

## **PRESERVATION OF INDIGENOUS KNOWLEDGE OF MINANGKABAU SONGKET CLOTH AS AN EFFORT TO PRESERVE CULTURE**

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Receive : 25 Sept 2025  
Accepted : 13 Oct 2025  
Published: 14 Nov 2025  
DOI : 10.30829/jupi.v10i2.26101

### **Abstract**

Minangkabau songket not only functions as traditional clothing but also as a container of local knowledge that represents symbolic meaning, philosophical values, and the collective outlook on life of the Minangkabau people. This study explores indigenous knowledge in songket motifs and the preservation strategies of the Adityawarman Museum. A qualitative method was applied using two approaches: Peirce's semiotics to analyze indigenous knowledge and a case study for preservation at the museum. Data were collected through interviews, non-participatory observation, and documentation, with museum curators purposively selected as informants. Data were analyzed using the Miles & Huberman interactive model and interpreted through Peirce's semiotics. The results show that the motifs on Minangkabau songket cloth, including the Pucuak Rabuang, Itiak Pulang Patang, Kaluak Paku, Saluak Laka, and Barantai motifs, reflect philosophical values, collective identity, and ethics embedded in Minangkabau culture. The process of preserving local wisdom carried out by the Adityawarman Museum of West Sumatra through six integrated stages of introduction, validation, documentation, storage, transfer, and dissemination, with the support of community participation and the use of digital technology. The conclusion in this study shows that the traditional knowledge of Minangkabau songket represents Minangkabau cultural knowledge that can be passed down from generation to generation through the meaning contained in each motif and the Adityawarman Museum plays an important role in preserving the original knowledge of Minangkabau songket. Theoretical contributions include expanding cultural semiotics and strengthening perspectives on indigenous knowledge preservation, offering novelty in the study of the relationship between symbols, culture, and local knowledge preservation.

**Keywords:** indigenous knowledge; Minangkabau songket; knowledge preservation

## INTRODUCTION

Minangkabau songket, as one of the traditional textiles characterized by a wide range of symbolic motifs, embodies the community's complex and profound collective knowledge. Each motif not only reflects aesthetic beauty but also represents the local system of values, mythology, and cosmology. However, globalization and the wave of modernization have encouraged the commodification of culture. Songket, which once held sacred meaning, is increasingly reduced to a mere textile industry commodity. Horkheimer et al. (2002) note that commodified culture tends to lose its authenticity and becomes reduced to a product of consumption.

Indigenous knowledge is a form of living and contextual epistemology within a community. Jessen et al. (2022) emphasize that local knowledge not only shapes ecological and cultural understanding but also sustains adaptive social systems. The indigenous knowledge embedded in songket needs to be preserved so it can be passed down intact. The Adityawarman Museum plays a crucial role in revitalizing the values and knowledge of Minangkabau songket, transforming it from a mere artifact into a source of information and education that bridges the present generation with the past.

Various studies have explored and preserved the cultural values embedded in traditional textiles. Saraswati et al. (2019) and Amalia et al. (2024) assert that batik is a symbol of local cultural identity whose meanings can be interpreted through a semiotic approach. Meanwhile, Ramadhani et al. (2025) employ Charles Sanders Peirce's semiotic model to analyze the structure of icons, indices, and symbols in ethnic clothing as expressions of cultural identity. Furthermore, Anggraeni et al. (2024) highlight the importance of preserving indigenous knowledge through documentation-based information approaches and community participation. In the Minangkabau context, Primadesi (2013) examines how the tradition of randai serves as a medium for transmitting local knowledge that can be documented and further developed.

Semiotic theory provides a powerful analytical tool to explore the knowledge embedded in Minangkabau songket. Peirce's triadic framework representamen, object, and interpretant enables a comprehensive interpretation of songket symbolism by connecting visual forms (representamen), philosophical meanings (object), and social interpretation (interpretant). According to Peirce (in Hoed, 2014a), a sign is something that represents something else; it is not a static structure but a cognitive process derived from sensory perception. This perspective aligns with the knowledge embedded in Minangkabau songket, where motifs appear as visual forms captured by the senses (representamen), interpreted as cultural values and philosophies (object), and further understood (interpretant) by the community in both customary contexts and everyday life.

The novelty of this research lies in its interdisciplinary approach that integrates Peirce's semiotic theory with the concept of knowledge preservation in information studies. By positioning Minangkabau songket as the object of inquiry, this study highlights traditional motifs as knowledge carriers that can be documented, interpreted, and preserved. The research fills a gap in previous studies that primarily focused on aesthetics or functional aspects of clothing by offering a new perspective on songket as a representation of cultural knowledge. This finding aligns with semiotic studies in information science, which affirm that Peirce's framework is relevant for explaining the ontological and epistemological dimensions of information (Thellefsen et al., 2018). It also reinforces the view that social semiotics can be

applied in library and information science practice to understand how semiotic resources convey or constrain access to information (Wells, 2015), supporting the interdisciplinary notion that information, signs, and culture are interconnected in the process of meaning representation (Brenner, 2015). Thus, this approach underscores the urgency of preserving indigenous knowledge so that it remains relevant across generations through information formats that adapt to the changing times. Museums are positioned as spaces of representation and repositories that not only store but also revitalize indigenous knowledge through interpretation, education, and community engagement.

The purpose of this research is to analyze the symbolic meanings embedded in Minangkabau songket motifs using Peirce's semiotic approach and to examine the knowledge preservation strategies employed by the Adityawarman Museum of West Sumatra as an institution that ensures the continuity of the cultural values contained within it.

## RESEARCH METHOD

This research employs a qualitative method with Charles Sanders Peirce's semiotic approach, consisting of three main stages: (1) identifying the object as something that exists in human cognition (Hoed, 2014b); (2) linking it to the representamen, which refers to a physical form understood by humans; and (3) interpreting the interpretant, namely the conceptual understanding formed through signs (Ramadhan & Supriyadi, 2024). This approach is used to deeply examine the structure of meaning embedded in Minangkabau songket motifs as a representation of local knowledge (Creswell, 2014). A case study approach is also employed to explore the efforts undertaken by the Adityawarman Museum in West Sumatra to preserve the indigenous knowledge embedded in Minangkabau songket.

The research site is focused on the Adityawarman Museum in Padang City, West Sumatra, which plays a central role in preserving collections of traditional Minangkabau textiles. The research informants consist of two museum administrators, including the Head of the Conservation and Development Section, purposively selected for their direct knowledge and experience in preserving songket collections at the institution. The number of informants is considered adequate because both are key actors with authority, experience, and direct involvement in songket preservation at the museum, making the information they provide representative for addressing the research objectives.

Data collection techniques were carried out through methodological triangulation consisting of in-depth interviews, non-participatory observation, and literature study. Interviews were used to explore informants' interpretations of the symbolic meanings of songket motifs, observations were conducted to document the visual forms and contextual uses of songket, and literature study was utilized to strengthen the conceptual framework and support field findings. Data validity was ensured through source triangulation by cross-checking interviews with museum documentation, archives, and relevant literature to maintain consistency and reliability. The collected data were analyzed using the interactive analysis model of Miles and Huberman (2018), which includes the stages of data reduction, data display, and conclusion drawing/verification.

## RESULT AND DISCUSSION

### Indigenous Knowledge in West Sumatran Songket Motifs

Minangkabau songket can be studied as a speaking textile, a textile medium that conveys collective narratives and ethical values. This aligns with Doran H. Ross's (Udiani & Mutia, 2019) view that songket cloth is a "layer of traditional skin" containing moral and philosophical messages of the Minangkabau people. Furthermore, Peirce's semiotic approach can be used to understand how each cloth motif, consisting of objects, representations, and interpretations, embodies the cultural, historical, and philosophical values of the Minangkabau people. Peirce's semiotics provides a systematic framework for explaining how these motifs function to convey deeper cultural values (Igiriza et al., 2024). The following is a semiotic analysis of each Minangkabau songket cloth based on Peirce's semiotic framework.

#### *Pucuak Rabuang Motif*

| Motif                                                                              | Representative                                                            | Object                                                | Interpretation                                                                                                    |
|------------------------------------------------------------------------------------|---------------------------------------------------------------------------|-------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
|  | Young bamboo shoots or bamboo shoots are symmetrical triangular in shape. | Symbolizes growth, dynamism, and lifelong usefulness. | Marks the individual's phase towards maturity, social legitimacy, and the regeneration of society's noble values. |

Source: (Summerfield & Summerfield, 1999)

Figure 1. Pucuak Rabuang Songket

The Pucuak Rabuang motif is one of the classic motifs often found in Minangkabau songket. Visually, this motif is displayed in a symmetrical triangular shape resembling bamboo shoots or young bamboo shoots, which often appear on the head of the cloth, the edges, to the body of the songket cloth. Summerfield and Summerfield (1999) explain that bamboo shoots in Minangkabau culture mean the growth process, from young shoots that rise straight up to become mature bamboo that rises and bends down, a metaphor for hope and humility, "The bamboo shoot symbolizes dynamism and hope that the younger generation will remain useful and creative according to the Minang proverb "Ketek baguno, Gadang tapakai." (Riza Mutia, Adityawarman Museum).

In the social system, this motif is used in life transition ceremonies, such as the inauguration ceremony of a village head, a wedding, or when a child enters adulthood. When the Pucuak Rabuang motif is worn by women, particularly the bundo kanduang, it is interpreted as a symbol of hope that the figure will become a role model among the community. The triangular shape in this motif is also interpreted as a representation of the 'tungku tigo sajarangan' (three pillars of the 'pangulu'), namely the pangulu (traditional leader), the alim ulama (religious leader), and the cadiak pintar (intellectuals) as the three main pillars of social and cultural life in the nagari community (Udiani & Mutia, 2019). This motif serves as a medium for conveying introspective values and social responsibility, as each phase of life plays a useful role in the community. The implied dynamic meaning suggests that growth is not only biological, but also moral and social (Summerfield & Summerfield, 1999).

#### *Itiak Pulang Patang Motif*

| Motif                                                                             | Representation                                                | Object                                                                                                                                            | Interpretation                                                                                         |
|-----------------------------------------------------------------------------------|---------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
|  | A line of ducks walking straight and in line towards the pen. | It means the principles of leadership, social order, loyalty, discipline, collective cohesion, and orderliness of life of the Minangkabau people. | The interconnectedness of individuals in the community, and the relationship between uncle and nephew. |

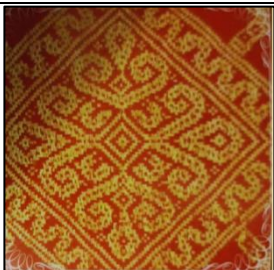
Source: (Summerfield & Summerfield, 1999)

Figure 2. Songket Itiak Pulang Patang

This motif depicts a stylized line of ducks walking in a straight line, as if a flock of birds were returning to their pen after a day in the rice fields. The meaning of this songket contains a cultural structure closely related to the concepts of leadership and social order. This repetitive pattern conveys the philosophical value of individual attachment to a devout and harmonious community, a stable collective life, and conveys the meaning of loyalty and discipline. "Ducks returning full are analogous to a society that submits and obeys its leader" (Riza Mutia, Adityawarman Museum). The relationship between leader and follower, or between *mamak* and nephew in the Minangkabau matrilineal system, is also implied in this motif. A *mamak*, as the head of the family, is likened to a leading duck who serves as a role model, while the nephews follow his lead, fully aware of their role within the social structure (Novrial, 2024).

The Itiak Pulang Patang songket also contains relational messages about the role of individuals in the context of migration and travel. Ducks leaving their pens to forage and then returning in rows are interpreted as a metaphor for the life of a nomad who maintains social order and responsibility to their origins. "Ducks are also likened to nomads seeking knowledge or sustenance, then returning or sending their earnings back to their hometown" (Riza Mutia, Adityawarman Museum). The rows of ducks reflect the order of life that ensures continuity and stability, a visual narrative that bridges the biological experience of animals with human social values (Novrial, 2024).

#### *Kaluak Paku Motif*

| Motif                                                                               | Representation                  | Object                                                                                                                    | Interpretation                                                                                            |
|-------------------------------------------------------------------------------------|---------------------------------|---------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
|  | Spiral of unopened fern shoots. | Introspection, personality formation, self-esteem strengthening, social responsibility of men in a matrilineal structure. | Individuals who have a role as protectors of the family and guardians of the balance of customary values. |

Source: (Summerfield & Summerfield, 1999)

Figure 3. Kaluak Paku Songket

The Kaluak Paku motif in West Sumatran songket textiles visualizes the natural spiral of young, unopened fern shoots. This motif is a stylization of the inward-curving coils of fern recesses, commonly found in Koto Gadang weaving and traditional Minangkabau carvings, both on wood and ancient megaliths dating back thousands of years (Summerfield & Summerfield, 1999). The spiral is a visual reflection of the process of internalizing self-worth, rooted in the



way ferns grow, coiling inward before opening outward (Wirawan & Iswandi, 2015). From a semiotic perspective, this spiral shape represents the human introspective process, which in Minangkabau tradition is linked to social responsibility and the role of men within a matrilineal structure. The object in its visual form indicates spiritual, moral, and social growth, while its interpretation reflects the responsibility of fathers and mothers in educating the younger generation in a balanced manner within the family and community (Udiani & Mutia, 2019). The Kaluak Paku motif is also closely associated with the traditional adage, "children are held in the lap, children are guided, village people are protected, and the nagari is protected." This emphasizes that an adult male holds a dual responsibility: as protector of the nuclear family and guardian of the customary kinship structure (Udiani & Mutia, 2019). This motif illustrates the principle that before a man can assume responsibility for a community, he must first develop his own personality internally.

This motif emphasizes the dual function inherent in men's roles in the Minangkabau matrilineal system: as fathers within the nuclear family and as uncles to nephews (children of sisters), who are responsible for educating, guiding, and maintaining the continuity of customary values in community life. "Kaluak paku is a way for children and their parents to learn about Minang customs and culture, so that when they migrate, they will be equipped with these customs and culture. This is the meaning of the philosophy: the child is held, the parents are guided." (Riza Mutia, Adityawarma Museum). Thus, the meaning of Kaluak Paku is a demand for balance between introspection and extroversion, between self-development and social service.

#### *Saluak Laka Motif*

| Motif                                                                               | Representation                                                             | Object                                                                                                                                                                      | Interpretation                                                                                                     |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
|  | Woven sticks or rattan with an "S" pattern used as a base for pots (Laka). | It signifies collectivity, deliberation, and consensus in the Minangkabau traditional system. It is a symbol of social ties that unite individuals within a clan or nation. | Individuals who have the responsibility to maintain harmony within the nuclear family, clan, customs and religion. |

Source: (Summerfield & Summerfield, 1999)

Figure 4. Saluak Laka Songket

This motif features interlocking weaves, resembling the woven palm fronds or rattan used as pot bases (laka) in traditional Minangkabau kitchens (Udiani & Mutia, 2019). This weaving is depicted in songket motifs as a geometrically interlocking, slanted "S"-shaped pattern, reflecting kinship in Minangkabau society. "Saluak means intricate, intertwined, and the woven motif symbolizes kinship in Minangkabau society." (Riza Mutia, Adityawarma Museum) Saluak Laka embodies the Minangkabau society's commitment to the bonds between its members within a mutually supportive kinship system (kaum) (Novrial, 2024). In Minangkabau tradition, family relationships are not individual, but rather collective, where bonds between individuals are held together by the principles of mutual assistance, deliberation, and consensus. This is evident in the proverb "Nan basaluak bak laka, nan bakaik bak batang, supayo tali nak jan putuih, kaik bakaik nak jan ungkai," which implies that relationships between individuals must be maintained so they don't fall apart, just as the interconnected strands of rattan create a solid whole (Udiani & Mutia, 2019; Wirawan & Iswandi, 2015).

This motif is also used as a decorative border on fabrics, a position that emphasizes its function as a protector of the core values of social life on the periphery and supports the entire structure. The motif's rattan-like appearance also represents the flexibility and strength derived from unity. In the context of Nagari Canduang Koto Laweh, this motif is interpreted as a symbol of harmony between custom and religion: "adat basandi syarak, syarak basandi kitabullah." This motif serves as a metaphor for how society is able to foster tolerance between values, customs inherited from ancestors, and religious law that are shared (Wirawan & Iswandi, 2015). This motif serves as a means of understanding a broader social construct, where the Minangkabau people are a collective entity bound not only by lineage but also by a commitment to values, responsibility, and a sense of togetherness woven into each piece of their songket cloth.

#### *Barantai Motif (Barantai Bugih)*

| Motif                                                                              | Representation                                                                                                                                                 | Object                                                                                                                                                                 | Interpretation                                                      |
|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|
|  | The cross pattern resembles the letter "X" arranged diagonally, inspired by the shape of the chains or bamboo slats in the gedek of traditional Minang houses. | It signifies collectivity, mutual cooperation, and social solidarity in Minangkabau society, and each individual has a role in supporting the overall customary order. | Minangkabau society upholds the value of social ties with the clan. |

Source: (Summerfield & Summerfield, 1999)

Figure 5. Barantai Songket

This motif visually forms a series of diagonally arranged "X"-shaped cross-sections, resembling interlocking chains, creating a series of tiered diamonds. This chain shape resembles the woven chains or bamboo slats commonly used in Minangkabau traditional house architecture (Summerfield & Summerfield, 1999). Symbolically, the barantai motif conveys the meaning of collectivity, mutual cooperation, and the importance of togetherness as a primary force in community life. "The barantai is interconnected; we cannot live alone; we must help each other." (Riza Mutia, Adityawarma Museum)

This view aligns with the philosophy of *sajari jo sabako*, which prioritizes mutual assistance in matrilineal societies, starting from the nuclear family down to fellow clansmen, and so on. This symbolic interpretation illustrates how the barantai motif conveys the importance of maintaining close social relations for collective stability and harmony. The barantai motif signifies a cohesive and mutually supportive Minangkabau social structure. Summerfield and Summerfield (Summerfield & Summerfield, 1999) even likened chains and gedek to structures that are weak when standing alone, but very strong when assembled together.

#### **Preserving Traditional Songket Cloth as an Effort to Preserve Indigenous Knowledge**

The Adityawarman Museum of West Sumatra, as an institution that protects cultural heritage, has a central responsibility in safeguarding and preserving the indigenous knowledge contained in the museum's songket cloth collection. Therefore, efforts to preserve Minangkabau songket cloth cannot be separated from the preservation of local knowledge (indigenous

knowledge) carried out by the Adityawarman Museum of West Sumatra, as the institution authorized to preserve Minangkabau culture.

Preservation of indigenous knowledge in songket is carried out through a series of interrelated processes that include the stages of (1) recognition and identification (recognition and identification of local knowledge), (2) validation (verification and authentication of meaning and value), (3) recording and documentation (documentation in written and digital formats), (4) storing (storing knowledge in a collection repository), (5) transfer (transfer of knowledge to the next generation and community), and (6) dissemination (dissemination and socialization to the public through educational and cultural media) (Utami & Irhandayaningsih, 2016). These stages are the foundation for the preservation of Minangkabau songket by institutions such as the Adityawarman Museum in West Sumatra. The following is a description of the processes of preserving local knowledge in Minangkabau songket cloth carried out by the Adityawarman Museum, Padang.

### *Recognition and Identification*

The Adityawarman Museum has conducted a process of identifying and recognizing the indigenous knowledge contained in Minangkabau songket through songket research in 2014 and 2015. This research was conducted directly with songket enthusiasts and artisans from various regions. Based on interviews with Wirda Harora, Head of the Conservation and Development Section of the Adityawarman Museum, this process involved direct research involving songket artisans from several regions, such as Pandai Sikek, Silungkang, Ampek Angkek, and Muaro Labuah. The Muaro Labuah region is even said to be the oldest origin of songket in West Sumatra. The research was conducted using direct oral interviews with active artisans. Furthermore, the involvement of local communities, such as Benhard Bard, a Swiss songket enthusiast living in Ampek Angkek, played a crucial role in the identification process. Participatory and community-engaged heritage emphasizes that this collaborative process enriches academic knowledge while returning the authority for cultural representation to the cultural owners themselves (Emma Waterton & Smith, 2010).

The museum also appointed relevant local figures, such as a weaver from Pandai Sikek who also teaches at Padang State University (UNP), as key informants in identifying the symbolic meaning and techniques of songket weaving. Identification was conducted contextually by examining the social background, philosophical values, and symbolic meaning of the motifs in the fabrics produced by the artisans. This knowledge was collected orally and then analyzed by the museum's research team. This approach aligns with the participatory principle of intangible cultural heritage management, where local communities play a key role in defining and representing knowledge passed down through generations. This aligns with the perspective of Waterton and Smith (2010), who emphasize the importance of collaboration with communities to maintain the authenticity and legitimacy of intangible cultural heritage. Studies of ecomuseums and revitalization projects in Europe have shown similar results and challenges, namely strengthening local legitimacy and the need for governance mechanisms for community-generated information (Pappalardo, 2020).

The results of the identification process are then integrated into the museum's digital collections information system, allowing the public to provide input on motif descriptions or collection data published online. Thus, the museum implements a community-based validation model. This strategy reflects the importance of community involvement in strengthening the accuracy of collection data and maintaining the authenticity of local knowledge. According to



research by Adell et al. (2015), a participatory approach to heritage management is a crucial mechanism in the democratization of cultural knowledge and the involvement of communities as the rightful owners of their cultural heritage. This community-based identification approach also positions the Adityawarman Museum's practices within the international framework formalized by the Convention for the Safeguarding of the Intangible Cultural Heritage (UNESCO, 2022), which encourages state parties to recognize, document, and facilitate the role of communities as primary holders of intangible knowledge.

### *Validation*

The Adityawarman Museum uses a triangulation approach, comparing information obtained from weavers, indigenous communities, and academics familiar with traditional Minangkabau weaving. This validation is conducted internally by a team of curators and conservators, as well as through collaboration with academic experts from Padang State University and weavers from Pandai Sikek.

The identified information is entered into the collection database system and re-checked based on input from the community or experts. If there are no objections or corrections, the information is considered validated. UNESCO (2024) emphasizes that the community-based inventory approach is an effective method for preserving intangible cultural heritage because it allows for the direct, active participation of cultural actors. Community-based validation approaches linked to collection databases also demonstrate the need for metadata governance and knowledge preservation practices explored in information science, namely verification mechanisms, metadata interoperability, and data policies that ensure that community records remain authentic and traceable over the long term (Pasqui, 2024; Stein & Zwass, 1995).

The crucial role of cultural actors such as weavers and academics in the validation process forms the epistemological foundation for the preservation of traditional knowledge. This is supported by findings from other UNESCO studies and the practice of the Ichpedia Project in South Korea, which demonstrate that traditional knowledge cannot be verified solely through universal academic criteria but must also refer to the socio-cultural credibility of the traditional practitioners themselves (Park, 2014). Heritage studies literature confirms that community involvement not only enriches data but also strengthens the legitimacy of cultural representations (Eichler, 2021).

### *Recording and Documentation*

The process of recording and documenting knowledge about songket cloth at the Adityawarman Museum was conducted by combining oral and written approaches through various activities such as interviews, field studies, seminars, and exhibitions. According to an interview with Wirda Harora, Head of the Conservation and Development Section, documentation began with direct research conducted in areas such as Pandai Sikek, Silungkang, Ampek Angkek, and Muaro Labuah in 2014–2015. This research involved active weavers and local traditional leaders. The results of this research were not only collected in the form of oral narratives but also converted into written documentation, which was printed into a book and stored digitally (PDF). This process represents the conversion of tacit knowledge into explicit knowledge that is documented and publicly accessible. This aligns with the SECI (Socialization, Externalization, Combination, Internalization) model used in the ICH crafts study, which demonstrates how tacit knowledge is transformed into explicit knowledge in collaboration between artisans and academics (Guo & Ahn, 2023).

Documentation is not limited to textual content but also includes visual data in the form of photographs of the collection, descriptions of weaving techniques, measurements, inventory numbers, and even the collection's history. All of this is stored in an online collection information system managed by the Adityawarman Museum's internal team. The documentation approach, which combines print and digital formats, also requires digital curation practices and the role of libraries/archives in managing and preserving metadata so that digital objects (PDFs, transcripts, photos) can be maintained, searched, and accessed long-term. This challenge is widely discussed in the information and digital preservation literature (Chigwada & Ngulube, 2023; Pasqui, 2024).

In its study on local knowledge documentation, UNESCO (2024) stated that the preservation of intangible cultural heritage, such as textile traditions, must be achieved through digital documentation mechanisms that enable open and long-term access. This is also in line with the UNESCO Recommendation on the preservation and access to documentary heritage, which states that both analog and digital documents must be preserved and accessible in the long term (UNESCO, 2015). Bastian and Flinn (2019) emphasize that the preservation of tacit knowledge requires adequate documentation skills to effectively preserve cultural information.

### *Storing*

Printed study results are stored as internal reference archives, while digital data, including metadata on motifs, measurements, weaving techniques, interview transcripts, and detailed images, are archived in the museum's collection information system, which is integrated with the official website, accessible at <https://museumadityawarman.sumbarprov.go.id/>. This step in establishing a digital repository aligns with the concept of "Organizational memory" in information science, where institutions must implement standardized information management policies (metadata, backup, format migration) to maintain knowledge continuity (Pasqui, 2024; Stein & Zwass, 1995).

The importance of digital storage is emphasized in research by Ilabakho and Rasmita (2025), which shows that digital preservation plays a crucial role in maintaining the sustainability of Indonesia's cultural heritage, particularly for cultural artifacts and local knowledge, which face challenges such as limited infrastructure, funding, and an inadequate legal framework. Furthermore, the implementation of a Digital Asset Management System (DAMS), as implemented at the Radya Pustaka Museum in Solo, enables the management of digital files (images, videos, and text) with structured metadata for greater durability and accessibility (Sadono et al., 2025). The use of a DAMS helps prevent data loss due to outdated formats or physical damage and optimizes the collection information recovery process. The study "Digital Asset Management in Cultural Heritage Institutions" by Crockett (2020) emphasized that DAM systems are key to organizing museums' digital assets, but challenges arise when small institutions lack the resources for long-term development. As a comparative study, Museum Victoria in Australia has developed an integrated DAM system framework to manage its collection's visual and audiovisual assets, strengthening metadata consistency and institutional workflow efficiency (Broomfield, 2009).

Thus, the Adityawarman Museum not only preserves physical artifacts but also builds an adaptive and publicly accessible intellectual repository (organizational memory). This preservation strategy ensures that knowledge about songket remains alive, relevant, and readily accessible to researchers, students, and the general public in the future. Michael et al. (2021), in their study "Digital Asset Management Systems in Museums," also caution that many museums

face challenges of interoperability and technological change, requiring flexible and adaptive digital storage systems (Amanda, 2021).

### *Transfer*

The Adityawarman Museum plays a central role as a knowledge transfer agent for indigenous knowledge about Minangkabau songket through hands-on experiences and public interaction. The 2015 and 2022 national exhibitions in Padang City served as a means of transferring knowledge about Minangkabau songket. During these exhibitions, visitors gained direct access to weaving workshops conducted by artisans from Pandai Sikek and Silungkang, who not only demonstrated weaving techniques but also explained the history, philosophy, and symbolism of songket motifs. Research on joint community-museum programs has found that hands-on interactions, workshops, hands-on demonstrations, and collaborations with community curators enhance public engagement and legitimize the traditional knowledge presented (Schreiber et al., 2024). Studies on textile and craft activities in museums confirm that hands-on workshops and shared craft activities contribute to participant empowerment and the intergenerational transmission of skills (Bang et al., 2024).

Prior to the exhibition, the museum conducted an in-depth thematic study covering socio-cultural aspects, philosophy, and songket production techniques. This ensured that the exhibition theme and educational materials were relevant and accurate. Knowledge transfer did not stop with face-to-face activities. The study results were printed as a book, converted into PDF format, and then uploaded to the museum's official website. Supporting seminars and workshops were also distributed through social media and the website to broaden the audience and reach those unable to attend in person. This approach adopted the concept of digital heritage, where online access serves as a means of preserving cultural values and intergenerational learning (Lubis et al., 2024). Website visitors could provide feedback on collection information, enabling community validation to occur simultaneously with transfer. This model is known as community-based knowledge transfer, where the public directly participates in strengthening the accuracy of the traditional knowledge presented by the museum (Nappi et al., 2024). Comparatively, the workshop- and publication-based transfer program implemented by the Adityawarman Museum is similar to programs reported in the literature on the preservation of Pekalongan batik, the preservation of North Sumatran ulos, and the preservation of Sumbanese ikat weaving, which collectively confirm that the combination of workshop practices, documentation, and digital access strengthens the transmission of cultural skills and meanings between generations (Bagaihing et al., 2022; Jiniputri et al., 2022; Wang, 2019).

The transfer approach implemented by the Adityawarman Museum combines formal education (seminars and scientific publications), informal (in-person workshops), and digital (online access and social media). This model makes the museum an adaptive and inclusive intergenerational learning forum for diverse community groups. This approach aligns with the principles of knowledge-sharing in heritage craft preservation, which emphasize collaboration between cultural practitioners and academic institutions within a holistic, participatory framework (García-Almeida, 2019). Cross-cultural comparisons show that the Adityawarman Museum's combined transfer strategy (face-to-face, digital, and publication) is consistent with effective international practices for maintaining the skills and symbolic meaning of textile traditions (Bang et al., 2024; Rivero et al., 2023; Schreiber et al., 2024).

### *Dissemination*

The Adityawarman Museum disseminates information through official museum channels, including national exhibitions, thematic seminars, and scientific publications in print and digital PDF formats, without utilizing social media as the primary channel. In 2015 and 2022, the Adityawarman Museum held national songket exhibitions in Padang City. These exhibitions served as educational forums where visitors not only viewed artifacts but also listened to oral narratives and witnessed the hands-on practice of local artisans. This demonstrates the museum's integration of an oral knowledge transfer approach into knowledge dissemination.

In addition to exhibitions, the museum regularly holds thematic seminars highlighting the philosophical, historical, and technical aspects of songket making. The seminar was developed based on the results of previous research studies, with speakers from academics and textile culture practitioners. The dissemination approach implemented by the Adityawarman Museum demonstrates a cultural knowledge dissemination model that combines formal, inclusive, and digital modalities. This dissemination concept aligns with Li's (2023) research, which states that digital displays and exhibitions of intangible cultural heritage enable the presentation of accurate and representative information, while creating a two-way channel between organizers and audiences. Similarly, Giovannini et al. (2021) demonstrate that the integration of digital technology in a museum context can expand the reach of dissemination and increase public interest in cultural heritage.

Furthermore, a study by Yan et al. (2025) emphasized the importance of effective digital dissemination of traditional cultural techniques, and that success is not only seen from the technology used, but also the credibility of the content, community engagement, and the authenticity of the knowledge presented. By combining face-to-face media, scientific publications, and digital information systems, the Adityawarman Museum in West Sumatra has succeeded in keeping the dissemination of Minangkabau songket knowledge relevant and alive across generations. This emphasis on cross-platform dissemination aligns with the objectives of the Convention for the Safeguarding of the Intangible Cultural Heritage (UNESCO, 2022) which advocates increasing public awareness and disseminating ICH knowledge at the local, national, and international levels. Therefore, the Adityawarman Museum's hybrid strategy places the results of songket preservation within the realm of globally recognized practices.

## **CONCLUSION**

Minangkabau songket is a medium of cultural expression that conveys indigenous knowledge through visual symbols and philosophical values passed down across generations. This research shows that motifs such as Pucuak Rabuang, Itiak Pulang Patang, Kaluak Paku, Saluak Laka, Berantai, and Atua Bada serve not only decorative functions but also represent social structures, worldviews, and the relationships between humans, nature, traditional values, and religion in Minangkabau society. Using Charles Sanders Peirce's semiotic approach, these motifs are described as a system of signs that shape collective meanings. These findings demonstrate that songket is not simply a textile product but a means of preserving local knowledge that is dynamic and contextual.

The Adityawarman Museum, as a cultural preservation institution, has played a strategic role in preserving songket knowledge through six main stages: identification, validation, documentation, storage, transfer, and dissemination. Various activities such as national

exhibitions, thematic seminars, and book publications, both print and digital, have become the primary medium for transferring knowledge from cultural practitioners to the wider community. The dissemination process focused on digital collection information systems and face-to-face forums, rather than solely on social media, but still managed to reach a broad audience. While this research is still exploratory in nature, the findings can provide an important basis for developing cultural heritage preservation policies based on local knowledge and strengthen songket's position as a living part of Indonesia's cultural identity.

This study is limited by the limited number of informants and the limited scope of its location in West Sumatra. Therefore, further research is recommended to expand the study to other traditional textile communities to gain a cross-cultural perspective. Theoretically, this study expands the application of Peirce's semiotics in the analysis of traditional textiles as sign systems representing social and spiritual values. Practically, these findings have implications for the development of digital-based knowledge preservation models in museums, integrating community participation and collection information systems to maintain the authenticity and sustainability of local knowledge.

## SUGGESTION

The Adiyawarman Museum can strengthen the digitization function of its songket collection by developing a more standardized and integrated metadata-based preservation system across cultural institutions, as well as developing digital-based public education and training programs that are widely understood, contextual, and relevant to the younger generation. Furthermore, the Peircean semiotic approach in this study has proven effective in uncovering layers of symbolic meaning in Minangkabau songket motifs. Museums can utilize it as an interpretative framework, so that motifs are presented as cultural signs that reflect the relationship between humans, nature, and traditional values. Thus, Peircean semiotics functions not only as an academic analytical tool, but also as a cultural communication strategy in museum preservation and education practices.

## THANK YOU-NOTE

Thanks are due to the Open University (UT) for its financial support for this research. Thanks are also due to the Adityawarman Museum of West Sumatra for its support and openness in providing data and research access, and to our academic colleagues for their constructive input throughout the writing process. The support of all parties has played a vital role in the success of this research and in efforts to preserve the knowledge and cultural values of Minangkabau songket.

## REFERENCES

- Adell, N., Bendix, R. F., Bortolotto, C., & Tauschek, M. (2015). *Between Imagined Communities and Communities of Practice-Participation, Territory and the Making of Heritage*. Universitätsverlag Göttingen. <https://doi.org/10.4000/books.gup.191>
- Amalia, D., Rosdiana, A., Al Azizi, N., & Wulandari, A. (2024). Semiotika Batik Jepara sebagai Bentuk Identitas Budaya Lokal Masyarakat Jepara. *ENTITA: Jurnal Pendidikan Ilmu Pengetahuan Sosial Dan Ilmu-Ilmu Sosial*, 6(1), 1–14. <https://doi.org/https://doi.org/10.19105/ejpis.v6i1.12169>
- Amalia, Dina, Rosdiana, A., Al Azizi, N., & Wulandari, A. (2024). Semiotika batik jepara sebagai bentuk identitas budaya lokal masyarakat Jepara. *Entita: Jurnal Pendidikan Ilmu*



- Pengetahuan Sosial Dan Ilmu-Ilmu Sosial, 6(1), 1–14.  
<https://doi.org/10.19105/ejpis.v6i1.12169>
- Amanda, M. (2021). Digital asset management systems in museums [Johns Hopkins Krieger School of Arts and Sciences]. <https://jscholarship.library.jhu.edu/bitstreams/9193efe7-80a3-471d-a58a-609215762eef/download>
- Anggraeni, N. C., Tamara Adriani Salim, & Muhammad Prabu Wibowo. (2024). Preservation of Indigenous Knowledge in Indonesia: Cultural Conservation Effort. In *Khizanah al-Hikmah : Jurnal Ilmu Perpustakaan, Informasi, dan Kearsipan* (Vol. 12, Issue 2, pp. 228–238). <https://doi.org/https://doi.org/10.24252/kah.v12i2a1>
- Bagaihing, M., Mantolas, C. M., Sanam, S. R., & Murni, K. L. (2022). Cultural preservation of tenun ikat in sustainable tourism perspective for igeneration in tourism department of politeknik negeri Kupang. *Applied Science and Technology on Social Science 2022 (ICAST-SS 2022)*, 311–314. [https://doi.org/10.2991/978-2-494069-83-1\\_56](https://doi.org/10.2991/978-2-494069-83-1_56)
- Bang, A. L., Engholm, G., Lervad, S., Nosch, M.-L., & Skjold, E. (2024). Textile craft as empowerment. *Dress*, 50(2), 151–173. <https://doi.org/10.1080/03612112.2024.2370126>
- Bastian, J. A., & Flinn, A. (2019). *Community Archives, Community Spaces: Heritage, Memory and Identity*. Facet Publishing.
- Brenner, J. (2015). Three Aspects of Information Science in Reality: Symmetry, Semiotics and Society. *Information*, 6(4), 750–772. <https://doi.org/10.3390/info6040750>
- Broomfield, J. (2009). Digital asset management case study – Museum Victoria. *Journal of Digital Asset Management*, 5(3), 116–125. <https://doi.org/10.1057/dam.2009.4>
- Chigwada, J., & Ngulube, P. (2023). Stakeholders in the acquisition, preservation, and dissemination of indigenous knowledge projects. *Information Development*, 0(0), 1–18. <https://doi.org/10.1177/026666669231192851>
- Creswell, J. W. (2014). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (4th ed.). Sage Publication.
- Crockett, E. C. (2020). DAM becky, look at that asset: Digital asset management in cultural heritage institutions [University of North Carolina]. <https://cdr.lib.unc.edu/downloads/k643b662s?locale=en>
- Eichler, J. (2021). Intangible cultural heritage, inequalities and participation: who decides on heritage? *The International Journal of Human Rights*, 25(5), 793–814. <https://doi.org/10.1080/13642987.2020.1822821>
- García-Almeida, D. J. (2019). Knowledge Transfer Processes In The Authenticity Of Intangible Cultural Heritage In Tourism Destination Competitiveness. *Journal of Heritage Tourism*, 14(1), 1–13.
- Geertz, C. (1999). *Tafsir Kebudayaan*. Penerbit Kanisius.
- Giovannini, E. C., Lo Turco, M., & Tomalini, A. (2021). Digital Practices to Enhance Intangible Cultural Heritage. *International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences - ISPRS Archives*, XLVI-M-1, 273–278. <https://doi.org/10.5194/isprs-Archives-XLVI-M-1-2021-273-2021>
- Guo, J., & Ahn, B. (2023). Tacit Knowledge sharing for enhancing the sustainability of intangible cultural heritage (ICH) crafts: A perspective from artisans and academics under craft–design Collaboration. *Sustainability*, 15(20), 14955. <https://doi.org/10.3390/su152014955>
- Hoed, B. H. (2014a). *Semiotik dan dinamika sosial budaya*. Komunitas Bambu.

- Hoed, B. H. (2014b). *Semiotika dan dinamika sosial budaya*. Komunitas Bambu.
- Horkheimer, M., Adorno, T. W., & Noeri, G. (2002). *Dialectic of enlightenment*. Stanford University Press.
- Igiriza, M., Valentino, R. A., Wiradharma, G., Fadhli, R., Adamy, Z., & Anjani, A. (2024). Preservation of Balinese batik knowledge as an effort to preserve indigenous knowledge. *Jurnal Kajian Informasi & Perpustakaan*, 12(2), 205–220. <https://doi.org/10.24198/jkip.v12i2.58663>
- Ilabakho, R., & Rasmita, R. (2025). Preserving the Cultural Heritage of Indonesian Society through Digital Preservation in Libraries. *Knowledge Garden: International Journal of Library Studies*, 3(1), 48–63. <https://doi.org/https://doi.org/10.21776/ub.knowledgegarden.2025.3.1.32>
- Jessen, T. D., Ban, N. C., Claxton, N. X., & Darimont, C. T. (2022). Contributions of Indigenous Knowledge to Ecological and Evolutionary Understanding. *Frontiers in Ecology and the Environment*, 20(2), 93–101. <https://doi.org/https://doi.org/10.1002/fee.2435>
- Jessen, Tyler D, Ban, N. C., Claxton, N., & Darimont, C. T. (2022). Contributions of Indigenous Knowledge to ecological and evolutionary understanding. *Front Ecol Environ*, 20(2).
- Jiniputri, A. R., Panggabean, R., & Widiawati, D. (2022). Preservation of Traditional Ikat Ulos by Motif Design Development and Natural Dye Utilization in Muara District, North Tapanuli. *ICON ARCCADE 2021: The 2nd International Conference on Art, Craft, Culture and Design (ICON-ARCCADE 2021)*. <https://doi.org/10.2991/assehr.k.211228.012>
- Krisna Ramadhan, & Slamet Supriyadi. (2024). Analisis semiotika Charles Sanders Peirce pada lukisan Seri Ilham Karim. *Atmosfer: Jurnal Pendidikan, Bahasa, Sastra, Seni, Budaya, Dan Sosial Humaniora*, 3(1), 118–130. <https://doi.org/10.59024/atmosfer.v3i1.1170>
- Lam, D. P. M., Hinz, E., Lang, D. J., Tengö, M., von Wehrden, H., & Martín-López, B. (2020). Indigenous and Local Knowledge in Sustainability Transformations Research: A Literature Review. *Ecology and Society*, 25(1). <https://doi.org/10.5751/ES-11305-250103>
- Li, J. (2023). Research on Digital Display of Intangible Cultural Heritage. In *Journal of Education, Humanities and Social Sciences* (Vol. 8, pp. 54–61). <https://doi.org/https://doi.org/10.54097/ehss.v8i.4224>
- Lubis, J. R., Rahayu, P. B., Irawan, F., & Siregar, S. R. (2024). Nusantara Digital Museum Based on Virtual Tour and Virtual Guide: A Case Study of Woven Fabric, Shawls, Songket and Ulos. *Electronic Journal of Education, Social Economics and Technology*, 5(2), 523–532. <https://doi.org/https://doi.org/10.33122/ejeset.v5i2.181>
- Miles, B., & Huberman, M. (1992). *Analisis Data Kualitatif: Buku Sumber Tentang Metode-Metode Baru*. UI Press.
- Miles, M. B., Huberman, M., & Saldana, J. (2018). *Qualitative Data Analysis: A Methods Sourcebook* (4th ed.). SAGE Publications.
- Nappi, M. L., Buono, M., Chivăran, C., & Giusto, R. M. (2024). Models and Tools for the Digital Organisation of Knowledge: Accessible and Adaptive Narratives for Cultural Heritage. *Heritage Science*, 12(1), 1–22. <https://doi.org/10.1186/s40494-024-01219-z>
- Novrial. (2024). *Ukiran Tradisional Minangkabau*. UPTD Musem Adityawarman.
- Pappalardo, G. (2020). Community-based processes for revitalizing heritage: Questioning justice in the experimental practice of ecomuseums. *Sustainability*, 12(21), 9270. <https://doi.org/10.3390/su12219270>
- Park, S. C. (2014). ICHPEDIA, A Case Study in Community Engagement in The Safeguarding of ICH Online. *International Journal of Intangible Heritage*, 9, 69–82.

- Pasqui, V. (2024). Digital curation and long-term digital preservation in libraries. *JLIS.It*, 15(1), 109–125. <https://doi.org/10.36253/jlis.it-567>
- Primadesi, Y. (2013). Preservasi Pengetahuan Dalam Tradisi Lisan Seni Pertunjukan Randai Di Minangkabau Sumatera Barat. *Jurnal Kajian Informasi & Perpustakaan*, 1(2), 179–187. <https://doi.org/https://doi.org/10.24198/jkip.v1i2.12060>
- Ramadhani, D. A., Marbun, S. J., Daely, A., Aini, R. A., Putri, N. A., Ghafari, M. O. F., & Dalimunthe, S. F. (2025). Representasi Identitas Budaya Melalui Busana dalam Kulturfest 2025 di Universitas Negeri Medan: Analisis Ikon, Indeks dan Simbol dalam Kajian Semiotika Charles Sanders Peirce. In *Jejak Digital: Jurnal Ilmiah Multidisiplin* (Vol. 1, Issue 4, pp. 915–921). <https://doi.org/https://doi.org/10.63822/br116d76>
- Rivero, P., Jové-Monclús, G., & Rubio-Navarro, A. (2023). Edu-Communication from Museums to Formal Education: Cases around Intangible Cultural Heritage and the Co-Creative Paradigm. *Heritage*, 6(11), 7067–7082. <https://doi.org/10.3390/heritage6110368>
- Sadono, S., Pandanwangi, B., Laksani, H., & Kasputra, D. (2025). Digital Preservation of Javanese Manuscript: A Digital Asset Management Approach at Radya Pustaka Solo Museum. *KnE Social Sciences*, 10(3), 17–24. <https://doi.org/10.18502/kss.v10i3.17891>
- Saraswati, H., Iriyanto, E., & Putri, H. Y. (2019). Semiotika Batik Banyumasan sebagai Bentuk Identitas Budaya Lokal Masyarakat Banyumas. *Piwulang: Jurnal Pendidikan Bahasa Jawa*, 7(1), 16–22.
- Schreiber, R. C., Goeke, M., & Bequette, M. (2024). Community-informed design: Blending community engagement and museum design approaches for sustainable experience development. *Curator: The Museum Journal*, 67(2), 441–457. <https://doi.org/10.1111/cura.12583>
- Stein, E. W., & Zwass, V. (1995). Actualizing organizational memory with information systems. *Information Systems Research*, 6(2), 85–117. <https://doi.org/10.1287/isre.6.2.85>
- Summerfield, A., & Summerfield, J. (1999). *Walk in Splendor: Ceremonial Dress and The Minangkabau*. University of California.
- Thellefsen, M. M., Thellefsen, T., & Sørensen, B. (2018). Information as signs: A semiotic analysis of the information concept, determining its ontological and epistemological foundations. *Journal of Documentation*, 74(2), 372–382. <https://doi.org/10.1108/JD-05-2017-0078>
- Udiani, C. M., & Mutia, R. (2019). *Songket Minangkabau: The Tapestries of West Sumatra*. Dewan Kerajinan Nasional.
- UNESCO. (2015). Recommendation concerning the preservation of, and access to, documentary heritage including in digital form. Newsroom. [https://www.unesco.org/en/legal-affairs/recommendation-concerning-preservation-and-access-documentary-heritage-including-digital-form?hub=701&utm\\_source=chatgpt.com](https://www.unesco.org/en/legal-affairs/recommendation-concerning-preservation-and-access-documentary-heritage-including-digital-form?hub=701&utm_source=chatgpt.com)
- UNESCO. (2022). Basic texts of the 2003 Convention for the Safeguarding of the Intangible Cultural Heritage. In *Living Heritage Entity*. UNESCO.
- UNESCO. (2024). Basic Texts of the 2003 Convention for the Safeguarding of the Intangible Cultural Heritage. In UNESCO.
- Utami, V. A., & Irhandayaningsih, A. (2016). Preservasi pengetahuan bagi keberlangsungan indigenous knowledge masyarakat suku samin Kabupaten Pati. *Jurnal Ilmu Perpustakaan*, 5(1), 101–110.
- Wang, C. (2019). Building a network for preserving intangible cultural heritage through education: A study of Indonesian batik. *International Journal of Art & Design Education*, 38(2), 398–415. <https://doi.org/10.1111/jade.12200>

- Waterton, E., & Smith, L. (2010). The Recognition and Misrecognition of Community Heritage. *International Journal of Heritage Studies*, 16(2), 4–15. <https://doi.org/https://doi.org/10.1080/13527250903441671>
- Waterton, Emma, & Smith, L. (2010). The recognition and misrecognition of community heritage. *International Journal of Heritage Studies*, 16(1–2), 4–15. <https://doi.org/10.1080/13527250903441671>
- Wells, M. J. (2015). Social semiotics as theory and practice in library and information science. *Journal of Documentation*, 71(4), 691–708. <https://doi.org/10.1108/JD-01-2014-0018>
- Wirawan, N., & Iswandi. (2015). Menapak Jejak Songket Minangkabau. UPTD Museum Adityawarman.
- Yan, Z., Lim, C. K., Halim, S. A., Ahmed, M. F., Tan, K. L., & Li, L. (2025). Digital Sustainability of Heritage: Exploring Indicators Affecting the Effectiveness of Digital Dissemination of Intangible Cultural Heritage Through Qualitative Interviews. *Sustainability*, 17(4), 1593. <https://doi.org/https://doi.org/10.3390/su17041593>