

Illustrated visual storytelling for cultural sustainability:

The Kelana Rempah Exhibition

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ABSTRACT

Museums with limited collections often rely on creative visual strategies to maintain public engagement, especially among younger audiences. This study examines how illustrated visual storytelling can support sustainable cultural engagement in exhibition design. It focuses on the Kelana Rempah temporary exhibition at the Sultan Mahmud Badaruddin II Museum in Palembang, Indonesia, exploring how illustration-based spatial narratives can make historical content more engaging and accessible. The exhibition was developed from an illustrated webtoon and translated into a series of thematic zones combining character-based visuals, narrative panels, and spatial arrangements. Visitors were invited to experience the atmosphere of Palembang during the Srivijaya era through a narrative journey designed to be clear, engaging, and relatable for school-aged audiences. The design process drew on visual narrative, experiential design, and participatory approaches, using mostly paper-based and modular materials. This research uses qualitative methods, including observation, design documentation, and reflective evaluation. The findings suggest that illustration can play a central role in shaping visitor experience, helping audiences engage with historical narratives in a more intuitive and meaningful way. The study also shows that illustration-based exhibition design can offer a flexible and resource-conscious approach to sustaining cultural engagement

1. INTRODUCTION

Museums play a crucial role in sustaining cultural memory and heritage; however, many institutions face challenges in maintaining public engagement, particularly among younger audiences. Recent studies highlight that younger generations increasingly expect interactive, technology-mediated experiences, making conventional exhibition formats less effective in fostering meaningful engagement (Aljas et al., 2025). These challenges are often intensified in museums with limited collections and resources, where traditional exhibition formats may struggle to communicate historical narratives in ways

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that resonate with contemporary visitors (Chai-Arayalert & Puttinaovarat, 2025). Furthermore, as patterns of cultural consumption shift toward visually driven and experience-oriented media, museums are increasingly required to adopt creative communication strategies that prioritize accessibility, engagement, and sustainability (Trocchianesi & Bollini, 2023; Yang et al., 2025).

Within art and design communication discourse, sustainability extends beyond environmental considerations to encompass cultural continuity, social engagement, and educational relevance. Cultural sustainability emphasizes the preservation and transmission of heritage through adaptive and context-sensitive approaches, ensuring that cultural narratives remain meaningful across generations (Yang et al., 2025). Visual communication plays a significant role in this process, as it contributes to the construction of collective memory and place-based meaning through accessible and audience-centered strategies (Yudhanto et al., 2023). In this context, visual communication design—and specifically illustration—offers strong potential as a mediating tool that translates historical narratives into engaging visual forms, enabling more inclusive and meaningful connections between cultural content and contemporary audiences (Nashir & Daimin, 2022).

Recent studies in Southeast Asian museum contexts have highlighted the growing importance of visual storytelling and experiential exhibition design in sustaining visitor engagement, particularly among younger audiences (Yang et al., 2025). Illustration has long functioned as a narrative medium capable of simplifying complex ideas, evoking emotional connections, and constructing imaginative environments. In museum contexts, illustration enables the reinterpretation of historical narratives into visually approachable forms, particularly for school-aged visitors. Rather than serving merely as decorative elements, illustrations can operate as strategic communicative devices that guide interpretation, structure narrative flow, and support visitor-centered and participatory engagement within exhibition spaces.

This study examines the *Kelana Rempah* temporary exhibition held at the Sultan Mahmud Badaruddin II Museum in Palembang as a case study of illustrated visual storytelling in museum exhibition design. The title *Kelana Rempah* originates from the Indonesian word *kelana*, meaning to wander or journey, and *rempah*, referring to spices. Rather than denoting physical travel alone, the term *kelana* conveys a narrative journey—an exploratory movement across space, time, and cultural encounters. In this context, *Kelana Rempah* represents a metaphorical journey along the historical spice routes that shaped Palembang's role during the Sriwijaya period.



Fig. 1. Sultan Mahmud Badaruddin II Museum
Source: Diani Apsari, 2025



Fig. 2. View Kelana Rempah temporary exhibition
Source: Diani Apsari, 2025

Historically, Sriwijaya functioned as a major maritime power whose influence was closely tied to its control over spice trade networks across Southeast Asia. Spices were not merely commodities but catalysts for cultural exchange, migration, and economic interaction. By adopting the title *Kelana Rempah*, the exhibition frames its narrative as an experiential exploration of these interconnected journeys, inviting visitors to engage with the historical, cultural, and maritime dimensions of the spice trade through illustrated visual storytelling.

Developed as an extension of an illustrated webtoon, the exhibition translated narrative illustrations into physical, spatial environments designed as experiential thematic zones. Through illustrated characters, environments, and sequential storytelling, visitors were invited to experience the atmosphere of Palembang during the Sriwijaya era. The exhibition was intentionally designed for school-aged visitors, with narratives adapted to emphasize clarity, character-driven storytelling, emotional resonance, and participatory interpretation. The use of paper-based and modular illustrated assets reflects a sustainable design approach that prioritizes accessibility, reusability, and cost efficiency. As a temporary exhibition, *Kelana Rempah* demonstrates how illustration-driven design can contribute to sustainable cultural engagement without reliance on high-cost digital technologies.

Despite the growing body of literature on visual storytelling, experiential exhibition design, and cultural sustainability, limited research explicitly positions illustration as a central strategic medium for sustainable cultural mediation within temporary museum contexts. In particular, studies rarely examine how illustration-driven spatial narratives function in low-resource environments to support long-term cultural engagement among school-aged audiences. Addressing this gap, this study investigates the Kelana Rempah temporary exhibition as a design-led case study.

The research is guided by the following questions:

1. How does illustrated visual storytelling function as a sustainable cultural mediation strategy in a temporary museum exhibition context?
2. How do experiential and participatory design approaches influence visitor engagement and interpretive understanding among school-aged audiences?

This research aims to analyze how illustration-based spatial narratives, developed through participatory and experiential design frameworks, contribute to sustainable cultural engagement in museums with limited collections and resources. By examining the design process, spatial construction, and visitor interaction within the Kelana Rempah exhibition, this study positions illustration not merely as visual output, but as a strategic communication medium that supports cultural continuity and adaptive heritage interpretation.

2. LITERATURE REVIEW

2.1 Visual Storytelling in Museum Communication

Museums have increasingly shifted from object-centered displays toward experience-oriented communication strategies in order to sustain visitor engagement. Contemporary museum practices emphasize storytelling as a means of mediating cultural knowledge, enabling visitors to construct meaning through narrative rather than passive observation (Falk & Dierking, 2013). Visual storytelling, in particular, has emerged as an effective approach to translate historical and cultural content into accessible forms that resonate with diverse audiences.

Visual storytelling in museum exhibitions operates through the integration of images, spatial sequencing, and interpretive narratives that guide visitors through a coherent experience. According to (Bitgood, 2010) well-designed exhibition narratives enhance visitor attention, comprehension, and emotional engagement. In this context, visual elements are not merely illustrative supplements but serve as primary communicative agents that structure how cultural information is perceived and remembered.

Recent studies in museum communication highlight the importance of narrative clarity and emotional connection, especially for younger visitors who may lack prior historical knowledge (Falk & Dierking, 2013). Visual storytelling allows museums to bridge cognitive gaps by presenting historical narratives through relatable characters, symbolic imagery, and sequential visual cues. This approach aligns with the growing demand for immersive and participatory museum experiences that prioritize visitor-centered interpretation. Within the Asian museum context, experiential and narrative-driven exhibition strategies have been identified as effective approaches to enhancing visitor interaction and interpretive understanding (Sharji et al., 2022)

2.2 Illustration as a Narrative and Interpretive Medium

While visual storytelling emphasizes narrative sequencing and spatial communication, illustration functions as a distinct interpretive medium that mediates meaning through visual simplification, symbolic construction, and character-based representation. Unlike photographic documentation or object display, illustration allows designers to selectively emphasize narrative elements, reconstruct historical atmospheres, and translate abstract cultural concepts into accessible visual forms.

In museum contexts, illustration operates as a bridge between historical knowledge and visitor imagination. Through stylization, color, composition, and character expression, illustration can reduce cognitive complexity while maintaining narrative depth. This interpretive flexibility is particularly significant when museums face limitations in physical collections or when historical artifacts require contextual reconstruction. Rather than merely representing objects, illustration enables the visualization of events, environments, and social interactions that may not be materially preserved.

For younger audiences, illustration plays an essential pedagogical role. Character-driven visual narratives support identification, empathy, and emotional engagement, allowing visitors to connect personally with historical themes. Research in museum learning suggests that emotionally resonant and visually coherent narratives enhance interpretive understanding and memory retention (Falk & Dierking, 2013). In this sense, illustration functions not only as an aesthetic enhancement but as a cognitive scaffold that supports experiential and participatory learning.

Moreover, illustration offers adaptive potential within temporary exhibition contexts. As a design medium, illustrated assets can be reconfigured, updated, and scaled without requiring extensive material or technological infrastructure. This adaptability aligns with principles of cultural sustainability, where continuous reinterpretation and accessibility are prioritized over permanence. By enabling the construction of imaginative yet contextually grounded visual narratives, illustration contributes to sustainable heritage communication practices that remain responsive to audience needs and institutional constraints.

Thus, positioning illustration as a narrative and interpretive medium expands its role beyond decoration, framing it instead as a strategic communicative device capable of shaping visitor perception, facilitating engagement, and supporting long-term cultural transmission within museum environments.

When translated into spatial environments, illustration extends beyond the surface of panels and becomes an experiential structure. Sequential illustrations, thematic zoning, and character-based storytelling can shape visitor movement, guide interpretive pathways, and construct immersive narrative atmospheres. In this transformation, illustration no longer functions solely as a two-dimensional visual artifact, but as a spatial mediator that contributes to the overall exhibition experience. This spatial translation connects illustration to experiential exhibition design practices, where learning emerges through embodied interaction and environmental engagement.

2.3 Experiential and Temporary Exhibition Design

Building upon the spatial potential of illustration, experiential design has become a dominant paradigm in contemporary exhibition practice, emphasizing multisensory engagement, interactivity, and spatial storytelling. Rather than presenting information through static displays, experiential exhibitions invite visitors to navigate, explore, and participate in constructed environments (Hallnäs & Redström, 2006). In museum contexts, experiential design supports deeper engagement by transforming visitors from passive observers into active participants.

Temporary exhibitions, including pop-up and modular formats, offer museums flexible platforms to experiment with narrative-driven design approaches. While temporary exhibitions are often perceived as ephemeral, recent studies suggest that they can play a significant role in sustaining institutional relevance and audience interest (Bitgood, 2010). Their adaptability allows museums to respond to contemporary themes, educational needs, and resource constraints.

Illustration-driven experiential environments are particularly suited to temporary exhibitions due to their scalability and material efficiency. Illustrated panels, modular structures, and paper-based installations can be reconfigured, reused, or adapted for different contexts. This approach supports sustainable exhibition practices by minimizing production costs and reducing reliance on permanent infrastructure or advanced digital technologies.

Furthermore, experiential exhibition design aligns closely with storytelling-based communication. Spatial sequencing, thematic zones, and interactive elements enable narrative immersion, allowing visitors to experience cultural histories rather than merely observe them. When combined with illustration, experiential design facilitates the construction of imaginative environments that evoke historical atmospheres and emotional resonance.

2.4 Cultural Sustainability in Art and Design Practices

The concept of sustainability within art and design discourse extends beyond environmental responsibility to include cultural and social dimensions. Cultural sustainability refers to the preservation, transmission, and continuous reinterpretation of cultural heritage in ways that remain relevant to contemporary society. In museum contexts, cultural sustainability emphasizes engagement strategies that ensure historical narratives are accessible and meaningful to future generations.

Design scholars have argued that visual communication plays a critical role in cultural sustainability by mediating between past and present through adaptive representation (Björgvinsson et al., 2012). Sustainable design practices prioritize approaches that are inclusive, resource-conscious, and socially responsive. Rather than focusing solely on permanence, sustainability in cultural communication values adaptability, reusability, and audience-centered design.

Illustration-based exhibition design aligns with these principles by offering flexible and low-resource solutions for heritage communication. Illustrated narratives can be easily updated, expanded, or recontextualized without extensive material investment. Additionally, illustration enables cultural narratives to be tailored to specific audiences, particularly children and young visitors, supporting long-term educational sustainability.

By framing illustration as a strategic medium for cultural mediation, museums can leverage visual storytelling to sustain engagement while operating within limited resources. This approach highlights the role of creative art and design communication in fostering sustainable cultural practices, positioning illustration not only as an artistic output but as a communicative and strategic design tool.

2.5 Participatory Design in Museum and Visual Communication

Participatory Design (PD) has been widely discussed in design and museum studies as an approach that emphasizes collaboration between designers, stakeholders, and end users throughout the design process. Originating from Scandinavian design movements in the 1960s and 1970s, participatory design promotes democratic values, human-centered thinking, and shared authorship in creative decision-making (Björgvinsson et al., 2012)

In the context of museum design and visual communication, participatory design enables museums to move beyond top-down curatorial narratives by actively involving curators, educators, designers, and visitors in shaping exhibition content and interpretation. (Dindler et al., 2010), highlights that participatory design enhances user engagement by allowing participants to contribute experiences, perspectives, and contextual knowledge, resulting in more meaningful and inclusive design outcomes.

Previous studies in Indonesian museum contexts demonstrate that participatory design plays a significant role in improving visitor engagement, branding, and interpretive effectiveness. Research on Museum Musik Indonesia shows that involving community members, museum managers, and visitors in the design process leads to stronger emotional connections and higher support for museum programs (Maharani et al., n.d.) . This collaborative approach positions designers not merely as problem solvers, but as mediators who facilitate dialogue between institutional narratives and public experience.

Within visual storytelling and illustration-based exhibitions, participatory design contributes to the development of narratives that are culturally grounded and accessible, particularly for younger audiences. By integrating stakeholder insights and visitor feedback, illustration becomes a shared interpretive tool that reflects collective memory, local

knowledge, and educational needs. Thus, participatory design supports sustainability in museum communication by fostering long-term relevance, inclusivity, and cultural continuity.

2.6 Positioning the Research Gap

While existing literature acknowledges the importance of storytelling, experiential design, and sustainability in museum exhibitions, limited research explicitly examines illustration as a central strategy for sustainable cultural engagement. Most studies focus on digital technologies or interactive media, often overlooking the potential of illustration-driven, low-resource exhibition design.

This study addresses this gap by investigating how illustrated visual storytelling operates within a temporary museum exhibition context to support cultural sustainability. By focusing on illustration as both a narrative and spatial communication medium, this research contributes to the body of knowledge in illustration and visual communication design. It offers an alternative perspective on sustainable exhibition practices, particularly relevant for museums with limited collections and resources.

3. METHODOLOGY

This study adopts a qualitative design research approach to examine the role of illustrated visual storytelling in fostering sustainable cultural engagement within a museum exhibition context. A case study methodology was employed to allow in-depth exploration of the *Kelana Rempah* temporary exhibition at the Sultan Mahmud Badaruddin II Museum, Palembang. The case study approach is appropriate for investigating design-led practices, as it enables the analysis of processes, decision-making, and contextual factors within real-world settings. In Indonesian museum discourse, visual communication and exhibition design are increasingly positioned as educational and interpretive tools rather than mere display mechanisms. (Budi Haswati et al., 2021) , emphasizes that museums function as cultural communication spaces where narratives are constructed through the interaction between collections, spatial design, and visitor interpretation. This perspective highlights the importance of visual strategies that are responsive to local contexts, audiences, and learning objectives.

Furthermore, Budi argues that effective museum exhibitions require adaptive storytelling approaches that bridge historical content with contemporary modes of engagement, particularly for younger audiences. Within this framework, participatory design becomes a relevant strategy, as it allows designers and curators to collaboratively translate historical knowledge into accessible visual narratives. By situating illustration and exhibition design within the communicative role of museums, participatory practices support museums' educational missions and enhance sustainable cultural engagement.

3.1 Research Design

This study adopts a qualitative case study approach to investigate how illustrated visual storytelling functions as a strategy for sustainable cultural engagement within a temporary museum exhibition. The *Kelana Rempah* exhibition is examined as a single instrumental case that provides insight into illustration-driven exhibition design in a resource-limited museum context.

The research also draws from practice-based design research, in which the design process itself becomes a site of inquiry. Through observation, documentation analysis, and reflective evaluation, the study explores the relationship between design intention, spatial implementation, and visitor response.

The research itself was conducted in late May 2025 during the exhibition period at the Sultan Mahmud Badaruddin II Museum, Palembang. Field research was carried out over one week and involved two field researchers and two exhibition volunteers responsible for monitoring visitor interaction. The case study approach was selected to enable in-depth investigation of spatial narrative construction, visitor engagement patterns, and participatory design processes within a real exhibition context.

3.2 Research Setting

Field research was conducted at the Sultan Mahmud Badaruddin II Museum in Palembang during the opening week of the Kelana Rempah temporary exhibition in May 2025. The exhibition was designed primarily for school-aged visitors and was inaugurated with organized school group attendance.

The field study lasted for one week and involved two field researchers and two exhibition volunteers who assisted in managing visitor flow and interaction.

3.3 Data Collection

Data were collected through qualitative fieldwork conducted during the exhibition period in late May 2025. The primary method involved non-participant observation of visitor behavior throughout the exhibition space, with particular attention given to school group visits during the exhibition opening. These observations focused on how visitors navigated the illustrated thematic zones, how long they engaged with specific installations, and how they interacted with illustrated characters and narrative panels.

In addition to behavioral observation, the study analyzed design documentation, including preliminary sketches, spatial layout plans, illustration panels, and narrative sequencing strategies. This documentation provided insight into how visual storytelling elements were translated from the original illustrated webtoon into spatial exhibition environments.

Reflective field notes were recorded by the two researchers throughout the one-week fieldwork period to document situational dynamics, visitor responses, and exhibition adjustments. Informal feedback was also gathered from teachers, students, museum staff, and exhibition volunteers during visit sessions. These conversations provided contextual understanding of visitor interpretation, educational relevance, and overall engagement with the illustrated installations.

Observational attention was directed toward patterns of spatial movement, duration of engagement within each thematic zone, verbal responses among school-aged visitors, and instances of peer discussion stimulated by the illustrated narratives. Together, these data sources enabled a comprehensive examination of how illustrated visual storytelling functioned within the experiential exhibition setting.

The primary unit of analysis in this study was visitor interaction episodes within each thematic zone, including patterns of engagement with illustrated panels, spatial navigation behavior, and verbal exchanges among school-aged visitors. Data triangulation was applied by cross-referencing observational notes, design documentation, and informal feedback to ensure consistency and interpretive validity. Collaborative reflection between the two researchers further strengthened analytical reliability.

3.3 Data Analysis

The collected data were analyzed using a thematic analysis approach to identify recurring patterns related to visitor engagement, interpretive understanding, and participatory interaction within the illustrated exhibition environment. Field observations, reflective notes, and informal feedback were reviewed and organized into preliminary categories based on recurring behavioral and verbal responses observed during the exhibition period.

The analysis focused on identifying patterns of narrative immersion, emotional engagement, spatial navigation behavior, and instances of peer discussion stimulated by illustrated panels. Particular attention was given to how school-aged visitors interacted with character-driven illustrations and how these interactions influenced their comprehension of historical content.

Design documentation was examined alongside observational data to understand how spatial sequencing and visual narrative strategies shaped visitor experience. By comparing intended design strategies with observed visitor behavior, the study evaluated the effectiveness of illustration as a mediating communication tool.

Emerging themes were interpreted through the theoretical frameworks of visual storytelling, experiential design, and participatory design. This analytical process enabled the study to connect empirical findings with broader discussions on cultural sustainability and illustration-based exhibition strategies.

3.4 Design Frameworks

Three interrelated design frameworks guided the development of the exhibition:

Design Thinking was applied to ensure an audience-centered design process, beginning with preliminary observation and informal surveys of museum visitors. These insights informed the narrative tone, visual complexity, and interaction level suitable for school-aged audiences.

Visual Narrative theory informed the construction of illustrated storytelling elements, including character design, environmental illustration, and sequential narrative panels. The exhibition narrative was structured to guide visitors through thematic zones that reflect historical contexts related to the Srivijaya era and the Spice Route (*Jalur Rempah*).

Experiential Design principles were incorporated to translate illustrated narratives into spatial experiences. The exhibition was designed as a series of experiential “rides” or interactive zones, allowing visitors to physically navigate illustrated environments and engage with historical narratives through immersion.

Participatory Design here itself illustrates an iterative design process involving curatorial interpretation, collaborative illustration development, spatial storytelling implementation, and visitor feedback to support experiential learning and sustainable cultural engagement.

The development of the exhibition adopted participatory design principles by involving museum curators, educators, and exhibition volunteers in the adaptation of the illustrated webtoon into spatial installations. Feedback regarding narrative clarity, educational relevance, and age-appropriate visual language informed the selection of illustrated scenes and thematic zoning.

School group observations during the opening phase also functioned as iterative evaluation, allowing minor adjustments to panel positioning and narrative sequencing. In this sense, participation occurred both during the pre-design phase and through real-time interaction during the exhibition period.

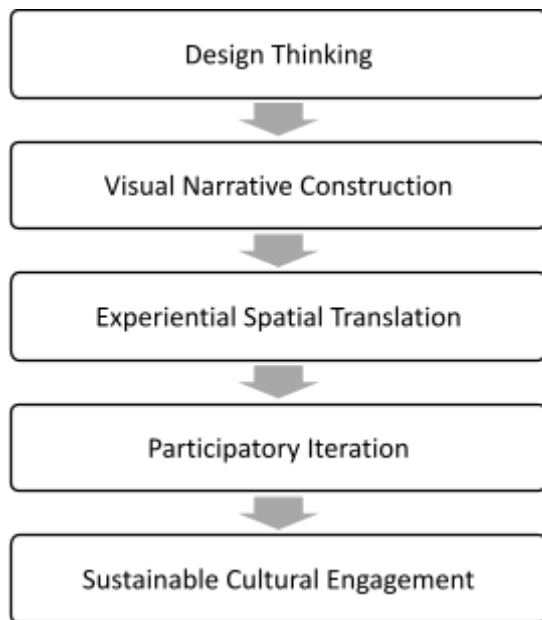


Fig. 3. Design framework

Source: Diani Apsari, 2025

3.5 Illustration Development Process

The illustration process began with historical research based on museum collections, archival materials, and curatorial input from museum staff. Initial sketches were developed by interpreting historical artifacts, architectural elements, and cultural symbols associated with the Srivijaya period. These sketches were refined into character and environment illustrations that balanced historical reference with visual clarity and narrative accessibility.

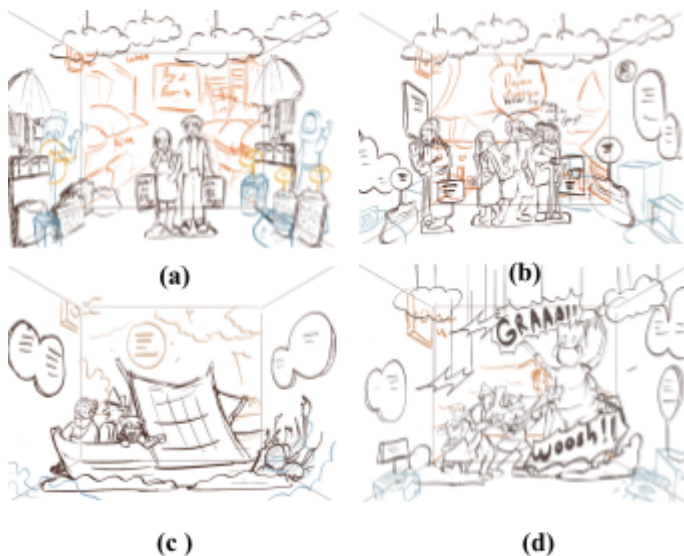


Fig. 4 (a, b, c, d). Sketch process based on moodboard

Source: Aliya Nuzul Saskia, 2025

The illustrated characters were designed to function as narrative guides, mediating historical content for young audiences. Environmental illustrations were composed to evoke the atmosphere of Palembang during the Srivijaya era, supporting spatial storytelling within the exhibition setting. The illustrations were subsequently adapted into modular visual assets, including panels, standees, and interactive elements, suitable for temporary and low-resource installation.

3.6 Participatory Design as a Collaborative Framework

This research adopts a participatory design approach as part of its qualitative research framework to support the development of illustrated visual storytelling within the *Kelana Rempah* temporary exhibition. Participatory design is employed not only as a design method but also as a collaborative research strategy that integrates multiple perspectives throughout the illustration and exhibition design process.

The participatory process involved close collaboration with museum curators, particularly in interpreting historical narratives and aligning illustrations with the museum's collection and educational objectives. This collaborative dialogue ensured that the visual representations remained historically grounded while being adapted into narrative illustrations suitable for school-aged visitors. In line with (Björgvinsson et al., 2012), this approach reflects contemporary participatory design practices that emphasize co-creation, reflection-in-action, and negotiation between institutional goals and public interpretation. In addition, visitor observations and survey feedback were incorporated to evaluate how illustrated thematic zones functioned as experiential narrative spaces. This iterative feedback loop aligns with (Dindler et al., 2010) view of participatory design as a process that enhances design relevance by actively engaging users as contributors rather than passive recipients. The integration of participatory observation and visitor input supports experiential learning outcomes and strengthens the sustainability discourse of the exhibition.

By applying participatory design within a museum illustration context, this research positions illustration as a collaborative medium that mediates historical knowledge, curatorial intent, and visitor experience. This approach reinforces the role of illustration in fostering sustainable cultural engagement through shared meaning-making and inclusive design practices.

3.7 Data Collection Methods

Data were collected through multiple qualitative methods:

- Design documentation, including sketches, character development sheets, and layout plans
- Observational studies conducted during the exhibition period to examine visitor interaction and engagement
- Visitor surveys, previously conducted by the museum, which provided insights into audience demographics, interests, and responses to visual narratives



Fig. 5. Observational studies

Source: Diani Apsari, 2025

These data sources were triangulated to support reflective analysis of how illustrated visual storytelling influenced visitor experience and interpretive understanding.

3.8 Data Analysis

Data analysis was conducted through reflective and thematic analysis, focusing on the relationship between illustration, narrative construction, and visitor engagement. The analysis emphasized how illustration functioned as a communicative medium within the exhibition space and how design decisions contributed to sustainable cultural engagement. Although this study is limited to a single case and short exhibition period, the qualitative findings provide contextual insights into illustration-driven experiential design within resource-limited museum settings.

4. ANALYSIS AND FINDINGS

The findings are organized according to themes identified during thematic analysis, including historical interpretation, narrative mediation, experiential immersion, participatory interaction, and sustainability.

4.1 Historical Interpretation through Illustration

The illustration process for the *Kelana Rempah* exhibition began with historical interpretation based on the Sultan Mahmud Badaruddin II Museum's collections, archival references, and curatorial narratives related to the Srivijaya era and the Spice Route (*Jalur Rempah*). Given the museum's limited number of physical artifacts, illustration played a critical role in visualizing historical contexts that could not be directly displayed.

Initial sketches were developed by translating historical references—such as traditional attire, architectural forms, trade objects, and symbolic motifs—into simplified visual elements suitable for narrative illustration. Rather than aiming for photographic accuracy, the illustrations emphasized interpretive clarity and narrative readability. This approach allowed historical information to be communicated through visual cues that were accessible to school-aged visitors, while still maintaining cultural authenticity.

The findings indicate that illustration functioned as an interpretive bridge between historical knowledge and contemporary audiences. By reconstructing historical atmospheres through illustrated environments, the exhibition enabled visitors to imagine Palembang during the Srivijaya period, supporting deeper cultural understanding despite the absence of extensive original artifacts.

4.2 Character and Environment Design for Museum Storytelling

Character design emerged as a central component of the exhibition's visual storytelling strategy. Illustrated characters were developed to act as narrative guides, introducing historical themes and accompanying visitors throughout the exhibition journey. These characters were designed with expressive features, simplified forms, and culturally informed attributes to foster emotional engagement and relatability among young audiences.

Environmental illustrations complemented the characters by establishing a cohesive spatial narrative. Illustrated backgrounds depicting riverine landscapes, trading ports, and royal settings were arranged sequentially to simulate a journey through historical Palembang. The combination of character-driven narratives and environmental illustration enabled the exhibition to function as a visual storybook within a physical space.

Analysis of the illustration development process reveals that the integration of characters and environments strengthened narrative continuity and interpretive coherence. Visitors were not merely observing isolated visuals but navigating a structured visual narrative, reinforcing the role of illustration as a storytelling medium within museum exhibition design.



Fig. 6. Coloring with background
Source: Deana Rafa Adelia & Katerina Yovira, 2025

4.3 Illustrated Thematic Zones as Experiential Narrative Spaces

One of the defining features of the *Kelana Rempah* exhibition was the arrangement of illustrated assets into experiential thematic zones. Each zone was designed as a visual and spatial experience that invited visitors to immerse themselves in specific historical moments. These illustrated thematic zones functioned similarly to narrative “chapters,” guiding visitors through a sequential storyline. The thematic zones itself divided into 4 rooms with four illustrated thematic zones.

These zones create a continuous storytelling journey that guides visitors—particularly school-aged children—through Palembang’s historical role as a vital node in the spice trade from the Sriwijaya period to the colonial era.

- **Zone 1: Introduction – The Market as the Origin of Civilization**

The first zone serves as a narrative introduction, featuring illustrations of Pasar Boom Plaju, which later evolved into Pasar 16 Ilir. The visual compositions depict floating market scenes at the mouth of the Tengkuruk River, populated by boats, traders, and agricultural products from the Batanghari Sembilan region. This zone positions the market as a social and economic space that connected inland communities with urban centers and functioned as the entry point of spice distribution.



Fig.7 . Zone 1

Source: Sri Maharani Budi, 2025

- Zone 2: The Market as a Cross-Cultural Encounter**
 The second zone expands the market narrative into a space of intercultural exchange. Illustrations portray the arrival of traders from Bangka, Belitung, Banten, and Lampung, alongside Arab, Chinese, and Indian merchants. The Musi River is visualized as a dynamic trading artery filled with kajang boats and merchant vessels, emphasizing Palembang's identity as a cosmopolitan port shaped by trade and cultural interaction.



Fig. 8. Zone 2

Source: Sri Maharani Budi, 2025

- Zone 3: Spices, Conflict, and Sriwijaya Mythology**
 The third zone introduces narrative tension through the illustrated character of Bhramsa, a symbolic figure representing piracy and threats to spice trade routes. Character illustrations and battle scenes between Bhramsa

and Sriwijayan figures are arranged in a visual storytelling format. This approach blends historical references, mythology, and imaginative elements to enhance emotional engagement, particularly for younger audiences.



Fig. 9. Zone 3

Source: Sri Maharani Budi, 2025

- Zone 4: Maritime Culture and Sustainability Message

The final zone functions as an epilogue, returning visitors to the present day. Illustrations of kajang boats, maritime landscapes, and spices convey a reflective message on the importance of preserving maritime heritage and spices as a foundation of cultural sustainability. Interactive challenges integrated into this zone encourage active participation and reinforce the exhibition's educational objectives.



Fig. 10. Zone 4

Source: Sri Maharani Budi, 2025

Through this thematic zoning, illustration operates not merely as a decorative element, but as a primary narrative medium that shapes spatial experience, storytelling flow, and sustainable cultural learning within the museum context.

The illustrated installations were composed of paper-based panels, standees, and interactive elements that allowed visitors to physically engage with the narrative environment. This design choice supported sustainability by utilizing low-resource materials that were modular and easily adaptable. Despite their temporary nature, the illustrated zone successfully created immersive experiences through visual density, narrative sequencing, and spatial arrangement.

Findings from observational analysis indicate that visitors actively engaged with these illustrated spaces by reading narrative panels, interacting with visual elements, and taking photographs within the environments. The illustrated zone transformed the exhibition from a passive display into an experiential storytelling platform, reinforcing the effectiveness of illustration-driven spatial narratives in museum contexts.

The illustrated thematic zoning approach employed in the *Kelana Rempah* exhibition aligns with experiential learning theory in museum contexts, which emphasizes learning through direct experience, emotional engagement, and multisensory interaction (Falk & Dierking, 2013). Rather than presenting historical information in a linear, text-based format, the exhibition relies on illustration as a narrative medium that enables visitors to construct meaning through spatial sequencing, visual cues, and storytelling.

Each zone functions as an experiential unit that integrates visual, spatial, and narrative elements. Visitors are not merely informed about historical events but are guided through a symbolic journey—from the market as a social space, through conflicts surrounding spice trade, to reflections on maritime heritage and sustainability. This strategy corresponds with museum storytelling approaches that utilize visual narratives to foster emotional connections between visitors and exhibition content, thereby enhancing interpretive understanding and memory retention.

For school-aged audiences, illustration serves as an interpretive mediator that bridges the complexity of historical narratives with intuitive and imaginative learning processes. Consequently, illustration supports not only aesthetic engagement but also reinforces sustainable, experience-based learning within the museum environment.

4.4 Visitor Observation and Survey Findings

Observational studies conducted during the exhibition revealed distinct patterns of visitor engagement, particularly among school-aged audiences. Younger visitors demonstrated sustained attention toward illustrated characters and narrative panels, often following the visual storyline sequentially across the exhibition zones. This behavior suggests that illustration facilitated narrative comprehension and guided visitor movement within the space.

In addition, existing visitor survey data provided by the museum indicated a preference for visually rich and narrative-based displays compared to text-heavy exhibitions. Respondents noted that illustrated elements helped them better understand historical content and made the museum experience more enjoyable. Teachers and accompanying adults also reported that illustrated storytelling supported informal learning by encouraging discussion and curiosity among students.

These findings highlight the role of illustration in enhancing interpretive clarity and emotional engagement. The combination of visual storytelling and experiential design enabled the exhibition to communicate cultural narratives effectively, even within the constraints of a temporary and resource-limited exhibition format. And also, the exhibition environment facilitated peer discussion among students, indicating that learning occurred not only through visual

absorption but through social interpretation and shared meaning-making. This aligns with participatory learning models in which knowledge emerges through interaction rather than passive reception.

4.5 Illustration and Sustainability in Museum Exhibition Design

From a sustainability perspective, the *Kelana Rempah* exhibition demonstrates how illustration-driven design can support cultural sustainability through adaptability and accessibility. The illustrated assets were designed to be reusable and scalable, allowing the exhibition to be reinstalled or adapted for different audiences and venues. This approach aligns with sustainable design principles that prioritize long-term cultural impact over material permanence.

The findings suggest that illustration contributes to sustainable museum practices by enabling continuous reinterpretation of cultural narratives. Illustrated storytelling allows museums to update narratives, introduce new characters, or expand storylines without extensive material or technological investment. As such, illustration emerges as a strategic medium for sustaining cultural engagement within museum environments. The paper-based illustrated panels were also designed for reassembly and future adaptation, allowing the exhibition narrative to be recontextualized for different educational programs without significant additional production cost. Rather than relying on digital interactivity, narrative immersion can be achieved through spatialized illustration, participatory learning dynamics, and modular design strategies.

5. CONCLUSION

This study investigated how illustrated visual storytelling operates as a strategy for sustainable cultural engagement within a temporary museum exhibition context. Through a qualitative case study of the *Kelana Rempah* exhibition at the Sultan Mahmud Badaruddin II Museum, the findings demonstrate that illustration can function not merely as decorative visual support, but as a spatial and participatory narrative system that structures visitor experience. By integrating character-driven storytelling, thematic zoning, and modular illustrated installations, the exhibition transformed historical material related to the Srivijaya era into an immersive and accessible environment for school-aged audiences.

The study contributes to visual communication and museum design discourse by repositioning illustration as a mediating framework capable of bridging historical interpretation and experiential learning. Rather than relying on digital technologies, narrative immersion was achieved through spatial sequencing, peer interaction, and participatory engagement. This suggests that sustainable cultural communication does not necessarily depend on high-cost technological infrastructure, but can emerge from thoughtful illustration-driven design strategies grounded in audience-centered processes.

From a sustainability perspective, the modular and paper-based exhibition system demonstrates how temporary displays can support cultural continuity through adaptability, reusability, and scalability. Such an approach offers practical implications for museums operating with limited collections and financial resources, particularly within Southeast Asian contexts.

However, this research is limited to a single case study conducted within a short exhibition period. Visitor engagement was observed primarily through behavioral indicators and informal feedback, without longitudinal assessment of learning outcomes. Future research may explore comparative exhibition models across institutions or incorporate structured interviews and mixed-method approaches to further examine long-term educational impact and cross-cultural applicability.

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CONFLICT OF INTEREST STATEMENT

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

AUTHORS' CONTRIBUTIONS

Diani Apsari: Conceptualisation, methodology, formal analysis, investigation, and writing – original draft, review and editing; overall research lead.

Sri Maharani Budi: Project administration, supervision, and stakeholder coordination; led the creative direction and collaboration with the Sultan Mahmud Badaruddin II Museum.

Rahmiati Aulia: Project administration, resources, and implementation; contributed to fieldwork coordination, budgeting, and on-site execution.

DECLARATION OF GENERATIVE AI IN THE WRITING PROCESS

During the preparation of this work, the author used AI-assisted tools to support language refinement and clarity. The author reviewed and edited all content and takes full responsibility for the content of the publication.

ETHICS STATEMENT

The authors declare that this research did not involve human or animal experimentation. Observations were conducted in a public museum setting without collecting personal or identifiable data from visitors. All procedures were carried out in accordance with general ethical standards for research in public environments.

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