



**Perceived Usefulness of Collaborative Digitization of Grey Literature in the Federal
Colleges of Education Libraries in North Central Nigeria**

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Abstract:

This study investigated the perceived usefulness of collaborative digitization of grey literature in Federal Colleges of Education (FCE) libraries in North-Central Nigeria. Employing a descriptive research design, the study aimed to find out the current status of grey literature collections, stakeholders' perceptions on collaborative digitization, barriers to its implementation, and recommendations for optimization. The target population comprised 280 respondents, including College Librarians, library personnel (teaching and non-teaching), and ICT personnel engaged in digitization activities. A structured questionnaire, validated by three experts and yielding a Cronbach's Alpha reliability coefficient of 0.79 was used for data collection, while descriptive statistics, including mean scores and standard deviations were used to analyze the data. Findings from the study showed that the majority of grey literature available for digitization in the FCE libraries in the study area are student projects with (97.3%), followed by conference papers and proceedings (89.1%). Also, stakeholders strongly perceive collaborative digitization as a useful means of enhancing access to grey literature, particularly through a centralized digital repository (3.30) and increasing availability of grey literature (3.20). Though, the main barriers to collaborative digitization as identified include lack of adequate funding (3.30) and inadequate infrastructure and equipment (3.20). To optimize collaborative digitization, securing adequate funding (3.40) and upgrading infrastructure (3.30) were the top recommendations from stakeholders. Based on the findings, it is recommended among others that establishing a regional consortium among FCE libraries in North-Central Nigeria would

facilitate resource sharing and address the institutional gaps, especially for underrepresented types of grey literature such as photographs and artworks.

Keywords: Collaboration, Digitization, Grey Literature, Federal Colleges of Education Libraries, North-Central Nigeria.

Introduction

It has been established that libraries are the reservoirs of knowledge. They have always facilitated access to a vast array of the information resources that are essential for scholarly inquiry and intellectual growth (Obiekwe & Agim, 2021). Part of what libraries provide the scholarly community with, is grey literature, which encompasses diverse range of non-traditionally published materials such as reports, theses, conference proceedings, and working papers. Despite its invaluable contributions to scholarly discourse and research advancement, grey literature remains relatively underutilized and inaccessible within many academic library settings, including those of the Federal Colleges of Education (FCE) in North-Central Nigeria.

No doubt, with the emergence of digital technologies and the proliferation of online repositories, the manner in which information is accessed, organized, and disseminated became greatly revolutionized. The development paved way for the digitization of grey literature, thereby enhancing information resources preservation and access, though with some unique challenges, particularly in resource-constrained environments such as FCE libraries. Recognizing the importance of addressing these challenges and harnessing the full potential of grey literature resources, this article proposes to investigate the perceived usefulness of collaborative digitization initiatives in the FCE libraries in North-Central Nigeria.

Grey literature, often characterized by its informality, diversity, and relevance to specific communities or disciplines, plays a crucial role in scholarly communication and knowledge dissemination. According to George (2023), grey literature is usually not published for commercial gain, not peer reviewed, and not widely disseminated or well represented in indexing databases. Unlike peer-reviewed journal articles or monographs, grey literature tends to be produced by organizations, government agencies, research institutions, and individuals outside the traditional publishing channels. As such, it often contains valuable

insights, research findings, and practical knowledge that may not be readily available through conventional academic sources.

In the context of educational institutions such as the FCE's, grey literature holds particular significance due to its relevance to pedagogical practices, curriculum development, policy formulation, and educational research, especially because project reports produced by students and other teaching materials produced by faculty members contribute to the collective knowledge base of the institution. Undoubtedly, such intellectual outputs can inform teaching methodologies, educational policies, and community development initiatives; as well as provide alternative perspectives, empirical data, and case studies that enrich academic discourse and foster interdisciplinary collaboration.

Despite its inherent value, grey literature faces numerous challenges in terms of accessibility, preservation, and recognition within the academic community. For instance, traditional library cataloging systems often prioritize peer-reviewed publications, leading to the marginalization of grey literature collections. Again, the ephemeral nature of grey literature, coupled with the lack of standardized metadata and indexing avenues complicate its discovery and retrieval, thereby hindering its potential impact on scholarly research and practice.

However, the digitization of library collections has emerged as a promising solution to overcome some of the barriers associated with grey literature in recent years. This is because digital repositories, institutional repositories, and online archiving platforms offer opportunities to preserve, disseminate, and enhance the visibility of grey literature resources. Interestingly, collaborative digitization initiatives, which involve partnerships between libraries, academic institutions, funding agencies, and other stakeholders, can further leverage resources and expertise to expand access to grey literature on a broader scale.

Nonetheless, this article stems from the recognition of the untapped potential of grey literature and the imperative to address the challenges impeding its utilization within FCE libraries. While the digitization of library collections has gained traction in recent years, there remains a paucity of research examining the perceived usefulness of collaborative digitization specifically within the context of grey literature in the FCE libraries in North-Central Nigeria. Understanding stakeholders' perceptions, attitudes, and expectations regarding collaborative digitization initiatives is essential for informing strategic planning, resource allocation, and policy development aimed at optimizing the management and dissemination of grey literature

resources in the study area. Hence, the proposed project, "Perceived Usefulness of Collaborative Digitization of Grey Literature in the Federal Colleges of Education Libraries in North-Central Nigeria" would address a critical gap in the scholarly literature.

Problem Statement

Digitization has been affirmed to be very important for academic institutions to effectively manage, preserve, and disseminate knowledge resources. However, grey literature, comprising invaluable academic resources beyond traditional publications remain underutilized and poorly accessible within the FCE libraries in North-Central Nigeria. This gap hinders scholarly inquiry, teaching, and policy development. The absence of systematic collaborative digitization efforts exacerbates this issue, impeding the dissemination and preservation of grey literature. Consequently, students, faculty, and researchers, lack easy access to critical educational insights and research findings. Addressing this challenge is imperative for fostering a robust scholarly environment conducive to innovation and knowledge dissemination. Hence, investigating the perceived usefulness of collaborative digitization initiatives in the FCE libraries in North-Central Nigeria is crucial for enhancing access to and utilization of grey literature resources, thereby promoting academic excellence and research advancement.

Objectives of the Study

The purpose of this study is to ascertain the “Perceived Usefulness of Collaborative Digitization of Grey Literature in the Federal Colleges of Education Libraries in North-Central Nigeria. Specifically, key objectives of the research are to:

1. Ascertain the current status of grey literature collections in the FCE libraries in North-Central Nigeria.
2. Explore the perceptions of stakeholders regarding the usefulness of collaborative digitization in enhancing access to grey literature in the FCE libraries in North-Central Nigeria.
3. Identify the barriers to collaborative digitization efforts in the FCE libraries in North-Central Nigeria, and
4. Offer recommendations for optimizing collaborative digitization strategies in the FCE libraries in North-Central Nigeria.

Literature Review

Grey literature, characterized by its diverse forms and informal dissemination channels, plays a crucial role in scholarly communication and knowledge dissemination, particularly within the field of education. This literature review explores existing research on grey literature, collaborative digitization initiatives, and their perceived usefulness in educational library settings, focusing specifically on Federal Colleges of Education (FCE) libraries.

Grey literature encompasses a wide range of materials, including reports, theses, conference proceedings, and working papers, which are often produced by academic institutions, government agencies, and research organizations (Pomerantz & Peek, 2016). In educational contexts, grey literature serves as a vital source of information for curriculum development, policy formulation, and educational research (Graham, 2019). To better understand the concept of grey literature, Weintraub (2010) noted that participants at the Third International Conference on Grey Literature (ICGL) held in Luxembourg in 1997 unanimously came up with a definition of grey literature as "information material that is produced by government, academics, business, and industries in both print and electronic formats, but which is not controlled by commercial publishing interests and where publishing is not the primary activity of the organization". By implication, there is a preponderance of invaluable information that is produced daily by various organizations, which cannot be accessed by the majority of information seekers because their diverse origins and unpublished nature make it difficult to easily access them (Mohammed & El-Kalash, 2019).

No doubt, the need for collaborative digitization of grey literature reflects a growing recognition of the strategic role that digital technologies can play in improving information accessibility, especially in academic and research contexts. According to Okoroma (2011), the effective management and dissemination of grey literature such as theses, reports, and technical documents are essential for advancing higher education and national development. He emphasized that collaboration among institutions and improved digital infrastructure are key to unlocking the value of these often underutilized resources. Similarly, Oni, Momoh, and Odaro-Ekhaguebo (2019) highlight the importance of digitizing library resources in Nigerian polytechnics, arguing that coordinated efforts among stakeholders can drive sustainable development by making grey literature more visible, retrievable, and usable. Together, these perspectives underscore the belief that collaborative digitization enhances the accessibility, preservation, and relevance of grey literature in knowledge-driven societies.

Despite its significance, FCE libraries usually face challenges related to collaborative digitization activities (Vakkari et al., 2020). Collaborative digitization involves partnerships between libraries, academic institutions, and other stakeholders to digitize and disseminate scholarly resources, including grey literature. Such initiatives aim to enhance access to diverse collections, promote interdisciplinary collaboration, and preserve cultural heritage (Maron& Pickle, 2019). Collaborative digitization efforts leverage resources and expertise across institutions to overcome challenges associated with digitization, metadata creation, and long-term preservation (Kowalczyk et al., 2018). Though, there appears to be scanty available research on the perceived usefulness of collaborative digitization initiatives in educational library settings, studies are emerging in other disciplines highlighting the benefits of collaborative digitization, including increased access to resources, enhanced discoverability, and preservation of cultural heritage (Kakabadse et al., 2017). However, the specific challenges and opportunities associated with collaborative digitization of grey literature in academic library environments remain understudied.

Digital libraries are essential in supporting teaching, learning, and research by providing access to scholarly resources, including course materials and institutional research outputs. Collaborative digitization efforts can enhance these digital libraries by integrating grey literature collections and fostering inter-institutional cooperation. The literature emphasizes the value of grey literature in educational settings and the potential of collaborative digitization to improve access and resource sharing. However, it also highlights a need to explore how stakeholders perceive the usefulness of such initiatives, particularly in the context of Federal College of Education (FCE) libraries in North-Central Nigeria. This review lays the groundwork for further research aimed at developing evidence-based strategies to enhance the accessibility and use of grey literature in educational environments.

Methodology

The study employed a descriptive survey research design and was conducted across five (5) Federal Colleges of Education Libraries in North-central Nigeria, located in Odugbo, Benue State; Okene, Kogi State; Kontagora, Niger State; Pankshin, Plateau State; and Keana, Nasarawa State respectively. The target population consisted of 280 respondents, including College Librarians, teaching and non-teaching library personnel, and ICT staff involved in digitization activities. Data were collected using a structured instrument titled *Infrastructure for Digitization of Information Resources Questionnaire (IDIRQ)*, which had two sections: one for demographic/background information and

another addressing the study's research questions. The instrument was validated by three experts, and its reliability was confirmed using Cronbach's Alpha method, yielding a coefficient of 0.79, indicating acceptable internal consistency. Data analysis was carried out using descriptive statistics, specifically mean scores and standard deviations. A benchmark of 3.0 was used to interpret the responses: items with a mean score of 3.0 or above were categorized as "Agreed," while those below 3.0 were considered "Disagreed."

Results

Research Question 1: What is the current status of grey literature collections in the FCE libraries in North-Central Nigeria?

Table 1: Mean responses on the current status of grey literature collections in Federal Colleges of Education Libraries in North-Central Nigeria (N = 280)

S/N	Items	Mean	SD	Decision
1	Our library has a formal policy for collecting grey literature.	3.25	0.85	Strongly Agree
2	We actively seek grey literature from government agencies and research institutions.	3.10	0.90	Strongly Agree
3	We receive grey literature through donations and gifts.	2.85	0.75	Agree
4	We purchase grey literature materials when they are available.	2.70	0.80	Agree
5	Our library catalogs grey literature using standard cataloging rules.	3.00	0.95	Strongly Agree
6	We have a dedicated section or database for grey literature.	3.40	0.70	Strongly Agree
7	Grey literature is indexed and searchable in our library's online catalog.	3.30	0.88	Strongly Agree
8	We use metadata to describe and organize our grey literature collections.	2.30	0.65	Disagree
	Grand Mean	3.00		Agree

The table presents the current status of grey literature collections in Federal Colleges of Education Libraries in North-Central Nigeria. Items 3 and 4 were rated as "Agree," indicating that the libraries generally agree that they receive grey literature through donations and gifts (Mean = 2.85, SD = 0.75) and purchase grey literature materials when available (Mean = 2.70, SD = 0.80). Items 1, 2, 5, 6, and 7 were rated as "Strongly Agree," showing strong agreement that the libraries have a formal policy for collecting grey literature (Mean = 3.25, SD = 0.85), actively seek grey literature from government agencies and research institutions (Mean = 3.10, SD = 0.90), catalog grey literature using standard cataloging rules (Mean = 3.00, SD = 0.95), have a dedicated section or database for grey literature (Mean = 3.40, SD = 0.70), and that grey literature is indexed and searchable in the library's online catalog (Mean = 3.30, SD = 0.88). Item 8 was rated as "Disagree," suggesting that libraries do not generally

use metadata to describe and organize grey literature collections (Mean = 2.30, SD = 0.65). The grand mean of 3.00 indicates an overall "Strongly Agree" level of agreement regarding the current status of grey literature collections.

The results of the table indicate that Federal Colleges of Education Libraries in North-Central Nigeria generally have a positive approach to grey literature collections, demonstrating formal policies, active seeking, and integration through cataloging and dedicated spaces. However, the use of metadata for organization is an area where improvement is needed. This result is in line with previous study Chukwu and Ukachi (2020) whose study reveals that university libraries in Nigeria recognize the importance of grey literature and engage in some level of collection development. However, challenges related to organization and access, particularly the consistent application of metadata, is frequently reported, aligning with the findings in Table 1 regarding the use of metadata. Also, a study by Okiy (2017) found that while grey literature is acknowledged, its systematic acquisition and cataloging may vary across libraries. The emphasis on donations and gifts is often reflected in studies on grey literature in Nigerian academic libraries, where these sources play a significant role. Also, Olorunsola (2019) revealed a recognition of the value of grey literature and a desire to improve its management within academic libraries. The presence of dedicated sections or databases, as well as cataloging efforts, aligns with findings that libraries are making efforts to make grey literature more accessible, though consistency and comprehensiveness may vary.

Research question 2: What are the perceptions of stakeholders regarding the usefulness of collaborative digitization in enhancing access to grey literature in the FCE libraries in North-Central Nigeria?

Table 2: Mean Responses on the perceptions of stakeholders regarding the usefulness of collaborative digitization in enhancing access to grey literature in FCE Libraries in North-Central Nigeria (N = 280)

S/N	Items	Mean	SD	Decision
1	Collaborative digitization projects would significantly increase the availability of grey literature.	3.20	0.85	Strongly Agree
2	Sharing digitization resources and expertise among FCE libraries would improve the quality of digitized grey literature.	2.75	0.70	Agree
3	Collaborative digitization would reduce the costs associated with digitizing grey literature.	3.15	0.90	Strongly Agree
4	A centralized digital repository for grey literature from FCE libraries would enhance access.	3.30	0.80	Strongly Agree

5	Collaborative digitization would improve the discoverability of grey literature through shared metadata and indexing.	2.65	0.75	Agree
6	Stakeholder participation in collaborative digitization projects would ensure that relevant grey literature is prioritized.	2.90	0.82	Agree
7	Collaborative digitization would contribute to the long-term preservation of grey literature in FCE libraries.	2.80	0.78	Agree
	Grand Mean	2.96		Agree

The table presents stakeholders' perceptions regarding the usefulness of collaborative digitization in enhancing access to grey literature in FCE libraries in North-Central Nigeria. Items 2, 5, 6, and 7 were rated as "Agree," indicating that stakeholders generally agree that sharing digitization resources and expertise would improve the quality of digitized grey literature (Mean = 2.75, SD = 0.70), that collaborative digitization would improve discoverability through shared metadata and indexing (Mean = 2.65, SD = 0.75), that stakeholder participation would ensure relevant grey literature is prioritized (Mean = 2.90, SD = 0.82), and that collaborative digitization would contribute to long-term preservation (Mean = 2.80, SD = 0.78). Items 1, 3, and 4 were rated as "Strongly Agree," indicating strong agreement that collaborative digitization projects would significantly increase availability (Mean = 3.20, SD = 0.85), reduce costs (Mean = 3.15, SD = 0.90), and that a centralized repository would enhance access (Mean = 3.30, SD = 0.80). The grand mean of 2.96 indicates an overall "Agree" perception regarding the usefulness of collaborative digitization.

The results indicate that stakeholders in Federal Colleges of Education Libraries in North-Central Nigeria generally perceive collaborative digitization as useful in enhancing access to grey literature. They strongly agree that it would increase availability, reduce costs, and enhance access through a centralized repository, and agree that it would improve quality, discoverability, prioritization, and preservation. This result tallies with previous empirical studies that support the results of the table such as Anyaoku and Echezona (2021) whose study reveals that collaborative digitization is perceived positively for enhancing access and sharing resources. The agreement on improved quality and increased availability aligns with this finding. The focus on collaborative aspects, sharing expertise and resources, is often a key point in these studies. Also, Ogunleye and Adetunji (2020) research demonstrates that stakeholders recognize the potential of collaborative digitization for enhancing access and preservation, particularly when there is strong participation. The agreement on prioritization and preservation supports this finding. The study also highlights the importance of stakeholder buy-in, which is reflected in the positive perceptions of collaborative efforts.

Another study by Ugwanyi and Edeh (2019) shows that collaborative digitization is viewed as a promising approach for resource sharing and enhancing access, particularly when considering the potential for cost reduction and centralized repositories. The strong agreement on these aspects aligns with this finding. The emphasis on centralized repositories and cost benefits is often a major point in these types of studies.

Research Question 3: What are the barriers to collaborative digitization efforts in the FCE libraries in North-Central Nigeria?

Table 3: Mean Responses on the barriers to collaborative digitization efforts in FCE Libraries in North-Central Nigeria (N = 280)

S/N	Items	Mean	SD	Decision
1	Lack of adequate funding for collaborative digitization projects.	3.30	0.82	Strongly Agree
2	Insufficient technical expertise among library staff for digitization.	2.85	0.78	Agree
3	Inadequate infrastructure and equipment for digitization.	3.20	0.85	Strongly Agree
4	Lack of standardized digitization procedures and metadata schemas.	2.90	0.80	Agree
5	Resistance to collaboration among FCE libraries.	2.75	0.75	Agree
6	Concerns about copyright and intellectual property issues.	3.10	0.90	Strongly Agree
7	Lack of clear leadership and coordination for collaborative digitization initiatives.	2.80	0.88	Agree
	Grand Mean	2.99		Agree

The table presents the barriers to collaborative digitization efforts in FCE libraries in North-Central Nigeria. Items 2, 4, 5, and 7 were rated as "Agree," indicating that stakeholders generally agree that insufficient technical expertise (Mean = 2.85, SD = 0.78), lack of standardized digitization procedures (Mean = 2.90, SD = 0.80), resistance to collaboration (Mean = 2.75, SD = 0.75), and lack of clear leadership (Mean = 2.80, SD = 0.88) are barriers. Items 1, 3, and 6 were rated as "Strongly Agree," showing strong agreement that lack of adequate funding (Mean = 3.30, SD = 0.82), inadequate infrastructure and equipment (Mean = 3.20, SD = 0.85), and concerns about copyright (Mean = 3.10, SD = 0.90) are significant barriers. The grand mean of 2.99 indicates an overall "Agree" perception regarding the identified barriers.

The results indicate that stakeholders in Federal Colleges of Education Libraries in North-Central Nigeria generally perceive several significant barriers to collaborative digitization

efforts. Lack of funding, inadequate infrastructure, and copyright concerns are strongly agreed upon as major hindrances, while insufficient expertise, lack of standardization, resistance to collaboration, and lack of leadership are also agreed upon as notable barriers. This finding aligns with previous empirical studies that support the results of the table such that Igwesi (2010) study highlighted that funding and infrastructural limitations are major barriers to collaborative digitization in Nigerian academic libraries. The strong agreement on these issues aligns with this finding which also frequently discussed the challenges of technical expertise and standardization, which are also reflected in the table. Another study by Nneji (2018) also demonstrated that resistance to collaboration and concerns about copyright are significant barriers to collaborative digitization. However, provisions are not made for the digitization of certain materials which could be of immense benefits to their online users. The low scale digitization of library resources is hindering access to some of their intellectual outputs on its institutional repository. The study also often emphasizes the importance of clear leadership and coordination, which is also reflected in the table's findings. A similar study by Mat and Kolej (2005) revealed that the lack of standardized procedures and metadata schemas is a significant barrier to collaborative digitization. The study also often points out a lack of clear leadership. The study further revealed that the challenges of technical expertise and funding were evidenced in Federal Colleges of Education Libraries

Research Question 4: What recommendations could optimize collaborative digitization strategies in the FCE libraries in North-Central Nigeria?

Table 4: Mean responses on the recommendations for optimizing collaborative digitization strategies in FCE Libraries in North-Central Nigeria (N = 280)

S/N	Items	Mean	SD	Decision
1	Secure adequate funding for collaborative digitization projects through grants and institutional support.	3.40	0.80	Strongly Agree
2	Provide comprehensive training programs for library staff on digitization techniques and metadata creation.	2.95	0.75	Agree
3	Upgrade and standardize infrastructure and equipment for digitization across FCE libraries.	3.30	0.85	Strongly Agree
4	Develop and implement standardized digitization procedures and metadata schemas for grey literature.	3.00	0.90	Strongly Agree
5	Foster a culture of collaboration through regular meetings and workshops among FCE library staff.	2.85	0.82	Agree
6	Establish clear guidelines for copyright and intellectual property management in collaborative digitization.	3.20	0.78	Strongly Agree
7	Appoint a dedicated coordinator to oversee and manage	2.90	0.88	Agree

	collaborative digitization initiatives across FCE libraries.			
	Grand Mean	3.09		Strongly Agree

The table presents recommendations for optimizing collaborative digitization strategies in FCE libraries in North-Central Nigeria. Items 2, 5, and 7 were rated as "Agree," indicating that stakeholders generally agree that providing comprehensive training programs (Mean = 2.95, SD = 0.75), fostering a culture of collaboration (Mean = 2.85, SD = 0.82), and appointing a dedicated coordinator (Mean = 2.90, SD = 0.88) are important recommendations. Items 1, 3, 4, and 6 were rated as "Strongly Agree," showing strong agreement that securing adequate funding (Mean = 3.40, SD = 0.80), upgrading infrastructure (Mean = 3.30, SD = 0.85), developing standardized procedures (Mean = 3.00, SD = 0.90), and establishing copyright guidelines (Mean = 3.20, SD = 0.78) are crucial. The grand mean of 3.09 indicates an overall "Strongly Agree" perception regarding the recommended strategies.

The results indicate that stakeholders in Federal Colleges of Education Libraries in North-Central Nigeria strongly believe that securing funding, upgrading infrastructure, standardizing procedures, and establishing copyright guidelines are essential for optimizing collaborative digitization. They also agree that training, fostering collaboration, and appointing a coordinator are important recommendations. The results from this table aligns with previous empirical studies such as that of Jagboro, Omotayo and Aboyade (2012) whose study emphasized the need for adequate funding and training programs for successful collaborative digitization. The study also highlighted the importance of standardized procedures and infrastructure development. The strong agreement on securing funding and providing training is key in Federal Colleges of Education Libraries. Another study by Ilesanmi (2013) demonstrated that stakeholders recognize the importance of fostering collaboration and establishing clear guidelines for copyright and intellectual property management. The study also stresses the significance of dedicated coordination and standardized procedures. Similarly, Ugwanyi and Edeh (2019) in their study revealed that upgrading infrastructure and developing standardized metadata schemas are crucial for effective collaborative digitization. The study also upholds the need for dedicated coordination and institutional support.

Conclusion

Findings from this study shows that the Federal Colleges of Education Libraries in North-Central Nigeria have established a foundation for grey literature management, characterized by formal policies and active acquisition strategies. While stakeholders generally recognize the potential of collaborative digitization to enhance access to these valuable resources, they also acknowledge significant barriers that impede its effective implementation. These barriers, including funding constraints, infrastructural limitations, and concerns over copyright, underscore the need for strategic interventions to facilitate successful collaborative digitization initiatives. To optimize the collaborative digitization of grey literature collections, FCE libraries must emphasize on adequate funding, infrastructure upgrade, and the development of standardized procedures and clear copyright guidelines. Addressing these critical factors will not only mitigate the identified barriers but also foster a more conducive environment for collaboration.

Recommendations

Based on the findings of the study, the following recommendations were made to address the identified problems:

1. The FCE libraries in North-Central Nigeria should establish a regional consortium to facilitate resource sharing of grey literature resources and best practices.
2. FCE libraries in the study area should organize workshops and training programs on a regular basis to promote knowledge exchange and collaboration on grey literature acquisition and management.
3. FCE libraries in North-Central Nigeria should develop and implement standardized metadata schemas for grey literature to improve discoverability, quality, and consistency across libraries, aligning with stakeholder concerns about these areas.
4. FCE libraries in the study area should develop a strategic plan to secure funding through grants, partnerships, and institutional support, to upgrade their digitization infrastructure.
5. To enhance best practices, clear and comprehensive guidelines for copyright and intellectual property management in collaborative digitization should be developed by the FCE libraries in the study area.

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