



Contributions of the National Center for Manuscripts in Adrar to the Preservation and Digitization of Manuscript Patrimony

Mecibah Ouarda

University of Mohamed Khider Biskra
(Algeria)

warda.msibah@univ-biskra.dz

Abstract

Manuscript *patrimony* represents a civilizational and cultural heritage that links previous, present and coming generations. Algeria is considered one of the rich countries in this cultural heritage, especially in the Eastern Sahara region, where there are several informal centers containing *Zawaya* and safes filled with many precious and rare manuscripts. In view of the material, scientific and historical value of the manuscript heritage in this region, the Algerian state redoubled its efforts to protect and value it by establishing a national center for manuscripts in the province of Adrar. This initiative has received great acclaim in the region, especially in light of the technological developments that necessitate special care for this written heritage to protect it from disappearance and vanishment via digitizing it and converting it from a scientific material sitting on the shelves of safes into a scientific material available to the audience. Hence came this study, which aims to shed light on the experience of the National Center for Manuscripts in Adrar in digitizing the manuscript heritage that this institution comprises, with a focus on the adopted methods of digitization, as well as the digital preservation tools used, touching on the obstacles and difficulties that prevent manuscripts from being made available on the center's website.

Article info

Received
08 November 2023
Accepted
09 February 2024

Keyword:

- ✓ Manuscript heritage:
- ✓ valuation:
- ✓ Digitization
- ✓ Availability
- ✓ digital preservation
- ✓ National

1. Introduction

Manuscript patrimony is considered a link and a meeting point between ancestors and subsequent generations. It is a valuable, cultural and civilizational national heritage that nations and peoples cherish and benefit from in achieving future research, for it is considered one of the important primary documents that researchers rely on in doing their research. The meaning of manuscript patrimony may expand to comprise everything hand written, whether on clay tablets or inscriptions on stones and other media, (Ghazal, page 2012), as indicated by the Encyclopedia of Library Science and Information. The concept may also be narrowed to be limited to the manuscript book, whether it is in the form of scrolls or in the form of newspapers in the form of notebooks or copybooks. The Arabs are considered among the most important peoples interested in the manuscript patrimony, which explains the uniqueness of the Arabic manuscript with unique features, whether in terms of the method of writing, or in the form of the manuscript itself, its decoration and the drawings it contains (Mansouri, 2015). Due to its scientific and artistic value, most countries have taken the initiative to preserve it, especially with the modern development of techniques and ways for preserving information and making it available, as it has become necessary to rely on it to preserve these manuscripts from

damage and loss, by digitizing and preserving them. Because of the huge amount of manuscript patrimony that Algeria possesses, especially in the Eastern Sahara region, where there are many public or private Zawaya and safes, such as the safes of the southwest of Algeria (Saoura and Tuat). In addition to private libraries owned by individuals and families that are full of many precious and rare manuscripts, the Algerian state has doubled its efforts in the region for the purpose of preserving this cultural heritage by establishing the National Center for Manuscripts in Adrar, whose most important task is to digitize and preserve manuscript patrimony.

From this standpoint, the present study has come to shed light on the experience of the National Center for Manuscripts in Adrar in digitizing the manuscript patrimony that this institution comprises, with the focus on the approved ways and methods of digitization and pointing out the digital preservation tools used and the problems faced by the National Center for Manuscripts that prevent it from making its manuscripts available online.

The importance of the present study stems from the importance of the manuscripts themselves, as they are considered among the original primary documents in which there are many facts and information that

complement the missing links of science, not to mention that researchers rely on them in their scientific and historical research. This is why it was necessary to digitize them to protect them from disappearing by transferring them by means of electronic storage which would allow them to be consulted without the need of going back to the original manuscripts. This would protect them from damage. In addition, making them available online would allow them to be known and help the largest possible number of researchers to reach them with the least amount of time and effort.

In order to achieve its aim, the present research paper seeks to answer the following questions:

- What are the stages that the manuscript digitization project at the National Center for Manuscripts in Adrar went through?
- What are the methods, means and tools adopted for the digital preservation?
- What are the problems that prevent the Center from making its manuscripts available on the Internet?

In order to answer the above asked questions, we adopted the descriptive approach relying on one of its tools, the interview form, which was conducted with the person in charge of the Digitization Department at the National Center for Manuscripts, Mr. Alali Abdel Rahman. This was to know the size and nature of the manuscripts the center comprises, as well as the material, human and financial equipment allocated to digitizing the manuscripts, and then know the stages and ways of digitization adopted by the center, answer the first question and, hence, reach the preservation and storage media used and the duration of storing the information on these media. By that, we would have answered the second question, and finally, address the problems facing the National Center for Manuscripts that prevent it from making digitized manuscripts available via the Internet, which is what we aim at to answer the third question.

2. Digitizing and storing manuscripts as a means of protecting them:

Manuscript patrimony represents an important aspect of ancient heritage due to its scientific and artistic value. Therefore, it must be preserved, especially since it is more sensitive and susceptible to damage due to the nature of the materials written on it and the poor state of preservation, which makes it hard for researchers to consult it and to benefit from it.

Recent developments in the field of digital storage and information retrieval have represented a great opportunity before the eyes of those who are interested in manuscript affairs, for digitization technology has contributed to preserving it by transferring the manuscript or scientific material to an electronic medium by photographing its pages with digital cameras or by scanners and then storing them on CDs and in special computer memories, or putting them online (Moulay, D.T.).

Initiatives to digitize and to make manuscripts available have started to emerge since the 1990s. Among these initiatives is the British National Library project, which resulted in the digitization of a large number of manuscripts, and the

American Memory Project, which was carried out by the Congress Library, which collected about seven million scientific materials. As for the French experience in the field of digitizing manuscripts, it dates back to 1997, when manuscripts were made available through the Gallica virtual library (El-Hadji, 2016).

In the Arab world, there have been several experiences in digitizing and preserving manuscripts, the most important of which is the Jumaa El-Majid Center project in Dubai, United Arab Emirates, which contains a huge number of manuscripts that are collected and restored from various parts of the world and that have been photographed and stored via digital media that can be made available on the Internet. As for Algeria, there has recently been interest by the state in manuscripts as it is a rich country in this cultural heritage, especially in the Sahara, where safes and Zawaya are many. On the basis of that, it established a national center for manuscripts in Adrar in 2006, together with two annexes affiliated with it in Telemcen and Biskra, the mission of which is to collect and restore manuscripts, digitize and preserve them. There is also the experience of the

National Library of Algeria, which includes more than 4,200 manuscripts, and more than 2,000 manuscripts have been indexed (Zoulikha and Bougoufala, 2021), in addition to the experience of Ahmed Urwa Library, which includes 1,020 manuscripts (Ahmed Urwa Central Library, 2023).

3. Introducing the National Center for Manuscripts:

The National Center for Manuscripts was established by Executive Decree N°. 06-10 dated January 15, 2006, in the province of Adrar (Official Gazette of the Republic of Algeria, 2006), due to the huge amount of manuscripts existing in the popular safes in the region. It was then followed by the establishment of two annexes for the center in Telemcen and Biskra in 2012. The aforementioned center aims to preserve the manuscript and printed heritage in the region, inventory the manuscripts of the Adrar region and its environs, and catalog the manuscript heritage by the use of scientific methods that facilitate researchers' access to it. The center also seeks to process and preserve manuscripts inside and outside the

center, adopting modern technologies such as digitization (National Center for Manuscripts, D.T.).

4. The most important manuscript safes in the Adrar region:

Book safes are a source of academic achievement for students of knowledge throughout the ages, and a place for interaction with the scholars and sheikhs who are in charge of them. The safes of the Adrar region have been divided into territories, among the most important of which are:

4.1 Safes of the Touat territory: The Touat territory contains valuable manuscripts in the region distributed across 27 safes, the most important of which are the safe of Sheikh Ben Abdel Karim Abdelkader, the treasury of Baabedallah, the safe of Moulay Suleiman bin Ali, the safe of the Bakris and other safes. It is worth noting that most of the intellectual production was lost from the safes of Touat, due to the harsh natural factors on the one hand, and the looting to which these safes were subjected during the colonial period on the other hand. The French writer Martin Alfraid Georges Paul counted all the popular safes and carried with him

many manuscripts. Then he wrote his book entitled “Four Centuries of the History of the Maghreb and the Sahara, starting from the year 1504 to the year 1902 AD” (Bu Salim, 2015).

4.2 Safes of the Gourara territory:

The number of the Gourara safes is 25, the most important of which are the Al-M'tarfa safe, which contains 800 manuscripts, the Sidi El-Hadj Belkacem safe, which contains more than 100 manuscripts, the safe of Sheikh Hakimi Moulay Ahmed, the safe of Sheikh Al-Jawzi, the safe of Sheikh Arab Ahmed, the safe of Sheikh Masjid Al-Sharif, and others (Bu Salim, 2015).

4.3 The safes of the Tidikult

territories: The number of the Tidikult safes is 16, the most important of which are the safe of Sidi Ahmed El-Alem, the safe of El-Sayyid Ibn Malik Abdel Karim Baqbali, which includes about two hundred manuscripts, the safe of El-Talib El-Mukhtar, and the safe of Sheikh Muhammad Bey Bel-Alem (Technical Team of the National Center for Manuscripts, 2015), in addition to the Bakriyah safe in Tamantit, which was founded by Sheikh Maimoun ben Amr in 1485 AD, whose manuscripts number reached about a thousand in various sciences and knowledge, in addition to the Maluka safe, which includes three hundred manuscripts, and the Kusam safe, which contains about two hundred and fifty manuscripts (Bu Salim, 2015).

5. The digital documentary account of the National Center for Manuscripts in Adrar:

The number of safes that the National Center has inventoried in the Adrar region is estimated at eighty-one. Eleven of them have been digitized so far. The National Center for Manuscripts includes a specialized department in digitization that aims to preserve manuscripts from damage and gradual loss resulting from use and consultation. It facilitates the process of obtaining manuscripts and information from near or far and, thus, contributes to the development of scientific research. The manuscript digitization project was launched at the Adrar National Center in 2012. It includes 70 manuscripts that have been digitized and whose original copy is located at the center. In addition to about 320 manuscripts, there is only a digital copy, which was obtained after making agreements with the owners of the safes stipulating the digitization of the safe manuscripts, along with providing a digital copy to their owner. The center maintains another digital copy that includes the digitized manuscripts of the safe. This digitized collection includes the manuscripts of the Adrar, Ain Salah, and Timimoun regions, and the Zawiya of Sidi Moussa, in addition to some rare publications. The oldest manuscript in the region, part of which was digitized, dates back to the thirteenth century AD, an

Ottoman copy of the holy Qur'an (letter drawing). As for the languages of these digitized manuscripts, most of them are in Arabic and some of them are in French and Amazigh. Among the center's most important digitized manuscripts is a dictionary from French to Turgui. We also find that the majority of the manuscripts' topics are in modern jurisprudence, doctrine, interpretation of the Qur'an, and Sufism, in addition to manuscripts in logic, medicine, astronomy, and history (Alaly, 2023).

The National Center for Manuscripts in Adrar relies on three methods of supply. We find donations such as the Ottoman Zawia in Constantine, which provided the Center with a collection of manuscripts, and deposits, which are made in the form of agreements in which the Center pledges not to provide digital copies except after the permission of their original owners. Among the methods of supply, we also find the purchase that is made on the level of the National Committee for Purchasing Cultural Property, where the center prepares a detailed report for the Ministry of Culture about the manuscript to be purchased, and if the Ministry provides approval, the National Committee undertakes the necessary procedures to complete the process of purchasing the

manuscript. The supply is made from various parts of the country, not just from the Adrar region, as the center is national (Alali, 2023).

6. Material and human equipment for the Digitization Department at the National Center for Manuscripts:

The Digitization Department at the National Center for Manuscripts includes five computers and two scanners. The first - DigiBook - was purchased by the center. It works with the Book Restorer software and provides horizontal imaging. The department was supported by a modern, more advanced scanner - CopiBook - that includes incorporated processing software and provides vertical imaging that takes into account the condition of the manuscript (Ibid).

As for storing digitized manuscripts, there is a computer dedicated to this process that includes a large storage space. An additional copy of these manuscripts is also kept on an external hard disk stored outside the center to ensure the availability of a copy of these manuscripts in case the center is exposed to any disaster that could harm its equipment. It is noted that digitized manuscripts are not saved via storage media such as CD drives and DVD drives, and thus there

is no information transfer, but, rather, these electronic media are allocated to the provision of manuscript copies demanded by beneficiaries who have asked for a digital copy of a manuscript and have obtained approval. This explains why there is no type of printer in the Digitization Department, as the latter applies the principle of zero paper in its transactions with beneficiaries (Ibid).

As for the financial resources allocated to digitize manuscripts, the head of the department of the digitization department confirmed that they were sufficient, while a shortage of human resources was recorded at the department level estimated at three employees out of 67 at the National Center for Manuscripts. The official of the Digitization Section confirmed that the number of employees in the department was insufficient. He also pointed out that there was no training for employees on the mechanisms and methods of digitization at the department level, but rather the training provided by the institution from where the scanner was purchased was sufficient. However, it was pointed out that the point of training on the latest developments in digitization was not important at the present time, as the department relies on the method of digitization in the form of an image and not in the form of a text (Ibid).

7. The stages that the digitization process went through:

Digitization at the level of the department allocated to this process at the National Center for Manuscripts, since its launch in 2012 to the present day, went through two basic stages:

7.1 First stage:

The center initially carries out inventory and indexation. After that comes the task of the Digitization Department, which digitizes manuscripts in a form of scanning using a French-made device called Digi Book, located at the National Center for Manuscripts in Adrar, where conventions were made with the owners of popular safes. Then, the Center would bring the manuscripts and carry out the process of digitizing them at the level of the Center's Digitization Department. This device has been in operation for seven years. But, due to its many shortcomings, it was replaced by another scanning device in 2019, for the former would take a long time in the digitization process, and which would affect the state of the manuscript as it remained inside the scanner for a long time. Also, the principle of image processing was not available. That is, after completing the digitization, the image is processed by another system that is not linked to the device (Alali, 2023).

7.2 Second stage:

In late 2019, another German-made scanner, called CopiBook, with a better image quality than the previous one and an accuracy degree of 600x600, was purchased. It also provided a number of features, among which:

- Speed in imaging, thus saving effort and time.
- Automatic image processing.
- It is equipped with a zoom system, which enables one to read any letter, no matter how blurry it is.
- Convert texts directly into PDF format (Ibid).

8. Digitization obstacles at the National Center for Manuscripts:

The National Center for Manuscripts faces a number of difficulties that prevent it from completing the digitization process in the best circumstances. Some of them are technical, related to the state of the manuscript and its fragility, which makes digitization difficult. Some of them are related to the owners of the safes who refuse to accept the idea of digitization in the first place, despite the center's efforts in this context, as it makes conventions with the owners of the safes that stipulate that the digital copy of the safe located in the center cannot be disposed of except

after its owner's permission. This is in case there is a beneficiary who has submitted a request to obtain a digital copy of the manuscript. A number of the safe owners have expressed their approval of this idea.

The fact that the center does not contain a mobile scanner prevents digitization from being carried out outside the center, an idea supported by many safe owners who agree to digitize their manuscripts and provide a digital copy to the center in the condition that the process takes place at the level of the safe. Also the lack of awareness of the importance of digitizing manuscripts, especially among safe owners, negatively affects the process (Ibid).

9. *Problems of manuscript availability at the level of the National Center for Manuscripts:*

We noticed that there was no availability of manuscripts at the center level. The head of the department assured us that in the near future only the titles of the manuscripts that the center comprises will be available, but there is no intention of making these manuscripts available through the center's website in the future. The reason for that is

due to the ministry supervision represented by the Ministry of Culture, which recommends that only the titles of the manuscripts will be made available, without making available additional information about the manuscript (Alali, 2023).

10. Prospects and future projects of the National Center for Manuscripts:

The Center is looking forward to embodying a group of projects, some of which will be inaugurated in the very near future and some others will come afterwards. Among these projects we have:

- Making indexes and titles of manuscripts existing in the center available on the platform through the recommendations of the recently established scientific council of the center.
- Introducing the inventoried safes and attaching them with pictures of the safes and manuscripts in the form of the front page.
- Introducing the center's publications in the fields of digitization and other operations such as inventory, indexing, processing, etc.
- Establishing the center's digital library, which comprises all digitized

manuscripts, but for internal consultation only.

- Establishing a technical card for the most important safes that have been digitized. Up till now, cards have been completed for the Koussam, the Azkamir, and the Ba Brahim Safes in Ain Salah, which were in the process of completion. The latter was recently burned, and fortunately, a large part of its manuscripts had been digitized (Ibid).

11. Recommendations:

In light of the aforementioned, the following can be recommended:

- Conducting more awareness-raising operations by adapting courses and workshops on digitization, especially for safe owners.
- Deep training for specialized human crews in the field of digitization.
- Providing the center with mobile scanners to be able to digitize a larger number of manuscripts by moving to popular safes.
- Finding a formula to make digitized manuscripts available by creating a digital platform with a secured and profitable system that supports the Sahara tourism.
- Involving the Telemcen and Biskra annexes in the digitization process.
- Speeding up the operation of digitization to be up to date in this field.

12. Conclusion:

Digitizing and making manuscripts available to beneficiaries will make a scientific and cultural shift that will contribute to progress towards the

better. There have emerged good intentions and initiatives on the part of those in charge of the National Center for Manuscripts in Adrar through greater interest in digitization and thus keeping pace with the information revolution and contributing to the process of preserving manuscript heritage, cultural identity and ensuring the application of scientific standards for digitizing manuscript heritage.

The study concluded that in view of the enormous means available in the center, whether in terms of human population or material and financial means, the digitization process at the National Center for Manuscripts in Adrar and its annexes had not exceeded 7.36% so far, which was a very small percentage. Also, the stages through which the digitization process took place were at a slow pace compared to the means or some other institutions that initiated digitization. This is due to the lack of application of scientific standards in the digitization process and the lack of qualified and trained human staff on the one hand, and the lack of some advanced software that would speed up the digitization process on the other and, thus, saving what could be saved before it is too late. The failure to make good use of the center's two annexes in Tlemcen and Biskra and to involve them in the digitization process also missed the opportunity for the center to work on a larger scale, as the two annexes, to this day,

carry out inventory and indexation only.

5. Bibliography List :

Abu Salim Salah. (2015). Spotlight on manuscript centers in southern Algeria. Heritage Annals Magazine, 20-35. from <https://www.asjp.cerist.dz/en/downArticle/366/15/15/39233/>(consulted on 05/03/2023).

Ahmed Urwa Central Library. (2023). from Emir Abdul Qadir University of Islamic Sciences: <http://www.univ-constantine.edu.dz/biblio/>(consulted on 05/03/2023).

Alali Abdel Rahman. (10/04/2023). [Msibah Warda]
Ghazal Adel. (August 15, 2012). Digitization of Arabic manuscripts. 02(02), 197-215. from <https://www.asjp.cerist.dz/en/article/1133941>. (consulted on 02/03/2023).

Khalfan Zahran Al-Hadji. (June, 2016). Digitization of manuscripts and text verification. Dar Al-Mandumah, 177-204. from https://www.researchgate.net/publication/323167183_rqmnt_almkhtwtat_wt_hqyq_alnsws_thdyat_whlwl(consulted on 05/03/2023).

Mansouri Ahmed. (2015). Manuscript heritage and its importance. Journal of Man and Field (01), 169-176. from <https://www.asjp.cerist.dz/en/downAr>

ticle/326/1/1/12895 (consulted on 02/03/2023).

Moulay Ahmed. (d.t.). From paper manuscripts in popular libraries to the digital library of manuscripts. 129-150.from

<https://www.asjp.cerist.dz/en/downArticle/16/4/1/2904>(consulted on 04/03/2023).

National Center for Manuscripts (d.t.). from [wikiwand:](https://www.wikiwand.com/ar/%D8%) <https://www.wikiwand.com/ar/%D8%> (consulted on 06/03/2023).

Official Gazette of the Algerian Republic. (January 18, 2006). Algerian Official Gazette (03).

Technical team of the National Center for Manuscripts (2015). Guide to the manuscript safes of Adrar Province. Adrar: National Center for Manuscripts.

Zoulikha Walid, Bougoufala Weddane. (2021). Manuscripts and their role in preserving national heritage. Al-Mawaqif Journal for Research and Studies in Society and History, 17(01), 1045-1063. from <https://www.asjp.cerist.dz/en/downArticle/142/17/1/160734>(consulted on 03/03/2023).