

## Integration of Information Technology in the South Coast Regional Museum: Metadata Development for Local Wisdom Education

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**ABSTRACT :** Local knowledge is an important part of cultural heritage that needs to be preserved and passed on to the younger generation. Museums as educational institutions have a strategic role in this process, especially at the regional level. However, limitations in managing collection information often become an obstacle in optimizing the educational function of museums. This study aims to examine the integration of information technology through the development of a metadata system at the Pesisir Selatan Regional Museum as an effort to strengthen education based on local wisdom. A qualitative approach was used with a case study method in the Pesisir Selatan area. Data collection was carried out by conducting in-depth interviews and participatory observation. The results of the study indicate that the application of structured and contextual metadata can improve accessibility, understanding, and involvement of visitors, especially students, in recognizing local cultural values. In addition, the integration of metadata with digital platforms opens up new opportunities for more inclusive and sustainable culture-based learning. This study recommends a metadata development model that is adaptive to the local context and integrated with the regional education curriculum.

**KEYWORDS:** Metadata, regional museum, information technology, local wisdom, cultural education

### INTRODUCTION

Museum Management is an integrated effort to protect, develop, and utilize Collections through policies for planning, implementation, and supervision for the greatest welfare of society. According to ICOM (International Council of Museums) [1], the definition of a museum has changed seven times since 1946, but all definitions recognize the importance and need for a museum to have a collection. For example, the 1956 definition defines groups of objects and specimens of cultural value: art, history, science and technology collections. The 1961 definition identifies a museum as a collection of objects of cultural and scientific importance, while the 1989, 1995 and 2001 definitions of a museum are as material evidence of people and their environment [2]. The role of museums has changed a lot over the past three decades and current museum practices can even be considered obsolete, but the fact remains that a museum cannot be a museum without a collection, and that museums with collections have a moral and legal obligation to take care of the objects in the best possible way. Museums need to continue to strive to find the ideal way to select, protect, and exhibit collections. Every museum is unique, so there are big differences in how museums manage their collections. Collection management for some museums involves all aspects of the organization, while other museums have a collection management process that can be implemented, but no collection management policies or procedures.

GOVERNMENT REGULATION OF THE REPUBLIC OF INDONESIA NUMBER 66 OF 2015 CONCERNING MUSEUMS. Article 1: A museum is an institution that functions to protect, develop, utilize collections, and communicate them to the public. Museum collections, hereinafter referred to as Collections, are Cultural Heritage Objects, Cultural Heritage Buildings, and/or Cultural Heritage Structures and/or Non-Cultural Heritage [12][13][14][15] which are material evidence of cultural products and/or natural materials and their environment that have important value for history, science, education, religion, culture, technology, and/or tourism.

Although each museum is unique, collection management is an important part of fulfilling public responsibilities including acquisition, accession, documentation, conservation and inventory. The Collection Management Policy is a document that addresses all of these activities and demonstrates accountability for collections, especially in terms of museum collection management.

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Museums have played many roles in society since their inception. The first museum was established two thousand years ago in Alexandria, Egypt.

The Museum of Alexandria was more like a research institution than a modern museum. Collections of sculptures, astronomical and surgical instruments, and natural objects such as elephant ivory and rare animal skins became part of the museum during the Hellenistic era. It became an encyclopedic institution that promoted research, discussion, and lectures on everything from religion to medicine, myth, philosophy, zoology, and geography. Museums, like libraries, were places to increase knowledge through scientific activities, exhibitions, and other programs that contributed to and encouraged public enlightenment. The role of museums has changed over time, and the Romans used the concept of museums as exhibition spaces to present exotic attractions. It seems that it was understood from the beginning that exhibitions would be the museum's primary form of communication with the public.

Museums play a very important role in strengthening cultural heritage and concern for cultural heritage as a national identity influences cultural development through public visits to museums. The increasing enthusiasm of the community can develop if there is a credible museum management process, especially at the collection processing stage as a form of data collection of the nation's cultural heritage identity. The community sees museums as storage of ancient objects, as a place to obtain historical information as well as a place of entertainment. However, several Indonesian museums, especially in West Sumatra, now represent more formal impressions such as office buildings, piled up items without any clear identity, dull and scary spaces so that there is less impression of having an attraction to invite the interest of the community or tourists to visit them. This is an urgent challenge for researchers to improve and expand information about artifact museums, especially in the field of managing existing collections as the main element of the presence of museums. Even further, information tools from existing collections can be provided electronically/virtually, creating a platform for managing digital artifacts, processing new identities for their physical appearance in accordance with the rules for processing non-book collections like in libraries to preserve Indonesian cultural artifacts through standard search facilities according to the standards set in the realm of Library Science.

The city of Jakarta has a museum development that is very far from expectations. For example, the National Monument (Monas) as one of the capital city's icons, the number of visitors over the past two years (2) years has decreased from 1,515,844 to 1,369,472 [6]. The museum itself has not been properly innovated, especially in presenting important information from each collection item available to be served to the public in terms of technology [7].

The management of museum collections is carried out clearly according to the rules in the realm of library science, especially in West Sumatra. Important documents for all museums, regardless of funding, collections, or location, need to be considered carefully. The guidelines presented here are intended to be a guide for museums to manage their collections properly so as to produce effective information retrieval facilities. This is emphasized by the ICOM Code of Ethics (2006), "Museum collections should be documented according to accepted professional standards. Such documentation should include a full identification and description of each object, its associations, provenance, condition, treatment and present location. Such data should be kept in a secure environment and be supported by retrieval systems providing access to the information by museum personnel and other legitimate users." Museum collections must be documented in accordance with established professional standards. The documentation must include a complete identification and description of each object, its association, provenance, condition, care, and current location. The data must be stored in a secure environment and supported by a retrieval system that provides access to the information by museum personnel and other authorized users. Furthermore, Jerry Weber (2009) in order to be considered professional and meet the required standards, each museum must be able to meet the minimum standards, whether a small community collection with one or two volunteers or a national institution with a number of staff and thousands of visitors.

Comparative aspects, the results of initial observations in the field, researchers visited various institutions including the Adityawarman Museum, the Bank Indonesia Museum, the Minangkabau Cultural Documentation and Information Center (PDIKM), and the Bagindo Aziz Chan Museum as an initial step in conducting pre-research. The museums were selected based on location, popularity, and historical content that may be relevant to updating collection management based on standard reference standards for museums.

One of the museums in Padang City is the Adityawarman Museum which is located at Jalan Diponegoro No. 10 Padang, inaugurated on March 16, 1977 by the Minister of Education and Culture, Prof. DR. Syarif Thayeb. Based on the Decree of the Minister of Education and Culture of the Republic of Indonesia No. 01/1991 dated January 9, 1991, this museum was named Adityawarman. This is to commemorate the services of a Minangkabau king in the 14th century AD. In accordance with the Decree of the Level II Regional Government of Padang No. 3071/SDTK/XVIII-74 dated August 8, 1974. This museum was built in the Tugu Field complex on Jl. Diponegoro Padang, on a land area of 2.5 Ha. The outer yard of the museum is overgrown with 100 types of plants in the form of shade trees, ornamental plants and a living pharmacy. The Adityawarman Museum is arranged in such a way as to resemble the Rumah Gadang building (a traditional house as a symbol of the Minangkabau people). In the building are stored objects of historical value in order to preserve the historical values of the nation's struggle in ancient times.

Most of the Museum's collections were initially acquired through donations. Based on the list of collections from 1974 to 2000, it is known that from 1974 to 1993 the Adityawarman Museum collection consisted of 30 Geological collections, 9 Biological,

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5063 Ethnographic, 31 Archaeological, 29 Historical, 117 Numismatic/Heraldic, 53 Philological, 657 Ceramic, 91 Fine Arts, 9 Technological, the total number of the Museum's collections from 1974 to 1993 was 6089. From 1993 to 1994 the Ethnographic collection increased by 196, and the Historical collection increased by 3 collections, Philological increased by 4 pieces. Then in 1994 to 1995 the Geological collection increased by 1, Ethnographic by 102, Archaeological by 2, Historical by 17, Philological by 11, Ceramic by 16, Fine Arts by 3, Technological by 4. In 1995 to 1996 all collections experienced additions, namely, the Geological collection increased by 5, Biological by 9, Ethnographic by 117, Archaeological by 37 collections, Historical by 10 collections, Numismatics/Heraldica by 1, Philological by 13, Ceramic by 23, Fine Arts by 3, Technological by 28. From 1996 to 1997 the Geological collection increased by 2, Biological by 8, Ethnographic by 123, Historical by 3, Numismatics/Heraldica by 34, Philological by 16, Ceramics by 15, Fine Arts by 6. From 1997 to 1998 the Ethnographic collection experienced the largest increase, namely 106 collections, Numismatics/Heraldica by 3, Ceramics by 2, Fine Arts by 1. From 1998 to 1999 the Ethnographic collection increased by 52 collections, Historical by 1, Numismatics/Heraldica by 6, Ceramics by 4, Fine Arts by 2 collections. From 1999 to 2000, the Ethnographic collection increased by 58 collections, Archaeology by 1 collection, History by 3 collections, Numismatics/Herald by 8 collections, Philology by 7 collections, Ceramics by 13 collections, Technology by 9 collections. Furthermore, from 1974 to 2000, the collection that experienced the most additions was the Ethnographic collection, which was 5,817 collections, and the collection that experienced the least additions was the Biological collection, which was 26 collections. The next museum surveyed was the Bank Indonesia Padang Museum or the Old Bank Indonesia Padang Building or the Former Bank Indonesia Padang Office Building (formerly De Javasche Bank Padang). A museum with a colonial architectural building, a legacy of the Dutch East Indies government, the former Bank Indonesia (BI) located on Jalan Batang Arau, Padang Barat District, Padang City, West Sumatra. This building was built on March 31, 1921 and was first used as a branch office of De Javasche Bank before being taken over by BI on July 1, 1953. It is located near the Sitti Nurbaya Bridge, which was built across the Batang Arau River [1].

The shape of the building is quite unique because the building used is still designed in the form of a colonial building. The museum offers various documentation during the Indonesian Independence period. The Proclamation Manuscript Formulation Museum is one of the traditional museums. Dioramas and Printed Information for each collection are seen in each room providing information in a format that is not yet systematic. Based on the results of observations that some information from the collection is very detailed and well curated, and some are only basic descriptions of an object related to the display. The dioramas are accurately depicted based on history and are well documented by several photos. Some of the collections are displayed as posters with very long text as their information. This condition certainly requires a long time for visitors to read in a room that is not suitable for reading for a long time.

On the one hand, some collections even make researchers unable to check one by one the sources of information displayed in the museum collection which is shabby or even damaged. The atmosphere of the museum is quite quiet and static while the content is very interesting and focused. Then, some collections present very basic information. Researchers found the potential to improve the management of museum collections systematically according to standards.

Furthermore, a survey was conducted at the Minangkabau Cultural Documentation and Information Center or commonly abbreviated as PDIKM. PDIKM is one of the museums in West Sumatra located in Silaing Bawah Village, West Padang Panjang District, Padang Panjang City [1][2]. This museum contains various kinds of information and collections about Minangkabau culture in the form of audio and visual documentation [1][2][3]. This museum can be accessed from the main Padang-Bukittinggi route, approximately two kilometers from the center of Padang Panjang City as one of the famous landmarks in Padang Panjang. This site was chosen because of its popularity and diverse content including archaeology, history, ethnology, and geographical aspects of West Sumatra. Researchers focused on the ethnographic collection because of the diversity, size and type of objects displayed. The museum provides a static experience with most artifacts that are very minimal in information. As a traditional museum, the ethnographic section is one of the most popular areas. With artifacts from West Sumatra in particular, this section has a lot to offer through various interesting objects. Then the Bagindo Aziz Chan Birthplace Museum was inaugurated on August 18, 2019, located at Jalan Alang Laweh Koto No. 7 RT / RW 19/5. Kel. Alang Laweh. Kec. Padang Selatan. This museum has a lot of important information that can be a source of learning or education for school children, students, students and the community as well as a reference for researchers. The survey results show that this museum does not yet have a search tool. With the collection catalog guidebook, visitors will get convenience and explanations related to the collections available at the museum.

As a data reservoir, the protection and proper management of objects is a primary task for museums. A well-managed museum has a clear identity and public image as a healthy and viable institution. The director and staff responsible for managing the museum must understand how their activities advance the institution's mission and add value to its public service role. Furthermore, management must reflect the values of the institution, and demonstrate an understanding of accountability for the actions taken. As Boylan says, "Successful museum management, in the new century, will require high vision and ethical standards, both externally and internally (with respect to relationships within the museum). It must be recognized that personnel (collectively - of all types and at all levels) and effective management of leadership are critical to the success or failure of a museum [1].

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Most museums strive to maintain their collections well and their facilities must be highly organized. It is essential that museums operate through systems and structures designed to maximize their ability to achieve their stated goals. In museum operations, all elements support each other; each element contributes to the advancement of the institutional mission. The primary job of staff is to develop policies that determine how the museum's collections are best managed. This responsibility includes, among other things, collections management. Therefore, collections management can be viewed as a means of improving the museum's response to acquiring, preserving and researching material evidence from visitors, as advocated by ICOM. This attitude is a model for decision making that includes the development of long-term practices for the care and management of collections [2].

This condition is in contrast to the collection management of several existing museums, especially the Mande Rubiah Museum, which does not yet comply with museum collection management standards. The implementation of existing management varies for curators depending on the needs, facilities and conditions available. Meanwhile, several standard guidelines related to museum collection management have been issued by official government and non-government institutions in Indonesia. However, several stages are not in accordance with the reference standards for museum collection management and their application in various museums is also still not in accordance with the existing guidelines and is even far from the reference standards for museum management in the realm of library science.

This study will investigate various aspects of collection metadata management and its application to the research object and produce a Draft Collection Management Guide for the Mande Rubiah Museum. The research stages include; 1) The importance of objects and their conditions, 2) Museum Collection Inventory, 3) Collection classification, 4) Collection management policies, 5) Analysis of collection management practices, 5) Recommendations for implementing collection management policies, 6) Collection management practices for the Museum.

Museum collections represent unique and irreplaceable resources, collections represent people and their ideas because objects are manifestations of people's attitudes and beliefs. Many studies have tried to define the importance of objects as material culture. Through objects we can interpret history and distinguish them in different eras from our past. Pitt-Rivers articulated an early definition of an object as the outward signs and symbols of certain ideas in the mind [2]. Deetz defines material culture differently as the segment of man's physical environment that is intentionally shaped by him according to a culturally determined plan [2]. It should be noted that collection metadata management should not only involve inventory control and access to information on the objects themselves, but should also include the idea of intellectual management and access – “the data itself is the ‘object’”. [3] In other words, more than the object itself should be preserved. According to Loy, collection management is not just a more modern phrase to replace the term “curation”. He asserts that collection management is the embodiment of a strategy to provide access and control over the entire collection and the data that accompanies it [4].

Furthermore, the integration of metadata and digitization of collections also opens up opportunities for the development of digital or virtual museum services, so that local cultural collections can be accessed by the wider community, students, researchers, and the Minangkabau diaspora online. This is in line with the approach [10] GLAM (Galleries, Libraries, Archives, and Museums) promoted by UNESCO and IFLA as a model of synergy between institutions preserving culture and knowledge in the digital era [10]. With this approach, museums are no longer storage spaces for inanimate objects, but become active centers for education, documentation, and strengthening an local identity. Based on the issue of the Mande Rubiah Regional Museum, the author is interested in analyzing How is the development of the South Coast Museum Design Metadata based on the ICOM Standard and How is the Implementation of the South Coast Museum Design Management Guide? And what is the description of the management results and obstacles faced.

### RESEARCH METHOD

This research method is a qualitative research method with a case study method in the Pesisir Selatan area applied to the Pesisir Selatan Regional Museum. Data were collected through participatory observation, in-depth interviews with museum managers and educators, and collection documentation. In addition, a literature review was conducted on the development of metadata and its implementation in various cultural institutions. The research was conducted at the selected Pesisir Selatan museum in West Sumatra representative of the research study. The research was conducted for six months, namely from May to October 2024. Meta data analysis was carried out by reduction, data presentation, and verification (drawing conclusions) [16].

### Museum Concept

George Browne Goode (1897) [3], Director of the Smithsonian Institution's National Museum of the United States, defined a museum as an institution for the preservation of objects that best illustrate natural phenomena and the works of Man, and the use of this to increase public knowledge. The United States Congress, in the Museum and Library Services Act (1976) [2] in Title II of P.L. 94-462, defines a museum as a public or private non-profit body or institution, permanently organized for educational or aesthetic purposes, employing professional personnel, owning or utilizing tangible objects, maintaining tangible objects, and exhibiting tangible objects to the public on a regular basis. Both definitions have important qualifications that distinguish museums



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from exhibition galleries, collections of antiquities, and other types of property that may be managed by an institution. A museum is also defined as a permanent establishment, managed for the public benefit, with the aim of preserving, studying, improving in various ways and, in particular, exhibiting to the public for presentation and teaching groups of objects and examples of cultural value: artistic, historical, scientific and technological collections, botanical and zoological gardens and aquariums and others (Riviere, 1960) [4].

Fraser (2019) [1] states that a museum is a democratic, inclusive, and polyphonic space for critical dialogue about the past and the future. Museums as institutions for the benefit of society, dedicate themselves to exploring and understanding the world by researching, preserving, and communicating, primarily through interpretation and exhibition, the tangible and intangible evidence that constitutes the heritage of humanity. So that museums are categorized as non-profit institutions (Davis, Mairesse, & Desvallées, 2010). In line with the definition above, the American Association of Museums (AAM) to become a museum must meet the following requirements:

- a. be a legally organized nonprofit institution or part of a nonprofit institution or governmental agency;
- b. be primarily educational in nature;
- c. have a formally stated mission;
- d. have one full-time professional staff member who has museum knowledge and experience and is delegated authority and sufficient financial resources to operate the museum effectively;
- e. present regularly scheduled programs and exhibitions that use and interpret objects for the public according to accepted standards;
- f. have a formal and appropriate program of documentation, care, and use of collections and/or tangible objects;
- g. have a formal and appropriate program of presentation and maintenance of exhibits (International Art Museums Division Smithsonian Institution, 2001).

The museum is a public service organization and deals with its objects—exhibits and visitors. It has several responsibilities to the objects and the public and as such, carries out various activities on a regular basis. The image and popularity of the museum depend on its public-friendly approach, entertainment, entertainment facilities in addition to its contributions to research and education.

### **Museum Collections Management**

Museum management consists of the policies, procedures, processes, and activities essential to fulfilling the specific functions of a museum, such as acquiring, documenting, and preserving collections in appropriate facilities and providing access to and use of the collections for purposes such as research, exhibition, and education. The production of exhibitions, the presentation of interpretive and educational programs, and the publication of catalogs, books, and websites that feature the museum's collections and themes are all part of museum management. Administrative functions related to funding, human resources, maintenance, and property management are also part of museum management and require specific knowledge and skills specific to the museum environment [11].

Museum collections management is one aspect of museum management. It is a process, not a product. It is a systematic approach to the proper preservation and wise use of museum objects. It encompasses every activity related to the acquisition, accountability, documentation, conservation, protection, disposition, and use of museum objects. It involves assessing and planning for the short-term and long-term needs of the collection as well as carrying out the day-to-day care of the objects on display and in storage. The goal of collections management is to make the museum's collections available to users for display and study while preserving them for future generations.

## **RESEARCH RESULTS**

In the digital era, the role of museums is no longer limited to being a place to store historical objects, but has developed into a more dynamic center for education and cultural preservation. On the other hand, local wisdom as part of intangible cultural heritage has great potential in enriching the insights of the younger generation. However, many regional museums in Indonesia still face challenges in packaging collection information in an interesting and educational way. One solution offered is the integration of information technology, especially through the development of a structured and contextual metadata system.

Local Wisdom and Education reflect the values, norms, and traditional practices that develop in society. In the context of education, local wisdom becomes a source of contextual learning that can strengthen cultural identity and a sense of nationality. Metadata and Information Technology in Museums Metadata is data about data—a structured description of a digital or physical object that facilitates the search, interpretation, and management of information. In museums, metadata allows visitors, researchers, and students to understand the context, history, and cultural values of the collections displayed.

Pesisir Selatan Regency is one of the regencies that has a million charms as a tourism area.



Figure 1. Map of the South Coast (Source: Google Documentation) <https://chatgpt.com/?ref=dotcom> ) [22]

But as a tourism area, one area must have a museum. The only museum that exists now is the Mande Rubiah Museum. For more details, see below:



Figure 2. Mande Rubiah Gadang House, South Coast (Source: Google Documentation) <https://chatgpt.com/?ref=dotcom> ) [22]

Pesisir Selatan Regency in West Sumatra has a museum that is very important in preserving Minangkabau culture and history [21], namely the Rumah Gadang Mande Rubiah Museum

Rumah Gadang Mande Rubiah Museum

- Location: Lubuk Sitepung Village, Lunang Village, Lunang Silaut District, Pesisir Selatan Regency.
- History: This museum is a historical legacy of Bundo Kanduang, an important figure in Minangkabau culture. In 1520, Bundo Kanduang and his family and followers moved from Pagaruyung to Tanah Menang (Lunang Village). Since then, Bundo Kanduang's

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title has changed to Mande Rubiah. On March 7, 1980, Rumah Gadang Mande Rubiah was designated as a local museum in West Sumatra [17].

- Collection: This museum houses around 213 collections, including traditional clothing, ancient manuscripts, religious and traditional ceremonial tools, and other heirlooms. The collection of manuscripts in this museum consists of religious texts such as fiqh, tafsir, tauhid, history, and the Qur'an, which are rich in beautiful illuminations [18].

- Function: In addition to being a place for cultural preservation, this museum also functions as an education center for the community and tourists who want to understand more about the history and culture of Minangkabau [19].

The Rumah Gadang Mande Rubiah Museum is one of the important cultural tourism destinations in Pesisir Selatan Regency. Its existence not only enriches the tourism sector, but also strengthens the cultural identity of the region. In addition to this museum, Pesisir Selatan Regency also has the potential to develop other cultural tourism destinations, such as the planned construction of a museum in Nagari Salido which will store and exhibit historical objects from the Inderapura and Bandar Sapuluah Kingdoms.

The only museum that exists and is owned by the Pesisir Selatan community is the Rumah Mande Rubiah Museum which was founded by the Muskala Kanwil P&K of West Sumatra Province on March 8, 1980. This museum is more often referred to as the Rumah Gadang Mande Rubiah. And the owner of this Gadang house has a relationship with the Pagaruyung Kingdom, which is estimated to have existed since the 14th century. This museum is located on Jl. Bundo Kanduang, Kp. Lubuk Sitepung Nagari, Lunang, Kec. Lunang, Pesisir Selatan Regency, West Sumatra. Not much different from the condition of museums in the region, the management and administration of the Mande Rubiah Museum have not followed the standard collection management standards with international standards. In addition, the location of the museum which is far from the center of the Pesisir Selatan Regency government also has an impact on the lack of public access to the museum location. Even the sad condition is that many people in Pesisir Selatan have visited the Istana Pagaruyung Museum in Batusangkar but have never been to the Mande Rubiah Museum. In fact, from its existence, the Mande Rubiah Museum has a relationship with the Pagaruyung Kingdom and ideally could be a regional icon and tourist destination for Pesisir Selatan Regency like the Istana Pagaruyung Museum in Batusangkar.

The lack of public interest in the Mande Rubiah Museum because they consider the museum to be a boring place and only present ancient objects without interactive appeal. The lack of early education about the importance of museums as a source of learning and cultural preservation makes people not accustomed to visiting museums. The lack of promotion is also an important factor in museums not being known and sought after as public tourist destinations.

The Mande Rubiah Museum has a diverse collection. The types of collections include manuscripts, coins, paper money, sharp weapons, kitchen utensils, religious and traditional ceremonial tools, buffalo head skeletons, garuda bird eggs, firearms, large porcelain plates, lamps, and sticks. The total number of collections in this museum is 360 pieces. This museum also functions as a place to store various historical relics from the Pagaruyung Kingdom. Inside, there are various artifacts from the descendants or heirs of the Pagaruyung Kingdom. This museum houses around 213 collections of various types. All of these collections are exhibited in an area of 20,000 square meters, with the main museum building covering an area of 1,000 square meters. However, it is unfortunate that the intellectual wealth and cultural heritage owned by the museum are not known to the public, especially the people of the Pesisir Selatan area itself. In line with the plan to build the Pesisir Selatan Regency Regional Museum which will be located in the center of the district government, namely Painan City, the Regional Government needs a foundation for documentation of collections and a standardized and locally based metadata management system. The new museum is designed as an educational hub and cultural center that integrates historical artifacts, traditional values, and cultural identities of the Pesisir Selatan community, as well as a vehicle for preserving cultural heritage that can reach the wider community and the younger generation in a sustainable manner. In this context, the Mande Rubiah Museum as the only museum that already exists and stores material heritage from the Pagaruyung Kingdom, has strategic value as a primary source. As previously mentioned, this museum stores more than 360 cultural collections including traditional weapons, ancient money, traditional manuscripts, ritual artifacts, and heirlooms that represent the journey of local culture. However, until now, there has been no adequate metadata documentation and cataloging system for these collections.

Therefore, the development of metadata for the Mande Rubiah Museum collection is not only aimed at improving the management of the existing museum, but also as an initial stage to provide a documentation basis, information system, and cultural narrative for the new museum being designed by the local government. This is in line with the principle of "Collection Management as Infrastructure" in modern museology studies, where collection documentation is the initial framework in building a quality museum experience [7].

The development of a good museum must begin with the arrangement of standardized, documented collections, and connected to a digital system [8]. In many cases, regional museums in Indonesia fail to function optimally because they are built without the readiness of collection management and metadata [9]. Therefore, this research is very relevant and urgent to ensure that the development of the Pesisir Selatan Regional Museum is not only oriented towards physical infrastructure, but also has a strong curatorial, documentary, and educational basis. This research also forms the basis for further research in a series of research on the development of educational tourism based on local wisdom in Pesisir Selatan Regency.

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## Metadata Development for Local Wisdom Education

Metadata is information that describes data. In the context of museums or cultural collections, metadata explains the what, who, when, where, and why of an object [16]. For example, metadata for a traditional cloth can include:

- a. Name of the cloth
- b. Region of origin
- c. Materials and manufacturing techniques
- d. Meaning of symbols or motifs
- e. Cultural function (e.g. for traditional ceremonies)
- f. Related folk tales

Metadata makes an object not only a visual artifact, but also a source of knowledge that can be accessed and understood. Local wisdom is a collection of values, knowledge, beliefs, traditions, and habits that are born from local communities and passed down from generation to generation [17]. For example:

- a. Traditional agricultural systems
- b. Rumah gadang architecture
- c. Customary law
- d. Traditional folk tales or pantun

These values are highly contextual, and are usually not found in formal textbooks. Therefore, promoting local wisdom in Education [18] is a way to:

- a. Foster local identity and pride
- b. Forming a character based on culture
- c. Strengthening a sense of love for ancestral heritage

## Metadata for Local Wisdom Education

Metadata for formal education, materials about local culture are often incomplete or not presented in an interesting way. This is where metadata plays a role:

- a. Facilitating Access: Metadata makes cultural information easier to find and understand, both by students, teachers, and the general public.
- b. Contextualizing Learning: With metadata containing cultural narratives, students not only learn "what rendang is", but also what it means, how the social process of making it is, and its role in the lives of the Minang community.
- c. Supporting the Independent Curriculum and Contextual Learning: Metadata allows teachers to create teaching materials from local objects, which are closer to students' lives.
- d. Bridging the Digital World and Tradition: Metadata can be included in digital platforms, applications, or museum websites, so that local values remain alive in the technological era.

Example of Museum Implementation in Pesisir Selatan

For example, in the Pesisir Selatan Regional Museum:

Traditional boat is made into metadata:

- a. Name: "Kajang Lako" canoe
- b. Function: Means of transportation for fishermen and trade
- c. Cultural value: Symbol of human relationship with the sea
- d. Local story: Used in rituals to ward off disaster

• This metadata is entered into a digital system, complete with photos, audio explanations, and even videos. Teachers can use this for social studies, arts and culture, or cross-disciplinary projects.

The challenges of information management in regional museums in the West Sumatra region are as follows:

### 1. Challenges of Information Management in Regional Museums

The Pesisir Selatan Regional Museum houses many historical collections related to Minangkabau culture, local history, and maritime life. However, collection information is still presented conventionally, limited to physical labels with short narratives, which are less able to arouse the interest of the digital generation.

### 2. Development of Contextual Metadata

Metadata development is carried out by mapping important elements such as object names, materials, manufacturing techniques, origins, functions, cultural narratives, and relationships with local wisdom values. Metadata is arranged in a digital format based on the Dublin Core standard that is adjusted to the local context.

### 3. Integration of Digital Technology

Metadata is integrated into a digital collection management system that can be accessed through mobile applications and museum websites. This allows users to browse collections based on themes, cultural values, or relevant historical stories.



## Integration of Information Technology in the South Coast Regional Museum: Metadata Development for Local Wisdom Education

For example, the songket cloth collection is not only displayed visually, but is also equipped with a narrative about the meaning of the motif and its use in traditional ceremonies.

### 4. Impact on Education

The use of metadata and digital technology encourages a project-based learning approach in schools. Teachers can use materials from the museum to develop curriculum-relevant assignments, such as creating presentations, cultural essays, or student documentary videos.

## CONCLUSION

The integration of information technology through the development of metadata has been proven to strengthen the educational function of regional museums, especially in transforming local wisdom into relevant and interesting learning resources. This effort not only increases the accessibility of cultural information, but also strengthens local identity and community participation in preserving cultural heritage. In the future, collaboration is needed between cultural institutions, education offices, and digital communities to create an inclusive and sustainable cultural learning ecosystem. Metadata development is not only about technical documentation, but also a strategy for preserving culture and educational innovation. With metadata, cultural objects become more alive, relevant, and can be actively used in the learning process. This is a concrete step to ensure that local wisdom is not only stored, but also studied and passed on contextually and meaningfully.

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