

When Preservation Threatens: Risks to the Integrity of Ancient Islamic Manuscripts in Indonesia

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Abstract

This article examines efforts to preserve ancient Islamic manuscripts in Indonesia, with particular emphasis on the risks associated with current conservation practices. Using a qualitative approach, the study analyzes data sourced from social media platforms such as Facebook, Instagram, and relevant websites. The data collection follows a desk-review method, in which content is gathered and categorized based on predefined criteria. This information is then filtered and analyzed to map the threats emerging from preservation efforts. The findings reveal three primary risks in the implementation of manuscript conservation: (1) physical damage resulting from improper preservation methods; (2) the loss of contextual or historical identity of the manuscripts; and (3) the discontinuity or fragmentation of textual content. These risks underscore the need for a comprehensive review of existing government policies and Standard Operating Procedures (SOPs) for manuscript preservation. Such policies must be contextually adapted to Indonesia's specific environmental and institutional conditions to guide preservation actors effectively.

Keywords: *Preservation, Ancient Islamic Manuscripts, Cultural Heritage, Indonesia.*

Abstrak

Artikel ini membahas tentang upaya pelestarian naskah kuno Islam terutama di Indonesia. Fokus utama pembahasan adalah pada berbagai ancaman yang terjadi selama proses pelestarian naskah-naskah kuno tersebut. Penelitian ini menerapkan metode analisis kualitatif untuk menggali data yang diperoleh dari platform media social, seperti: Facebook, Instagram, serta situs Web. Pengumpulan data menggunakan metode Desk-Review, di mana data yang diperoleh dari platform tersebut dikumpulkan dan dikelompokkan berdasarkan kategori yang telah ditentukan. Selanjutnya, data tersebut direduksi dan dianalisis untuk memetakan ancaman risiko yang muncul dari proses pelestarian tersebut. Hasil penelitian mengidentifikasi tiga ancaman utama yang terjadi dalam pelaksanaan preservasi naskah kuno, yaitu: 1) Ancaman yang dapat menyebabkan kerusakan fisik pada naskah-naskah kuno akibat proses preservasi yang dilakukan; 2) Ancaman hilangnya identitas naskah kuno; dan 3) Ancaman terhadap ketidaksinambungan isi teks dalam naskah kuno. Oleh karena itu, sangat penting untuk adanya kebijakan pemerintah yang meninjau kembali Standar Operasional Prosedur bagi para pelestari naskah kuno, yang disesuaikan dengan kondisi wilayah Indonesia sebagai syarat bagi para pelaku pelestarian.

Kata Kunci: *Pelestarian, Naskah Kuno Islam, Warisan Budaya, Indonesia.*

Introduction

Many ancient manuscripts in Indonesia, particularly those related to Islam and owned by private individuals, have suffered significant damage. This deterioration stems from both environmental factors, such as humidity and temperature fluctuations, as well as human activities, including inadequate preservation practices. Safeguarding these fragile materials is crucial for protecting the intellectual legacy of earlier prominent Islamic scholars. These manuscripts often contain theological, cultural and historical insights that are integral to a nation's identity (Fakhriati, Mu'jizah, et al., 2022; Koopman, 2023; Savino & Tonazzini, 2024). Preservation of Indonesian

Islamic manuscripts, therefore, contributes not only to conserving Islamic knowledge in Indonesia but also to maintaining the diversity of Indonesia's cultural heritage.

Despite this significance, public awareness regarding the value of ancient manuscripts remains limited. These texts are frequently seen merely as sacred heirlooms passed down through generations, with reverence rooted more in tradition than in an appreciation of their intellectual content. Consequently, many manuscripts have been neglected, left in poor condition by descendants who lack a full understanding of their meaning and historical importance. While there is a cultural inclination to respect these objects as believed by some to possess spiritual attributes, this respect has not translated into sustained efforts to protect them (Ahmad, 2024; Becker, 2021; Schettino et al., 2023).

This study aims to identify and map the key threats facing the preservation of ancient manuscripts. These include: (1) physical damage resulting from improper conservation techniques; (2) the loss of a manuscript's identity, including provenance, context and authorship; and (3) the disruption or discontinuity of the textual content during preservation processes. These risks often arise from carelessness or the absence of appropriate protocols, highlighting the urgent need for clearer guidance to support practitioners in the field.

One of the most pressing concerns is the physical damage caused by uninformed preservation practices. Those tasked with conserving these works are not always fully aware of the procedures necessary to maintain their structural integrity and ensure long-term

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sustainability (Krtalić & Dinneen, 2022; Rumbach et al., 2020). A major contributing factor is the limited understanding and implementation of Standard Operating Procedures (SOPs). Such guidelines should provide step-by-step instructions for safe and effective preservation (Balzani et al., 2024; Siliutina et al., 2024). However, SOPs must also be adapted to local conditions, especially in Indonesia, where geographic and climatic diversity poses unique preservation challenges.

A lack of knowledge and awareness about these essential procedures often leads to the very outcomes that conservation efforts are meant to prevent, which is irreversible harm to cultural and intellectual heritage (Fakhriati, Kalsum, et al., 2022; Motsi, 2017; Nur'aini, 2025; Nur'aini et al., 2024; Rachman et al., 2022; Wibowo et al., 2024). Without careful attention to context and protocol, well-meaning actions can inadvertently accelerate the degradation of these invaluable sources of knowledge.

Literature Review

Ancient Islamic Manuscripts

Ancient Indonesian Islamic manuscripts constitute a vital component of the intellectual heritage of Islam, which has been cultivated in Indonesia for centuries. Early scholars played a pivotal role in producing and disseminating religious texts that became foundational to Indonesian Muslim education and community life. These figures served not only as teachers but also as authors and transmitters of religious knowledge (Mursyid & Zin, 2024; Noorhidayati & Aziz, 2023). The themes addressed in these manuscripts include *Fiqh* (jurisprudence), *Tauhid* (monotheism),

Akhlak (ethics), Sufism, and Islamic history, and are commonly written in Arabic, Malay, or regional languages. These texts continue to be used in *pesantren* (Islamic boarding schools) and other educational institutions, underlining their enduring relevance in the spiritual and intellectual development of Muslims in Indonesia (Berkey, 2014; Yahya & Jones, 2021). Through them, Islamic values are transmitted across generations, sustaining a longstanding tradition of Islamic scholarship.

Numerous scholars have contributed significantly to the corpus of Islamic manuscripts in Indonesia. Beyond their roles as educators and preachers, many were prolific authors and thinkers whose works continue to inform Islamic studies today (Gallop, 2022; Karim et al., 2023). In Palembang, notable figures include Sheikh Shihabbudin bin Abdullah, Sheikh Kemas Fakhruddin, Sheikh Abdussamad Al-Falimbani, and Sheikh Abdullah Azhari. In Betawi, the contributions of Habib Uthman bin Yahya and Sheikh Junaidi Al-Batawi stand out. In Aceh, important scholars include Sheikh Hamzah Fansuri, Syamsuddin Al-Sumatrani, and Sheikh Abdurrauf As-Singkili; while in Banjar, Sheikh Muhammad Arsyad Al-Banjari remains an enduring figure (Adib, 2022; Hidayat et al., 2023; Ni'am, 2017; Nur Aisyah et al., 2023; Rahmah, 2018; Siti Maria Ulfah et al., 2024). These individuals represent a diverse and rich scholarly tradition that continues to shape Indonesia's Islamic intellectual landscape.

One particularly influential work is *Ratib Samman*, authored by Sheikh Abdussamad Al-Falimbani. This text holds a cherished place in the religious life of Palembang's Muslim community, especially among practitioners of Sufism. Its continued recitation today attests

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to its spiritual resonance and cultural significance (Aknan, 2020; Buska et al., 2020; Siregar et al., 2023). More than a written document, Ratib Samman functions as a living heritage that bridges generations and reinforces communal religious identity (Muvid & Kholis, 2020). It remains an integral part of Indonesia's enduring Sufi traditions.

Risk to The Integrity of Ancient Islamic Manuscripts in Indonesia

The integrity of ancient manuscripts in Indonesia in general faces diverse threats: physical, biological, and digital, all of which have been widely discussed in academic literature. Environmental factors such as humidity, temperature extremes, microbial growth and insect infestation significantly contribute to the deterioration of these texts. Additionally, natural disasters and institutional shortcomings, including inadequate storage or handling protocols, further accelerate their degradation (Cappitelli et al., 2010; Sihotang & Sitanggang, 2022; Tyagi, 2022). Additionally, unethical conservation practices and poorly executed digital interventions may compromise or distort the original content and context of the manuscripts. In response, recent scholarship advocates for a more holistic approach—one that integrates traditional conservation methods with responsible digital preservation to safeguard the historical and textual value of these cultural artifacts (Abdoh, 2025; Hou & Xia, 2024; Rachman, 2017; Singh & Verma, 2024; Wibowo et al., 2024; Zhang et al., 2022).

Literature on manuscript integrity increasingly reflects a shift from purely physical preservation toward protecting cultural meaning and contextual integrity through digital technologies and community-based efforts. This evolution can be structured into four analytical perspectives: chronological, thematic, theoretical, and methodological. Chronologically, studies from the 1990s to early 2000s emphasized traditional physical conservation—manual restoration, environmental monitoring, and material stabilization (Rachman, 2017). Since 2010, the focus has gradually expanded to include digital preservation, introducing new concerns such as the loss of material context and authenticity. In the last decade, further developments have highlighted the roles of community involvement and advanced technologies in sustaining manuscript heritage (Abdoh, 2025; Cappitelli et al., 2010). Thematically, key concerns in the literature include: (1) physical deterioration due to environmental conditions and age; (2) biological threats such as microbial and insect activity; (3) the absence of systematic documentation; (4) ethical challenges in preservation methods; and (5) disparities in access and participation across communities (Fakhriati, Kalsum, et al., 2022; Nur'aini, 2025; Tyagi, 2022; Zhang et al., 2022). Theoretically, scholarship diverges between value-based preservation models and frameworks centered on risk management or cultural sustainability. Methodologically, studies have drawn on ethnographic case studies, hands-on conservation practices, microbiological analyses, and policy reviews (Cappitelli et al., 2010; Cloonan, 2023; Nur'aini, 2025; Saputra et al., 2023). Together, these developments point to an increasingly interdisciplinary and complex field.

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Despite this progress, notable gaps remain. First, cross-cultural comparative studies remain limited, resulting in conservation models that are often localized and lack broader integration (Cloonan, 2023). Second, while technical preservation methods receive considerable attention, social dimensions such as community participation, cultural rights and the embedded value of manuscripts are often underexplored (Cloonan, 2023; Fakhriati, Kalsum, et al., 2022; Saputra et al., 2023). Third, recent risks associated with digitization, including data security vulnerabilities, dependence on fragile digital infrastructure and erosion of material authenticity—have not been adequately addressed in the literature (Nur'aini, 2025; Siliutina et al., 2024).

A further challenge lies in the lack of interdisciplinary collaboration. Without meaningful engagement between librarians, conservators, data scientists, and cultural heritage professionals, preservation strategies remain narrowly focused. There is thus an urgent need to broaden the theoretical and ethical frameworks underpinning manuscript conservation, making space for more inclusive, cross-disciplinary, and culturally grounded approaches to sustainable heritage preservation.

Preservation of Manuscripts

The preservation of ancient manuscripts is a vital endeavor aimed at safeguarding endangered cultural heritage. Beyond protecting physical artifacts, preservation reinforces a nation's cultural and historical identity. Its primary objective is to shield manuscripts from deterioration and potential loss, ensuring their longevity and accessibility for future generations (Buragohain et al., 2022; Roslan

et al., 2021; Verticchio et al., 2021). Achieving this goal requires systematic planning and the collaborative engagement of multiple stakeholders. Effective conservation strategies are best sustained through partnerships that bring together institutions, experts, and communities (Carlson et al., 2020; Graci, 2020; Norazman et al., 2023).

Preservation encompasses a range of activities, from physical conservation and digitization to facilitating scholarly research and public engagement (Wibowo et al., 2024). It involves precise techniques such as environmental monitoring, the use of archival-quality storage materials, and routine maintenance (Nur'aini, 2025; Nur'aini et al., 2024). Importantly, the responsibility of safeguarding these texts does not rest solely with professionals; community involvement is essential. Public awareness campaigns and educational initiatives play a critical role in cultivating a sense of shared ownership and commitment to preservation efforts (Carlson et al., 2020).

Recent developments show increasing attention from both institutional and grassroots actors. A variety of restoration techniques are now applied to address damage and deterioration (Mousazadeh et al., 2023; Neglia et al., 2024). At the same time, public understanding of manuscripts as embodiments of national heritage rather than mere antiquities, continues to grow (Saraswati, 2018; Smith, 1994). Accordingly, the preservation of ancient manuscripts should be viewed as a collective responsibility. It is not the domain of a select few, but a shared duty across society to ensure that these cultural touchstones remain vital resources for generations to come.

Method

This study employed a qualitative research design, focusing on digital ethnography across social media and web-based platforms. The scope of this study includes visual documentation, specifically photographs of conservation activities, shared by manuscript preservation practitioners on Facebook and Instagram. It also incorporates screenshots from the DREAMSEA, EAP, and KHASTARA websites, all of which present digital surrogates of ancient manuscripts. These platforms such as Facebook, Instagram, and institutional websites have become powerful tools for raising awareness and disseminating knowledge about heritage preservation. These platforms allow conservationists to engage directly with the public and share reflections on the historical and cultural value of ancient texts.

Data collection relies on a desk-review methodology, a practical means of accessing a wide array of publicly available information. Content is systematically gathered from digital sources and organized according to predetermined categories. Each dataset is described and interpreted within its thematic grouping, supported by relevant scholarly references. The data were descriptively analyzed and organized into emerging thematic categories. These themes are supported by citations from relevant academic and institutional sources to contextualize the findings.

For analysis, a descriptive approach was adopted to distill and present the data in a structured manner. This method enables the identification of recurring patterns and themes, which are then visually represented to enhance accessibility and understanding. By

summarizing complex, heterogeneous data into coherent narratives, the analysis helps illuminate how digital media can shape public perceptions of conservation, while also highlighting vulnerabilities in current preservation efforts.

Result and Discussion

This study found at least three aspects of threats that arise during the process of the preservation of ancient Islamic manuscripts, namely: (1) The threat of physical damage to ancient manuscripts due to the preservation process, (2) The threat of losing the identity of ancient manuscripts, and (3) The threat of discontinuity of the content of the text in ancient manuscripts. These three aspects will be explained further.

The Threat of Physical Damage to Manuscripts Due to Preservation

Preservation is an effort to protect cultural heritage from extinction, including protecting against physical damage. Many factors, such as natural and environmental factors, can cause physical damage to ancient manuscripts. However, physical damage to the manuscript can be caused by the preservation process itself. Neglect and lack of understanding of the basic procedures for preservation can trigger physical damage to the manuscript. This tends to be unnoticed by conservationists, such as not wearing masks and gloves when handling ancient manuscripts. Below is a taken from the Instagram accounts of institutions, experts, and preservation organizations during the identification of ancient manuscripts during the preservation process.

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Figure 1. The photo was taken from the Instagram upload of preservation actors from government institutions at the registration and verification of ancient manuscripts in 2024.

In image 1 above, the Instagram post shows that individuals involved in the process of ancient manuscript preservation originated from government institutions. They are collecting data and verifying the ancient manuscripts, which is an important step in efforts to preserve cultural heritage. The concern in this upload is that the individual does not wear gloves and masks while holding ancient manuscripts. This raises considerable concern, especially

considering the weather conditions in Indonesia, which tend to be humid. High humidity can cause sweaty hands, and sweat contains salt, oil, and dirt that can damage the manuscript's surface. This contamination can potentially cause long-term damage to the manuscripts, such as the appearance of spots, mold, or even more serious physical damage.

In addition, using masks is very important in this context to help minimize the fine dust of ancient manuscripts inhaled by the breath when doing preservation. This dust can irritate the respiratory tract but can result in long-term health problems if exposed continuously. Therefore, it is important for preservationists to adhere to strict safety protocols, including the use of gloves and masks, to protect the precious ancient manuscripts and the health of their preservationists.



Figure 2. The photo was taken from the Instagram upload of the preservation actor from the organization institution in the field of ancient manuscripts at the Technical Guidance for the Digitization of Ancient Manuscripts.

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The upload from one of the Instagram accounts shown in image 2 above is an organization preserving ancient manuscripts. In the upload, it can be seen that the digitization process of ancient manuscripts is ongoing. The image on the left shows that the digitization was carried out without gloves, which is a concern because it shows that the actors preserving ancient manuscripts seem to ignore the safety of the manuscript and the individuals. Meanwhile, the image on the right shows the Technical Guidance for the Digitization of Ancient Manuscripts, where gloves and masks are also neglected. Although this activity aims to save ancient manuscripts from extinction, the actions taken have the potential to cause damage to the manuscripts. Therefore, it is important for organizations and individuals involved in the preservation of ancient manuscripts always to ensure that the preservation efforts carried out are genuinely effective and do not harm the precious manuscripts that are part of our history and culture.





Figure 3. The photo was taken from the ancient manuscript researcher's Instagram and Facebook posts.

In Figure 3, there is an upload that shows the interaction between the researcher and the owner of the ancient manuscript. In the image, it can be seen that the lack of adequate preservation equipment when opening ancient manuscripts is a significant problem. This kind of inaccuracy is difficult to avoid when in a location not designed for the study of ancient manuscripts, as seen in the two images on the right. However, in the image on the left, which shows the research activities of ancient manuscripts by academics, it can be seen that they do not wear gloves and masks when interacting with the owners of ancient manuscripts. This reflects negligence, incompleteness, and unpreparedness in using preservation tools. Non-compliance with the preservation protocol that should be applied in the study of ancient manuscripts can potentially damage the manuscript in terms of physical and information contained in it.

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The Threat of Loss of Ancient Manuscript Identity

The activity of preserving ancient manuscripts aims to save manuscripts that are widespread in the community physically. However, in the rescue process, it is important to still pay attention to the risks of carrying out the rescue. The threat of losing the identity of ancient manuscripts can be seen in the metadata and digitization results of ancient manuscripts, which can be found on some of the following ancient manuscript digital websites:

DREAMSEA Project No.:	DS 0003 00001
Institution:	HMMML: DREAMSEA
Surrogate Format:	Digital
IIIF Manifest:	https://www.vhmmml.org/image/manifest/537672
Country:	Indonesia
City (Province):	Ogan Komering Ilir (Sumatera Selatan)
Name of collection:	Private collection of Ibrahim
Right to Left?:	Yes
Current Status:	In situ
Subject matter:	Arabic Linguistics; Philanthropy; Miscellaneous; Sermon
Copying date in native date:	1325 Muharram 15
Copying date in Gregorian:	1907 February 27
Place of copying:	Mecca
Script:	Arabic, Jawi
Writing support:	Ledger Paper
Watermark?:	No
Countermark?:	No
Manuscript cover?:	No
Binding?:	Yes
Manuscript paper dimension:	28 x 20 cm
Text block dimension:	21 x 19 cm
Number of pages:	2 pages; 3 pages; 1 page; 2 pages; 4 pages; 3 pages; 4 pages
Number of blank pages:	0 page; 6 pages; 2 pages
Rubrication?:	No
Illumination?:	No
Illustration?:	No
Other notes:	At the beginning a note says that "I, Haji Muhammad Aqib started my Islamic studies on 15 Muharram 1325 Hijriyah". There are many mistakes in the writing of this manuscript that were later corrected by someone else in a different ink. The Arabic script of the text does not use diacritics. A piece of paper was inserted into the manuscript with the title of a text that explains the start of a chapter on Arabic grammar.

Figure 4. One of the Metadata of ancient manuscripts on the www.dreamsea.co website

Figure 4 shows a screenshot of one of the ancient manuscript websites, namely DREAMSEA (*Digital Repository of Endangered and Affected Manuscripts in Southeast Asia*) which a Philologist initiated. The site is an initiative to preserve ancient manuscripts across Southeast Asia and provide digital access to these manuscripts online and open to the public. However, when we examine the available metadata, historical information regarding the manuscript is not included, such as how the manuscript originated and how the manuscript was obtained.

Deskripsi Koleksi		Detail Versi Lengkap
Catalog ID	2632306	
BIBID	0010-0824005097	
Jenis Bahan	Naskah Kuno	
Judul	Syair orang berbuat amal; Syair Sitambari; Syair surat kirim kepada perempuan; Hikayat mi'raj Nabi Muhammad; Penang, 1806	
Pengarang		
Penerbitan	[Penang], . . [1806]	
Deskripsi Fisik	77 halaman, 4 volume : kertas Cina ; 20 x 14,5 cm	
Subjek	Manuskrip Melayu -- Manuskrip Arab	
Nomor Panggil	M55 Malay B.3	

Figure 5. Ancient Manuscript Metadata on www.khastara.perpusnas.go.id website

Figure 5 shows a screenshot of the metadata from the KHASTARA website (Khasanah Pustaka Nusantara) managed by the National Library of the Republic of Indonesia. The site serves as a single search gateway for digital collections that include a wide range of manuscripts, books, and other important documentation related to Indonesia's cultural heritage and knowledge. In the screenshot above, the metadata information presented is not completely complete. Although there are several important elements presented, such as the title of the manuscript and the call number of the manuscript, there are significant shortcomings in several other important aspects. For example, an explanation of the owner of the manuscript is not included, even though this information is very important to understand the context and history of the manuscript. In addition, the origin of the manuscript, indicating the location or institution where the manuscript was found or stored, is also not included. Furthermore, the type of script used in the manuscript is also not mentioned. Script information is very important, as it can provide clues about the historical and cultural period and language used.

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Overall, while KHASTARA serves as a significant portal for accessing digital collections, it is crucial for managers to ensure that the metadata information provided is more comprehensive and complete. This will not only improve the quality and credibility of the portal but also make it easier for users to conduct more effective and efficient searches.

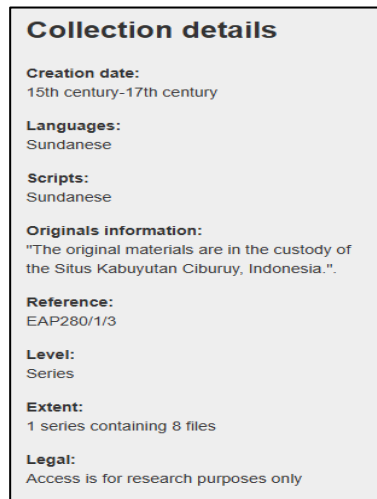


Figure 6. Metadata on www.eap.bl.uk websites

Figure 6 shows a screenshot of the metadata of the EAP (Endangered Archives Programme) website maintained by the British Library and supported by the Arcadia Foundation. This program has a noble goal, which is to facilitate the digitization of endangered archives worldwide. So, special attention is required to ensure that the cultural heritage contained in it does not disappear over time. By digitizing, EAP strives to preserve these valuable documents and encourage open access for the broader community so that anyone and anywhere can access the knowledge and information contained in them.

However, in the screenshot shown, some shortcomings need to be noted. The metadata presented is incomplete, which may hinder further understanding and research regarding the manuscripts listed. One of the important pieces of information missing is the identity of the manuscript's owner, which can provide more context regarding the origin and significance of the document. In addition, there are no specific details about the location where the manuscript is stored, such as the address or institution that stored the manuscript. This information is essential for researchers who want to conduct further studies or access the manuscript physically.

The Threat of Discontinuity of Text Content in Ancient Manuscripts

Preserving ancient manuscripts are the only ways to preserve invaluable cultural heritage. Ancient manuscripts that are a source of knowledge and history often face great challenges due to age, humidity, pest infestation, and careless use. Preservation activities that focus on the physical condition of ancient manuscripts that are often vulnerable and damaged are the restoration process. The process of restoring ancient manuscripts is carried out with great care and expertise, involving various techniques and methods to repair damage without depriving the manuscript of its historical and artistic value. However, in its implementation, the improvement of ancient manuscripts can pose a risk to the consistency of the content of the text in the manuscript. For example, in the image of the manuscript below, it can be seen how the results of the restoration can affect the integrity and authenticity of the content of the manuscript:



Figure 7. Text conditions are arranged upside down

In picture 7, you can see an ancient manuscript that has been restored. However, in this process, the text in the manuscript is arranged in reverse order, which means that the original order of the writings is no longer logical, so the reader can no longer understand the original meaning of the manuscript. In addition, the placement of text pages is also done carelessly, without paying attention to the order in which it should be. This irregularity causes difficulty in identifying important parts of the script, as well as interfering with the storyline or the information that is intended to be conveyed. This results in the identity and content of ancient manuscript texts becoming challenging to understand and interpret correctly.



Figure 8. The text is not visible in the digital results of ancient manuscripts on www.eap.bl.uk websites

Figure 8 above shows the results of digitizing ancient manuscripts on the EAP website, displaying one of the historical manuscripts that have important value in studying history and culture. The photo of the ancient manuscript shows a reflection of light that can interfere with reading and understanding the manuscript's content. This reflection of light not only reduces the visual quality of the digitized manuscript but masks an important part of the text that should be readable. This condition can potentially threaten the integrity and consistency of the content of the digitized text. Ambiguity in the manuscript's appearance can lead to misinterpretation or loss of valuable information.

This study shows that unskillful efforts to preserve ancient manuscripts can pose various risks that threaten the existence of these manuscripts. The author finds that the threat remains in efforts to save ancient manuscripts. There are three threats that will occur in the rescue process, which could endanger the manuscripts. First is the threat of physical damage to ancient manuscripts caused by the preservationists. Second, there is the threat of loss of identity of ancient manuscripts due to incomplete historical information. Third,

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the threat of discontinuity of the content of the text in ancient manuscripts was caused by errors in the rescue process.

One risk that arises when making rescue efforts is the threat of physical damage to ancient manuscripts. Although the purpose of the rescue activity is to protect the manuscript, there is often negligence and unpreparedness of the tools of the conservationists (Molnár et al., 2023). The preservationists in question include government agencies that focus on preserving ancient manuscripts, professional organizations for preserving ancient manuscripts, and researchers and practitioners of ancient manuscripts. In Figure 2, we can see that the Preservation Organization Institution conducts Technical Guidance on digitizing ancient manuscripts, but there is still negligence. This negligence is often related to the implementation of Standard Operating Procedures (SOP) for conservation, such as the use of gloves and masks during the rescue process. Gloves are needed so that human skin does not come into direct contact with ancient manuscripts, considering that the acid content on the hands can harm the physical nature of the manuscript. In some countries, such as Germany. It does not matter if gloves are not used because the humidity level there is different from that in Indonesia (Barnett, 2024; Baty et al., 2010; Labadi, 2003; Sloggett, 1998). Therefore, the existing Standard Operating Procedures (SOP) must be reviewed to suit Indonesia's geographical conditions better.

The loss of the identity of ancient manuscripts is a serious threat that can hinder efforts to preserve cultural heritage and the knowledge contained in them. This is often caused by incomplete metadata. Therefore, it is very important to compile metadata that describes the historical context, the content of the ancient manuscript, and the

structure of the manuscript as a whole. In a codicological study, there are many aspects that need to be considered when creating metadata. These aspects include the title of the manuscript, the code, the language and script used, the type of paper, the size of the manuscript and text, the number of pages and lines of text, the owner of the manuscript, the location of the storage, the history of the manuscript, and the beginning and end of the text citation. All these elements contribute to preserving the historical identity of ancient manuscripts. However, these manuscripts risk losing their identity if they do not follow the codicological context (Maniaci, 2022; Mayernik, 2021; McWebb, n.d.; Rafii, 2023). For example, figure 9 below shows the metadata found on the religious literature website, which also displays the digital results of ancient manuscripts and their metadata. The metadata provided is quite comprehensive, making it easier for the general public to understand ancient manuscripts by referring to the metadata.

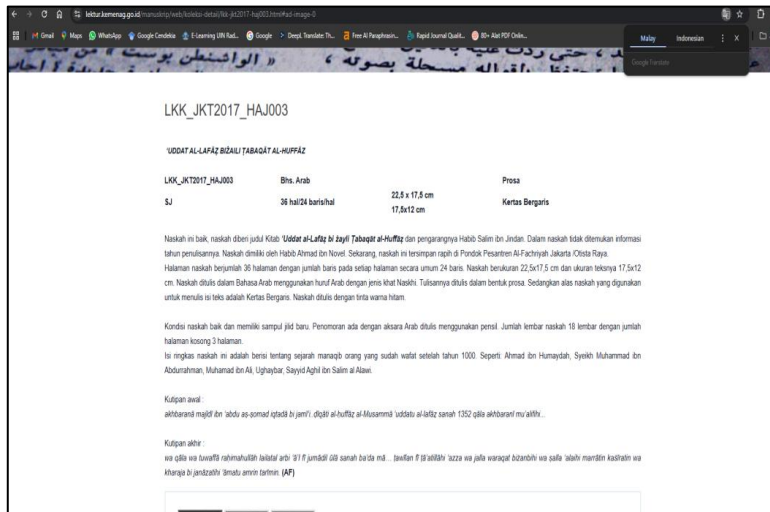


Figure 9. <https://Lektur.kemenag.go.id> website that presents digital results of ancient manuscripts along with metadata.

The preservation of ancient manuscripts can pose a risk of discontinuity of the text caused by human error due to non-compliance with Standard Operating Procedures (SOP) and lack of understanding of the manuscript. (Kalsum & Rachmadini, 2023; Nur'aini, 2025) This discontinuity can occur during the restoration process, where there are errors in the arrangement and placement of the pages, as seen in Figure 9. This kind of incident is often caused by a lack of knowledge of the content of ancient manuscripts. However, this risk can be minimized by involving philologists in the manuscript improvement process so that errors in drafting and placement can be avoided (Allen, 2021). In addition, Figure 8 shows the results of digitizing ancient manuscripts that are very opaque, making them difficult to read and analyze. These two problems have the potential to threaten the sustainability of ancient manuscripts that are being preserved and can raise new issues.

Conservation activities that pose various threats are phenomena that require serious attention. Often, conservationists do not realize that small elements, such as implementing standard operating procedures, ensuring equipment completeness, and collaborating with relevant parties, are crucial. (Heritage & and Golfomitsou, 2015; Mendoza & Talavera, 2025) However, in the field, these things are often overlooked. Therefore, the decreasing age of ancient manuscripts, their increasingly fragile condition, undisclosed historical identities, and the discontinuity of the content of texts and manuscript pages are three urgent issues.

The above problems demonstrate that, although institutions, researchers, and communities dedicated to preserving ancient manuscripts have made a firm commitment to safeguarding

endangered archives, there are still opportunities for improvement. One of the aspects that needs to be considered is the presentation of more informative metadata and the review of standard operating procedures in the preservation of manuscripts. Thus, the results of these preservation efforts can provide more significant benefits to ancient manuscripts and their users. Improving metadata quality will significantly contribute to supporting better research and understanding of this invaluable cultural heritage.

Conclusion

This study highlights that preserving ancient Islamic manuscripts in Indonesia, particularly those reflecting the Islamic scientific tradition is crucial in safeguarding the intellectual heritage of earlier scholars. These manuscripts are not merely historical artifacts; they offer profound insights into the evolution of Islamic theology, jurisprudence, ethics, and spiritual practice across different periods. Effective preservation thus demands a comprehensive strategy that moves beyond material conservation to include measures that protect the manuscripts' identity, provenance, and cultural context. This includes rigorous metadata documentation, high-resolution digitization, and ensuring ethical, responsible public access.

A critical component of this preservation strategies is the development, dissemination, socialization and consistent implementation of Standard Operating Procedures (SOPs) of manuscript preservation. These protocols serve as essential guidelines, ensuring each stage of the preservation process, from collection and cataloging to storage and ongoing maintenance, is conducted in accordance with professional standards and regional

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conditions. In particular, Indonesia's tropical climate presents specific challenges. High humidity can promote fungal growth, while fluctuating temperatures may cause physical degradation of paper, parchment, and leather. Well-formulated SOPs provide conservationists with tools to mitigate such risks while maintaining both the material integrity and historical authenticity of these texts.

Another challenge of manuscript preservation as found in this study is access to manuscript collections. This access is often limited by institutional restrictions, geographic dispersion, and the fragile condition of many artifacts. Remote or privately held collections pose logistical challenges to systematic fieldwork. Additionally, the lack of standardized preservation protocols across institutions leads to inconsistencies in cataloging, digitization, and care. These issues are compounded by limited funding and a shortage of trained conservation professionals.

This study recommends increased institutional support, sustainable funding models, and targeted capacity-building to be increased to preserve valuable Islamic manuscripts in Indonesia. Future studies need also to consider interdisciplinary strategies, such as employing artificial intelligence to assist in digitization and metadata generation, and explore community-based conservation models that empower local stakeholders. Comparative studies across regions could yield valuable insights for refining preservation methods, ultimately ensuring that these cultural and intellectual legacies remain a dynamic and enduring resource for future generations.

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