

MANUSCRIPT PRESERVATION: A STUDY ON THE PROCESS OF CONSERVATION-RESTORATION AND DIGITALIZATION OF MALAY MANUSCRIPTS IN PALEMBANG

Herlina

Raden Fatah State Islamic University Palembang, South Sumatra Indonesia
herlina_uin@radenfatah.ac.id.

Ardi Prasetio

Raden Fatah State Islamic University Palembang, South Sumatra Indonesia
ardiprasetio0002@gmail.com

Riki Walian Dani

Raden Fatah State Islamic University Palembang, South Sumatra Indonesia
rikiwalian2@gmail.com

ABSTRACT

This article emphasizes the significance of preserving ancient manuscripts through conservation, restoration, and digitalization. Conservation is the initial step to prevent damage caused by environmental factors, while preservation aims to physically protect ancient manuscripts using various techniques, such as binding, lamination, or reproduction. Restoration, as a follow-up to conservation, is carried out to repair the physical damage that has been done to the ancient manuscripts. Digitalization of ancient manuscript collections involves converting physical manuscripts into digital formats that can be accessed and processed using computer technology. The purpose of this study is to determine the extent of preservation through the use of conservation techniques, methods of restoration, and digitalization of manuscripts carried out by manuscript owners in manuscript collections in Palembang. The research method uses observation techniques and literature studies. The importance of these efforts is highlighted to ensure that future generations can access and enjoy this valuable cultural heritage and knowledge, while also protecting and preserving manuscripts from damage and extinction by converting them into digital form.

Keywords: Preservation, Manuscripts, Conservation, Restoration, Digitalization

Introduction

Ancient manuscripts are a cultural heritage that exudes a wealth of knowledge, wisdom, and history of human civilization. The content of the manuscript contains a variety of information such as stories, philosophies, discoveries, and worldviews that have shaped our past and guided our journey into the future. However, when we look into the existence of these manuscripts, we realize that they require not only appreciation but also careful protection (Primadesi, 2012)

In today's complex modern world, the challenges to manuscript preservation are becoming more complex and diverse. Global climate change threatens the environmental stability needed to keep the manuscript intact. Internal and external environmental conditions, such as temperature, humidity, and light levels, are critical factors in ensuring the survival of the manuscript. Pest attacks and decomposing microorganisms can quickly damage vulnerable organic matter (Rohmawati, 2012). In addition, social, economic, and technological changes are changing the way we interact with scripts, posing new challenges in maintaining the cultural and historical values contained within them.

The advancement of information technology, especially in the era of digitalization, not only affects fields such as industry, trade, and education but also has a significant impact on preserving and accessing human cultural heritage, including ancient manuscripts that have priceless historical and cultural value (Almis and Wijayanti, 2023). The role of modern technology in the preservation of manuscripts, such as digitization by using advanced technology as an effort to save manuscripts (Yasin, 2016). The digitization of ancient manuscripts is to preserve human cultural heritage and make it accessible to current and future generations (Almis and Wijayanti, 2023).

Furthermore, based on the results of the observations made by the researcher regarding the condition of the manuscripts scattered in several places in Palembang, two problems are the question of how the process of preservation with conservation and restoration, and how is the process of digitalization of manuscripts carried out? This study aims to determine to what extent manuscript preservation is carried out through activities such as conservation, restoration, and digitization carried out in manuscript collections in Palembang.

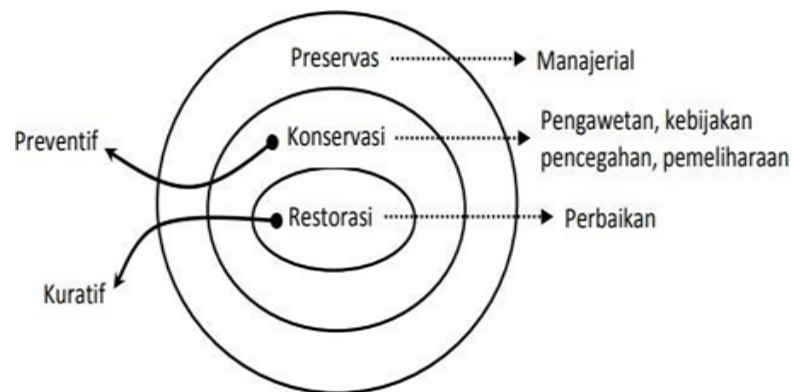
Research Methodology

This research was conducted at Palembang, specifically in a private library or private collection of R.M Fauwas Diradja (SMB IV), Nyimas Umi Kalsum, and Kemas Andi Syarifuddin. The methods used in this research a literature study methods and observation methods. Literature study is the main approach in collecting and analyzing data through understanding and learning theories contained in various literature relevant to the research. The literature study process involves searching, selecting, and synthesizing literature obtained from academic sources, scientific journals, and reference books, as well as policies and guidelines related to manuscript preservation. The literature study method provides in-depth insights into best practices, challenges, and recent developments in manuscript preservation, providing a strong basis for formulating recommendations and conclusions in this study (Ramdhan, 2021). Meanwhile, Observation is defined as the observation of an object or subject matter (Sujarweni, 2020). In the observation method in this study, the observation of the process of conservation, restoration, and digitization was carried out by the manuscript owners (*Juriat*) to preserve the manuscript. In this study, observations were made on two objects, namely the main object and the supporting object. The main object in this case is the preservation of the Palembang Malay manuscript, while the supporting object is in the form of information from other sources related to literature preservation and digitization of manuscripts from various sources.

Theoretical

The preservation of library materials, especially ancient manuscripts or manuscripts, is not new to libraries. The collection of library materials needs to be maintained and preserved so that the knowledge contained in them can be passed on to future generations. However, the task of preservation and maintenance is not easy. Since ancient times, librarians have struggled against the enemies of library materials such as bookworms, termites, cockroaches, and various other types of insects. Various efforts have been made to eradicate them effectively and efficiently. The purpose of preserving library materials is to maintain human cultural heritage, both in physical form and the information contained in it (Bahar and Mathar, 2015: 89-100).

The subject of preservation has attracted interest in several previous works, and even for a long time, the Preservation, Conservation, and Restoration of Library Materials LIBRIA, Vol. 10, No. 1, June 2018 has been a subject studied systematically since the 1950s as part of library and information science. Along with its development, these terms later appeared in the professional literature (Fatmawati, 2018: 13-32). The field of conservation is becoming increasingly complex because it involves various problems from various contexts such as cultural, social, economic, and cultural heritage institutions, and their use. The term "collection preservation" is specifically closely related to the context of the library. The process of activities involved in this preservation is very diverse and requires precision and diligence in handling it. Figure 1 can provide illustrations that help in understanding the various activities involved in the preservation of library materials.



If you look at the image above, it can be seen that preservation has a more extensive or general meaning, while conservation and restoration have a more specific and limited meaning. From the definitions given by the International Federation of Library Associations and Institutions (IFLA), the distinction between the three terms becomes clear.

Preservation is an effort to keep collections intact as they are today, while the definition of the *International Federation of Library Association (IFLA)* states that preservation involves various aspects, such as preservation of library materials, financial management, human resources, methods and techniques, and information delivery management (IFLA, 2006). Thus, preservation is a concept that includes conservation as well as all actions related to the protection, maintenance, and restoration of library collections. Furthermore, IFLA conservation is a special policy and method used to protect library materials and archives to preserve the collection (Cloonan, 1997). IFLA

defines restoration as an effort to repair damaged library and archival materials (IFLA, 2006).

Digitization of manuscripts is an effort to save ancient manuscripts by utilizing digital technology. For example, soft files, digital photos, and microfilm. The goal is to try to make the original manuscript or duplicate manuscript last as long as possible (Sakamoto in Wirajaya, 2010); (Yasin, 2016).

Results and Discussion

1. Preservation

In UU No. 43 of 2007, Pasal 6 ayat (1) states the obligation of the community to store, care for, and preserve the ancient manuscripts they have and register them with the National Library. This means that ancient manuscripts must be given special treatment so that the physical value of the information contained in the manuscript can continue to be used for various purposes. Therefore, it is necessary to carry out preservation activities which include preservation, conservation, restoration and digitization of ancient manuscripts.

Preservation is generally defined as an effort to preserve. Because the scope of preservation is so broad, this preservation includes all managerial and financial aspects, including storage, personnel organization, policies, techniques, and methods used to preserve library materials and their information (Kautsar, et al., 2022). Looking at the above definition and scope, the activities include maintenance, care, repair, and even reproduction. The benefits of preserving ancient manuscripts are very diverse. First, this preservation makes it possible to understand more deeply about past civilizations, including their beliefs, values, and knowledge. In addition, by keeping ancient manuscripts intact, we can also honor and appreciate the cultural heritage of our ancestors. Then, ancient manuscripts often hold valuable and unique information that cannot be found anywhere else, such as knowledge of traditional medicine, spiritual beliefs, or classical literary works (Salsabillah, 2023).

The preservation of ancient manuscripts also has practical benefits in academic and research contexts. Ancient manuscripts are often an important source for the study of history, literature, religion, and many other fields. By keeping ancient manuscripts preserved and accessible, researchers have better access to unearth new knowledge and insights that can contribute to the development of science and human

understanding of itself. In addition to cultural and academic benefits, the preservation of ancient manuscripts also has economic value. Tourist destinations often attract tourists by offering cultural experiences and having a well-preserved collection of ancient manuscripts can be a special attraction for tourists interested in local history and culture (Handayani, 2023). Overall, the preservation of ancient manuscripts is a long-term investment in human cultural heritage and ensures that the knowledge and wisdom contained within them can be passed on to future generations, maintain cultural sustainability, and improve understanding of humanity's long journey on the planet.

2. Conservation

The definition of conservation according to Dureau and Clements is a policy and activity to protect library materials from damage, such as deacidification, encapsulation, and digital storage. Conservation also includes the use of chemical or physical procedures in the maintenance of libraries to ensure their durability (Dureau and Clements, 1986). Meanwhile, another definition of conservation is an effort made by library managers to maintain each collection by repairing existing damage. On the other hand, conservation can also be referred to as a special policy in protecting library materials and archives to maintain the preservation of the collection. One of the conservation measures taken to save manuscripts, such as lontar, is an effort to prevent their physical damage and destruction (Taufiqurrahman and Hidayat, 2022). Thus, conservation in the context of ancient manuscripts, conservation involves efforts to protect, preserve, and maintain the sustainability of the object.

The conservation of ancient manuscripts has the main goal of preserving valuable cultural heritage for the future. By protecting ancient manuscripts, we can keep the information and cultural values contained in them available for future generations to learn and understand (Kuswati, 2022). In addition, the conservation of ancient manuscripts also has benefits in the development of human knowledge and understanding of history, culture, religion, and science. Ancient manuscripts are often a major source of academic and educational research, allowing us to continue learning from the past. In addition, the conservation of ancient manuscripts can also empower local communities by involving them in efforts to preserve their cultural heritage. Overall, the conservation of ancient manuscripts is an important effort to preserve human cultural identity and history for the future (Hanum et al., 2023).

In the field of library conservation, several strategies can be applied to maintain the preservation of library materials or manuscripts, including a. Fumigation (Fumigation is the process of destroying pests or pathogenic microorganisms using toxic gases) to protect items from pest and fungal attacks, as well as in the conservation of valuable objects such as library materials and archives to eradicate destructive insects (Hermawan, 2018); b. Removing acidity in the paper (deacidification) is a process that aims to repair or stop the degradation of paper caused by acid reactions that occur in it (Marsono, 2016). c. Lamination and Encapsulation, lamination and encapsulation are two processes used to protect documents, images, posters, or other printed materials by providing a protective coating. The lamination process is carried out by attaching the protective sheet to the surface of the molding material using hot pressure or cold pressure, depending on the type of protective sheet and the surface of the molding material to be laminated (Bahar and Mathar, 2015: 89– 100). Meanwhile, encapsulation involves a slightly different process. Encapsulation is another method of protecting paper from physical damage, such as brittleness due to age or environmental damage. It involves wrapping paper, such as ancient manuscripts or posters, in plastic sheets without air inside, similar to storing library materials in plastic envelopes (Rafita, 2023).; Binding. Through binding, it helps in keeping the manuscript well maintained and maintained, and ensures that the library materials provided by the library can be used in good condition so that they can enrich their knowledge and reading experience (Nurwahyuningsih and Ismayati, 2019).; e. Reproduction. Reproduction is a maintenance method that aims to duplicate and add to the collection of rare library materials by reproducing them in the form of photocopies or microfilms.

3. Restorasi

According to the definition of IFLA, restoration is an attempt to repair damaged library and archival materials (IFLA, 2006); (Christiani, 2020). In the Indonesian Librarian Dictionary, restoration is often also referred to as repair, which is a special action to repair damaged or weathered library materials or documents (Sukirno, 2023). The restoration of ancient manuscripts must take into account their physical condition, as each damage requires different handling. As for manuscript repairs, such as lontar manuscripts, techniques that can be done include blackening faded writing by using burnt candlenuts, loosening the lontar to restore its authenticity by using wood oil or

glycerin, and reconnecting cracked lontar using Japanese tissue and adhesives such as polyvinyl acetate or *Carboxyl Methyl Cellulose* (CMC), as well as encapsulating with polyester plastic if needed.

4. Digitalization

In the digitization of ancient manuscripts, there are several stages, three stages are starting from Pre-Digitalization, Digitalization, and Post-Digitalization (Hendrawati, 2018: 21–29). The Pre-digitization stage (Initial Procedure) in this process is the Preparation stage, including planning such as planning the format and shape, will use a scanner or camera, this can be seen from where the manuscript is located if the manuscript is in the home of the citizen can use a portable scanner or a small camera but can produce high-resolution images. in this case, prepare equipment for certain manuscript conditions.

In the digitization stage, the tools have been determined, as well as adjusting the equipment so that it is easy to be used properly by officers or librarians who will digitize, then process the image by scanning or taking photos and processing at the editing stage, at the editing stage has a significant role in restoring with editing, such as providing filters to clarify and even redraw the writing on the manuscript to clarify on the Editing results. Also, the results of the manuscript influence how the manuscript is taken, for example using a focus camera, camera lens, and exposure settings must be right with the color of the document so that it produces the manuscript as it is original (Almis and Wijayanti, 2023). The script digitization rules themselves have the required camera provisions at the beginning "DSLR/Digital Single Lens Reflex, minimum 5.1 MP and RAW format (Yasin, 2018). The Post digitization stage involves unifying images, giving identities, and presenting manuscripts in a format that is easily accessible and utilized by users (Husain and Tajuddin, 2018). Thus, each stage ensures that ancient manuscripts can be digitized efficiently and effectively so that they can be preserved and accessed by future generations

Preservation of manuscripts in private libraries/collections in Palembang

Manuscript preservation is an effort made by manuscript owners to save manuscript collections so that they remain durable and preserved. In general, the condition of the manuscripts in some private libraries is still in good condition, but some manuscripts are damaged and need to be repaired. And some manuscripts are old because

they are eaten by age. Palembang's ancient manuscripts were written using Arabic script, Malay Arabic script (Jawi), and Malay Latin script. The following are the conditions of the place and condition of the manuscripts in the library/private collection in Palembang belonging to Sultan Mahmud Badaruddin (SMB) IV Jaya Wikrama R.M Fauwas Diradja, Nyimas Umi Kalsum, and Kemas Andi Syarifuddin:

1. Storage Places

The arrangement or storage of manuscripts by the storage place greatly affects the condition of the manuscript. As high humidity and high temperature are more hazardous for library materials it is advisable to maintain an ideal room temperature (20°C-25°C) and relative humidity of (RH45- 55%) for preservation of documents/manuscripts. Air conditioning of the stack area round the clock is an ideal example of maintaining optimum temperature & humidity for the storage of documents. But it is practically not possible for all the libraries to afford air conditioning for 24 hours. So it is useful to adopt local control measures like the use of humidifiers in dry climates to increase the required level of moisture content and dehumidifiers to remove moisture in wet seasons. These may be operated whenever necessary for which proper monitoring of relative humidity is highly essential (Sahoo, 2004)

Based on the results of the observation and documentation above, the storage place for the collection of ancient manuscripts (*Manuscripts*) in the private library belongs to R.M Fauwas Diradja. namely, the manuscripts are placed in the cabinet, the position of the cabinet is in the living room and the manuscript storage area does not use *Air Conditioning* (AC). The storage room temperature is 25°C

Meanwhile, the storage area in the private library owned by Nyimas Umi Kalsum is in the room and neatly arranged in a closet and the room temperature is around 24°C. Based on the results of observation and documentation above, the storage area of the collection of ancient manuscripts in the private library owned by Andi Syarifuddin, the ancient manuscripts are placed in the cupboard, the position of cabinet is in the living room and the place where the manuscript collection is stored is not used *Air Conditioning* (AC).

Based on the results of the observation and documentation above, the author can conclude that in private libraries in Palembang, different manuscript storage places use air conditioning and the manuscript storage place has not used air conditioning to regulate the room temperature.

2. Manuscript condition

In general, the condition of the manuscript collection in the private library owned by R.M Fauwas Diradja, there are more than 50 manuscript titles and there are still manuscripts that have not been opened and are still wrapped. Of the 50 manuscripts that have been identified, some of the manuscripts are still in good condition and others are quite good, but there are also library materials that have been damaged, many have been damaged by various factors such as chemical factors that result in changes in the color of the paper and others, and need to be repaired.

Based on the results of the observation and documentation above, the author can conclude that the factors that are often encountered in the manuscript are chemical and biological, while other factors such as the human factor have never occurred because of the manuscript collection in the private library in R.M Fauwas Diradja which is rarely shown physically to the public.

Meanwhile, the condition of the ancient manuscript belongs to Nyimas Umi Kalsum. To keep the manuscript durable, the owner must pay attention to the condition of the manuscript and the manuscript owner must preserve it so that the manuscript can be used by the public. In general, the condition of the manuscripts in the Nyimas Umi Kalsum private library is still in good condition.

Based on the results of observations at the Kemas Andi Syarifuddin private library, around 80 manuscripts were recorded in various languages, namely Jawi, Malay, and Arabic. The condition of the manuscript in general is quite concerning because it is tens or even hundreds of years old. The manuscript of his collection of ancient manuscripts was obtained from generation to generation. Starting from the first owner, namely his great-grandfather during the reign of Sultan Mahmud Badaruddin (SMB) II. The types of ancient manuscripts that belong to most of them are about religious sciences such as Tafsir, Hadith, Fiqh, Sufism, and Tawheed. Furthermore, Kemas Andi said that manuscripts about literature also exist, such as poems and history, especially in the Sultanate of Palembang Darussalam. All of these manuscripts

themselves are over 100 years old, the oldest is 300 years old Therefore, the aspect of preserving and caring for the manuscript is very important. Seeing the large collection of manuscripts stored in the Kemas Andi Syarifuddin Private Library, the handling, and maintenance of the manuscripts physically is very necessary so that the manuscripts are maintained and maintained in their condition.

3. Manuscript preservation

Preservation aims to protect the physical and value of information or intellectual content of manuscripts/library materials, this preservation is aimed at expanding access to information continuously. Therefore, it is necessary to maintain and supervise the environment where the manuscript is stored, replaced, and physically repaired must be well maintained.

- a. Preservation of manuscripts in private libraries/collections owned by (R.M Fauwas Diradja, Nyimas Umi Kalsum, and Kemas Andi Syarifuddin)

Manuscript preservation is carried out at the R.M Fauwas Diradja private collection, namely *the preservation of manuscripts once a year, and is controlled every day by cleaning the manuscript collection storage area, usually the Sultan keeps it in the same plastic box in a cupboard. Then each manuscript is stored in a paper envelope and in terms of preservation, we are assisted by the national library to care for and digitize the manuscripts*". Meanwhile, the collection is owned by Nyimas Umi Kalsum *by sowing traditional materials such as cinnamon and camphor*. In the personal collection owned by Kemas Andi Syarifuddin, information was obtained on how to preserve which is *usually done by cleaning regularly using a clean brush and providing a magic/good moth escape in the cupboard. Preservation/maintenance also sometimes receives assistance from PNRI*".

Thus, it can be concluded that the preservation activities carried out in private libraries in Palembang are on average simple, such as providing materials that can be avoided from insects, examples of good lime and others and routinely cleaning ancient manuscripts with a brush aid.

- b. Conservation of ancient manuscript collections in private libraries (R.M Fauwas Diradja, Nyimas Umi Kalsum, and Kemas Andi Syarifuddin)

Every manuscript collection should need maintenance and prevention of damage to the manuscript. The deterioration caused by biological agents such as micro-

organisms, insects, and rodents is generally known as bio-deterioration. Almost all manuscript components, be it paper, leather, textiles, or straw board used for binding are prone to attacks by these biological agents. Efforts to prevent damage to the manuscript were carried out from the beginning. In replacing severe manuscript damage, it is necessary to carry out preventive efforts caused by several factors. The factors that affect manuscript damage include insects and dust. Only certain insects badly damage the Archivo-library materials. They are silverfish, cockroaches, booklice, bookworms, and termites.

This is also to the findings of researchers in private libraries/collections in Palembang owned by (R.M. Fauwas Diradja, Nyimas Umi Kalsum, and Kemas Andi Syarifuddin). Here are the results in the private library of R.M Fauwas: *"The most frequent factors such as cockroaches, termites, and dust, for termite control usually use cloves or camphor"*. Likewise in the Nyimas Umi Kalsum Library/Private Collections, *"The manuscript damage is usually dust, and insects badly damage the archivo-library materials. They are silverfish, cockroaches"*. The same thing also happened to the manuscript of Kemas Andi Syarifuddin's collection, that: *"The factors that cause the damage are cockroaches, other insects"*.

Based on the above findings, the researcher concluded that the manuscripts in the library/private collection at (R.M Fauwas Diradja, Nyimas Umi Kalsum, and Kemas Andi Syarifuddin) were damaged by cockroaches and termites. However, the manuscript owner has not taken appropriate measures to prevent damage caused by the insect, such as by fumigating or using insecticides or other insecticides.

"only use things that are traditional, vague and routine in cleaning my manuscript collection" (Nyimas Umi Kalsum). Meanwhile, in the Private collection owned by Kemas Andi Syarifuddin, the content of the interview was: *"So far we have been doing it in the traditional way to get rid of insects and others, then always clean the manuscript, put the manuscript in an anti-termite/glass cabinet, etc."*. (the Kemas Andi Syarifuddin).

Based on the above findings, the researcher concluded that the manuscripts in the library/private collection at (R.M Fauwas Diradja, Nyimas Umi Kalsum, and Kemas Andi Syarifuddin) have prevented the destruction of manuscripts in the traditional way in the form of camphor and cloves.

- c. Restoration (repair) of ancient manuscripts in a private library/collection owned by (R.M Fauwas Diradja, Nyimas Umi Kalsum, and Kemas Andi Syarifuddin)

After we know the various types of manuscript destroyers and the types of damage they cause, then we must be able to fix them. The work of improving this manuscript is called restoration. This restoration includes: patching paper, replacing torn pages, and repairing things that have been damaged.

Based on the results of the researcher's observations, it is known that the owner of the manuscript has made improvements to the manuscripts, either by himself or with assistance from the national library:

In the manuscript belonging to the private library/collection of R.M Fauwas Diradja, information was obtained that: *Manuscripts that are damaged or some have been torn are coated with filmoplast. Some of them have been coated with Japanese tissues.* Meanwhile, the manuscript belonging to Nyimas' library/private collection Umi Kalsum has also *made improvements to the manuscript and to repair of manuscript, The national library assisted in repairing all damaged manuscripts and laminating them.* For manuscripts belonging to Andi Syarifuddin's private library/collection, repairs were made by *replacing damaged manuscript covers with new covers, only patching the manuscripts with insulation, and connecting them into one* (Kemas Andi Syarifuddin).

Based on the results of interviews conducted by researchers, the process of repairing manuscripts in private libraries/collections (R.M Fauwas Diradja, Nyimas Umi Kalsum, and Kemas Andi Syarifuddin) has not been as much as possible to improve manuscripts due to other factors, but some try to save torn manuscripts with Filmoplas and with Japanese tissues so that they do not get worse by patching up torn manuscripts with clear insulation. One example of a manuscript that has been restored (repaired)

- d. Digitization of ancient manuscripts in private libraries/collections owned by (R.M Fauwas Diradja, Nyimas Umi Kalsum, and Kemas Andi Syarifuddin)

Digitization The process of transferring from printed documents to electronic documents. Digitization is the process of conserving printed materials into electronic digital formats through scanning or others. The original manuscript is processed by photographing or scanning to produce an electronic document.

Based on the results of observations, information was obtained that the manuscript of the collection belonging to R.M Fauwas Diradja, some of the manuscripts are approximately 22 manuscript titles with a total width of 465 of all manuscripts have been digitized. This proves the Sultan's concern for manuscripts to preserve cultural heritage in Palembang.

For the manuscript of Nyimas Ummi Kalsum, all of the manuscript collections have been digitized. Meanwhile, Andi Syarifuddin Kemas, some of the manuscript collections have been digitized as copies or backups. Andi Syarifuddin Kemas has digitized the manuscript collection to maintain the integrity of the manuscript, using complete tools such as cameras. From the results of an interview at the Kemas Andi Syarifuddin private library that has digitized, the manuscript: *" I prepared a camera and scanner to take pictures of the manuscript and the results were saved on the computer in pdf format. However, the physical information data of the manuscript is usually typed on the computer, so that it is easy to read, the scan results are saved in a prepared folder."*

From the findings, it can be extracted that the digitalization of the manuscript needs to be carried out so that the content of the manuscript is maintained if at any time the physical manuscript is no longer maintained. Digitization has benefits including Securing the content of the manuscript from extinction so that the next generation continues to get information from the sciences contained in the manuscript. Manuscripts can be duplicated easily and there is a manuscript backup so that if one day the manuscript becomes extinct, the value of information in digital form can still be accessed. Can be used as an object of promotion for the nation's wealth

Conclusion

Preservation is emphasized as a first step to prevent damage caused by environmental factors, such as humidity, temperature, and light exposure. Conservation is an effort to physically preserve ancient manuscripts by using various techniques and methods, such as binding, lamination, or reproduction, to maintain the integrity of the library materials. Restoration, as a follow-up to conservation, aims to repair the physical damage that has been done to ancient manuscripts so that they can be preserved and accessed by future generations. In conclusion, the preservation of ancient manuscripts through the process of preservation, conservation, and restoration is essential for

preserving cultural heritage and human knowledge and ensuring access to this valuable information for the future.

The condition of the Palembang manuscripts in the private library/collection owned by (R.M Fauwas Diradja, Nyimas Umi Kalsum, and Kemas Andi Syarifuddin), as a whole is in conditions that has been damaged such as torn and fragile because the manuscripts are quite old. The understanding of how to preserve and care for manuscripts carried out by manuscript owners in private libraries in Palembang that handle this part of the manuscript is quite good. This can be seen from their treatment of the manuscript such as having digitized and cleaning procedures that have used gloves and brushes as well as traditional materials.

The process of preserving manuscripts in private libraries/collections (R.M Fauwas Diradja, Nyimas Umi Kalsum, and Kemas Andi Syarifuddin) is the owner maintenance of the manuscript simply or traditionally, damage prevention and repair have not been carried out optimally by the actual preservation. The private library has digitized ancient manuscripts, and all owners in this research have digitized the manuscript. Before carrying out digital preservation activities, manuscripts in printed form must first be made into digital form, which is also referred to as the digitalization process, digitization is the conservation process from printed materials to electronic digital formats through scanning or others. The damage factors that appear on the physical of the manuscript are caused by various factors, namely: biology, chemistry, physics, and others.

References

- Almis, Vivin Mawaddah and Luki Wijayanti, "Digitization of Ancient Manuscripts as an Effort to Preserve Information: A Systematic Literature Review," *Journal of Library Science (JIPER)* 5, no. 2 (September 30, 2023), <https://doi.org/10.31764/jiper.v5i2.15224>.
- Bahar, Hijrana, and Taufiq Mathar. "Efforts to Preserve Ancient Manuscripts at the Regional Library and Archives Agency of South Sulawesi Province." *Khizanah al-Hikmah: Journal Library, Information, and Archives Science* 3, no. 1 (2015): 89–100.
- Bala, Salisu. "The Preservation Of Ancient Arabic Manuscripts: A Reflection On Some Selected Public Repositories In Northern Nigeria." *Islamic Africa* 2, no. 1 (3 Juni 2011): 1–10. <https://doi.org/10.5192/21540993020101>.
- Christiani, Lydia. "Preservation, Conservation, and Restoration of Documents in the Library Directory." *Anuva: Journal of Cultural, Library, and Information Studies*

- 4, no. 3 (22 November 2020): 371–82. <https://doi.org/10.14710/anuva.4.3.371-382>.
- Cloonan, Michèle Valerie. "Preservation Without Borders" 47, no. 3 (1 Januari 1997): 180–86. <https://doi.org/10.1515/libr.1997.47.3.180>.
- Conservation (PAC), IFLA Core Programme on Preservation and, John McIlwaine, dan Marie-Thérèse Varlamoff. *IFLA Disaster Preparedness and Planning: A Brief Manual*. IFLA PAC, Paris, 2006. <https://repository.ifla.org/handle/123456789/1315>.
- Dureau, J. M., dan D. W. G. Clements. "Principles for the Preservation and Conservation of Library Materials. IFLA Professional Reports, No. 8," 1986.
- Fatmawati, Endang Fatmawati Endang. "Preservation, Conservation, and Restoration of Library Materials." *LIBRIA* 10, no. 1 (August 20, 2018): 13–32. <https://doi.org/10.22373/3379>.
- Finkel, Dr Irving. *The Ark Before Noah: A Fascinating Story of the Mystery of the Flood Disaster in Ancient Times*. Alvabet Library, t.t.
- Gunawan, Hendra dan Sri Sudiarti. (2023). "Inventory, Preservation, And Digitalization Of Manuscripts As A Historical Source In Jambi" *Juspi: Jurnal Sejarah Peradaban Islam*. 7(1), page.64-71 DOI: <https://dx.doi.org/10.30829/juspi.v7i1.16089>
- Handayani, Fitri. "Local Wisdom in the Essence of Preservation of Ancient Manuscripts as the Preservation of the Nation's Cultural Heritage." *Proceedings of the Faculty of Ushulludin Adab and Da'wah* 1, no. 1 (2023): 133–47.
- Hanum, Atiqa Nur Latifa, Antonius Totok Priyadi, Aliyah Nur'aini Hanum, and Aji Ali Akbar. "The Role of Libraries, Archives, Museums in the Preservation of Ancient Manuscripts in West Kalimantan." *Periodic of Library and Information Science* 19, no. 1 (June 2, 2023): 66–82. <https://doi.org/10.22146/bip.v19i1.6294>.
- Hermawan, Bambang. "Preservation of Library Materials with Fumigation System: Empirical Experience at the Directorate of Libraries of the Islamic University of Indonesia." *Library Bulletin* 1, no. 2 (6 November 2018): 97–106.
- Hidayanti, Asri. "Preservation of Ancient Manuscripts Using the Urauchi Technique (Case Study at the Aceh Museum)." Ar-Raniry State Islamic University Banda Aceh, 2021.
- The Great Dictionary of Indonesian Language (KBBI) Online." Retrieved 20 April 2024. <https://www.kbbi.web.id/>.
- KBBI VI Online," accessed May 22, 2024, <https://kbbi.kemdikbud.go.id/entri/digitalisasi>.
- Kautsar, Rahmat, Hamidi Ilhami, and Muhammad Nur Effendi. "Preservation of Library Materials at the Banjarmasin City Public Library." *Literature: Scientific Journal of Library and Information Science* 10, no. 1 (July 12, 2022): 49–58. <https://doi.org/10.18592/pk.v10i1.6741>.
- Kuswati, Suci Nurrahma. "Digitization of Ancient Manuscripts as an Effort to Disseminate Information." *LIBRIA* 13, no. 1 (June 1, 2021). <https://doi.org/10.22373/10971>.

- Marsono. "Factors of Damage to Ancient Manuscripts and Their Countermeasures (Case Study at the Sonobudoyo State Museum, Yogyakarta)." Thesis, UIN Sunan Kalijaga Yogyakarta, 2016. <https://digilib.uin-suka.ac.id/id/eprint/21021/>.
- Nasution, Hikmah. "Preservation of Manuscripts in the National Library of the Republic of Indonesia," 23 November 2015. <https://repository.uinjkt.ac.id/dspace/handle/123456789/29094>.
- Nurwahyuningsih, Ratnawati, and Nita Ismayati. "Evaluation of Physical Preservation Activities Manuscript Ancient At The National Library of the Republic of Indonesia uses the Cipp (Context, Input, Process, Product) model." *Bibliotech: Journal of Library and Information Science* 4, no. 1 (8 August 2019). <https://doi.org/10.33476/bibliotech.v4i1.924>.
- Pramana, Wahyu Dian. "Strategy for the preservation of ancient manuscripts at the East Java Provincial Library and Archives Office." *Daluang: Journal of Library and Information Science* 2, no. 2 (November 17, 2022): 101–11. <https://doi.org/10.21580/daluang.v2i2.2022.10293>.
- Primadesi, Yona. "The Role of Local Communities in the Effort to Preserve Paseban Ancient Manuscripts." *Composition: Journal of Language Education, Literature, and Art* 11, no. 2 (2 July 2012). <https://doi.org/10.24036/komposisi.v11i2.88>.
- Ramadhan, Muhammad. *Research Methods*. Cipta Media Nusantara, 2021.
- Rohmawati, Zuni. "A Study on the Factors Causing Damage to Ancient Manuscripts and their Countermeasures in the Library of Pakualaman Temple, Yogyakarta." Thesis, UIN Sunan Kalijaga Library, 2012. <https://digilib.uin-suka.ac.id/id/eprint/10784/>.
- Sahoo, Jyotshna. (2004). "Preservation of Library Materials: Some Preventive Measures" *The Orissa Historical Research Journal, OHRJ, Vol. XLVII, No. 1 2004 - magazines.odisha.gov.in*
- Salsabillah, Shintia. "Preservation of Ancient Manuscripts at the Library and Archives Office of Fifty Cities Regency." Thesis, Faculty of Languages and Arts, 2023. <http://repository.unp.ac.id/47758/>.
- Setiawan, Makis, Emi Pujiastuti, and Bambang Eko Susilo. "Systematic Literature Review: The Effect of Mathematical Anxiety on Students' Problem-Solving Ability." *QALAMUNA: Journal of Education, Social, and Religion* 13, no. 2 (28 July 2021): 239–56. <https://doi.org/10.37680/qalamuna.v13i2.870>.
- Sukirno, Sukirno. "Library restoration as an effort to reactivate School Library at SMP PGRI 1 Serang." *Consent: Community Services Journal* 1, no. 01 (July 31, 2023): 09–17.
- Taufiqurrahman, Taufiqurrahman, and Ahmad Taufik Hidayat. "Conservation, Digitalization, and Counseling of Ancient Manuscripts in Surau Manggopoh, Agam Regency." *Axiologically: Journal of Community Service* 6, no. 1 (February 28, 2022): 157–72. <https://doi.org/10.30651/aks.v6i1.5377>.
- Yasin, Dhimas Muhammad. (2016). "Digitization and Description of Ancient Manuscripts as an Effort to Strengthen the Sovereignty of Indonesia: A Case Study

of the Al-Mutawassimīn Manuscript," *Defendonesia* 2, no. 1 (December 23, 2016): 24–33, <https://doi.org/10.54755/defendonesia.v2i1.55>.