



# Visualizing Prehistoric Collections: Cultural Representation at Sri Baduga Museum

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## ABSTRACT

Sri Baduga Museum preserves around 7,000 artifacts representing West Java's cultural heritage, yet the current visualization of its prehistoric to Hindu-Buddhist collections on the first floor has not fully supported visitors' understanding. The 49% decline in visitor numbers from 2023 to 2024 further highlights the urgency of evaluating the effectiveness of visual communication in conveying cultural meanings. Addressing the limited scholarly attention to local cultural visualization—particularly Sundanese heritage—this study examines how the museum's visual elements represent West Javanese culture and identifies obstacles that hinder visitors' interpretive processes. Employing a qualitative approach using observation, interviews, and questionnaires with 35 respondents, this research explores visitors' perceptions and experiences. The findings show that 62% of visitors find the visual presentation appealing; however, issues such as small text, dense infographics, and an inadequate layout reduce readability and constrain meaning-making. Through Peirce's semiotics, Stuart Hall's representation theory, and the Shannon-Weaver communication model, the study reveals that suboptimal visual design generates communicative "noise" that disrupts cultural interpretation. The study contributes to the field by foregrounding Sundanese cultural visualization within a regional museum context, a topic rarely discussed in Indonesian museology literature. These insights underscore the need for more interactive, contextual, and modern visual strategies to enhance visitor understanding, engagement, and the overall effectiveness of cultural representation.

## Keywords

visual communication; museum studies; west Javanese culture; cultural representation; visitor engagement

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## INTRODUCTION

Culture is a system of ideas, including values, knowledge, symbols, and beliefs, that guide people's social behavior. To understand a culture, a means is needed to store, preserve, and introduce it to the community; one such means is a museum. Museums play an important role in conveying cultural information through various forms of communication, including visual communication, which is crucial for attracting interest and deepening visitors' understanding of cultural heritage (Denysiyuk, 2021; Ippoliti & Albisinni, 2016).

The role of museums has undergone a significant transformation over time. In the colonial era, the museum served as a repository of exotic objects collected by the European elite to show their power and cultural dominance (Bennett, 2013; Guillot, 2014). After independence, museums in Indonesia began to function as centers for education and cultural preservation (Sunaryo, 2022). In the modern era, the museum paradigm is an interactive communication medium that presents a visually based educational experience (Polyakova & Poydina, 2018). The concept of the "new

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museum" emphasizes knowledge exchange, social engagement, and inclusivity in access to information and facilities, which is useful for building connections between collections and visitors (Ippoliti & Albisinni, 2016b; Vasylenko & Butko, 2021). However, the museum has now transformed into a public space that keeps up with the times by using technology and hosting interesting programs. That way, the museum managed to attract visitors from various walks of life. In addition, collaborating with other parties makes a museum relevant to the needs of the community (Marsitaully, 2024)

Museums in Indonesia today are not only places to exhibit history and culture that are considered boring, but also places that everyone can access through the various activities they offer. The museum also ensures that all visitors can access and experience the museum's benefits and presence. In Indonesia, there are 442 museums with rich histories and diverse cultures (Kementerian Pendidikan Dasar dan Menengah [Kemendikdasmen], 2025). Therefore, museums in Indonesia are classified in several ways. The first classification of museums, based on collections, divides them into public and special museums. The second classification, based on the organizers, is divided into two categories: government museums and private museums. According to the Ministry of Education and Culture, there are also various other museums, such as archaeological, art, automotive, military, biographical, and historical museums (Kumparan, 2022; Husni et al., 1994).

The museum has now transformed into a dynamic public space by leveraging technology and hosting engaging programs that reach diverse groups. According to data from the 2024 Museum World Ranking, one of Indonesia's best museums, with the highest global ranking, is the National Museum of Indonesia, which ranks 293rd worldwide. The National Museum of Indonesia, also known as the Museum Gajah, is the oldest and largest museum in Southeast Asia, housing an extensive and diverse collection since its establishment on April 24, 1778. During the COVID-19 pandemic, the number of visitors dropped drastically to 3,175. However, through the effective implementation of visualization analysis, such as temporary exhibitions, appealing spatial layouts, informative signage, and interactive public programs like the Museum Smart Competition (LCCM), dance and gamelan classes, and various seminars, visitor numbers surged to 399,220 during the 2021-2022 period. This achievement demonstrates the importance of visual communication in enhancing the museum's appeal and strengthening visitors' understanding of the cultural heritage on display (Dierking et al., 2013; Sukirno, 2020).

This phenomenon shows that visualization analysis is a crucial factor in a museum's success in attracting and retaining visitors. The results of the study show that museums and cultural experiences are now undergoing transformation through the integration of digital technologies and innovative approaches. The shift from a passive exhibit model to an active, immersive, and personalized experience enhances visitors' emotional and sensory engagement (Capece & Chivăran, 2020). In addition, the development of new models for providing cultural knowledge and experiences that are multisensory, inclusive, and personal is also a success in increasing visitors' emotional and social engagement. Elements such as images, colors, typography, and layouts, as well as digital technologies such as virtual reality and interactive multimedia, have been shown to enrich the visitor experience and deepen understanding of the cultural content displayed (Denysiyuk, 2021).

Although several studies have examined the effectiveness of visualization in museums, research that specifically analyzes visualization within the context of West Javanese culture remains very limited. Most previous studies have focused on national museums or technology-based museums, leaving unexplored the ways in which visualization is used to represent local cultures, particularly Sundanese culture. This gap highlights the need for research that more comprehensively investigates the visualization of West Javanese culture.

Based on this phenomenon, the author conducted research on the Sri Baduga Museum. The Sri Baduga Museum is one of the museums that plays an important role in introducing the history and traditions of the Sundanese people in West Java. With typical Sundanese stilt house architecture and a thematically arranged collection, this museum aims to provide an immersive educational experience. However, in recent years, the Sri Baduga Museum has faced a serious challenge: a decline in visitor numbers. Data show that the number of visitors decreased by 49%, from 66,547 in 2023 to 32,741 in 2024. The main cause of this decline is suspected to be an inadequate delivery

of visual communication and a lack of innovation in exhibition presentation (Rebollo-Sánchez et al., 2024). The choice to research the museum was based on the richness of the local cultural narratives presented in its collections, as well as the need for an in-depth academic analysis of how the museum constructs and conveys cultural representations to the public, especially in the midst of the challenges of globalization that are driving changes in the presentation of cultural heritage (Hooper-Greenhill, 2000).

Research on the Sri Baduga Museum indicates a decline in visitor numbers, which is suspected to be due to suboptimal visual communication in its exhibition displays. Meanwhile, the decrease in visitors to the Mandala Wangsit Siliwangi Museum is influenced by dissatisfaction with the condition of the collections' interiors, limited promotional efforts, poorly maintained museum facilities, and a difficult-to-access location (Suryani et al., 2018). In this context, although both museums face declining visitor numbers, previous studies highlight that the underlying factors differ. Therefore, the research approach used for the Mandala Wangsit Siliwangi Museum cannot be equated with this study, which focuses on visual communication as the primary aspect that remains under-examined.

The study conducted at the Mandala Wangsit Siliwangi Museum employed a systematic random sampling method to analyze the relationship between the independent and dependent variables. The independent variable examined was Perceived Quality, which consists of four sub-variables: Service Interaction, Service Evidence, Product Functionality, and Product Enrichment. The dependent variable in that study was the level of visitor satisfaction at the Mandala Wangsit Siliwangi Museum. Meanwhile, the author's research uses a qualitative, descriptive approach. This approach is intended to provide a factual and systematic depiction of the phenomenon being studied, namely, how visitors understand cultural representation in the collections of the Sri Baduga Museum through visualization analysis.

This research is important for evaluating the extent to which visual communication in the Sri Baduga Museum collection effectively represents West Java culture to visitors. For this reason, Peirce's (1931/2005) semiotic theory approach is used, which offers a triadic model of representation, object, and interpretation to trace the relationship between visual signs and constructed cultural meanings. In addition, Hall's (1997) theory of cultural representation helps explain that cultural representation in museums is not a neutral process but is influenced by social constructs, ideologies, and power. As a supporting theory, Shannon and Weaver's (1949) communication model is applied to analyze how visual messages are conveyed to audiences and the possibility of disruption in the communication process. With this combination of approaches, the research aims to contribute to the study of visualization analysis in local museology, enrich academic understanding of cultural representation in museums, and offer strategic recommendations to optimize the delivery of cultural messages through visual media.

## **METHOD**

This study uses a qualitative, descriptive approach. According to Bogdan and Taylor (1975), qualitative methods produce descriptive data in the form of written or spoken words from observed behaviors. In line with the findings, Creswell (2003) notes that the qualitative approach investigates social phenomena and human problems. The descriptive approach was chosen to provide a factual and systematic picture of the phenomenon being studied, namely, visitors' understanding of cultural representations in the Sri Baduga Museum's collection, through a visualization analysis. The subjects in this study are visitors to the Sri Baduga Museum in Bandung. The number of respondents was 35, consisting of 22 men and 13 women, aged 18 to 45 years. Respondents were selected from individuals who had visited the museum at least once, including students, university students, tourists, and the general public, as well as visitors present during the observation period. The sample was selected based on the frequency of visits and visitors' willingness to complete the questionnaire. Meanwhile, the research focuses on the visual communication of the collection on the museum's 1st floor. This location was chosen because the Sri Baduga Museum plays an important role in the collection and preservation of Sundanese culture in West Java.

The data collection methods in this study include observation, interviews, and documentation. Observations were conducted over a 4-month period from August 2024 to December 2024. The author observes the exhibition layout, the design of information labels, and the use of colors,

typography, iconography, and digital interactive media to convey the narrative of Sundanese culture to visitors. Interviews were conducted in a semi-structured manner to museum management staff, with a duration of 10 minutes. Questionnaires were distributed to visitors for one month in December 2024. This was done to gain an understanding of the visualization analysis of prehistoric collections – Hindu-Buddhist kingdoms, audience perceptions, and challenges in building effective cultural representations. In addition, documentation was collected over a one-month period in December 2024, including photographs of exhibition elements, catalogs, brochures, museum activity reports, and visitor data, to enrich the observational results and strengthen the semiotic analysis.

Data analysis is carried out in three main stages: data reduction, data presentation, and conclusion drawing and verification. Data reduction is achieved by filtering and simplifying raw data to produce relevant information that focuses on the research objectives. In this study, data reduction was achieved through interviews with museum staff and questionnaires distributed to visitors. First, the author collected all the interview responses and questionnaires. Furthermore, the data is grouped into main themes based on answers that have similar meanings among respondents. The presentation of data aims to organize the findings so that they can be read and analyzed more easily. In this study, data presentation involves preparing findings from data analysis and field observations. The data is presented in thematic tables. The table is created based on the results of data analysis, the number of respondents, and the problems found. This helps researchers see common patterns of visitor responses.

The data analysis process consisted of three stages: data reduction, data presentation, and conclusion drawing. Data reduction was carried out by selecting and simplifying information obtained from observations, interviews, and questionnaires. Data presentation was arranged using interview excerpts and visual documentation to facilitate identification. Meanwhile, conclusions were drawn gradually by comparing field findings and verifying them through repeated data checks throughout the analysis process.

Data validity was ensured through methodological triangulation, including observations, interviews, questionnaires, and documentation, as well as source triangulation with museum visitors and staff. This process was carried out to confirm the consistency between observational findings and the results of questionnaires and interviews. In addition, Peirce's semiotic theory was used to interpret the meanings of visual signs, while Hall's theory of cultural representation was applied to understand how cultural meanings are constructed through the presentation of collections. These two theories serve as the interpretive foundation for explaining how the Sri Baduga Museum presents and communicates Sundanese culture through the visualization of its collections.

Conclusions and verification are carried out to address the problem formulation logically, but remain open to changes in light of new findings in the field. In this study, conclusions were drawn and verified by comparing the patterns of findings in the field with relevant theories, such as Lester's theory of visual communication and Stuart Hall's theory of cultural representation. This process is continuously verified by re-matching data and findings throughout the analysis. With this method, the research is expected to provide an in-depth picture of how the Sri Baduga Museum constructs a representation of West Java culture through its visual communication.

## FINDINGS AND DISCUSSION

The results of the research regarding the assessment of visitors to the analysis of the visualization of the Sri Baduga Museum collection, including the context of the discussion, research questions, indicators, and percentages, can be briefly seen in Table 1, as follows:

**Table 1.** Research Questions for Visitors to Sri Baduga Museum

| Context                      | Question   | Indicator       | Percentage (%) |
|------------------------------|--|-----------------|----------------|
| <b>Visual Communication</b>  | How do you assess the visual appearance of the collection on the 1st floor of the Sri Baduga Museum? | Interesting     | 62,9           |
|                              |  | Not Interesting | 37,1           |
| <b>Visitor Understanding</b> | Are there any parts of the collection or visualization that you find difficult to understand?        | Yes             | 45,7           |
|                              |  | No              | 54,3           |

|                                |  |         |      |
|--------------------------------|--|---------|------|
| <b>Cultural Representation</b> | Does the collection at the Sri Baduga Museum successfully represent West Java's culture? | Already | 88,6 |
|                                |  | Not yet | 11,4 |








*Sumber: Author's Processed Data (2025)*

The results of the study show that visual communication on the 1st floor of the Sri Baduga Museum collection is quite successful in attracting attention and conveying cultural information to visitors, although some technical obstacles still affect the effectiveness of message delivery. Based on one month of observations, researchers found that visual elements such as basin plans, information labels, and infographics were quite attractive. However, there are some issues, such as the label's font size being too small, the infographic being too dense, and the light indicator on the plan not working. According to the Canadian Museum of Human Rights, ideally, title text, image captions, and object labels should be set in Bold or Regular fonts, 30 pt for titles and 24 pt for description text, with title lengths of 2-5 words and description text lengths of 60-75 words. Text is installed between 890 mm and 1,700 mm from the floor to ensure visibility for visitors sitting or standing, with Universal Access Points (UAPs) at a height of 1,065 mm.

This analysis indicates that the visual elements on the first floor of the Sri Baduga Museum function not only as aesthetic components but also as signs (icons, indexes, and symbols) in accordance with Peirce's semiotic theory. When elements such as labels, colors, and maps are not presented optimally, the visitor's interpretive process as the interpretant is hindered. This condition highlights that ineffective visualization can introduce noise from the perspective of Shannon and Weaver, preventing the museum's intended cultural messages from being fully received by visitors.

Additional data from the questionnaire distributed to the 35 respondents in Table 1 showed that 62.9% of visitors rated the collection's visual appearance attractive, while another 37.1% rated it negatively. The most eye-catching collections include West Java geographical information, animal and plant fossils, and Hindu-Buddhist inscriptions, all of which have prominent visual elements as shown in Table 2.

**Table 2.** Collections and Infographics on the 1st Floor of the Sri Baduga Museum

| No | Objek   | Information                             | Percentage (%) |
|----|---|---|----------------|
| 1  |    | Geographical Information of West Java   | 37,1           |
| 2  |   | Animal and Plant Fossils in West Java   | 37,1           |
| 3  |   | Hindu-Buddhist Royal Relics Inscription | 37,1           |
| 4  |   | Collection of Relics of Ancient Man     | 31,4           |
| 5  |    | Goa                                     | 2,9            |

*Source: Author's Processed Data (2025)*

Based on the questionnaire results, the visual display of the collection on the 1st floor of the Sri Baduga Museum received mixed responses. Most respondents found the display interesting







because it was interactive and informative, especially in the part of the Bandung Basin plan equipped with lights that directly showed the topographic location. The visualization is considered attractive, aesthetically pleasing, and easy to understand, supported by a detailed, structured design that makes it easier for visitors to access information on Sundanese history and culture. The presentation of simple yet complete information provides high educational value and a museum experience that is fun and in keeping with the times.

Positive findings regarding the visual display can be understood through Stuart Hall's theory of representation. When visualizations are presented in an attractive and interactive manner, visitors are better able to construct meaning about Sundanese history and culture. These results are consistent with research conducted at the National Museum of Indonesia, which found that informative visualization can enhance visitor engagement and improve their understanding of local culture.

However, some respondents found the visual display unattractive because it was overly simple and traditional and did not make optimal use of digital technology. The design of the labels and infographics is perceived as too small, plain, and difficult to read, while the collection descriptions are considered too short or too long and confusing. The Bandung Basin plan is also considered less interactive and too complicated by some visitors. Some respondents felt that the collection's look was too ordinary, lacking aesthetic appeal and a satisfying visual experience, especially for visitors less interested in history or expecting a more modern digital experience.

The negative findings indicate challenges in the sociocultural representation process. Visualizations that are perceived as "old-school" or overly simple make it difficult for visitors to fully understand the information presented. This aligns with international studies, such as those by Santagati et al. (2019) and Lazzarotti and Cerquetti (2021), which state that museums with non-interactive visual displays tend to be less effective in attracting younger audiences and helping them develop a deeper understanding of cultural meaning.

**Table 3.** Objects of Analysis and Observation

| Item                      | Picture   | Information   |
|---------------------------|---|---|
| <b>Collection Objects</b> |  | Hindu-Buddhist Royal Relics Inscription             |
|                           |  | Relics of Ancient Man                               |
|                           |  | Goa   |
| <b>Label</b>              |  | Description labels of museum collection objects     |
| <b>Infographic</b>        |  | Infographic about West Java zones, regions and maps |
| <b>Geographic Map</b>     |  | Interactive 3D Map of the West Java Basin           |

Source: Author's Processed Data (2025)

Visualization analysis in museums is the main medium in conveying information to visitors through visual elements such as images, colors, and layouts (Lester, 2002). The results of the study show that the visual communication on the 1st floor of the Sri Baduga Museum is quite attractive to most visitors, but several obstacles still hinder the effective delivery of information at the

museum. These obstacles include label design with a small font size, infographics that are too dense, and several indicator lights on the basin plan that do not work. Analysis based on Peirce's semiotic theory shows that representations (visual signs) in museums must guide visitors (interpreters) in understanding the cultural objects on display. However, if the visual design is less than optimal, the interpretation process can be disrupted, hindering visitors' understanding of the cultural meaning conveyed.

**Table 4.** Analysis of Respondents' Answers to Visitor Understanding

| Aspects                            | Indicator  |  |
|------------------------------------|--|--|
|                                    | Understand   | Don't Understand   |
| <b>Collection Labels</b>           | Informative labels, explaining the origins and functions of the collection   | The text is too small, illegible; Foreign terms are confusing                            |
| <b>Visualization</b>               | The visualization is interesting and detailed, reinforcing the distinctive impression of West Java from the architectural elements | The visual display is considered "old-school" or less attractive by some visitors        |
| <b>Completeness of Information</b> | The information is considered to be quite complete and helps with understanding  | Minimal explanation, many collections without narrative; Info is too dense or complex    |
| <b>Language and Writing Style</b>  | The explanation is still fairly general and easy to understand by the general public who like history                              | Use of ambiguous or academic terms that are difficult for general visitors to understand |

*Source: Author's Processed Data (2025)*

Regarding visitor understanding, most respondents stated that the visual communication elements on the 1st floor of the Sri Baduga Museum were quite helpful in understanding West Java's culture. Based on the results of the questionnaire in Table 1, 45.7% of visitors found some museum collections difficult to understand, while 54.3% felt the opposite. Most respondents stated that they did not have difficulty understanding the collections or visualizations displayed at the Sri Baduga Museum because each collection was accompanied by a clear, informative label and detailed visualizations, so visitors did not feel confused. The information presented is quite helpful for understanding the meaning and function of the collection's objects; even brief explanations are useful. Although some people call the visual appearance "old-school" or standard, the presentation is generally still easy to understand, both in terms of text and visuals.

However, other respondents stated that certain parts of the collection or visualization are difficult to understand. These difficulties are generally caused by infographics that are too complex and information-dense, unclear collection numbering, or incomplete explanations, such as in animal sculpture or fossil collections. In addition, too small label writing, the use of standard or ambiguous language, and a narrow, unsystematic layout of information are also inhibiting factors. Some respondents considered that text alone is not enough, and suggested additional visual media, such as videos, to make it easier to understand. Despite differences of opinion, respondents generally appreciated the efforts to present information, although there was still room for improvement, especially in the visual and technological aspects of delivery.

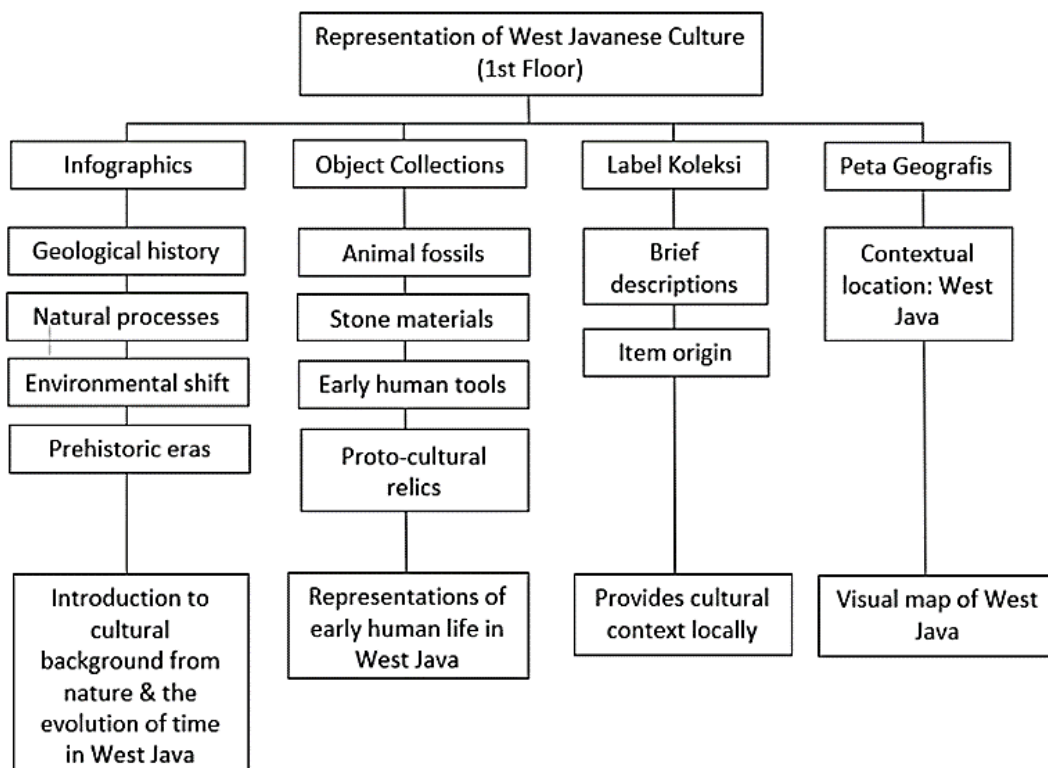
From a semiotic perspective, dense infographics and hard-to-read labels can hinder the process of interpreting symbols, which in turn prevents Sundanese cultural messages from being conveyed effectively. Research conducted at the National Museum of Indonesia also shows a similar pattern, indicating that difficult-to-understand information can reduce visitors' comprehension. Therefore, the findings of this study provide a new contribution by identifying technical visualization challenges within the context of Sundanese culture that have received little attention in previous research.

This aligns with Shannon & Weaver (1949), which states that, in the communication process, interference or noise can hinder the recipient's understanding of the message. Noise in this context comes in the form of illegible label designs and overly complex infographics. In the museum's visual communication, symbols such as images, colors, and layouts serve to convey cultural meaning to visitors. If these elements are not well designed, then the process of interpreting symbols becomes less effective. These findings are reinforced by a similar study by Winanti et al. (2024), which finds that the selection of appropriate visual elements strongly influences visitors' understanding of local

history and culture. If the collection labels are poorly designed, then the process of interpreting the symbols becomes more difficult.

Regarding the representation of West Java culture, the study's results show that the majority of visitors believe the Sri Baduga Museum has successfully represented local culture through its collections. The collection displays various cultural relics that reflect the identity of the people of West Java. Based on the results of the questionnaire in Table I, 88.6% of visitors believed the Sri Baduga Museum successfully represented West Java culture, while 11.4% disagreed. This success is evident in the diversity of collections, including megalithic statues, traditional clothing, traditional musical instruments, replicas of traditional houses, and typical weapons such as kujang, which reflect the richness of Sundanese culture. The collection is arranged in a sequential and thematic manner, depicting the journey of the natural history and culture of West Java in a way that is easy to understand by visitors. The respondents considered the description accompanying the collection quite helpful for understanding the historical background and origin of the objects, and emphasized that the collections displayed represented various regions in West Java, not just one.

However, some respondents also stated that the collection at the Sri Baduga Museum has not fully succeeded in representing West Java culture optimally. The reasons include the lack of interactive information, explanation labels that are too small or incomplete, and the failure to display all aspects of West Java culture and geography as a whole. Some visitors find it difficult to understand the collection due to limited initial knowledge of West Javanese culture, and they compare the presentation of this museum, which is considered to still need improvement, to be more attractive and comprehensive in the modern era.



**Figure 1.** Mapping of the Cultural Representation of West Java Sri Baduga Museum (1st floor) (Source: Author's Processed Data, 2025)

The 1st floor of the Sri Baduga Museum represents the culture of West Java through infographics, collection objects, explanatory labels, and geographical maps. The infographic displays the natural and geological history of West Java as the basis for the formation of civilization. Collections of fossils, prehistoric tools, and cultural artifacts show the early development of human life in the region. Collection labels help visitors understand the function and context of the object,

despite the constraints on size and language style. Geographical maps clarify the cultural distribution in various regions of West Java, strengthening the cultural narrative conveyed.

According to Hall's (1997) theory of cultural representation, culture is represented through symbols and language that shape visitors' understanding. Cultural representations are also dynamic and can change according to social and political developments. This means that museums should not rely on conventional approaches, but should adapt their presentation methods to modern perspectives and visitor needs. Museums in the digital era are required to adopt innovations in information delivery, such as digital media and interactive technologies, to enhance the attractiveness and understanding of visitors to the collections on display (Lazzeretti & Cerquetti, 2021). In addition, the design of labels and infographics that are attractive and easy to understand is also an important factor in improving the educational experience at the museum (Santagati et al., 2019). Thus, museums can function more effectively as relevant centers of cultural education for various groups of people.

The findings regarding visualization challenges carry important implications for museum management. Sri Baduga Museum needs to improve the quality of its visual elements, such as label size, infographic readability, and lighting arrangement. In addition, the use of visual technologies, such as digital maps, interactive displays, and educational videos, enhances the visitor experience and helps address the declining interest in museum visits. These innovations not only deepen cultural understanding but also strengthen the museum's role as a cultural education center in the digital era.

## CONCLUSION

This study found that the visualization of the 1st-floor collection at the Sri Baduga Museum is quite successful in depicting West Javanese culture to visitors, although various technical obstacles still hinder understanding of the cultural messages. Visual elements such as floor plans, labels, and infographics serve as signs in the process of semiosis, helping visitors understand the cultural meanings presented. However, if these visual elements are not designed properly, such as using very small font sizes, overly dense infographics, or having limited interactive media, the interpretation process becomes less effective. In addition, the way West Javanese culture is presented in the museum is not entirely neutral, as it is influenced by social and ideological constructs that shape its display and understanding.

The main contribution of this study is to clearly reveal the shortcomings in the museum's collection visualization, particularly how suboptimal visual elements can reduce visitors' ability to understand cultural meanings. These findings highlight that informative, clear, and accessible visual presentations are crucial in supporting effective cultural communication within the museum.

This study has several limitations, including a relatively small sample size and a research scope limited to one museum floor, so the findings should be interpreted with caution. Therefore, future research is recommended to conduct comparative studies in multiple museums with different characteristics, or to explore the use of digital technology and interactive media to enhance the effectiveness of visual communication in museums. Such approaches can provide deeper insights into how cultural visualization can be improved to better meet the needs and expectations of today's visitors.

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