

THE REVITALIZATION OF THE POSTAL MUSEUM THROUGH INTERACTIVE DISPLAY MEDIA AND EDUCATIONAL ZONES

¹Muhammad Khalil Gibran, ²Didit Widiatmoko Suwardikun, ³Hanif Azhar,
⁴Yanuar Rahman, ⁵Andreas Rio Adriyanto
Telkom University, Indonesia
gibrankhalil@student.telkomuniversity.ac.id¹,
diditwidiatmoko@telkomuniversity.ac.id²,
hanifazhar@telkomuniversity.ac.id³, vidiyan@telkomuniversity.ac.id⁴,
andreasrio@telkomuniversity.ac.id⁵

Abstract

This study explores the revitalization strategy of the Museum Pos Indonesia through the implementation of interactive display media and the arrangement of display zones based on visitor experience. The focus is directed toward transforming the previously conventional presentation of collections and exhibition spaces into formats that are more communicative, educational, and aligned with the needs of the digital generation. The research adopts a qualitative approach using Design Thinking (empathize, define, ideate, prototype, and test), supported by the Double Diamond framework from the UK Design Council. Data collection was conducted through observation, interviews, questionnaires, and literature review on the digitalization of educational spaces and user-centered design. The results indicate that technologies such as touchscreen displays, QR codes, and augmented reality (AR) can enhance visitor engagement and enrich the delivery of historical narratives. The reorganization of structured display zones also contributes to creating a more immersive and guided visitor experience. This study recommends the adoption of adaptive display systems that align with technological advancements and audience preferences, so that Museum Pos Indonesia may function not only as an archive but also as a dynamic and inclusive medium of cultural communication.

Keywords: Museum Revitalization, Interactive Display, Museum Pos Indonesia, Display Zone

INTRODUCTION

A museum is a cultural institution that plays a vital role in the preservation, education, and dissemination of historical knowledge to the public. As times evolve, museums are no longer merely repositories of artifacts; they are now expected to become interactive spaces that offer immersive and participatory learning experiences for visitors. This is especially relevant in today's digital era, where audiences—particularly younger generations—have higher expectations for visual experiences, technology, and ease of access to information.

Museum Pos Indonesia, as a thematic museum focused on the history of communication and the national postal system, faces the challenge of remaining relevant and appealing to visitors across generations. Established in 1931 during the

Dutch East Indies administration under the name PTT Museum (Post, Telegraph, and Telephone), the museum is strategically located at Jalan Cilaki No. 73, Bandung. It resides in an educational cluster alongside the Geological Museum and Gedung Sate Museum. Its main collections include domestic and international stamps, postal communication tools, archival documents, and postal uniforms from various eras. Over time, the institutional transformation from the State Post and Giro Company to PT Pos Indonesia (Persero) in 1995 also altered the museum's name and orientation. Today, Museum Pos Indonesia envisions becoming an engaging educational destination that contributes to the company's public image and the development of socio-cultural values in society.

Despite its great potential as an educational and historical space, observations reveal that Museum Pos Indonesia still faces significant challenges. The static nature of the displays, long textual descriptions without engaging visuals, and the lack of interactive media make the museum feel monotonous and less appealing to younger generations. The exhibition space appears conservative, with unstructured circulation flow and insufficient signage systems. These conditions result in low visitor engagement, minimal participation, and limited comprehension of the historical narratives presented.

Museum revitalization thus emerges as a strategic effort to address these issues. In this context, revitalization goes beyond physical renovation to include updates to visual communication systems and visitor experiences based on technology and participatory design. One of the approaches implemented in this research is the integration of interactive display media and the thematic zoning of exhibitions based on visitor experience. This concept is designed to position the museum as a cross-generational communication space that adapts to contemporary educational needs without compromising its historical essence.

The development of interactive display media—such as touchscreens, QR codes, and Augmented Reality (AR) becomes a central strategy for delivering historical content in a more communicative and engaging manner. These digital tools allow visitors to explore collection information actively, in-depth, and based on their personal interests. In addition, the use of visual storytelling based on thematic zones strengthens the delivery of historical narratives in a structured and contextual manner. The designated zones cover the timeline of postal communication from the kingdom era, colonial period, and independence to the global development of postage stamps and modern delivery systems.

In this study, the Design Thinking method is applied as a conceptual framework to identify user needs and develop relevant design solutions. The five core stages—Empathize, Define, Ideate, Prototype, and Test—are carried out iteratively to ensure that the design solutions generated are well-aligned with the characteristics and expectations of museum visitors. This approach is reinforced by the Double Diamond model from the Design Council UK, which emphasizes structured problem exploration

and solution refinement. The combination of these two models ensures that the design process not only focuses on the form and function of media but also incorporates aspects of user experience, emotional engagement, and clarity of conveyed information.

Data for this research were collected through multiple methods, including direct observation of the museum's layout and displays, interviews with managers and visitors, questionnaires distributed to target users, and literature review of academic journals and publications related to digital museum transformation, interactive design, and user-centered visual communication strategies. The qualitative findings serve as the foundation for formulating design strategies that are contextual, applicable, and sustainable.

This study aims to answer how interactive design strategies and appropriate display systems can enhance the educational role of Museum Pos Indonesia and foster greater visitor engagement. Furthermore, it maps the extent to which technology integration can support historical understanding in the context of digital museums while strengthening curatorial functions in accessible, emotional, and informative visual formats.

Thus, this research not only contributes functionally to the development of Museum Pos Indonesia but also conceptually provides a reference for the advancement of interactive educational public space design in Indonesia. Museum Pos Indonesia has the potential to become a model of thematic museum revitalization capable of addressing contemporary challenges through communicative, inclusive, and participatory design.

RESEARCH METHOD

This research employs a qualitative approach with a descriptive case study design, focusing on the revitalization efforts of the Museum Pos Indonesia through the application of interactive display media and a zone-based display system grounded in visitor experience. The study aims to gain an in-depth understanding of the exhibition space context, visitor behavior, and design strategies that bridge historical narratives with contemporary visual technology. Data were collected using four main methods: field observation, in-depth interviews, online questionnaires, and literature review. Direct observations were conducted at Museum Pos Indonesia to record the existing conditions of display media, spatial circulation, and visitor interaction patterns. Semi-structured interviews were carried out with museum managers, educational staff, and visitors from various backgrounds to explore perceptions and challenges in delivering museum information. Questionnaires were distributed online using Likert and semantic differential scales to respondents aged 17–30 years, aiming to collect quantitative data on visual media preferences, interactivity expectations, and visitor experiences. Secondary data were obtained from academic literature, design journals, and supporting documents related to the digitalization of educational spaces and user-

centered visual communication design. The types of data analyzed include primary data (results from observation, interviews, and questionnaires) and secondary data (literature and previous studies). Data analysis was conducted using the SWOT approach (Strengths, Weaknesses, Opportunities, Threats) to identify internal and external factors affecting the success of the design, and the PEST approach (Political, Economic, Social, Technological) to understand relevant macro-environmental factors. All data were analyzed holistically to formulate a display and zoning strategy that is communicative, participatory, and adaptive to the needs of the digital generation.

RESULT AND DISCUSSION

This section presents the main findings from the field data collection and analysis process, obtained through observation, interviews, questionnaire distribution, and documentation of the existing conditions at Museum Pos Indonesia. The findings are systematically organized according to the research focus: the revitalization of Museum Pos Indonesia through the implementation of interactive display media and experience-based display zoning. All data are interpreted in relation to design needs, visual narrative development, and the integration of interactive technology within the exhibition space

1. Field Observation of Existing Conditions



Figure 1 Observation of Existing Display

Source: Gibran, 2025

Direct observations were carried out on the spatial circulation, collection arrangement, types of display media, and visitor interaction with museum content. The results showed that most of the displays were static and relied heavily on printed text. The lack of visual guides, the absence of thematic wayfinding systems, and the limited use of interactive media were identified as major obstacles in constructing a communicative spatial narrative.

Table 1. Weaknesses of the Current Display System

No.	Element	Present condition	Main Problem
1.	Media Display	Printed Information Panels	Not communicative and monotonous
2.	Stamp Collection	Scattered without visual order	No curatorial narrative flow
3.	Wayfinding	Not available	Visitors have difficulty navigating

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|----|------------------------|-------------------------|--|
| 4. | Media Digital | Not available | Minimal visual interactivity |
| 5. | Collection Information | Long texts, not curated | Less suitable for the younger generation |

Source: Author's Observation, 2025

2. Interview Results with Museum Managers and Visitors

Interviews were conducted with museum management, intern students, and visitors from both student and public groups. The majority expressed the importance of modernizing the display system to enhance the museum's appeal. The management also stated their readiness to embrace technology-based innovations.

Table 2. Summary of Feedback from Museum Management and Visitors

No.	Respondent	Main Input
1.	Museum management	Needs a thematic & interactive display system
2.	Intern Students	Narrative flow is unclear; signage is limited
3.	High School Students	Interested in touchscreen displays and AR
4.	Accompanying Teachers	Museum is not engaging enough for students
5.	General Tourist	Display facilities are insufficient to support exploration

Source: Author's Observation, 2025

3. Questionnaire for Respondents in the Productive Age Group

A total of 120 respondents aged between 18–35 years completed an online questionnaire. The instrument employed both a 5-point Likert scale and a semantic differential scale to assess perceptions regarding the need for interactive design and educational media in museums.

Table 3. Visitor Perceptions of Interactive Display Media

No.	Statement	Average Score	Interpretation
1.	Museums need touchscreens for collection exploration	4.6	Strongly Agree
2.	QR codes will facilitate access to information	4.3	Agree
3.	Display design should be visual and narrative	4.5	Strongly Agree
4.	Audio guides should be accessible via personal devices	4.0	Agree
5.	Museum spaces should follow a thematic flow per zone	4.7	Strongly Agree

Source: Author's Observation, 2025

Literature studies from journals and museum revitalization reports reinforce the importance of integrating interactive media. Rachman and Putri (2021) state that experience-based display approaches can enhance both the duration and quality of museum visits. Meanwhile, Hermawan and Priyanto (2020) emphasize the importance of visual observation as a foundation for building intuitive display narratives.

Based on the findings above, it can be concluded that the revitalization of the Indonesian Postal Museum should focus on developing a display system centered on interaction and user experience. The design strategy is directed towards:

- Integrating touchscreens as the main source of visual information.
- Providing QR codes on each main collection.
- Dividing the space into thematic display zones based on the narrative flow of postal communication history.
- Adding AR displays for immersive experiences (such as stamp and postal vehicle animations).
- Strengthening the wayfinding system and visual branding throughout the museum.

These steps are expected to meet the needs of the digital-native generation, which tends to favor fast, visual, and participatory information delivery.

Analysis/Discussion

The revitalization of the Indonesian Postal Museum through the development of interactive display systems and thematic zoning based on visitor experience stems from the need to transform the exhibition space into one that is more contextual, narrative-driven, and participatory. Based on direct observation, the museum still heavily relies on static media and lacks interactive visual support. This results in low emotional and cognitive engagement from visitors, especially among younger audiences who are accustomed to dynamic digital environments.

1. Visual Interaction and Visitor Response

Field observations revealed that most of the current display systems are passive and one-way in nature. Many of the informative materials are presented in long texts, with minimal supporting illustrations or animations. This is supported by the questionnaire results, where the majority of respondents - especially those aged 18–30 - expressed a strong desire for more interactive and communicative information systems. Technologies such as touchscreens, QR codes, and Augmented Reality (AR) were considered highly effective in bridging historical narratives with the digital generation. A similar study by Yuliana et al. (2022) found that interactive media significantly increases engagement and information retention in educational museums. These findings align with this study's recommendations, where respondents rated interactive technology as a top priority in enhancing historical interpretation

2. Display Flow and Thematic Zoning

The lack of wayfinding systems and structured zoning based on chronological narrative makes the visitor experience feel disorganized. According to the narrative space theory by Hermawan & Priyanto (2020), visitors require spatial storytelling to understand history progressively and meaningfully. Hence, restructuring the zones based on communication eras such as the royal period, colonial era, independence, and modern development is proposed as a conceptual solution to strengthen narrative cohesion and identity of each display area.

3. Validation Through SWOT and PEST Analysis

The SWOT analysis in this study revealed that the museum's main strengths lie in its rich collection and strategic location, while its weaknesses stem from outdated design and lack of interactivity. Opportunities arise from trends in digital education spaces, while threats include limited human resources for digital curation and institutional funding constraints.

The PEST analysis also identified that governmental support for cultural sectors, rapid technological advancements, and public interest in experience-based content are key environmental factors. Zhang (2023) emphasizes that the implementation of interactive technology must be supported by infrastructure readiness and staff capacity to ensure effectiveness.

4. Visual Narrative Design: Conceptual Approach



Figure 2 3D Design Visual Narrative Design

Source: Gibran, 2025

The display system is proposed using a visual storytelling approach, where historical content is delivered through graphics, illustrations, and digital simulations. According to Setiawan and Rachman (2021), visualized narratives significantly enhance knowledge absorption and create a strong emotional connection. In the proposed prototype zones, elements such as video mapping, interactive maps, and sensor-based installations are used to establish the museum as a cross-generational communication space,

5. Synergy of Conventional and Digital Media

Balancing digital and conventional media is essential. Physical panels, vitrines, and signage not only serve informative purposes but also contribute to building a spatial narrative system. Rachman and Putri (2021) argue that creating spatial atmosphere through educational and aesthetic display strategies can now be realized with user-centered and design thinking approaches.

CONCLUSION

This research concludes that the revitalization of Museum Pos Indonesia through the implementation of interactive display media and visitor-experience-based zoning offers a relevant and strategic solution to the stagnation of conventional museum spaces. By adopting Design Thinking and the Double Diamond framework, the design process becomes more user-centered and adaptive to the digital generation's learning behavior. The integration of technologies such as touchscreen displays, QR codes, and Augmented Reality (AR) significantly enhances visitor engagement, supports narrative comprehension, and transforms the museum from a passive archive into an active space of cultural communication.

Field findings show that visitors especially students and young adults prefer experiential and interactive media over static textual displays. In response, display zoning based on postal communication history provides a thematic structure that facilitates narrative clarity. This transformation not only improves educational delivery but also aligns with the values of contemporary design in public learning spaces.

The logical consequence of this research is the strengthening of interdisciplinary knowledge between visual communication design and museology, especially in the context of cultural and historical education. In practice, the research contributes to the development of Islamic education as well, by providing a replicable model of interactive and narrative-based educational spaces that foster engagement, reflection, and inclusive learning—principles that resonate with the holistic values of Islamic pedagogy.

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