, 2021) This case study examines the open access practices of a single Nigerian Public Library and identifies some of the key factors that influence the adoption of open access.
- The COVID-19 pandemic and Open GLAMs in Nigeria: impacts, opportunities and challenges (Chuma-Okoro and David Ogbeidi) identified some of the challenges GLAM institutions were facing in the aftermath of the pandemic.
- Collaborate, Communicate, and Navigate Ethical Considerations with the Ethical Sharing Card Game (Oloruntimilehin et al., 2023) This resource provides a gamified approach

to teaching ethical considerations related to open access and digitization.

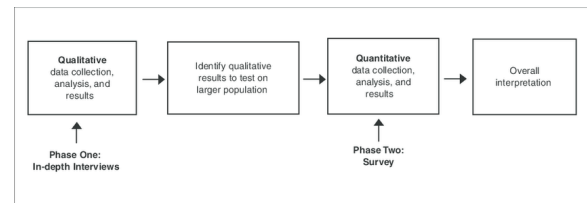
- A Literature Review on Digitization in Libraries and Digital Libraries (Sasmita Patra and Jyotshna Sahoo, 2022) This study illustrated the process, challenges and implications of digitization to libraries.
- Open Access Resources: Options for Libraries in a Challenged Economy (Isaac Anyira and Imade Idubor, 2020) This study argued the need for libraries to embrace alternative sources of acquiring and maintaining a healthy library collection under a harsh economy.

Despite the growing body of research, there is still a significant gap in our understanding of the landscape of open access and digitization in Nigerian Public Libraries. Most of the related research focuses on the opportunities, benefits and limitations of Open access in libraries in Nigeria, However, this research hopes to conduct a comprehensive mapping to discover the actual state of open access and digitization practices carried out in Nigerian Public Libraries and how it impacts the availability of contents for Wikimedia projects.

## Methods

This research will employ a mixed-methods approach, utilizing both qualitative and quantitative research methodologies to thoroughly investigate the implementation and experiences of digitization initiatives in Nigerian libraries. This approach has been chosen to provide a comprehensive understanding of the topic, combining the depth of qualitative insights with the breadth of quantitative data. The mixed methods will adopt the sequential exploratory design which begins with qualitative data collection and analysis of

participants' views, and then uses these results to inform a later quantitative phase (Terrell, 2012).



### Sequential Exploratory Design

Source: Fuentes' (2008) sequential exploratory mixed methods design

Qualitative methods, including interviews and document analysis, will be utilized to explore the experiences, perceptions, and contextual factors surrounding digitization initiatives. Interviews with librarians, policymakers, and technology experts will offer valuable qualitative insights. Document analysis will involve a thorough review of existing policies, procedures, and any relevant documentation related to digitization projects in Nigerian public libraries. Quantitative methods will be employed through surveys distributed among library staff to gather quantitative data on the current provision of digitized resources, existing policies, and staff perceptions. This will allow for statistical analysis to identify patterns and trends in the data. It's imperative to include the perspectives and experiences of the end-users—the individuals benefiting from digitized resources in public libraries. To address this, surveys will be extended to library users, seeking their feedback on the frequency and demographics of their usage of digitized resources. This quantitative data will provide insights into user patterns, preferences, and the effectiveness of the digitization initiatives from the users' standpoint. Additionally, qualitative methods such as focus group discussions or user interviews may be incorporated to gather in-depth qualitative insights into how users perceive and interact with digitized resources.

Integrating qualitative and quantitative data involves triangulation, where findings from both

methods are compared and contrasted. Qualitative findings will help contextualize quantitative results, providing a deeper understanding of the factors influencing the effectiveness of digitization initiatives. For instance, survey results on staff perceptions will be triangulated with qualitative insights from interviews, enhancing the validity and reliability of the overall study. This triangulation provides a more comprehensive and nuanced understanding of the complex phenomenon of digitization initiatives in Nigerian public libraries (Hussein, 2009).

Data will be generated through fieldwork, including interviews, surveys, and document reviews conducted within selected Nigerian public libraries. Research team members will be selected based on their expertise in library science, digitization, and research methods. Training sessions will be conducted to ensure consistency in data collection and analysis. Additionally, a language and translation plan will be implemented, involving bilingual team members, if necessary, to address any language-related challenges during interviews or document analysis.

### **Sampling:**

The research study will adopt a mixed-methods approach, incorporating both qualitative and quantitative phases (Terrell, 2012). The sampling strategy will involve a random selection of twelve public libraries across the six different states in the Southwest of Nigeria and the FCT. This ensures a representative and varied sample that reflects the diverse landscape of libraries in the region.

### **Purposive Sampling Strategy for Qualitative (QUAL) Phase:**

In the qualitative phase focusing on library staff perceptions and stakeholder interviews, a purposive sampling strategy will be employed. The goal is to select participants based on their relevance to the research questions, ensuring a diverse range of perspectives (Sarfo *et al.*, 2022). Focus group discussions will be organized with

both library staff and users to capture collective experiences and diverse perspectives on the utilization of digitized resources in Libraries, with library users being selected for the focus group discussions with opportunistic sampling, which allows users to be selected based on their availability and ease of access. Purposive sampling allows for the selection of key informants such as librarians, policymakers, and technology experts who possess in-depth knowledge and experience related to digitization initiatives in Nigerian public libraries. This strategy ensures that the qualitative data collected is information-rich and aligns with the study's objectives.

### **Random Sampling Strategy for Quantitative (QUAN) Phase:**

For the quantitative phase, particularly in the survey component directed at library staff and library users, a random sampling strategy will be adopted (Sarfo *et al.*, 2022). The aim is to generate representative samples that reflect the broader population of library staff involved in digitization initiatives across different Nigerian public libraries and the accessibility and utilization of these digitized resources by library users. Through random sampling, each member of the population has an equal chance of being included in the survey, enhancing the generalizability of findings to the larger population of library staff and library users. This strategy provides breadth to the quantitative data by capturing a diverse range of responses and experiences among library staff involved in digitization and the utilization of digitized resources by library users. This strategy will help in ensuring a broad representation across demographics and enhancing the generalizability of findings.

The sample size for the qualitative aspect of this research study will be 18 interviews, 36 library staff and 48 library users for focus group discussions. This will be spread equally across the States to ensure that there is equal coverage for the different libraries (Staller, 2021). The sample size for the surveys will be 260

respondents for library staff and 200 respondents for library users, this is adopted using the sample to item ratio of 20:1 (Memon *et al.*, 2020).

### **Data Collection and Analysis:**

Data collection methods include semi-structured interviews with library staff to explore their experiences and perceptions, in-depth interviews with key stakeholders such as the Director of Library Services at the State Ministry of Information, Director of State Library Boards, Chief Librarians, and Directors of State Information Communication and Technology Development Agencies (Okafor, 2020) across the six Southwest States and the Federal Capital Territory. This will help gain a comprehensive understanding of policy dynamics, surveys distributed to library users and staff to gather quantitative data and focus group discussions with both library staff and users to capture collective experiences and diverse perspectives on digitized resources. A thorough examination of existing policies, procedures, and relevant documentation related to digitization projects in Nigerian public libraries will also be conducted.

The qualitative phase, focusing on stakeholder interviews, will utilize content analysis and coding techniques to identify patterns and themes within the gathered data. Qualitative data analysis software will facilitate the organization and categorization of information, ensuring a systematic examination of textual content from key informants, including librarians, policymakers, and technology experts.

In the quantitative phase, the research will extend its focus to library users, incorporating specific survey questions to gauge their utilization patterns and satisfaction levels with digitized resources. The research will also employ surveys targeted at library staff to complement and validate the qualitative data gathered through stakeholder interviews and focus group discussions. The survey component

will utilize a random sampling strategy to ensure a comprehensive and representative sample of library staff and users across different Nigerian public libraries. By adopting random sampling, each member of the user population stands an equal chance of inclusion, contributing to the generalizability of findings.

By incorporating a survey component, the research aims to triangulate the findings, enhancing the reliability and validity of the overall study (Hussein, 2009). The surveys for library staff will provide quantitative data that can be statistically analyzed, offering complementary insights to the qualitative data obtained from interviews. Quantitative data will undergo statistical analysis using relevant tools like Jamovi, and demographic profiling of library users will be conducted based on survey results.

The quantitative data collected from surveys in the research study will undergo a rigorous analysis process to address the main research question and sub-questions. The analysis will involve both descriptive and inferential statistical methods to provide a comprehensive understanding of the implementation and experiences of digitization initiatives in Nigerian public libraries.

Descriptive statistics, such as frequencies, percentages, and measures of central tendency, will be employed to summarize key aspects related to digitization in Nigerian public libraries. This includes summarizing the current provision of digitized resources, existing policies, staff perceptions, funding sources, technology utilization, and user demographics.

To address specific sub-questions, the following inferential statistical methods will be applied

- **Comparison Analysis:** Comparative analyses such as analysis of variance (ANOVA) will be used to compare the perceptions of library staff towards digitization initiatives across different variables like library size or geographical location.

- **Correlation Analysis:** Correlation analyses will explore relationships between variables, such as examining the correlation between funding sources and the frequency of digitized resource utilization.

## Expected output

- Comprehensive Research Report
- Open bibliographic dataset
- Case Studies of Successful Open Access and Digitization Initiatives in Nigerian Public Libraries
- Policy Recommendations for Open Access and Digitization in Nigerian Public Libraries
- Training Materials and Resources for Nigerian Public Libraries
- Presentations at conferences and workshops on open access, digitization, and library science
- Workshops and training sessions for librarians on open access and digitization

## Risks

Access to comprehensive data on open access and digitization practices in Nigerian Public Libraries may be limited, potentially hindering the depth of analysis and generalizability of findings. To mitigate this risk, the research team will employ multiple data collection methods, including surveys, interviews, and case studies, to gather as much information as possible from diverse sources. Additionally, collaboration on already built connections with library associations and stakeholders such as the Virtual Library Services Department of the Digital Library Services of the Nigerian National Library, the Goethe Institut, Nigeria National Librarians Association, Yoruba Academy, Library Aid and the Plateau State Library Board

will be pursued to access any available data and enhance the research's comprehensiveness.

Some libraries may exhibit resistance to adopting open access and digitization practices due to institutional inertia, lack of awareness, or concerns about resource allocation and technical capacity. The research team will engage in extensive outreach and advocacy efforts to raise awareness about the benefits of digitization among library staff and administrators. This may involve conducting training workshops, providing informational materials, and showcasing successful case studies from other libraries. Emphasizing the potential contributions to knowledge dissemination and community engagement, particularly through platforms like Wikimedia projects, can help overcome resistance to change.

Many libraries in Nigeria face infrastructure challenges such as limited funding, inadequate IT resources, and unreliable connectivity, which could impede their ability to effectively digitize their collections and implement open access initiatives. To address infrastructure challenges, the research team will explore adaptive strategies and alternative solutions tailored to the specific context of each library. This may include identifying low-cost digitization methods, leveraging existing community resources and partnerships, and advocating for targeted investment in library infrastructure. Collaboration with relevant government agencies, NGOs, and private sector partners can also help mobilize support and resources to address infrastructure gaps.

By proactively identifying and addressing these risks and challenges, the research project can enhance its effectiveness and maximize its potential impact on promoting open access and digitization in Nigerian Public Libraries, ultimately contributing to broader knowledge sharing and dissemination efforts, including those aligned with Wikimedia projects.

## Community impact plan

- The research team will disseminate the findings through a variety of channels, including publication in a peer-reviewed journal, presentation at conferences and workshops, and development of training materials and resources for libraries.
- The research team will collaborate with Wikimedia affiliates in Nigeria to promote the adoption of open access and digitization initiatives in Nigerian Public Libraries.
- The research team will develop training materials and resources for librarians to implement open access and digitization initiatives. The team will also help identify works in the public domain and under open licenses.
- The research team will develop a public dataset that provides access to data on open access and digitization practices in Nigerian Public Libraries.
- The research team will engage with the communities served by Nigerian Public Libraries to promote the benefits of open access and digitization and to support the development of community-based open access and digitization initiatives.

## Evaluation

- **Stakeholder Engagement and Collaboration:** The level of engagement with relevant stakeholders, including Nigerian Public Libraries, library associations, government agencies, and Wikimedia projects, will be indicative of the project's potential impact and sustainability. Successful collaboration and partnerships fostered throughout the research process will contribute to


the project's effectiveness in addressing identified challenges.

- **Contribution to Knowledge and Practice:** The extent to which the research generates new insights, contributes to existing knowledge and informs practical interventions in open access and digitization practices in Nigerian Public Libraries will be a critical measure of success. This may include the development of best practices, policy recommendations, or actionable strategies for enhancing access to information and promoting digital inclusion.
- **Impact on Wikimedia Projects:** Given the project's alignment with Wikimedia projects, success can be measured by the extent to which the research findings and outputs are integrated into Wikimedia platforms, contribute to the enrichment of content, and support knowledge sharing initiatives. Increased participation of Nigerian Public Libraries in Wikimedia projects and the incorporation of digitized resources into Wikimedia Commons would signify positive outcomes.
- **In the furtherance of Wikimedia projects,** this research hopes to serve as a valuable advocacy tool for promoting digitization. This way, the libraries can contribute to the availability of reliable sources for citation and references in Wikimedia projects. Projects such as Wikicite and Wikisource present opportunities for libraries to collaborate with Wikimedia as digitized works can be uploaded on Wikimedia Commons and subsequently transcribed through Optical Character Recognition (OCR) onto Wikisource. Additionally, the creation of Wikidata items from these digitized books facilitates their

referencing in Wikipedia articles using Wikicite for accurate attribution.

- **Capacity Building and Empowerment:** Another measure of success would be the extent to which the project enhances the capacity and skills of stakeholders, including library staff, researchers, and policymakers, in open access, digitization, and knowledge dissemination practices. Training workshops, educational materials, and collaborative learning opportunities can facilitate skill development and empower stakeholders to drive change.
- **Sustainability and Long-Term Impact:** Assessing the project's sustainability and long-term impact involves evaluating the extent to which its outcomes are sustained beyond the project duration. This includes considerations of institutionalization of practices, policy uptake, and ongoing community engagement efforts. Establishing networks, platforms, or mechanisms for continued collaboration and knowledge sharing will indicate sustained impact.

## Budget

 FKA WMF Research Fund Budget

## Response to Reviewers and Meta-reviewers

**Scaling Down Proposal and Reflecting on Budget:** We appreciate the feedback regarding the ambition of our proposal to the allocated budget and timeframe. We have revised our proposal to scale down certain aspects while ensuring that the core objectives are retained.

**Being More Specific about Research Goals:** Thank you for highlighting the need for specificity in our research goals, particularly

regarding survey questions. We enhanced the clarity of our proposal by providing detailed information on the specific methodologies and survey questions we plan to employ. This will assure the committee of our ability to execute the research successfully within the proposed framework.

### **Articulating Clear Connection to Wikimedia Projects:**

We acknowledge the importance of clearly articulating the connection of our proposal to Wikimedia projects. In our revised proposal, we emphasized how our research outcomes will directly contribute to the enhancement of Wikimedia projects, particularly in terms of access to open knowledge and digitization initiatives. We will elucidate the specific ways in which our findings will enable and empower Wikimedia initiatives in Nigeria and beyond, addressing the identified gap in our initial submission.

**Concrete Plans for Addressing Risks:** We appreciate your feedback on the need for concrete plans to address identified risks, especially concerning data availability and resistance to change. In our revised proposal, we outlined specific strategies for mitigating these risks, including potential collaborations with relevant stakeholders, capacity-building initiatives, and adaptive management approaches. This will strengthen the robustness of our research plan and increase the likelihood of successful outcomes.

### **Framing the Proposal as Part of a Multi-Year Project:**

Thank you for your suggestion to consider framing our proposal as part of a multi-year project to better accommodate its ambition. We took this into account in our revisions, ensuring that the proposed activities align with the available time frame and resources. Additionally, we will provide more clarity on how access and digitization initiatives are directly linked to Wikimedia projects,



enhancing the relevance and impact of our research within the Wikimedia community.

**Sample Survey and Interview Questions, List of Participating Libraries:** We addressed your recommendation by including a sample of survey and interview questions in our revised proposal, along with a list of potential participating libraries and our existing connections within the library community. This will provide greater insight into our research methodology and the scope of our outreach efforts.

**Clearer Difference from Similar and Previous Research:** In response to the call for a clearer distinction from recent research and an explanation of how our proposed project builds upon and extends previous studies, we will focus on conducting a thorough literature review to identify gaps and limitations in existing research. Our research objectives and methodology will be explicitly designed to address these identified gaps, utilizing a mixed-methods approach and forging collaborative partnerships with stakeholders. Through these efforts, we will ensure that our study stands out from recent research and makes a meaningful contribution to the field by providing actionable recommendations and advancing understanding in the intersection of libraries, librarianship, and Wikimedia projects.

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