

# Information and Communication Technologies in Preserving Arabic and Islamic Manuscripts

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## Abstract

That Arabic and Islamic manuscripts contain a wealth of intellectual and educational sources of knowledge has been proved beyond any doubt. In spite of tremendous benefit of these manuscripts in learning and research, their present condition in Nigeria is highly worrisome. We found out that these manuscripts have remained at the mercy of natural disasters as most of them are subject to total destruction by weather and insects. It is also discovered that Arabic and Islamic manuscripts deal with interesting themes that are of utmost relevance to our society, such as environmental and governmental issues. Therefore, the aim of this study is to examine the benefits of Information and Communication Technologies in the preservation of Arabic and Islamic manuscripts in Nigeria. Our study revealed that Information and Communication Technologies possess some devices that can be used in the preservation of these manuscripts. Historical and sociological approaches were used as methodologies.

**Keywords:** Arabic and Islamic manuscripts; Preservation; Information and Communication Technologies; Nigerian society

## Introduction

The first word of the revelation that came to Prophet Muhammad (pbuh) was 'Iqra', which means 'read' or 'recite'. The word instructed the Prophet and his followers to read, write, understand, share and propagate ideas and messages by all possible means. The word 'Iqra' is repeated in the first brief revelation (Al-Quran 96: 1-5) to stress the importance of education.

It is amazing that the means for the teaching and learning process is specified as the pen (qalam) (Seriki, 2007). Since the pen is a gift from mankind, therefore, only human beings have the privilege, honour and ability to write or record ideas and reflections. In this way, mankind may benefit from previous works or leave behind the works achieved by them for the generations yet unborn.

Moreover, it is a fact that Islam had played a significant role in the spread and expansion of Arabic language. Since Islam is always accompanied by the spread of literacy, Abdullahi (2010) notes that information about Sijilmasa, Ghana and Kanem revealed that the use of Arabic language were among the then Muslim populace mainly Arabs and non-Arabs. In other words, ancient Muslim empires, kingdoms and emirates worldwide produced great scholars who contributed immensely to the study of Arabic and Islamic Studies through the numerous manuscripts which they left behind. For instance, Timbuktu, an ancient town in Mali, is believed to be harbouring the world largest collection of Arabic and Islamic manuscripts. In his work, Jimba (2008) observes that during and after Jihad of Uthman bn Fodio in Nigeria, works of great Muslim scholars, such as Muhammad bn Abdulkarim Al-Maghili, Ibrahim Tahir Fairamma, Amin Al-Kanemi, Uthman bn Fodio, Abdullah bn Fodio, Muhammad Bello, Abdus-Salam Yusuf Alikinla Al-Adabiy, Muhammad Al-Labeeb Tajul-Adab, and Al-Wazir Junaid, among others, on culture, politics, administration, diplomacy, governance and other spheres of knowledge were all recorded in Arabic language. Though some of these manuscripts are available at the

national archives and repositories, majority of them are still available in private hands. Almost every Muslim home in Hausa and Yoruba lands harboured boxes of manuscripts originally written or copied by its forefathers and passed on from generation to generation, a clear indication that manuscripts were produced and kept in private libraries by indigenous scholars.

However, the largest number of these manuscripts had been destroyed by termites, bad storage, water or harsh weather condition or even by other custodians who are, in most cases, ignorant of their values. This has called for various ways of preserving them. In other words, the unsatisfactory condition of Arabic and Islamic manuscripts in Nigeria at present calls for various ways of preserving them. This includes the usefulness of Information and Communication Technologies (ICT) in the preservation of these manuscripts.

This study also examines briefly the history of Arabic and Islamic manuscripts in Nigeria and analyzes the themes and contents of these manuscripts. It then looks into the challenges of collection of the manuscripts before dwelling into the benefits of ICT in the preservation of Nigeria Arabic and Islamic manuscripts. Findings, recommendation and conclusion end the study.

### **Historical Overview of Arabic and Islamic Manuscripts in Nigeria**

A manuscript is defined as a written or typewritten composition or document as distinguished from a printed copy. It can also be a document submitted for publication or a piece of writing written by hand or typed as opposite to print (Gada & Bala, 2012). It is also defined by Karkarku (2010) as any written book or piece of work or data, information or correspondence which is not published. Arabic and Islamic manuscripts on the other hand are composite words which refer to the intellectual and scholarly writings and compositions on

Arabic and Islamic related sciences written by Nigerian Arabic and Islamic scholars.

The people of the geographical area known today as Nigeria have known Arabic as early as 7<sup>th</sup> Century, not only as liturgical, but also as language of trade and commerce (Abdullahi, 2010). Later, writing materials such as wooden slates, ink and pen with which pupils develop the skills of writing by producing alphabets, words and phrases and subsequently sentences for identification and memorization were developed. More advance learning like rhetoric, syntax, morphology and prosody among others, which require revision necessitated the need for thick papers. Students at this level, therefore, produce their individual copies for consultation in future. Scholars who teach higher level students advanced subjects like Language, Arts, Logic, Social Sciences, Law and History, among others, write their original works which they eventually dictate to their students. Consequently, these are reproduced from generation to generation and through this method, the bulk of the Arabic and Islamic manuscripts of Nigerian heritage emerged.

In Nigeria, the golden age of Arabic and Islamic manuscripts was through 18<sup>th</sup> and 19<sup>th</sup> Centuries. This was when the country witnessed the influx of immigrant scholars who visited and settled in Hausaland such as Ahmad Baba Al-Timbukti, Abdulkarim Al-Maghili and Abdrahman Al-Sa'di, among others. In other words, the introduction of Arabic and Islamic manuscripts into Nigeria was undertaken initially by Muslim scholars, who were also merchants and preachers. Some of the manuscripts brought by these scholars included copies of the Glorious Qur'an, books of Tafsir, Muwatta' of Imam Malik, Maqāmatu'l Harīrī, and some standard primary books dealing with acts of devotion such as Matnul 'Ashimawiyah, Al-Khadarī as well as Al-Risālah of Ibn Zayd and Mukhtasar of Khalīl, among others. In addition, the emergence of the Sokoto Caliphate in the 19<sup>th</sup> Century marked the turning point in the writing of standard Arabic and Islamic manuscripts

(Abdul-Hamid, 1972).

Moreover, the emergence of centres of learning in different parts of Nigeria especially in Katsina, Kano and Sokoto called for urgent need of standard religious literature. In this way, religious literature expanded at a speedy rate throughout the country. Due to non-availability of printed Arabic books, people were forced to search everywhere for available manuscripts so that they might make copies of their own. Some of the copyists gradually turned to be manuscripts producers. They copied and sold some of the rare manuscripts to those who were interested in buying them. At this juncture, mention must be made of a skilled professional copyist, Shaykh Sanusi Kātībī of Oke-Gege, Ibadan, who died in 1938 (Hiskett, 1964). He was popularly known as Alfa Kātībī, from the Arabic word Kātīb (a writer or scribe). The activities of these copyists or writers, therefore, boosted Arabic and Islamic scholarship through the production of many scholarly writings in Nigeria.

### **Arabic and Islamic Manuscripts of Nigerian Literary Heritage: Themes and Contents**

It is an undisputable fact that Nigeria can boast a rich literary heritage with well stocked manuscripts libraries. Arabic and Islamic manuscripts remain a source of inspiration to Muslims in Nigeria. These manuscripts represent our overall civilization legacy, especially our recorded and written heritage. They are rich in thought and scientific content symbolizing the constructive role played by these scholars and the remarkable contributions they made in the growth of civilization. In his work, Abdullahi (2010) mentioned that Nigeria manuscripts deal with all fields of knowledge and disciplines, such as Qur'ān and its sciences, Qur'anic exegesis, prophetic traditions, Islamic Law, Islamic Jurisprudence, Islamic Theology, Sufism, Philosophy, Psychology, Logic, Rhetoric, Politics, History, Medicine, conflict resolutions, biographies and methods

of teaching. Others include issues pertaining to tolerance in Islam, the rights of women and children, the rights of orphans, and the rights of workers, among others. There are also various kinds of commercial documents; administrative, scientific, commercial, political and personal correspondences. Correspondences also included the relationship between tribes, peoples, religious verdicts (*fatwas*) and many other educational, informative and interesting topics.

In a nutshell, when we consider the diversity of the contents of Arabic and Islamic manuscript collections available in Nigeria, which were products of Muslim scholars, the present Muslim generation should have every reason to be proud of their rich intellectual heritage. These manuscripts are very useful and relevant to the contemporary Muslims. This intellectual legacy is no doubt a veritable link between the past and present generation of which the present Muslims should try to generate ideas from such sources which can serve as the concrete foundation for greater societal advancement. The above assertion is an indication of a thorough intellectual formation of our past scholars, hence the need for collecting and preserving all the available manuscripts, majority of which were not yet published. The nature of these manuscripts today is very disheartening and calls for urgent care to preserve it especially in the age of information and communication technology.

### **Challenges of Collection and Preservation**

The major challenges facing Arabic and Islamic manuscripts in Nigeria are those of collection and preservation. Ordinarily, manuscripts are kept by their owners in wooden or iron boxes or cupboards where they are locked up. They are also kept in open shelves hung on the walls or even on bare floor. In many places, manuscripts are invaded by rats, termites and cockroaches on regular basis. The quality of the manuscripts is also affected by rat faeces and other environmental factors. In other words,

majority of the manuscripts lie in private hands and their custodians refuse to release them. The reason for this, according to Jimba (2008), can be attributed to custodians' ignorance. They believe that giving them out would either amount to wasting the efforts of their forefathers or selling parts of their property, an act that is traditionally viewed with abhorrence in this part of the world.

The effort of the Library of the University of Ibadan in the collection of these manuscripts should be acknowledged. The University has had collections for microfilming from Northern and Western Nigeria between 1954 and 1965. Some centres and bureaus in Nigeria that had engaged in collection of these manuscripts include Graduate Research Unit at Bayero University, Kano, National Archives at Kaduna, National Museum at Jos and Centre for Islamic Studies at Uthman Dan Fodio University, Sokoto, and Ahmad Bello University, Zaria, among others. The efforts were manifested through Waziri Junaidu, Ibrahim Mukoshy, M. A. Al-Hajj and F. H. El-Masri who collected many manuscripts from Northern part of the country and Shaykh Adam Al-Ilory, Professor Razaq Deremi and H. K. Bidmus who collected many manuscripts from the Yoruba speaking areas (South-Western Nigeria) (Kaura, 2009).

However, the problem of poor preservation is one of the major problems facing many modern repositories with better facilities in Nigeria, like the University of Ibadan (Jimba, 2008). In the elaboration, the manuscripts were being catalogued with the prefix CAD in sequence. Meanwhile, there were a few of the manuscripts damaged and some were at the advanced stage of deterioration.

The problem of poor preservation is also not peculiar to Nigeria alone as rightly observed by Jimba (2008) in which he wrote about Abdul-Qadir Mamna Haidara, an internationally acclaimed Malian manuscripts expert, who wrote on the poor condition of manuscripts in Timbuktu, Gao, Djenne and other Malian towns

with large manuscripts collection. However, the manuscripts were in a very bad state which has led to the loss of many of them. There were also others that have been affected by various kinds of calamities such as water moist, effect of rain, fires, termites and other insects, human neglect and forgetfulness, consecutive periods of drought in Africa, poverty, inappropriate storage and many other uncountable difficulties.

The above assertion, therefore, calls for preservation and dissemination of Arabic and Islamic manuscripts to the public sphere in the era of ICT. The reason is that the advent of technology has given rise to greater concerns for preservation of manuscripts by adopting modern technologies.

### **The Computer Technology Usage in Document Preservation**

The holdings of libraries, museums, archives and other documentation centres are the priceless heritage of mankind. Not only in the context of ancient lore, but also in the context of medieval and modern age are manuscripts considered as the most important source of authenticity. The manuscripts constitute our most precious national and cultural heritage. In other words, preservation of documents is an important subject for the librarians, information scientists, archivist, curators, and scholars and also for different types of institutions. The problem of preservation of rare documents has continued ever since human beings acquired the knowledge of writing. The scribes were always worried to preserve their writings for prosperity with whatever means they had. Therefore, preservation of manuscripts is a serious problem for the custodians throughout the world. These manuscripts are the powerful medium for preservation of our literary, linguistic, artistic and cultural heritage. These are the only source of the unknown and unknowable. Therefore, every possible effort must be taken to save these treasures for the future generation (Sahoo & Monhanty, 2013).

Before the advent of modern technology, Ahmed (2012) reveals that the books and manuscripts were kept in locked cupboards and access to them was limited and that the medium of information storage has changed from clay tablets, palm leaves to paper and now to electronic and optical media. The traditional preservation method constitutes all forms of direct actions aimed at the life expectancy of undamaged or damaged elements of manuscript like mechanical cleaning and solvent cleaning, among others. Preservation ensures that people present and future will have access to the information that constitutes the documentary heritage. He equally posits that preservation through digital conversion can certainly extend the life of a particular manuscript. Digitization enhances access to the manuscript, as its image can be seen on the web by users all over the world. In addition to this, it can be sent for offline viewing using a higher uncompressed master file. The next segment will address some reasons that necessitate preservation of Arabic and Islamic manuscripts using Information and Communication Technology in Nigeria.

### **Preservation of Arabic and Islamic Manuscripts in Nigeria using IT**

Ahmed (2009) in his writing has provided seven technological advances that have made preservation of Arabic and Islamic manuscripts through computer technology easy. They are as follows: (1) PCs are much more cost effective and powerful in comparison to a few years ago. (2) Scanning technologies have become cheaper and better, allowing computers to convert manuscripts, pictures and colour photos into digital files. (3) Storage technologies have improved in terms of price and physical space required. (4) The rapid growth of internet has provided widening access to the digitized information. (5) The emergence of more widely accepted standard protocols. (6) The increase in use of standards like SGML and HTML. (7) The emergence of standard image formats and compression technologies making it possible to share images on computers.

Presently, the changes brought by advancement in technology have been so extensive that it is necessary, if not compulsory, that Arabic and Islamic manuscripts in Nigeria should be in a state of fundamental transformation from manual to electronic and digital. In the next section, we will look at tools for preservation of Arabic and Islamic manuscripts in Nigeria.

### **Tools of Computer Technology for Preservation**

**Hardware:** A computer with the following minimum configuration such as Pentium 4 class processor running at 2.0 GHz or higher, 512 MB minimum memory, 160 GB Hard drive, 18” or larger monitor, 128MB Video card and CD-RW and / or DVD-R Optical drive.

**Scanners:** Scanners are of various types. Flat bed scanner is the most commonly used.

**Digital Camera:** Digital cameras snap pictures by providing a real digital bit map to read directly into application. A digital camera uses a light sensitive processor chip to capture photographic images on a small diskette or flash memory inserted in the camera in digital form.

**Software:** The software required is as follows, HTML editor, XML editor, OCR (Optical Character Recognition) software, image editor, page layout and design software and PDF software.

**Image editor:** It helps in saving images in multiple file formats, resizing images and cropping, among others. Adobe Photoshop is the best example of this software.

**PDF software:** This software is freely available on internet and is a widely used format. It helps in viewing and downloading the online files quickly and easily.

**Page layout and design software:** Adobe page maker is the software available for this purpose. It has more design features than word processors.

OCR (Optical Character Recognition) software: OCR is performed in order to make every word in the scanned documents readable and fully searchable without having to key everything into the computer manually.

### **ICT and its Relevance in the Preservation of Arabic and Islamic Manuscripts**

Information is as old as man. It is the modern world's great non-diminishing resource – the more it is shared, the greater its capacity to be shared by all. From the earliest times of written history, information has been passed on from one person directly to another. Today technological advances make information instantaneously transmittable to every part of the world to multitudes of people. This is done either through the satellite, audio visual or digital transfer. Today modern publishing methods and information retrieval systems are explored (Tijani, 2006).

ICT could be defined as the science of application of knowledge to practical purposes. The terms have come to refer to 'the use of computers and telecommunications for the processing and distribution of information in digital, audio, video and other forms. According to Gada & Bala (2012) quoting Curtain, ICT is a set of activities that facilitate the capturing, storage, processing, transmission and display of information by electronic means. ICT, according to Chafe (2000), uses the power of computer and other computing devices to capture, store, process and produce knowledge at speeds never dreamt of before.

Communication technology ensures the transmission of knowledge to any part of the world within a fraction of a second through the uses of devices such as telephones, satellites and radio frequencies. Gada and Bala (2012) also observe that huge amount of data at an unbelievable speed of light (360,000km/sec.) can be transmitted to any part of the world. Therefore, storage and transmission of knowledge that contained in Arabic and Islamic

manuscripts can be facilitated tremendously through Information and Communication Technology.

ICT is very significant in the storage and transmission of Arabic and Islamic manuscripts. The fact is that technologies that are available today have the potential to transform the manuscripts into electronic data, thereby providing the opportunity to rapidly access, process and preserve them at a maximum speed. Arabic and Islamic manuscripts are facing the problem of preservation today and some copies are rare in circulation. These manuscripts suffer problem of paper decay and ink degeneration because some lack any kind of cover and binding. As a result of this, the owners refuse access to it. Electronic replication of these manuscripts offers a solution to the problems mentioned above. Limitless copies can be made for circulation among users through ICT. It may also be feasible and beneficial to enhance the original manuscripts in the electronic version by scholarly commentaries, indexing or editing as well as translations into one or more languages.

The manuscripts may be converted from paper to a digital version through scanning of each page. The text can be stored on a CD-ROM which can hold around 250,000 pages of manuscripts. In case of problem of space on CD-ROM, it can be alleviated with DVD technology which increases storage capacity of a CD-ROM almost seven fold. Accordingly, the access and transmission of these manuscripts can be possible through making limitless number of copies for wider circulation. The contents of these CD and or DVD ROMS again can be placed on a Web server which may be accessed with Web access all over the world by any interested researcher (Gada & Bala, 2012).

### **Conclusion**

In this study, the efforts of foreign and indigenous scholars in the production of Arabic and Islamic literature in Nigeria have been identified. Our findings revealed that a lot of Arabic and

Islamic works were written by different scholars especially in the Northern and South-Western Nigeria before, during and even after the Jihād of Uthman bn Fodio. Apart from their religious benefits, the manuscripts have been discovered to be all embracing repertoire of knowledge. Beside the valuable contents, they also testify to the art calligraphy. In addition, Arabic and Islamic manuscripts enhance the studies in arts and humanities especially in the areas of library science, biographies and indexation, among others. This study appreciate the giant role played by the historians, literary scholars, translators and editors, librarians and archivists for the collection and preservation of Arabic and Islamic manuscripts. This is especially so in some Nigerian Universities whereby this study recommends the preservation of the manuscripts to be shared to the public through electronic means. The intellectual heritage of our forefathers especially on issues relating to all aspects of the contemporary life should be well utilized by the present Muslims as a sign of appreciation for their efforts. We are aware of the nation's need of these topics to find solution to the educational crisis facing our society. The crisis has to do with blind imitation of the West, error in knowledge and our inability to formulate ideas, policies and device strategies for solving problems that are peculiar to our culture, environment and faith. It is high time; therefore, we gave these manuscripts the adequate attention they deserve at all levels of our educational system.

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