



Strategies for the Preservation of Rare Book Collections at the State Museum of North Sumatra Province

Hulwa Azra Shabrina^{1*}, Yusniah²

^{1,2} State Islamic University of North Sumatra, Golf field street No.120, Kp. Tengah, Kec. Pancur Batu, Deli Serdang Regency, North Sumatra, Indonesia

*Email: hulwa0601212070@uinsu.ac.id (Corresponding author)

KEYWORDS

Rare Book Preservation
Museum Collection
Cultural Heritage
Conservation Challenges
Digital Preservation

ABSTRACT

This study explores the preservation strategies employed for the rare book collection at the North Sumatra State Museum, which constitutes a vital part of the nation's cultural heritage. These rare books possess significant historical and intellectual value, reflecting the trajectory of civilization and the formation of national identity. As a cultural institution, the museum bears a major responsibility to safeguard these collections from deterioration and loss. The primary aim of this research is to identify the preservation strategies implemented by the museum and to examine the challenges encountered during the process. A qualitative method with a descriptive approach was used. Data were collected through direct observation, interviews with museum staff, and documentation analysis of preservation activities. The interview involved a single informant, Herina Eliasta Ginting, who serves as the Rare Book Collection Officer. She was selected due to her direct involvement and extensive knowledge of the conservation processes conducted at the museum. Data were analyzed using the interactive model proposed by Miles and Huberman. The findings reveal that the museum has implemented several preservation measures, including regulation of temperature and humidity in storage areas, physical security measures, and preventive maintenance to avoid potential damage. However, the implementation of these strategies continues to face significant challenges, particularly the limited availability of conservation experts and operational funding. Consequently, enhancing human resource capacity and adopting digital preservation technologies are essential to ensure more effective and sustainable conservation of the collection.

KATA KUNCI

Pelestarian Buku Langka
Koleksi Museum
Warisan Budaya
Tantangan dalam Konservasi
Pelestarian Digital

ABSTRAK

Penelitian ini membahas strategi pelestarian koleksi buku langka di Museum Negeri Provinsi Sumatera Utara, yang merupakan bagian penting dari warisan budaya bangsa. Buku-buku langka ini memiliki nilai sejarah dan intelektual tinggi yang mencerminkan perjalanan peradaban serta identitas nasional. Museum sebagai institusi budaya memiliki tanggung jawab besar dalam menjaga dan melindungi koleksi tersebut dari kerusakan maupun kehilangan. Tujuan utama dari penelitian ini adalah untuk mengidentifikasi strategi pelestarian yang diterapkan oleh pihak museum serta mengungkap berbagai hambatan yang dihadapi dalam proses tersebut. Penelitian ini menggunakan metode kualitatif dengan pendekatan deskriptif. Data diperoleh melalui observasi langsung, wawancara dengan staf museum, serta studi dokumentasi terhadap aktivitas pelestarian. Wawancara dilakukan terhadap satu orang informan, yaitu Herina Eliasta Ginting yang menjabat sebagai Staf Koleksi Buku. Informan ini dipilih karena memiliki peran langsung serta pengetahuan yang mendalam terkait proses konservasi buku langka yang dilakukan di museum. Analisis data dilakukan menggunakan model interaktif Huberman



© the Author(s) 2025

This work is licensed under a [Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International](https://creativecommons.org/licenses/by-nc-sa/4.0/) <https://doi.org/10.24239/inkunabula.v4i2.3985>

Received 06 May 2025; Received in revised form 11 June 2025; Accepted 13 August 2025

Available online 21 September 2025

dan Miles. Hasil penelitian menunjukkan bahwa museum telah menerapkan sejumlah strategi pelestarian, seperti pengaturan suhu dan kelembaban ruang penyimpanan, pengamanan fisik, serta tindakan preventif terhadap potensi kerusakan. Namun, pelaksanaan strategi ini masih menghadapi tantangan besar, terutama keterbatasan tenaga ahli konservasi dan anggaran operasional. Oleh karena itu, dibutuhkan peningkatan kapasitas sumber daya serta penerapan teknologi digitalisasi guna mendukung pelestarian koleksi secara lebih efektif dan berkelanjutan.

How to Cite this Article: Shabrina, H. A., & Yusniah, Y. (2025). Strategies for the Preservation of Rare Book Collections at the State Museum of North Sumatra Province. *Inkunabula: Journal of Library Science and Islamic Information*, 4(2). <https://doi.org/10.24239/inkunabula.v4i2.3985>

1. Introduction

Rare book collections constitute an important form of cultural heritage. These books not only hold scientific knowledge but also document the social and cultural values of earlier times. The presence of rare books serves as tangible evidence of the progression of human civilization over the years (Asaniyah, 2019). Such books serve as primary sources for scholars exploring intellectual and cultural history. Therefore, rare books play a crucial role in safeguarding a nation's identity (Kristin a, 2020). Without dedicated preservation efforts, future generations may lose access to historical knowledge that cannot be replaced

Museums hold a strategic function as institutions tasked with preserving cultural heritage, including rare books (Books dkk., 2020). As technical bodies, they are responsible for the professional management, care, and storage of historical collections. Managing collections requires strict adherence to conservation standards to prevent deterioration caused by environmental and temporal factors (Khairunnisa & Anggraeny, 2022). Rare books housed in museums are typically unique and unavailable elsewhere (Juwita dkk., 2020). Thus, museums must ensure their protection and prevent any form of damage or loss. Moreover, museums need to provide restricted access to information so that books remain preserved while still available for research

According to the Yogyakarta Provincial Library and Archives Agency, rare books are those no longer in print (Asaniyah, 2017). These books are challenging to obtain due to their limited availability. Such collections usually have significant historical or unique value, both in their content and in their physical form. Rare books often serve as primary sources in historical, social, and cultural research (Jannah et al., 2024). Their scarcity and the high value of the information they contain make them priority objects for preservation. Therefore, understanding the definition of rare books is essential to ensure that preservation measures are implemented appropriately.

Rare books possess physical features and content that distinguish them from general collections (Irdana & Kumarawarman, 2018). Physically, these books may have been produced manually or with materials that are no longer manufactured. Examples include handmade paper, natural dyes, or authentic leather bindings. In terms of content, rare books frequently contain information absent from contemporary documents (Fatmawati, 2017). For this reason, they are categorized as special collections and require specialized handling. Their storage and accessibility must be managed through strict procedures to ensure long-term preservation.

Preservation efforts are essential for safeguarding the information contained within rare books (Elnadi, 2021). Without proper treatment, the valuable knowledge they hold is at risk of disappearing due to physical deterioration. Damage may result from aging materials, unsuitable environmental conditions, or improper handling. The goal of preservation is to maintain the books' condition so they remain readable and available for research by future generations. Preservation also involves preventive actions, such as regulating temperature and humidity in storage areas (Dayantri, 2022). Without these measures, rare books will deteriorate, and the important information they hold will be lost.

The State Museum of North Sumatra Province maintains a collection of rare books that holds significant value for both regional and national history. However, the museum encounters several

challenges in safeguarding these items. These challenges include the age of the books and the declining quality of their materials. Limited conservation facilities also restrict the museum's ability to preserve the collection optimally. Additionally, Indonesia's tropical climate accelerates the decomposition of organic materials such as leather and paper. Thus, the museum must implement specialized strategies to address these conservation issues.

The storage environment plays a crucial role in influencing the physical condition of rare book collections. Fluctuating temperatures and humidity can accelerate the degradation of organic materials such as leather and paper. Excessive humidity fosters mold growth, while high temperatures accelerate deterioration. Light exposure, particularly ultraviolet radiation, can also damage ink and cause pages to fade (Bondar, 2018). Therefore, the storage environment must be tightly controlled. Using temperature regulation devices and dehumidifiers is an important component of conservation strategies for rare collections.

Environmental factors are not the only causes of rare book deterioration; chemical and biological processes also contribute to the damage. Oxidation causes paper to become brittle and discolored over time (Aulia & Rachman, 2023). Additionally, adhesives and inks may undergo chemical breakdown, which further accelerates deterioration. From a biological standpoint, book collections are vulnerable to insects such as termites and ants, as well as fungal growth. These organisms can damage the physical structure of books and cause the loss of specific information (Lestari dkk., 2018). Therefore, museums must implement pest management systems and detect biological damage as early as possible.

A key issue in maintaining rare book collections is the lack of qualified specialists. Many museums, including the State Museum of North Sumatra Province, still lack certified conservators. Conservation of collections requires technical expertise that only trained personnel can provide. The conservation process also requires research-based decisions, including material selection and repair methods. Without such expertise, preservation activities may unintentionally inflict further harm on the collection. Thus, museums need to provide ongoing staff training and build partnerships with conservation education institutions.

Preserving rare books requires substantial financial resources. Due to limited budgets, museums often have to prioritize between conservation needs and other operational expenses (Purwani, 2020). For instance, obtaining high-resolution scanners and conservation tools requires considerable funding. Moreover, conservation materials like acid-free paper, restoration adhesives, and cleaning supplies are relatively costly. Without adequate financial support, preservation programs cannot be carried out effectively. Therefore, museums must develop partnerships with external parties such as donors, corporate CSR programs, or government funding schemes.

Enhancing museums as historical tourism destinations can help preserve rare book collections. By transforming museums into educational and recreational venues, visitor numbers can increase, generating additional revenue. This income can then be allocated to conservation activities and the digitization of collections. Dayantri (2022) shows that the right promotional strategies and improved museum services can attract more visitors. Such efforts also open the door to collaboration with institutions in tourism, education, and culture. Through this approach, preservation becomes more sustainable, as a supportive and active economic system backs it

Jannah's Research (2024) study on the preservation of ancient manuscripts at the State Museum of North Sumatra Province offers valuable insights applicable to the preservation of rare books. Ancient manuscripts and rare books share similar features, including aged paper and significant historical importance. Effective preservation methods used for ancient manuscripts such as manual conservation techniques and digitization can be adapted for rare book collections. The study also highlighted obstacles like insufficient funding and limited technical resources. Its recommendations can serve as a foundation for improving conservation policies. Therefore, the experience gained from preserving ancient manuscripts can enhance strategies for safeguarding rare books.

The responsibility for preserving rare collections does not rest with a single institution; instead, it requires cooperation among museums, libraries, and archives. Such collaboration enables the

sharing of knowledge, technology, and skilled personnel that support each institution's efforts. Organizations such as the National Library and the National Archives possess conservation and digitization expertise that can be transferred to museums. According to Lestari (2018), collaboration helps establish broader and more consistent conservation standards across agencies. Moreover, international partnerships enable museums to access training and technological advancements from abroad. Thus, strengthening cross-sectoral cooperation is essential for addressing complex conservation issues

Museums must also work to increase public awareness of the importance of preserving rare book collections. When people understand historical value, they are more likely to care about cultural heritage. Therefore, museums should conduct public education initiatives such as thematic exhibitions, conservation workshops, and volunteer training programs. Conservation literacy should also be improved within the museum itself, particularly among non-technical staff. This literacy encompasses both theoretical knowledge and practical skills, including collection handling and proper documentation (M. Ningrum, 2019). With greater understanding at all levels, conservation efforts can be carried out more collectively and sustainably.

This study seeks to determine the strategies used to preserve rare books at the State Museum of North Sumatra Province, as well as the challenges faced throughout the preservation process. The research focuses on the technical, managerial, and policy-related factors that influence collection conservation. The findings are expected to advance preservation theory within cultural institutions. Moreover, the results can function as a practical guide for other museums encountering similar issues. It is anticipated that museums will implement preservation efforts that are more systematic, measurable, and sustainable. This study is also intended to encourage greater collaboration among museums in Indonesia in the management of rare collections.

2. Literature Review

2.1. Preservation of Rare Book Collections

Preserving rare book collections is a crucial component of museum collection management. Because rare books hold substantial historical, cultural, and scientific significance, they require specialized care to ensure their condition remains intact. Ratmono's research (2022), states that rare book preservation can be categorized into two forms: physical preservation and digital preservation. Physical preservation involves maintaining the book's condition by regulating temperature, humidity, and lighting. Meanwhile, digital preservation focuses on creating digital archives of the books to minimize the risk of physical deterioration

2.2. The Role of Museums in Collection Preservation

Museums hold a vital position in safeguarding historical artifacts, including rare books. Mawarrumrum (2020) emphasizes that museums serve not only as storage facilities but also as centers for education and research. They bear the responsibility of preserving the objects in their care while also informing the public about the importance of protecting historical materials. This role aligns with the museum's broader mission as an institution that documents and archives culture for future generations. According to Aulia & Rachman (2023), museums must implement multiple strategies to preserve their collections. One essential measure is proper collection maintenance, which encompasses conservation, restoration, and regular upkeep. Additionally, incorporating digital technologies for documentation has become a crucial strategy, particularly because physical storage space and costs are limited while collections continue to grow.

2.3. Strategies for Preserving Rare Book Collections in Museums

The strategy for preserving rare book collections can be viewed through the various approaches adopted by museums. Purwani (2020) notes that museums in Indonesia, including those in North Sumatra, have started using digital archiving systems to minimize deterioration in rare book collections. This approach is intended to prolong the lifespan of the materials while also improving access for researchers and the public. In addition, Arnidah (2020) recommends implementing research-based collection management and regularly assessing collection conditions. This involves inspecting the physical state of the books such as paper deterioration or printing damage and utilizing technology to help maintain them properly. Some museums also employ specialized

storage cabinets equipped with temperature and humidity controls to protect collections from environmental damage.

3. Research Metodology

This study employs a qualitative approach to gain an in-depth understanding of the social and cultural aspects of preservation strategies for rare book collections at the State Museum of North Sumatra Province. This method enables the researcher to explore the perspectives, experiences, and practices of museum personnel who manage collections. Qualitative research is descriptive and interpretive, allowing for a thorough analysis of the conservation setting (Kristina, 2020). Through this approach, the researcher obtained a detailed picture of the preservation strategies implemented. The study involved one informant, Herina Eliasta Ginting, who works as a Book Collection Staff member. She was selected for her direct involvement and extensive knowledge of the rare-book conservation procedures carried out at the museum.

The research process consists of three primary stages: preparation, implementation, and reporting. During the preparation phase, the researcher identified the study's focus, selected the research site, and conducted preliminary observations and interviews. Data were gathered from both primary and secondary sources through observation, interviewing, and documentation, supported by tools such as interview guides and audio recorders. Data analysis followed Huberman and Miles' interactive model, which includes data reduction, systematic data presentation, and conclusion drawing. To ensure the accuracy of the findings, a validity test emphasizing credibility, as outlined by Sugiyono (2021), was conducted to ensure the results were reliable and scientifically sound. This process ensures that the data collected is of high quality and aligns with the research objectives.

4. Research and Discussion Results

The assumption that museums are dull places simply because they house ancient artifacts needs to be reconsidered (Asaniyah, 2017). Museums are, in fact, educational and engaging spaces where visitors can gain new knowledge through enjoyable learning experiences. They function not only as repositories of historical objects but also as institutions for education, research, and recreation that broaden public insight (Irdana & Kumarawarman, 2018; Jannah dkk., 2024; Juwita dkk., 2020). With more interactive and informative methods, museums can become centers that enhance society's intellectual quality. Exhibiting historical collections is not only visually appealing but also helps cultivate awareness of history and culture (Mawarningrum, 2020). Through such exhibitions, museums actively foster a community that is more conscious of its identity and cultural heritage (Elnadi, 2021; Fatmawati, 2017). Every object on display carries educational significance and can be utilized in both formal and informal learning contexts. Therefore, museums should be regarded as an essential part of the national education system and the development of the nation's character.

As Sustianingsih (2020), observes, museums exist in nearly every country, though the number varies by region. In Indonesia, most provincial capitals have museums that contain artifacts of considerable historical importance. These collections serve not only as evidence of significant events but also as reflections of unique aspects of local cultural identity. The role of museums goes beyond artifact storage; they also act as institutions of preservation and cultural development that strengthen national consciousness. Museums function as a link between past and present, connecting contemporary generations with the legacy of their ancestors (Rifauddin & Pratama, 2020).

To fulfill this role, museums create a range of educational and participatory programs that allow visitors to engage directly with the collections. Activities such as thematic exhibitions, guided tours, scientific writing workshops, public discussions, educational film screenings, and outreach initiatives are part of their public engagement efforts (Ardiansyah dkk., 2025; Isnaini, 2024). The State Museum of North Sumatra Province exemplifies an institution that successfully carries out these functions. Founded in 1954 and located at Jalan H. M. Jhoni No. 51, Medan, the museum houses collections that span natural history, culture, and the relationship between humans and their environmen (Lestari dkk., 2018). These collections serve not only as historical records but also as symbols of the Indonesian people's identity.

4.1. *The Urgency of Preserving Rare Books to Preserve Intellectual Heritage*

Preservation is a crucial effort to maintain and safeguard library materials, including rare books, ensuring that their physical condition and the information they contain remain protected (Triwani dkk., 2024). Menurut Bondar (2018), explains that preservation is carried out as a form of responsibility to guarantee that library resources can continue to be used over long periods, whether for research or historical purposes. Because of their age and limited availability, rare books are at high risk of deterioration if not properly cared for. Preservation activities aim not only to protect the informational value of these materials but also to maintain their aesthetic qualities, physical stability, and accessibility. According to Elnadi (2021) preservation plays a key role in shielding collections from damage caused by environmental conditions, human factors, and natural aging. In this regard, rare books require special attention, as their significance lies in both their content and their historical and physical characteristics..

Asaniyah (2019), states that preservation is part of the care process intended to prevent the rapid decline of rare book collections. Through preservation, public access to the information contained within these materials can be sustained, even when the books are old or out of print. This highlights the educational and cultural importance of preservation, especially in supporting the continuity of the nation's intellectual heritage. Furthermore, Alifia & Trilaksana (2022) menekankan bahwa kelangkaan buku-buku tertentu membuat koleksi ini sangat rentan terhadap emphasize that the rarity of certain books makes them particularly susceptible to extinction. Without preservation efforts, the public would struggle to obtain information that exists only in these unique materials. Therefore, preserving rare book collections is a strategic measure to ensure that historically and scientifically valuable information resources remain available for both present and future generations..

4.2. *Rare Book Criteria*

According to a best-selling work written by a Master of Management graduate from Bogor Agricultural University (IPB), several criteria are used to categorize a book as rare (Pramana, 2022). The first criterion is newly published books printed in small quantities, which can immediately place them in the rare category. The second criterion includes old books ranging from several decades to centuries old that possess historical significance due to their connection with notable individuals or significant historical events. A third category consists of books that were once widely popular at the time of their initial publication but are no longer being reprinted (Sumber: www.safakmuhammad.com).

The State Museum of North Sumatra Province also applies its own standards to determine the rarity of books in its collection. A book is considered rare if it holds substantial historical importance, either because its content documents significant events or because it is linked to historical figures from North Sumatra. Such books often serve as essential references for researchers and historians, mainly when their contents cannot be found elsewhere. Additionally, the museum classifies books as rare if they are no longer issued by their original publishers but remain highly sought after by both visitors and academics (Pradana & Setyadi, 2019). The rarity is further emphasized by the fact that a book exists solely in the museum's collection, making it a distinctive and irreplaceable resource for safeguarding the region's intellectual and cultural heritage.

"The criteria for categorizing books as rare books here are high historical value. In addition, these books are also usually no longer published, so it is not easy to find them elsewhere. However, interestingly, these books are still much sought after by library visitors. There are even some that can only be found in the State Museum of North Sumatra Province."

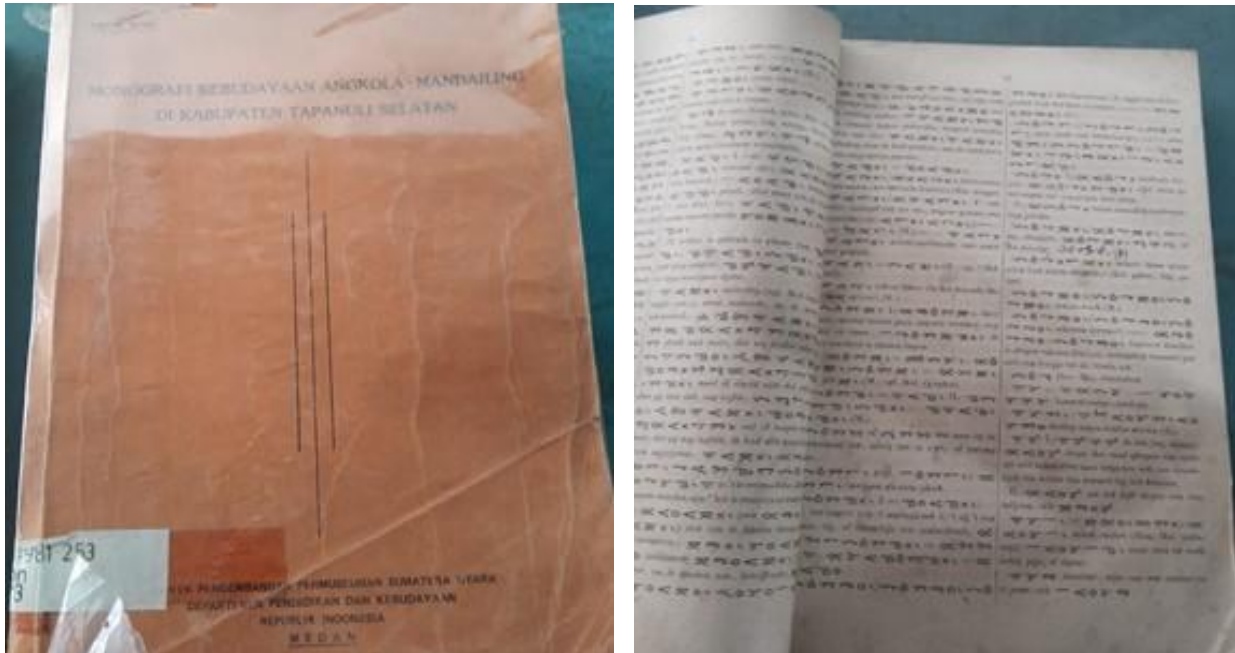
Lebih lanjut, beliau menjelaskan mengenai contoh koleksi yang tergolong langka:

"At the State Museum of North Sumatra Province, there are several examples of rare books that we have. One of them is the Batak cultural monograph books. It includes monographs on Toba Batak culture, Karo Batak, Mandailing Batak, and Malay culture. In addition, we also have transcripts of Batak manuscripts. Actually, there are many more examples of rare books stored in this museum."

The State Museum of North Sumatra Province sets specific criteria for classifying books in its collection as rare. One of the primary considerations is whether a book holds substantial historical significance, whether due to its age, its content that documents major events, or its connection to notable historical figures from North Sumatra. Moreover, books that are no longer issued by their original publishers but remain highly sought after by museum visitors and researchers are also considered rare. The rarity of a book is further reinforced by its availability exclusively in the State Museum of North Sumatra Province, making it a distinctive and irreplaceable source of information.

Figure 1

Rare Book Collection and Book Contents



Source: Researcher Data, 2025

The State Museum of North Sumatra Province preserves an array of rare and significant books. Among its notable collections is a series of monograph volumes that explore in detail various dimensions of Batak culture, encompassing the traditions and customs of the Batak Toba, Batak Karo, and Batak Mandailing sub-ethnic groups. The museum also holds books centered on Malay culture in North Sumatra, emphasizing its history, language, and cultural practices. Additionally, the collection includes transcriptions of ancient Batak manuscripts, which serve as essential primary sources for the study of local history and traditional knowledge. Beyond these examples, the State Museum of North Sumatra Province safeguards a diverse range of rare books that possess distinctive historical, cultural, or informational significance and are not readily available elsewhere.

4.3. Strategies for Preserving Rare Book Collections

To preserve the collection of rare books, the museum implemented a range of integrated, comprehensive strategies. These strategies are designed to maintain the physical condition of books, protect collections from damage, and ensure that the historical value and information they contain are preserved. Broadly speaking, this preservation strategy includes managing the storage environment, securing collections, and preventing damage due to biological, physical, and human factors. Each of these strategies is implemented through concrete steps and detailed procedures to minimize the risk of damage and extend the shelf life of the collection. With this comprehensive approach, the museum seeks to create optimal conditions for rare books to remain preserved and enjoyed by future generations. The State Museum of North Sumatra Province implements three primary strategies in preserving its collection of rare books, which are as follows:

4.3.1. Storage Environment Management

One of the main strategies for preserving rare book collections is the management of the storage environment, which is carried out thoroughly and systematically. The museum strives to maintain the storage room's temperature and humidity within ideal limits to minimize the risk of physical and chemical damage to library materials. To maintain the integrity and sustainability of the rare book collection at the State Museum of North Sumatra Province, a standardized, strictly controlled storage procedure is needed. In an interview with Herina Eliasta Ginting, the Book Collection Staff at the museum, the storage procedures were explained in detail, including temperature and humidity settings, air quality control, and lighting settings to prevent damage to the collection. The results of an interview with Herina Eliasta Ginting, Book Collection Staff at the State Museum of North Sumatra Province, confirm this finding. In an interview, he revealed directly

"The procedures for storing rare book collections at the State Museum of North Sumatra Province are as follows, starting from regulating the temperature, ensuring that the temperature and humidity of the room remain stable so that the collection remains in a safe state, then controlling the air quality so that it is not contaminated by dust, fungi, and insects that can damage the collection in the museum, and regulating lighting by avoiding direct exposure to sunlight to the collection that can be causing damage to the collection"

This temperature and humidity control is significant because drastic fluctuations can cause the paper to become brittle, the ink to fade, and mold and microorganisms to grow, thereby damaging the book. In addition, air quality regulations are carefully implemented, including the installation of filters to remove dust particles and pollutants, and the maintenance of clean, contaminant-free air. In addition to temperature, humidity, and air regulation, environmental management also includes proper lighting settings. The museum controls the intensity of light to avoid excess and prevents direct exposure to ultraviolet rays, which can accelerate color fading and damage collection materials. In addition, the storage space is regularly cleaned to remove dust and dirt that accumulate on the collection and in the surrounding environment. This process is critical because the dust that accumulates can increase the paper's acidity and accelerate the degradation of the collection. With this comprehensive environmental management, the museum seeks to create ideal conditions for the long-term preservation of rare books.

4.3.2. Collection Security

The following strategy is collection security, which emphasizes preventive measures to protect rare book collections from potential harm. The museum enforces a strict security system, both physical and procedural, to reduce the risk of damage from accidental or intentional human actions. These measures include tight monitoring of access to the collections, restrictions on activities that could endanger them, and the use of security equipment such as surveillance cameras and alarms to prevent theft or vandalism. An interview with Herina Eliasta Ginting, the Book Collection Staff at the State Museum of North Sumatra Province, supports this finding. In the interview, she explained directly:

"The State Museum of North Sumatra Province has preserved the collection of rare books and will continue to preserve the collection of rare books for the long term, so that rare book information seekers will continue to get the information they need"

In addition, the collection's security includes special handling measures for rare books during borrowing, transfer, and exhibition. Every activity involving the collection is monitored and conducted by qualified staff to ensure that no action poses a risk of damage. The museum also enforces strict handling procedures, such as requiring gloves when handling the books and limiting direct visitor access. Through these preventive security efforts, the museum aims to safeguard the collection's integrity and ensure its long-term preservation.

4.3.3. Damage Prevention

Strategi The third preservation strategy focuses on preventing damage caused by biological, physical, and human factors. This prevention is carried out through routine pest-control efforts, including fumigation to eliminate organisms that may harm library materials. Such pest management is crucial because insects such as termites, bookworms, and moths can cause

severe damage to paper and other organic materials. Fumigation and additional pest-control procedures are implemented carefully to avoid any negative impact on the collection or its storage environment. An interview with Herina Eliasta Ginting, the Book Collection Staff at the State Museum of North Sumatra Province, supports this finding. In the interview, she directly stated:

“So far, the State Museum of North Sumatra Province has restored or repaired books, both rare books and non-rare books that have been damaged, so that they are maintained and are still used by museum users.”

Museums also work to reduce physical damage caused by impact, pressure, or improper handling by individuals. To achieve this, preventive steps are taken by arranging the collection layout ergonomically to reduce excessive pressure on the books and by providing training and education to collection users on how to handle rare books properly. This educational effort is intended to raise awareness among visitors and staff of the importance of treating the collection with care, avoiding actions that could physically harm the books, and understanding the value of each item within the museum. Through this comprehensive preventive approach, the museum remains committed to ensuring the collection stays intact and sustainable in the long term.

To address challenges threatening the preservation of rare book collections such as age-related deterioration, suboptimal environmental conditions, and pest infestations the State Museum of North Sumatra Province proactively implements a comprehensive, well-structured conservation and maintenance strategy. However, one significant obstacle to this preservation effort is the limited number of human resources with specialized conservation expertise, as well as insufficient funding to support the effective and continuous implementation of the strategy.

To enhance the preservation of its valuable collections, the State Museum of North Sumatra Province has developed a focused and innovative strategic plan. One of the primary initiatives currently emphasized and actively pursued is the digitization of its rare book collection. This digitization effort is expected to improve information access for researchers and the broader public, while also functioning as a preventive measure to protect the physical condition of rare books from potential damage caused by frequent or direct handling

4.4. Rare Book Collection Storage Procedure

A carefully planned and properly managed storage area plays a crucial role in maintaining the physical preservation of library collections, including scarce books that are highly vulnerable to various types of damage. As noted by Aulia & Rachman (2023), poorly arranged storage spaces can create serious issues, including mold growth from excessive humidity, water leaks that can ruin paper and ink, and fire hazards from electrical short circuits. These risks require storage systems that are not only secure but also meticulously designed and grounded in established conservation principles.

In response to these needs, the State Museum of North Sumatra Province has established and applied integrated, comprehensive procedures for storing its rare book collections. These procedures encompass not only the technical elements of physical storage but also the broader environmental conditions of the room, ensuring the collection remains consistently stable and protected. Environmental management includes regulating temperature, humidity, air quality, and lighting factors essential to preserving paper-based materials (Riski, 2021). Through strict environmental controls, the museum aims to reduce the likelihood of damage from external factors while extending the lifespan of the collection, ensuring its continued accessibility for future generations.

4.4.1. Temperature and Humidity Stability

Temperature and humidity stability are crucial elements in maintaining the physical condition of rare book collections and ensuring they remain well-preserved. The State Museum of North Sumatra Province consistently manages the temperature and humidity of its storage rooms through daily monitoring to prevent adverse effects such as deterioration, mold growth, or deformation of materials caused by drastic climate fluctuations. Currently, approximately 75% of the collection is kept in conservation-standard, air-conditioned rooms equipped with temperature-control systems, along with humidifiers and dehumidifiers to maintain an ideal microclimate. A designated staff member conducts routine checks of temperature and humidity levels to ensure

that the room's environmental conditions remain within safe thresholds each day. As noted by Ningrum (2019), high temperatures tend to dry out the air, while low temperatures increase moisture both extremes posing serious risks to collections.

The urgency of maintaining temperature and humidity stability is further reinforced by Aulia & Rachman (2023), who note that improper storage can cause significant damage, including brittle paper, fading ink, and deterioration of adhesive components. For this reason, the microclimate control system in the storage area is implemented not only through technological equipment but also through structured daily monitoring by trained personnel to ensure that all parameters remain within optimal ranges. The use of this integrated control system helps prevent immediate damage and significantly prolongs the lifespan of the collection, ensuring that rare books remain accessible to future generations and are preserved in accordance with established conservation standards.

4.4.2. Air Quality Control

The State Museum of North Sumatra Province also rigorously monitors the air quality in its storage rooms as part of its preservation efforts for rare book collections. Air contaminated with dust, chemical pollutants, or microorganisms can negatively affect the physical condition of books. For this reason, air filtration systems are utilized to remove fine particles that may scratch paper surfaces or trigger chemical reactions in library materials. Accumulated dust can also promote the growth of mold and bacteria, gradually compromising the structural integrity of the collection. This effort is reinforced through routine cleaning practices and regular air-quality inspections conducted by museum personnel.

Equally important, the museum anticipates potential threats from destructive organisms such as insects (booklice, termites, moths) and rodents, which are known to cause severe damage to organic-based materials (Sustianingsih, 2020). Preventive measures are implemented through continuous monitoring, the placement of traps, and the use of natural, non-toxic repellent substances to safeguard the collection without disrupting the storage environment. This approach is both preventive and responsive, meaning it not only deals with threats when they arise but also minimizes risks before they develop. With an effective air control system, the museum can protect the integrity of its collection from environmental contamination.

4.4.3. Lighting Settings

Light, especially from direct sunlight and high-intensity artificial sources, presents a serious risk to rare book collections. The State Museum of North Sumatra Province understands that exposure to light, particularly ultraviolet (UV) radiation, can accelerate ink fading, increase paper fragility, and damage book covers and adhesives. To address this, the museum uses a tightly controlled lighting system, including low-radiation lamps and UV filters on windows and lighting fixtures. The light intensity is maintained at a safe level for collection, and lighting is turned on only when necessary, such as during maintenance activities or limited exhibition viewing.

The effect of light wavelength on collections is highly significant. Shorter wavelengths and more prolonged exposure durations increase the likelihood of physical and chemical deterioration in library materials. Therefore, the placement of collections is adjusted according to the direction of incoming light, and protective covers or shields are added when required. These efforts aim to create ideal environmental conditions for the long-term preservation of rare books, ensuring that their informational and aesthetic value is sustained (Hidayati & Marintan, 2024). By applying this careful, integrated lighting management, the State Museum of North Sumatra Province works to safeguard its rare book collection from visual and structural damage caused by light exposure.

4.1. A Collection of Rare Books

Khairunnisa dan Anggraeny (2022) define conservation as a deliberate effort to preserve, maintain, and protect an object so that it remains intact and undamaged for long-term sustainability. Consistent with the museum's strict storage protocols, the State Museum of North Sumatra Province also carries out a series of comprehensive physical conservation measures to safeguard the condition of its rare book collection. These efforts are conducted through several structured and methodical stages:

4.1.1. Survey of Collection Conditions and Environment

The initial step in conserving rare books is a comprehensive assessment of each item's physical condition. This meticulous examination covers key aspects such as the state of the paper whether it has become brittle or discolored the strength of the binding, and the condition of illustrations or other vulnerable elements. The inspection also identifies physical damage, such as tears, stains, and signs of insect activity, that may threaten the longevity of the collection (Alifia & Trilaksana, 2022; Prasetyo, 2019). Beyond the books themselves, the assessment includes an evaluation of the surrounding storage environment, with close attention to temperature, humidity, and lighting to detect any potential risks that could contribute to deterioration.

Thorough monitoring of environmental conditions is critical to maintaining the safety of the collection. Fluctuating temperatures and humidity can accelerate the deterioration of organic materials in books, while excessive exposure to light can cause fading and weaken the paper. For this reason, the survey serves as the foundation for determining appropriate conservation actions and preventing further damage. The findings are also used to support periodic review, enabling adjustments to storage practices and care procedures to ensure preservation efforts remain consistent, effective, and sustainable.

4.1.2. Collection Cleaning

After assessing the condition of the collection and its storage environment, the next step is to clean the rare books carefully to prevent further damage. The cleaning process currently involves using soft brushes to remove dust from the book surfaces and low-power vacuum cleaners to extract small particles lodged between pages or within the binding (Ardiansyah dkk., 2025; Isnaini, 2024). Non-abrasive, non-chemical cleaning materials are also applied selectively, tailored to the book's specific material to ensure the cleaning remains safe and effective. Although these techniques are widely used, evaluations show that soft brushes and low-power vacuums are often insufficient for removing microscopic dust particles that are difficult to lift manually. This limitation suggests the need to reassess cleaning strategies and consider more advanced technologies such as HEPA-based air filtration systems or ultrasonic cleaning to strengthen the protection of the collection.

The presence of dust and dirt on rare books can accelerate both physical and chemical deterioration, particularly in humid environments. Fatmawati (2017) emphasizes that dust not only spreads easily within storage spaces but can also increase the acidity of paper surfaces, making them more fragile. Furthermore, in high-humidity conditions, dust adhering to materials can form permanent stains that are difficult to remove, diminishing the visual and historical value of the collection. Routine cleaning and strict air-quality monitoring in storage rooms are essential to prevent the buildup of harmful contaminants. However, given the persistent challenges posed by fine dust, ongoing evaluation and adaptation of cleaning techniques are necessary to ensure that conservation practices remain effective and aligned with technological advancements in preservation.

4.1.3. Conservation and Remedial Measures

Buku langka yang ditemukan mengalami kerusakan selama survei kemudian mendapatkan penanganan konservasi yang sesuai dengan tingkat kerusakannya. Perbaikan yang dilakukan dapat bervariasi, mulai dari tindakan sederhana seperti menambal sobekan kecil pada halaman kertas, memperkuat penjilidan yang longgar, hingga perawatan yang lebih kompleks dan spesifik yang memerlukan keahlian profesional. Setiap tindakan konservasi ini bertujuan untuk memulihkan dan menjaga keutuhan fisik buku agar dapat bertahan lebih lama tanpa kehilangan nilai informasinya. Selain itu, konservasi juga memperhatikan aspek estetika dan historis agar koleksi tetap dapat dinikmati secara visual oleh para peneliti dan pengunjung museum.

Thorough documentation forms an essential component of this process. Each treatment step is recorded in detail, including the specific techniques and materials applied, so that the entire conservation procedure is traceable and can inform future preservation decisions. This documentation also helps the museum monitor the collection's post-treatment condition and plan subsequent maintenance more accurately and systematically. Through this approach,

conservation becomes not only a corrective response but also an integral part of ongoing, sustainable, and professional collection management.

4.1.4. Final Placement in Controlled Conditions

After the cleaning and conservation process is completed, the rare book collection is returned to a storage room prepared with optimal environmental conditions. Temperature and humidity are maintained within an ideal, stable range, as this stability is essential for preventing further deterioration. Lighting is also carefully regulated, kept at low intensity, and free from direct ultraviolet exposure, which is known to cause fading and material damage. These measures collectively aim to provide the most supportive environment for the long-term preservation of the collection.

The physical arrangement of the books on storage shelves becomes an important focus at this stage. Each item is positioned to avoid excessive pressure or friction, preventing deformation or mechanical damage that could result from improper stacking or arrangement. The use of suitable shelving and an ergonomic storage system helps preserve the structure and overall quality of the books. By placing the collection in a carefully controlled setting, the museum safeguards the historical, aesthetic, and informational value of its rare books, allowing them to remain accessible for an extended period.

Through these organized stages of physical conservation, the State Museum of North Sumatra Province reaffirms its commitment to preserving the intellectual heritage of its rare book collection, ensuring its continued protection for future generations.

4.2. Obstacles in the Preservation of Rare Book Collections

The museum has encountered several substantial challenges in preserving its rare book collection. First, one of the primary obstacles is the limited availability of human resources with specialized and in-depth expertise in preventive, curative, and professional conservation. This expertise includes knowledge of preservation techniques, handling of ancient materials, identification of various types of damage, and optimal management of storage environments. The shortage of competent personnel makes it difficult to carry out conservation efforts systematically and sustainably. Second, the museum also faces budget constraints specifically allocated for collection preservation activities. Limited financial resources hinder routine maintenance, essential repair and restoration work, and the procurement of storage facilities that meet modern conservation standards. This financial limitation poses a serious challenge to the preservation of the physical integrity and informational value of rare books for future generations. Third, the available storage space remains limited and does not fully meet ideal environmental standards. Challenges include maintaining stable temperature settings, controlling humidity levels, and ensuring appropriate lighting intensity. These environmental conditions are crucial to preventing long-term physical deterioration of rare books. When storage rooms do not meet these standards, collections become more vulnerable to damage caused by environmental fluctuations. The results of an interview with Herina Eliasta Ginting, Book Collection Staff at the State Museum of North Sumatra Province, reinforce these findings. In the interview, she directly stated

"Yes, so if we talk about obstacles, there are indeed some things that are quite a challenge for us at the museum. The first, of course, is resource limitations. Be it human resources in the sense of a workforce that has special knowledge and expertise in conservation, or in terms of budget. We also face the limitations of the ideal storage space for rare books. The existing space does not fully meet conservation standards, such as stable temperatures and humidity."

The State Museum of North Sumatra Province is currently facing serious obstacles in its efforts to preserve its valuable collection of rare books, mainly due to the lack of internal conservation experts with adequate competence and qualifications. This situation directly impairs the museum's ability to implement appropriate, professional preventive and curative conservation measures for the rare books that are its assets, thereby increasing the risk of damage and diminishing the value of the collection's information over time. Until now, at the State Museum of North Sumatra Province, there has been no structured, regularly implemented training or staff capacity-building program specifically focused on the practice of preserving rare book collections.

As a result, the knowledge and skills of staff tasked with handling, caring for, and conserving these precious books are likely to remain limited to basic practices, potentially increasing the risk of damage and deterioration in the long-term condition of this collection of highly valuable rare books.

As a responsibility to the nation's cultural and intellectual heritage, the State Museum of North Sumatra Province has and will continue to demonstrate a strong, sustainable commitment to preserving its rare book collection for the long term. This ongoing effort has a noble goal: to ensure that information seekers, academics, researchers, and the broader community interested in rare books can continue to access the knowledge resources they need. Thus, the historical value, the information it contains, and this priceless cultural artifact will be well preserved and can continue to be studied and utilized by future generations in North Sumatra and Indonesia as a whole.

5. Conclusion

The State Museum of North Sumatra Province has established specific criteria for identifying rare book collections with high historical and exclusive value, making them not only important to visitors and researchers but also essential for safeguarding regional cultural heritage. By implementing strict conservation procedures including regulating temperature, humidity, air quality, and lighting the museum ensures the preservation of the collection's physical condition. This research provides a significant contribution to the field of rare library material conservation by presenting best practices and highlighting the challenges encountered throughout the preservation process, particularly within the cultural and geographical context of North Sumatra. These findings enrich conservation literature and serve as a valuable reference for other institutions managing similar collections in Indonesia and beyond.

The State Museum of North Sumatra Province continues to face considerable obstacles, such as limited conservation and digitization expertise and restricted financial resources; nevertheless, the commitment to comprehensive preservation remains firm. The strategies employed include optimal environmental management of storage spaces, strict security for collection, and protection against biological, physical, and human-induced damage. The practical implications of this study underscore the importance of enhancing human resource capacity and increasing funding as essential requirements for the successful preservation of rare collections. Furthermore, the planned digitization initiative is expected to broaden public and researcher access while serving as a long-term preservation measure that minimizes the risk of physical deterioration of the original materials. Consequently, this research not only provides meaningful benefits to the State Museum of North Sumatra Province but also offers valuable models and lessons for similar institutions seeking to preserve rare collections in Indonesia and globally sustainably.

References

- Alifia, M., & Trilaksana, A. (2022). Peranan Museum Mpu Tantular dalam melestarikan koleksi warisan budaya tahun 2004-2014. *Jurnal Pendidikan Sejarah*, 12(3), 1–15. <https://ejournal.unesa.ac.id/index.php/avatara/article/view/47296>
- Ardiansyah, R., Padang, P. E., Humairah, D. S., Hutasoit, S. S., & HAS, M. S. (2025). Peran Mushaf Tertua dalam Konservasi Sejarah Islam di Indonesia: Tinjauan terhadap Koleksi Berharga di Museum Sejarah Al-Qur'an Sumatera Utara dan Implikasinya terhadap Pemahaman Warisan Al-Qur'an. *JIM: Jurnal Ilmiah Mahasiswa Pendidikan Sejarah*, 10(1), 229–237. <https://jim.usk.ac.id/sejarah/article/view/33934>
- Arnidah, A., Anwar, C. R., & Hasfat, H. (2020). Pengaruh Pemanfaatan Buku Elektronik Berbasis Multimedia Mata Pelajaran Simulasi dan Komunikasi Digital di SMK. *Journal of Curriculum Indonesia*, 3(2), 101–105. <https://doi.org/10.46680/JCI.V3I2.35>
- Asaniyah, N. (2017). Pelestarian informasi koleksi langka: Digitalisasi, restorasi, fumigasi. *Buletin*

Perpustakaan, 57, 85–94.

- Asaniyah, N. (2019). Pelestarian koleksi langka melalui restorasi. *Buletin Perpustakaan*, 2(1), 93–104.
- Aulia, F., & Rachman, Y. B. (2023). Preservasi Koleksi Buku Langka di Perpustakaan" X". *Jurnal Ilmu Informasi, Perpustakaan Dan Kearsipan*, 25(1), 4. <https://scholarhub.ui.ac.id/jipk/vol25/iss1/4/>
- Bondar, A. (2018). Kontekstual Pelestarian Naskah Kuno/Manuskrip Dalam Menggali Kearifan Lokal sebagai Social Capital Membangun Bangsa: Sebuah Tinjauan UU No. 43/2007 tentang Perpustakaan. *Media Pustakawan*, 15(3), 106–113. <https://ejournal.perpusnas.go.id/mp/article/view/951>
- Books, I. R., Kilmarx, B. T., Bubenik, C., Periasamy, M., Phillips, M., Vincent, H., Castrillo, M., Cataldo de Azevedo, F., Fabian, C., & Garcia-Monge, I. (2020). Competency Guidelines for Rare Books and Special Collections Professionals. *Competency Guidelines for Rare Books and Special Collections Professionals*. <https://www.ifla.org/g/rare-books-and-special-collections/proposed-competency-standards-and-guidelines-for-rare-book-and-special-collections-professionals/>
- Dayantri, D. (2022). Analisis Strategi Pengembangan Museum Sebagai Aset Pariwisata Sejarah Di Kota Medan Dengan Metode SOAR (Studi Kasus Museum Negeri Provinsi Sumatera Utara). <http://repository.uinsu.ac.id/19934/>
- Elnadi, I. (2021). Preservasi dan konservasi sebagai upaya pustakawan mempertahankan koleksi bahan pustaka. *The Light: Journal of Librarianship and Information Science*, 1(2), 64–71. <https://journal.uinmataram.ac.id/index.php/light/article/view/4362>
- Fatmawati, E. (2017). Identifikasi faktor-faktor penyebab kerusakan koleksi perpustakaan. *EduLib : Journal of Library and Information Science*, 7(2). <https://ejournal.upi.edu/index.php/edulib/article/view/9722>
- Hidayati, D. N., & Marintan, M. A. (2024). Upaya Perpustakaan Masjid Agung Keraton Surakarta dalam Menjaga Kelestarian Naskah Kuno Warisan Budaya Bangsa. *Buletin Perpustakaan*, 7(1), 105–122. <https://journal.uin.ac.id/Buletin-Perpustakaan/article/view/34732>
- Irdana, N., & Kumarawarman, S. (2018). Konsep Penataan Koleksi Museum untuk Mempermudah Pemahaman Wisatawan dalam Wisata Edukasi Arsip dan Koleksi Perbankan di Museum Bank Mandiri Jakarta. *Diplomatika: Jurnal Kearsipan Terapan*, 1(2), 132–147. <https://jurnal.ugm.ac.id/diplomatika/article/view/35174>
- Isnaini, W. (2024). Pelestarian Arsip Koran Lama Tahun 1942-1992 di Museum Perjuangan Pers Sumatera Utara. UIN Sumatera Utara. <http://repository.uinsu.ac.id/24117/>
- Jannah, M., Monang, S., & Faturrahman, M. (2024). Pelestarian Naskah Kuno di Museum Negeri Provinsi Sumatera Utara. *Journal Sains Student Research*, 2(5), 41–56. <https://ejurnal.kampusakademik.co.id/index.php/jssr/article/view/2512/>
- Juwita, T., Novianti, E., Tahir, R., & Nugraha, A. (2020). Pengembangan model wisata edukasi di Museum Pendidikan Nasional. *Journal of Indonesian Tourism, Hospitality and Recreation*, 3(1), 8–17. <https://ejournal.upi.edu/index.php/Jithor/article/view/21488>
- Khairunnisa, A. L., & Anggraeny, E. (2022). Pengelolaan koleksi rare book melalui konservasi antiquariat di Pusat Perpustakaan dan Penyebaran Teknologi Pertanian Bogor Jawa Barat 2018. *Warta Perpustakaan Pusat Undip*, 15(2), 4–17. <https://ejournal2.undip.ac.id/index.php/wp/article/view/16767>
- Kristina, A. (2020). Belajar mudah metodologi penelitian kualitatif. *Jakarta: Rumah Media*.
- Lestari, D., Barky, N. Y., & Rambe, Y. S. (2018). Revitalisasi Museum Negeri Propinsi Sumatera Utara dengan Tema Arsitektur Vernakular. *JAUR (Journal of Architecture and Urbanism Research)*, 1(2), 32–47. <https://ojs.uma.ac.id/index.php/jaur/article/view/1765>
- Mawarningrum, D. A. (2020). Pelestarian Buku Langka di Perpustakaan Nasional Republik

- Indonesia. *digilib.uns.ac.id*. <https://digilib.uns.ac.id/dokumen/abstrak/81788/Pelestarian-Buku-Langka-di-Perpustakaan-Nasional-Republik-Indonesia>
- Ningrum, D. F. (2019). Kegiatan Inklusi Sosial di Perpustakaan Ganesha SMA N 1 Jetis Bantul. *UNILIB : Jurnal Perpustakaan*, 10(2). <https://doi.org/10.20885/UNILIB.VOL10.ISS2.ART9>
- Ningrum, M. (2019). Konservasi Kuratif Terhadap Koleksi Buku Langka Di Perpustakaan Nasional Ri. <https://repository.uinjkt.ac.id/dspace/handle/123456789/45918>
- Pradana, A. Y., & Setyadi, A. (2019). Strategi Perpustakaan Dalam Melakukan Preservasi Koleksi Local History Naskah Kuno Keraton Surakarta Di Dinas Kearsipan Dan Perpustakaan Provinsi Jawa Tengah. *Jurnal Ilmu Perpustakaan*, 8(1), 21–31. <https://ejournal3.undip.ac.id/index.php/jip/article/view/26763>
- Pramana, W. D. (2022). Strategi pelestarian naskah kuno di Dinas Perpustakaan dan Kearsipan Provinsi Jawa Timur. *Daluang: Journal of Library and Information Science*, 2(2), 101–111. <https://journal.walisongo.ac.id/index.php/daluang/article/view/10293>
- Prasetyo, A. A. (2019). Preservasi digital sebagai tindakan preventif untuk melindungi bahan pustaka sebagai benda budaya. *Tibannbaru: Jurnal Ilmu Perpustakaan dan Informasi*, 2(2), 54–67. <https://journal.uwks.ac.id/index.php/tibannbaru/article/view/554>
- Purwani, I. T. (2020). Evaluasi Kegiatan Pengelolaan Koleksi Buku Langka Berdasarkan Model Evaluasi Sistem Analisis di Perpustakaan Museum Nasional RI. <https://digilib.yarsi.ac.id/8974/>
- Ratmono, D. (2022). Pelestarian Buku Langka Di Pusat Preservasi Dan Alih Media Bahan Perpustakaan Perpustakaan Nasional Ri. *Maktabatuna*, 4, 17–31. <https://ejournal.uinib.ac.id/jurnal/index.php/maktabatuna/article/view/4269>
- Rifauddin, M., & Pratama, B. A. (2020). Strategi preservasi dan konservasi bahan pustaka di Dinas Kearsipan dan Perpustakaan Kabupaten Trenggalek. *Jurnal Ilmu Perpustakaan (Jiper)*, 2(1). <https://journal.ummat.ac.id/index.php/JIPER/article/view/2218>
- Riski, M. A. (2021). Strategi promosi perpustakaan khusus: studi pada Perpustakaan Museum Sonobudoyo Yogyakarta. *Al-Kuttab: Jurnal Kajian Perpustakaan, Informasi Dan Kearsipan*, 3(2), 23–31. <https://jurnal.uinsyahada.ac.id/index.php/Kuttab/article/view/4149>
- Sugiyono, & Lestari, P. (2021). *Metode Penelitian Komunikasi (Kuantitatif, Kualitatif, dan Cara Mudah Menulis Artikel pada Jurnal Internasional)* (Sunarto (ed.); I). CV. Alfabeta Bandung.
- Sustianingsih, I. M. (2020). Pemanfaatan Museum SUBKOSS sebagai sumber belajar sejarah di Lubuklinggau. *Criksetra: Jurnal Pendidikan Sejarah*, 9(1), 1–14. https://www.researchgate.net/publication/345263765_Pemanfaatan_Museum_SUBKOSS_sebagai_Sumber_Belajar_Sejarah_Di_Lubuklinggau
- Triwani, R., Dioranta, S., Nadya, C., & Yunita, S. (2024). Strategi Ketahanan Nasional dalam Perspektif Melestarikan Peninggalan Sejarah dan Budaya Di Museum Negeri Sumatera Utara. *Innovative: Journal Of Social Science Research*, 4(1), 12039–12046. <https://j-innovative.org/index.php/Innovative/article/view/6005>