

PERCEPTION AND PREPAREDNESS FOR DIGITAL PRESERVATION OF ARABIC AND ISLAMIC MANUSCRIPTS IN WAZIRI JUNAIDU HISTORY AND CULTURE BUREAU, SOKOTO, NIGERIA

By

Ibrahim M. M. Furfuri (Ph.D)

ibrahim.furfuri@ssu.edu.ng immfurfuri@yahoo.co.uk

Inuwa Abdul-Kadir Library, Sokoto State University, Sokoto

Abstract

This study was conducted to assess the perception and preparedness for digital preservation of Arabic and Islamic Manuscripts in Waziri Junaidu History and Culture Bureau, Sokoto. This Bureau houses significant collection of Arabic and Islamic manuscripts that are invaluable to the preservation of Nigeria's cultural heritage. Two research questions guided the study, and a survey research design combined with observation were used as instruments for data collection. A four-point Likert Rating Scale on perception and preparedness on digital preservation of Arabic and Islamic manuscripts for effective service delivery was developed and used for the study. The findings indicate significant level of preparedness in the Waziri Junaidu History and Culture Bureau. This could be attributed to the Bureau's mandate to preserve and promote the rich cultural heritage of the region, and strong commitment to implementing manual preservation strategies. Resources, such as trained personnel, introduction of appropriate technology and funding could have facilitated the adoption of digital preservation initiatives but this has nose-dived presently. The findings also indicate significant perception among the staff which could be attributed to factors such as awareness and appreciation of the importance of safeguarding these valuable resources, as well as staff exposure to various training initiatives that focused on digital preservation. Hence, the study concludes that staff involved in preservation efforts at the Bureau have a positive perception and understanding of the importance and benefits of digital preservation for the Arabic and Islamic manuscript collections. However, there has been plan for digital preservation over the years, but the preparedness for implementation is still very low. Based on the findings, the study made appropriate recommendations.

Keywords: Arabic and Islamic Manuscripts, Digital Preservation, History and Culture Bureau, Waziri Junaidu Sokoto.

Introduction

The Waziri Junaidu History and Culture Bureau in Sokoto houses a significant collection of Arabic and Islamic manuscripts, particularly that of the Sokoto Caliphate. These manuscripts are invaluable for the preservation of the Caliphate and Nigeria's cultural heritage. Balarabe (1992) noted that in Nigeria, the Arabic literature in the form of manuscripts is very important at national and international levels because of its immense value for knowledge and research in areas such as history, culture, and socio-economic development. In other words, Arabic language has greatly influenced the culture of many societies, especially through the wide spread and influx of its literature in the early 19th century under the Sokoto Caliphate. Therefore, the idea of digital preservation of Arabic and Islamic manuscripts touching the Caliphate has become imperative. Iliyas (2015) asserts that, despite several works done by scholars such as W.E Kensdale, Alhaji

Hassan Gwarzo, Abdullahi Smith, and a host of others, Arabic and Islamic manuscripts in Nigeria have suffered neglect due to lack of awareness and recognition of their value in the present and the future society. Hence, a visit to various repositories of these manuscripts will testify that they are endangered including those owned privately (Kamba & Abba, 2020). Therefore, it is very crucial to adapt global best practices through digitization of these valuable historical and cultural records. Effective preservation of manuscripts and other archival records has the power to greatly influence transformation of a society politically, culturally, economically and administratively (Maidabino, 2010).

Arising from the historical significance of Arabic language in the evolution and propagation of Islam on one hand and the strategic significance of Sokoto since the Jihad of 1804 on the other hand, the Sokoto Caliphate assumed the status of custodian of knowledge from which other Islamic centres and communities in the region and beyond looked up to. The inherent benefits of Arabic and Islamic manuscripts centred on educational, economic, political, social, medical, technological, and cultural, activities of sub-Saharan West Africa and even beyond. Notably, some of the manuscripts have been translated into some local languages, but much work still needs to be done in terms of preservation for future use. The fundamental problem lies on the use of obsolete and grossly inefficient methods of preservation and accessibility to Arabic and Islamic manuscripts, including the translated ones that are hitherto preserved manually. Thus, there is compelling need to get these vital resources properly digitalized for effective service delivery to all users. This study, therefore, focuses on digital preservation of Arabic and Islamic manuscripts available in Waziri Junaidu History and Culture Bureau, Sokoto. Digital preservation of manuscripts is necessary because swift advances in technologies have resulted to dramatic ease of production, organization, retrieval and accessibility to information in both born digital and digitized formats (Ahmad & Rafiq, 2022). In Nigeria, digital preservation of manuscripts seems not to have been given the deserved attention by relevant institutions such as archival centres, libraries, museums, and related research centres. A study by Ogbu and Igwebuike (2024) reveals that digitization of cultural heritage information resources in South-East Nigeria was at very low level of implementation.

In the current digital age, digitization is one of the fundamental functions archival institutions. In the context of this paper, digitization refers to transfer of physical documents from its original format into digital form through different processes. The process of digitization involved selection, digital conversion, organization, searching and retrieval facilities, storage, and preservation for continuous accessibility to documents contents. Digitization of archival materials such as manuscripts is a process of storing information sources and resources in the digital space purposely for long-term maintenance and continued accessibility of the contents through time and changing technologies (Nasidi & Jika, 2023). However, these researchers further noted that in Nigeria, migration is the most popular digital preservation strategy adopted without viable plan to assess digital objects for preservation purposes. They further noted that most Nigerian librarians are falling short of the required technological skills to properly handle digital preservation. Therefore, Arabic and Islamic manuscripts are one of the important cultural and intellectual heritage in Nigeria, and it is very necessary to safeguard and preserved these resources. Their preservation should be a continuous process of deploying the best technologies for storage and services as well as prevention of all sorts of damage. Hence, it is the primary duty of all stakeholders of Waziri Junaidu History and Culture Bureau, Sokoto, to preserve and conserve its collections of

manuscripts not only in their physical forms but also in digital format. Despite the challenges associated with the digital format, it has many advantages that include: avoidance of physical damage, loss of the documents, easy and virtual access globally, and solution to limited space for storage and use.

The Waziri Junaidu History and Culture Bureau, Sokoto was established since 1973 by Edict No. 3 of North Western State of Nigeria. The Bureau was charged with the responsibility of collection, preservation and making accessible all materials related to history and culture of Sokoto State. In an interview with the Executive Director of the Bureau in 2014, Suleiman, Aduku and Kpakiko (2017), stated that the Bureau has grown and developed as one of the important data bank and research centre in Nigeria. It houses over “500,000 volumes of records, archival documents, photographs, artifacts, museum objects, Arabic/Ajami manuscripts and other documents of historical and cultural importance”.⁶⁸ For the overall efficiency of operations and effective service delivery. The Bureau consists of the Department of History and the Department of Culture. These departments further consist of seven (7) units as follows:

- i. Museum and Monuments
- ii. Archives and Library
- iii. Arabic/Ajami Manuscripts and Translation
- iv. Research and Documentation
- v. Repair and Bindery
- vi. Extension, Craft and Visual Arts
- vii. Performing Arts and Cultural Research

In addition to the above, the staff of the Bureau attended several seminars, workshops, short courses, and visit to other countries in order to enhance their performance in managing the materials for effective services to users. In other words, all the trainings and visits focused on collection and long-term preservation, and accessibility and use of the resources. However, studies have envisaged lack of proper planning and comprehensive policies for digital preservation as a major hindrance (Suleiman, Aduku and Kpakiko, 2017). These researchers reported that traditional techniques have remained the major means for the organization, storage, preservation, and provision of services required by users of Waziri Junaidu History and Culture Bureau, Sokoto.

This study therefore, focuses on assessing the level of preparedness for digital preservation of the Arabic and Islamic Manuscripts in the Bureau. The study will specifically determine staff perception of digital preservation of Arabic and Islamic manuscripts for effective service delivery to users. Furthermore, the study will assess staff exposure to relevant technologies through training workshops and short courses, collaboration and support by governmental and non-governmental organizations, and other donor agencies, towards implementing digital preservation in Waziri Junaidu History and Culture Bureau, Sokoto.

Statement of the problem

The Waziri Junaidu History and Culture Bureau, Sokoto houses significant collections of Arabic and Islamic manuscripts that are invaluable to the preservation of Nigeria's cultural heritage and intellectual heritage. However, these collections are faced with various threats, including environmental degradation, mishandling, and natural disasters. Digital preservation is thus highly desirable for effective preservation and enhancement of access to these resources. Nevertheless,

the perception and preparedness of stakeholders in the History and Culture Bureau towards this modern method remain unclear; thereby posing some obvious challenges to the existence, permanent preservation and accessibility to this rich cultural and intellectual heritage for current usage and posterity.

Objectives of the Study

The primary aim of this study was to assess staff perception and level of preparedness for digital preservation of Arabic and Islamic manuscripts for enhanced service delivery in Waziri Junaidu History and Culture Bureau, Sokoto. The study has the following objectives:

1. to determine the perception of staff on digital preservation of Arabic and Islamic manuscripts in Waziri Junaidu History and Culture Bureau, Sokoto.
2. to assess the preparedness for digital preservation of the Arabic and Islamic manuscripts in Waziri Junaidu History and Culture Bureau, Sokoto.
3. to determine whether any significant variance exists between preparedness and the required digitization facilities available in Waziri Junaidu History and Culture Bureau, Sokoto.

Hypotheses

Ho₁ There is no significant preparedness on digital preservation of Arabic and Islamic manuscripts for effective services in Waziri Junaidu History and Culture Bureau, Sokoto.

Ho₂ There is no significant perception on digital preservation of Arabic and Islamic manuscripts for effective services in Waziri Junaidu History and Culture Bureau, Sokoto.

Literature Review

For proper understanding, it is pertinent to give brief background information on Arabic and Islamic manuscripts in Nigeria. The Islamic revivalist movement known as the Sokoto Jihad in 1804 had made greater influence on the scholarly contributions of literary works in different fields of learning including political, religious, economics, sciences and medicine. In view of its immense relevance and value to present and future needs of the society at national and international levels, the literature and other manuscripts of the Sokoto Caliphate deserves the attention of researchers (Balarabe, 1986). It was in this regard that, Balarabe conducted his Masters degree thesis on the Sokoto Caliphate Collection in Some Nigerian Libraries and Archival Institutions. In the study, Balarabe reported the existence of Arabic and Islamic manuscripts in both pre-Jihad and the Jihad periods. These materials were widely spread largely in Northern Nigeria and parts of sub-Saharan Africa, particularly places like Niger Republic and Ghana. The pre-Jihad manuscripts largely consisted of books on Arabic language and Islamic religion. The manuscripts were directly linked to the coming of Islam in Northern Nigeria through foreign Muslim missionaries and caravan trades and other commercial activities with the caravan traders from North Africa. The trade routes covered places like Bornu, and Kano in Northern Nigeria, Agades and Timbukutu (Balarabe, 1986).

The Arabic and Islamic manuscripts generated during and post Jihad period were so huge and diverse, which resulted into its greater influence on the knowledge and cultural heritage, socio-

economic, activities, political system, and administrative affairs in Northern Nigeria. However, there was no exact certainty on the first Arabic and Islamic manuscript that entered the territory that is today known as Nigeria. According to Adamu (2009), historically, one should expect that the manuscripts entered Bornu before the Hausa land and other parts of Nigeria, Adamu further asserts that, the early manuscripts were text books including Qur'an, used for teaching and practices of various aspects of Islamic religion. Those books were duplicated in hand-written formats. This development was followed by pamphlets and hand-written letters of correspondences with foreign scholars, and among indigenous authors. Thus, the production of indigenous Arabic manuscripts started between 15th and 16th century by prominent scholars. The renowned scholars that contributed to the emergence and spread of Arabic and Islamic manuscripts include the Wali Dan Marina of Katsina and his students, scholars from Kano, 'Yandoto Kingdom in present Zamfara State, and other numerous scholars that lived prior to the Jihad of Usman Danfodiyo. Adamu had also noted that the family of Usman Danfodiyo were prolific writers whose activities covered not Hausa land alone, but places like Borno, Adamawa, Nupe and Yoruba land. So all these places have witnessed tremendous production of Arabic and Islamic manuscripts. But, this development and practices were slowed down with the emergence of printing technology. Hence, historians, scholars, and researchers (foreign and local) began to focus attention on discovery, recovery, acquisition of these unquantifiable materials within Nigeria, African countries, British and other parts of the world. Gradually, the available Arabic and Islamic manuscripts were collected, organized, preserved and maintained for effective utilization.

Due to its relevance and importance, many centres were established in Nigeria to serve as the repositories of the Arabic and Islamic manuscripts. Some of these important centres studied by Balarabe (1986) include:

- i. Sokoto State History Bureau, Sokoto
- ii. Private library of Waziri n Sokoto
- iii. Northern History Research Scheme, A.B.U. Zaria
- iv. Research Data Centre, B.U. K. Library
- v. National Archives Kaduna, National Museum, Jos

In the South-West of Nigeria, a mass collection of Arabic and Islamic manuscripts also exist. According to Mahmud (1983), the works of great scholars such as Ahmad al-Rifa'i ibn Bello, and Adam Abdallahi al-Iluri have contributed immensely to the development of Arabic and Islamic manuscripts. Thus, the establishment of the Departments of Arabic and Islamic Studies in some Nigerian universities has further accelerated the recovery, acquisition, and availability of Arabic and Islamic manuscripts in Nigeria. Mahmud (1983) reported that, towards the end of the 19th century, literary works on Arabic and Islamic manuscripts began to decline, but large number of correspondences in Arabic and Ajami forms of writing continued to be used among emirates, and other parts of Africa. Details of this are available in the work of Murry Last on Sokoto Caliphate.

In the case of History and Culture Bureau, Sokoto, there are numerous challenges associated with the recovery and acquisition of the manuscripts, which include refusal of families or individuals to release the manuscripts for fear of confiscation by authorities or loss of ownership. But, the manuscripts were organized, preserved and maintained for effective utilization and services. Thus, Balarabe (1986) succinctly stated that the Sokoto Caliphate manuscripts collection is meant to cater for the needs of Nigerian and foreign scholars and researchers. The collection is utilized

mostly by Historians, Arabic/Islamic scholars, educationists and researchers in various related disciplines.

In terms of preservation, the findings of the above study indicates problems of protection against possible danger and unfavourable atmosphere that may result into continuous deterioration. In addition, humidity and limited storage space as well as shortage of trained staff were observed to be among the serious threats for permanent preservation and service delivery to users. However, despite these challenges, in another study, Balarabe (1991) reported that, the Waziri Junaidu History and Culture Bureau, Sokoto, has taken the lead in terms of discovery, recovery and preservation of historical records, particularly the Arabic and Islamic manuscripts. Hence, the need for digital preservation of its manuscripts to enhance service delivery to scholars and researchers within and out Nigeria cannot be overemphasized. In the present digital age, adapting modern technologies to preserve these manuscript has become necessary, at least for enhancing access and long-term preservation.

Preserving Arabic and Islamic manuscripts is crucial for maintaining the rich history and culture of the Islamic world. According to Kanchi and Kulkarni (2021) as cited in Taj & Gala (2024), “Manuscript” originates from “manuscriptum,” which is a fusion of two latin words: “Manus” and “Screbere” or “Screpte,” that denotes hand written something. Manuscripts are usually regarded as tangible cultural heritage information materials that constitutes valuable components of a nation or community cultural legacy and serve as invaluable resources for reconstructing their history and culture (Munjeri, 2004 as cited in Taj & Gala, 2024).

As these manuscripts are susceptible to damage from various factors, including environmental conditions, mishandling, and natural disasters, and digital preservation has become an essential tool for ensuring their longevity (Ahmed, 2018). Digital preservation is essential for safeguarding and disseminating the valuable information contained within Arabic and Islamic manuscripts. These manuscripts are housed in various history and culture bureaus across the world, making it crucial to understand the perceptions of stakeholders on digital preservation efforts.

Preserving Arabic and Islamic manuscripts in digital format is vital for protecting them from physical damage and ensuring easy access by researchers, scholars, and the general public, including the virtual users (Hussein & Abbad, 2018). Digital preservation helps to combat the deterioration of manuscripts due to environmental factors, human handling, and natural disasters. Moreover, it enables the sharing of knowledge across geographical boundaries and contributes to the global preservation of cultural heritage.

The History and Culture Bureau plays a vital role in managing and preserving these manuscripts, making preparedness for digital preservation an essential aspect of their services. Digital preservation techniques involve the conversion of physical manuscripts into digital formats, such as high-resolution images or text documents (Varlamova, Mandić, Belmonte, Dershowitz, & Soliman, 2016). These digital copies can then be stored and managed using specialized software and hardware systems. Digital preservation not only protects manuscripts from physical damage but also makes them more accessible to researchers and scholars worldwide. Stakeholders involved with the history and culture bureau may have diverse perceptions of digital preservation, which can impact the success of digitization initiatives (Varlamova et al., 2016). These perceptions may be influenced by factors such as awareness of the benefits of digital preservation, concerns about

the authenticity and integrity of digitized materials, and the availability of resources and expertise to implement digital preservation projects.

Despite the benefits of digital preservation, several challenges must be addressed to ensure its effectiveness. These challenges include selection and prioritization of manuscripts for digitization, securing funding and resources, and ensuring the long-term accessibility and usability of digital materials (Hussein & Abbad, 2018). Additionally, the unique characteristics of Arabic and Islamic manuscripts, such as complex scripts and illustrations, require specialized expertise and technology for accurate digitization. To achieve successful digital preservation of Arabic and Islamic manuscripts, the History and Culture Bureau must adopt a strategic approach that incorporates planning, resource allocation, and collaboration with experts in the field (Ahmed, 2018). This involves identifying priority manuscripts for digitization, implementing proper digitization techniques, and establishing long-term preservation strategies. By addressing these challenges and embracing digital preservation, the History and Culture Bureau can ensure the preservation and accessibility of these valuable cultural artifacts for future generations. Challenges faced by the History and Culture Bureaus in implementing digital preservation projects include limited funding, inadequate infrastructure, and a shortage of skilled personnel (Ahmed, 2018). However, these challenges can be addressed through collaborations with local and international institutions, capacity-building initiatives, and raising awareness of the importance of digital preservation among stakeholders.

Findings from a study by Taj and Gala (2024) on digital preservation of Arabic, Persian and Urdu manuscripts in India, reveals that over a million pages were digitized based on selection from more than 100 institutions across India. This suggests that digital preservation of Arabic and Islamic manuscripts is very crucial because it enhances accessibility and service delivery to users. It can also improve the preservation of original documents, while at the same time minimize physical handling and extensive use of original manuscripts that are rare.

In Nigeria, digital preservation of manuscripts is still low and require urgent attention. According to Abioye (2018), the Nigerian National Archives has realized the digitization of some of its records that were not born digital. It initiated a project that aimed at ensuring efficiency of finding aids to existing manuscripts for enhancing service delivery at its Ibadan, Kaduna and Enugu Zonal Offices. However, only selective records were digitized due to numerous challenges such as funding, technological requirements, etc. Another study was conducted by Agidi and Gbamwuan (2023), about the condition of National Archive of Nigeria. The researchers employed desk review of secondary sources of information and corroborated it with oral interviews that used narrative, historical, and analytic approach. Their findings reveals that in both Ibadan and Kaduna zonal offices, manuscripts are in deplorable conditions, and require proactive measures to rescue them through digitization. Digitization will help ensure long-term preservation, and enhance the manuscripts visibility, ease of accessibility for effective services to researchers. Thus, they calls for the support of international agencies such as International Council on Archives (ICA) and United Nations Educational, Scientific, and Cultural Organization (UNESCO) for both technical and financial assistance.

The preservation of endangered Arabic and Islamic manuscripts within the context of the Sokoto Caliphate carries immense historical and cultural significance. These manuscripts serve as

invaluable repositories of knowledge, documented the rich cultural and intellectual heritage, religious teaching, administrative practices from both Islamic and colonial perspectives, and the societal norms prevalent during the Caliphate existence. However, today these valuable documents are facing multifaceted challenges that threaten their long-term existence, including physical degradation, inadequate preservation techniques, and limited access to different scholars and researchers. Hence, it is necessary to determine staff opinions regarding the level of preparedness in terms training, technology including software, funding, and policies as vital requirements for digital preservation. The staff perception on the digitization project as a means of preservation and enhancing access for effective service delivery to physical and remote or virtual users is also of paramount importance.

Methodology

This study adopted survey research design. It involved collecting data from a sample of individuals through structured questionnaires or interviews to describe, compare, or explain their knowledge, attitudes, beliefs, behaviours, or characteristics (Creswell & Creswell, 2018). A study on digitization that involved manuscripts is usually associated with investigation of diverse objectives, and it may also require the researcher to employ qualitative case study method that use semi-structured interviews, observation, and content analysis of library records (Taj & Gala, 2024). Hence, the researcher also employed observation to corroborate it with instrument used for the data collection. Availability sampling procedure was used to sample all the respondents with population of fifteen (15). The questionnaire on preparedness and perception on digital preservation of Arabic and Islamic manuscripts for effective services in Waziri Junaidu History and Culture Bureau, Sokoto was developed by the researcher and was the instrument utilized for the study. The instrument was divided into two parts. Section A was on preparedness while Section B was on perception on digital preservation of Arabic and Islamic manuscripts for effective services in Waziri Junaidu History and Culture Bureau, Sokoto.

A four-point Likert Rating Scale with the options strongly agree, agree, disagree, and strongly disagree was used to structure the surveys. Each received a 4, 3, 2, 1 grade. The test-retest reliability test was employed for the pilot study's self-developed questionnaire also covered the preparedness and perception on digital preservation of Arabic and Islamic manuscripts for effective services in Waziri Junaidu History and Culture Bureau, Sokoto, with reliability coefficient of 0.83. Descriptive statistics of frequency counts and percentages was used. At a significance level of 0.05, two sampled means were employed to evaluate the null hypotheses formulated. SPSS version 27, a statistical tool for Social Science was used.

Results

Table 1: Summary of One-Sample t-test on perception on digital preservation of Arabic and Islamic manuscripts for effective services in Waziri Junaidu history and culture Bureau

	N	Mean	Std. Deviation	df	t-test	Prob	decision
perception on digital preservation of Arabic and Islamic manuscripts Constant Mean	15	3.5627 2.5	0.69938	14	18.737	0.0001	rejected

Table 1 presents the summary of a one-sample t-test conducted to evaluate the perception on digital preservation of Arabic and Islamic manuscripts for effective services in the Waziri Junaidu History and Culture Bureau. The t-test column displays the calculated t-statistic value, which is 18.737. The t-statistic is used to determine the significance of the difference between the sample mean and a hypothesized or constant mean. This column shows the probability value or p-value associated with the t-test. In this case, the p-value is 0.0001, which is extremely small, indicating a highly significant difference between the sample mean and the constant mean. Based on the p-value and a predetermined significance level (usually 0.05 or 0.01), a decision is made whether to reject or fail to reject the null hypothesis. In this case, the decision is "rejected," which means that the null hypothesis is rejected, and the alternative hypothesis is accepted. The constant mean column, which is 2.5 in this case, represents the hypothesized or expected mean value against which the sample mean is being compared. In the context of this study, the results suggest that the perception on digital preservation of Arabic and Islamic manuscripts for effective services in the Waziri Junaidu History and Culture Bureau is significantly different from the constant mean of 2.5. The positive t-statistic value (18.737) and the small p-value (0.0001) indicate that the observed mean (3.5627) is significantly higher than the constant mean.

Table 2: Summary of One-Sample t-test on preparedness on digital preservation of Arabic and Islamic manuscripts for effective services in Waziri Junaidu history and culture Bureau

	N	Mean	Std. Deviation	df	t-test	Prob	decision
preparedness on digital preservation of Arabic and Islamic manuscripts Constant Mean	15	3.9866 2.5	0.53050	14	13.800	0.0001	rejected

Table 2 presents a summary of a one-sample t-test conducted to evaluate the preparedness on digital preservation of Arabic and Islamic manuscripts for effective services in the Waziri Junaidu History and Culture Bureau. The t-test column displays the calculated t-statistic value, which is 13.800. The t-statistic is used to determine the significance of the difference between the sample mean and a hypothesized or constant mean. This column shows the probability value or p-value associated with the t-test. In this case, the p-value is 0.0001, which is extremely small, indicating a highly significant difference between the sample mean and the constant mean. Based on the p-value and a predetermined significance level (usually 0.05 or 0.01), a decision is made whether to reject or fail to reject the null hypothesis. In this case, the decision is rejected, which means that the null hypothesis is rejected, and the alternative hypothesis is accepted. The constant mean column, which is 2.5 in this case, represents the hypothesized or expected mean value against

which the sample mean is being compared. The results suggest that the preparedness on digital preservation of Arabic and Islamic manuscripts for effective services in the Waziri Junaidu History and Culture Bureau is significantly different from the constant mean of 2.5. The positive t-statistic value (13.800) and the small p-value (0.0001) indicate that the observed mean (3.9866) is significantly higher than the constant mean.

Discussion

This finding is consistent with the growing recognition of the importance of digital preservation in safeguarding cultural heritage materials, including Arabic and Islamic manuscripts (Ayrís, Davies, McLeod, Miao, Shenton & Wheatley, 2008). These manuscripts represent invaluable sources of knowledge and cultural identity, and their preservation is crucial for ensuring their accessibility and longevity for future generations (Abdullahi, Asuku, & Idris, 2016). The significant perception observed in the Waziri Junaidu History and Culture Bureau could be attributed to several factors. First, the Bureau's mission to preserve and promote the cultural heritage of the region may have fostered awareness and appreciation for the importance of safeguarding these valuable resources (Waziri Junaidu History and Culture Bureau, n.d.). Further more, exposure to training programmes, workshops, or professional development programmes focused on digital preservation may have contributed to enhancing the perception and understanding of the concept (Abdullahi et al., 2016). Also, the recognition of the potential risks associated with the deterioration of physical manuscripts, such as environmental factors, handling, and natural disasters, may have reinforced the perception of digital preservation as a viable solution for ensuring the accessibility and longevity of these valuable resources (Ngulube, 2015).

However, it is important to note that while a positive perception is essential, it should be complemented by practical actions and implementation strategies. Therefore, despite the significant level of perception for digital preservation, there were no concrete actions for implementation. Thus, the manuscripts are still managed using traditional methods as found in a similar study by Suleiman, Aduku and Kpakiko (2017). Thus, the manuscripts still face the same threats lamented by Balarabe (1986), that protection against possible danger and other conditions such as unfavourable atmosphere, humidity, limited storage space, and shortage of staff are threats to permanent preservation and service delivery. This implies that the documents may continue to deteriorate due to the use of boxes and leather satchels which appeared to be obsolete storage facilities. Therefore, Positive perception alone may not be sufficient to ensure the successful digital preservation of Arabic and Islamic manuscripts (Hedstrom, 1998; Deegan & Tanner, 2006). Effective digital preservation requires a comprehensive and well-planned approach that encompasses various aspects, such as policy development, infrastructure establishment, staff training, collaboration with stakeholders and experts in the field, and ongoing evaluation and improvement (Ayrís et al., 2008; Ngulube, 2015). Additionally, addressing challenges such as metadata standardization, technological obsolescence, and sustainable funding mechanisms is crucial for the long-term preservation and accessibility of the digital collections (Hedstrom, 1998; Ngulube, 2015).

The significant level of preparedness observed in the Waziri Junaidu History and Culture Bureau could be attributed to several factors. First, the Bureau's mandate to preserve and promote the rich cultural heritage of the region may have fostered a strong commitment to implementing digital

preservation strategies (Waziri Junaidu History and Culture Bureau, n.d.). Additionally, the availability of resources, such as trained personnel, appropriate technology, and funding, could have facilitated the adoption of digital preservation initiatives (Hedstrom, 1998). Furthermore, the recognition of the potential risks associated with the deterioration of physical manuscripts, such as environmental factors, handling, and natural disasters, may have underscored the importance of creating digital copies for long-term preservation (Ngulube, 2015). Digital preservation offers a viable solution for ensuring the accessibility and longevity of these valuable resources, enabling their dissemination to a wider audience and facilitating scholarly research (Deegan & Tanner, 2006). It is important to note that while the observed preparedness level is significant, it does not necessarily imply that the digital preservation efforts are comprehensive or fully implemented. Indeed, the implementation of digital preservation is still very low. This finding corroborates that of Ogbu and Igwebuike (2024) which reveals the digitization of cultural heritage information resources in South-East Nigeria as very low level of implementation. Ongoing efforts may be required to address challenges such as metadata standardization, technological obsolescence, and sustainable funding mechanisms (Hedstrom, 1998; Ngulube, 2015). The issue of technological obsolescence was in line the finding from the study of Abioye, (2018) and Nasidi and Jika (2023), as they all emphasized the need for technological requirement as part of the implementation strategies for digital preservation of manuscripts in Nigeria. Effective digital preservation requires a holistic approach that encompasses various aspects, including policy development, infrastructure establishment, staff training, and collaboration with stakeholders and experts in the field (Ayriz et al., 2008; Ngulube, 2015). Continuous evaluation and improvement of the digital preservation strategies are also essential to ensure the long-term preservation and accessibility of the Arabic and Islamic manuscripts (Deegan & Tanner, 2006).

From the findings, it is evident that the significant level of preparedness for digital preservation of Arabic and Islamic manuscripts for effective services in the Waziri Junaidu History and Culture Bureau is a positive indicator of the Bureau's commitment to safeguarding these valuable cultural resources. However, ongoing efforts and collaboration with relevant stakeholders are crucial to address the challenges and ensure the successful implementation and sustainability of digital preservation. This finding suggests that the individuals involved in the preservation efforts at the Bureau, such as librarians, archivists, and other stakeholders, have a positive perception and understanding of the importance and benefits of digital preservation of the Arabic and Islamic manuscripts. Positive perception is considered a critical factor for the successful adoption and implementation of digital preservation initiatives (Ngulube, 2015). When individuals recognize the value and necessity of digital preservation, they are more likely to actively support and contribute to the efforts, thereby increasing the chances of success (Hedstrom, 1998).

Preservation is one of the fundamental pillars of Arabic and Islamic manuscripts management. Therefore, the existence of the available manuscripts depends largely on the preservation methods applied. A physical visit to the Bureau for observation by the researcher showed that preservation of the manuscripts has been a difficult task due to several factors. Some of these factors include dilapidated and unattractive structures. In addition, there is the gradual decrease of experienced staff, technological obsolescence and over reliance on traditional preservation techniques. Also, the contents of the Bureau's website has not been functional for some time. Thus, the established structures of Waziri Junaidu History and Culture Bureau seem to gradually nose-dive. Therefore, without employing modern techniques such as digitization for preservation of Arabic and Islamic

manuscripts, then the wide array of these vital resources will remain dumped in rooms and stores, and continue to deteriorate beyond usage. In this regard, comprehensive laws and policies are very necessary to ensure the migration of the obsolete storage formats to electronic contents, otherwise the manuscripts will be inaccessible to present and future generations of researchers (Kamba & Abba, 2020).

Conclusion

The staff of Waziri Junaidu History and Culture Bureau, Sokoto, seem to recognize the need for digital preservation of Arabic and Islamic manuscripts for the overall efficient and effective services to researchers, scholars and the general public who may have interest in accessing the resources physically and virtually. The level of preparedness is relatively good in terms of staff training and experience in global best practices. However, the Bureau lacks adequate skilled staff, adequate funding, and deployment of emerging technologies for digital preservation. In addition, there is the issue of utilization of the Bureau's website which is part of the necessary requirements for accessing digitized manuscripts. Digital preservation policy and guidelines are also not comprehensive enough. The study also assumes that staff exposure to training programmes, workshops, or professional development initiatives over the years may have contributed to their positive perception and understanding of digital preservation. Therefore, the study has practical implications to the Governing Board and Management of the Bureau in terms adequate funding, deployment of emerging technologies, skilled staff, policies and guidelines, among others.

Recommendations

Based on the findings of this study and for effective digital preservation of Arabic and Islamic manuscripts in the Waziri Junaidu History and Culture Bureau in Sokoto, the following recommendations are made. The Bureau should ensure to:

1. undertake a thorough assessment of the existing Arabic and Islamic manuscript collections at the Bureau. This should include evaluating the physical condition, rarity, and historical significance of the manuscripts in order to prioritize their preservation.
2. develop a comprehensive digital preservation policy and guidelines with clear goals, strategies, and procedures for digitization and preservation of the Arabic and Islamic manuscripts; in conformity with the international standards and best practices.
3. acquire necessary modern technologies and facilities for digitization, such as scanners, lighting, and controlled environment, among others. Additionally, the Bureau should invest in robust data storage solutions like servers, cloud storage, or a combination of both for sustainable digital preservation of the manuscripts collection.
4. standard metadata for organization, preservation and accessibility of digitized manuscripts is necessary. Thus, a robust website is indispensable for ensuring accurate and consistent service delivery to users physically and virtually.
5. ensure regular training of staff in order to acquaint them with the modern techniques of digitization and digital preservation.
- 6. provision of adequate and sustained funding for digitization and preservation project specifically for Arabic and Islamic manuscripts in the Bureau.**

References

- Abdullahi, I., Asuku, M. E. & Idris, M. Y. (2016). The preservation of Arabic manuscripts in the digital age: Issues and challenges. *International Journal of Applied Technologies in Library and Information Management*, 2(2), 1-13.
- Abioye, A. (2018). Management of public sector records in Nigeria. *Nigerian Journal of Library and Information Science*, 3(1), 142-170.
- Adamu, M. (2009). The scope and significance of Arabic manuscripts in Nigeria. Unpublished paper presented at Arewa House, Kaduna.
- Ahmed, A. (2018). A study of the manuscripts and documents in the Arabic language available in Punjab University Library. *Journal of Islamic & Religious Studies*, 3(1), 90-97.
- Ahmad, A. & Rafiq, M. (2022). Assessing the preparedness of university libraries for digital preservation. *Journal of academic librarianship*, 48, 102617, 1-8. [https://doi.org/10.1016/j-acadlib.2022.102617](https://doi.org/10.1016/j.acadlib.2022.102617)
- Agidi, P. A. & Gbamwuan, A. (2023). Digital Preservation of Nigeria's National Archives: Opportunities and Challenges *ALKEBULAN: a journal of West and East African studies*, (3)1, 35-49.
- Ayris, P., Davies, R., McLeod, R., Miao, R., Shenton, H. & Wheatley, P. (2008). *The LIFE2 final project report*. <https://www.life.ac.uk/2/documentation.shtml>
- Balarabe, A. A. (1986). Sokoto Caliphate Collection in Some Nigerian Libraries and Archival Institutions. A Masters Degree Thesis, Department of Library and Information Science, Ahmadu Bello University, Zaria, Nigeria
- Balarabe, A. A. (1991). Nigerian Libraries and the Acquisition of Ancient Historical Documents in the North. *COMMUNICATE: Journal of Library and Information Science*, 1(1), 6 – 12.
- Balarabe, A. A. (1992). The Administration of Arabic Archives in Nigeria. *African Journal of Library, Archives & Information Science*, 2(2), 133 – 139.
- Creswell, J. W. & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches*. (5th ed.). SAGE Publications.
- Deegan, M. & Tanner, S. (Eds.) (2006). Digital preservation. *Digital Research in the Arts and Humanities*. Facet Publishers
- Hedstrom, M. (1998). Digital preservation: A time bomb for digital libraries. *Computers and the Humanities*, 31(3), 189-202.
- Hussein, M. H., & Abbad, S. M. (2018). The role of libraries in the preservation of Arabic Islamic manuscripts in Somalia. *International Journal of Advanced Research in Biological Sciences*, 5(6), 33-42.
- Iliyas, (2015). Iliyas, N. M. (2015). Significance and preservation of local Qur'anic manuscripts in Northern Nigeria. A paper presented at the International Conference in honour of Khalipha Ishaq Rabi'u organized by Centre for Qur'anic Studies, Bayero University, Kano at Musa Abdullahi Auditorium, Bayero University, Kano, 12th – 15th August.
- Kamba, M. A. & Abba, M. A. (2020). Preservation of cultural heritage and indigenous knowledge sustainability in Northern Nigeria: the role of Private Libraries. *Nigerian libraries: journal of the Nigerian Library Association*, 53(2), 135-145.

- Mahmud, K. (1983). The Arabic literacy tradition in Nigeria. *Nigeria Magazine*, No. 145. 37-54.
- Maidabino, A. A. (2010). The availability, organization, and use of archival records: a study of public archives agencies in the North-Western States of Nigeria. *Library Philosophy and Practice (e-journal)*. 386. <https://digitalcommons.unl.edu/libphilprac/386>.
- Nasidi, N. A. & Jika, A. Z. (2023). Digital Archiving and the Establishment of Open Access Digital Repositories in Selected Nigerian Universities. *Library Philosophy and Practice (e-journal)*. 7587. <https://digitalcommons.unl.edu/libphilprac/7587>
- Ngulube, P. (2015). Trends in digital preservation practice from antiquity to the present day. In P. Ngulube (Ed.), *Handbook of Research on Effective Digital Preservation Practices* (pp. 1-66). IGI Global.
- Ogbu, K. N. & Igwebuike, E. U. (2024). Digitization of cultural heritage information resources for effective utilization in South-East Nigeria. *International Journal of Applied Technologies in Library and Information Management*, 10(1), 70- 77. <http://www.jatlim.org>
- Suleiman, H., Aduku, B. S. & Kpakiko, M. M. (2017). Arabic manuscripts preservation and conservation in Waziri Junaidu History and Culture Bureau, Sokoto. *Journal of applied information science and technology*, 10(3), 67-73.
- Taj, A. & Gala, B. (2024). *Digitization projects for cultural heritage materials: A Study with special reference to Arabic, Persian, and Urdu manuscripts*. DOI: 10.4018/979-8-3693-2782-1.ch013
- Varlamova, A., Mandić, M., Belmonte, R., Dershowitz, N. & Soliman, S. (2016). *Towards a Digital Preservation Policy: From Models to Action*. UNESCO.
- Waziri Junaidu History and Culture Bureau. (n.d.). About us. Retrieved from [Bureau's website]