

Promoting Malaysian Architecture Through QR Integrated Enamel Pin Merchandise

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Abstract

Malaysian architecture, encompassing traditional and modern structures, plays an important role in the nation's cultural identity. However, increasing modernization and a lack of awareness, particularly among younger generations, threaten its appreciation and preservation. This decline not only impacts cultural heritage but also weakens the sense of national identity and continuity, diminishing the connection between people and their historical roots. This study explores the potential of wearable merchandise as an innovative tool for promoting Malaysian architecture. Specifically, it examines the role of Malaysian in fostering cultural appreciation by incorporating architectural-themed wearable merchandise into their daily attire. The research aims to assess their awareness of Malaysia's architecture and propose merchandise designs that effectively represent and promote these landmarks. A quantitative survey was conducted to analyse awareness, preferences, and attitudes toward wearable merchandise inspired by Malaysian architecture. The findings inform the design of impactful accessories that serve as everyday reminders of architectural significance. By integrating such merchandise into professional settings, this study will present an accessible and sustainable approach to enhancing cultural appreciation.

1. Introduction

Malaysia boasts a diverse architectural landscape, blending traditional influences with modern innovations. From the intricate designs of traditional Malay houses to the iconic Petronas Twin Towers, Malaysian architecture reflects the nation's rich cultural identity and historical evolution. However, due to rapid modernisation and changing societal interests, appreciation for architectural heritage is gradually declining. This poses a challenge in preserving national identity and fostering cultural awareness.

The financial sustainability of conservation projects is critical, as budget constraints often lead to compromises in restoration efforts, such as substituting original materials with cost-effective alternatives (Mohd Nawi *et al.*, 2020). In 2024, Prime Minister Datuk Seri Anwar announced that the federal government had allocated RM25 million to conserve UNESCO-designated heritage sites in Melaka (Povera, 2024). To address these challenges, Malaysia must explore alternative strategies to enhance public engagement, promote tourism, and enhance global recognition of its architectural landscape.

One such approach is promoting wearable merchandise inspired by Malaysian architecture, making these structures visible and appreciated in everyday life. Developing creative and aesthetically appealing products that

incorporate architectural elements offers an accessible and cost-effective way to raise awareness while fostering a greater appreciation for Malaysia's diverse architectural heritage.

2. Literature Review

2.1 Merchandise as a Tool for Cultural Preservation

According to Dongxiang (2018) cultural symbols are beyond basic information signs, as they encapsulate deeper cultural meanings and reflect the distinctive image of a country. For instance, Dataran Merdeka stands as a symbol of independence and national pride, while nasi lemak, the national dish, represents a Malaysian favourite dish. The Zapin reflects elegance and Islamic cultural influence. Chinese heritage and tradition can be seen in Cheongsam, and batik embodies the artistic spirit of Malay craftsmanship, all serving as meaningful examples of Malaysia's diverse cultural symbols.

The use of merchandise as a medium of cultural communication has become an important strategy in preserving and promoting national identity. Beyond its commercial value, merchandise serves as a bridge that connects people to culture, history and place. Moreover, merchandise has long been used as a memorable item, with museums, heritage sites, and tourism organisations leveraging custom-designed products to establish tangible connections between people and historical landmarks. In Malaysia, local brands such as 'Apom!' have gained popularity by offering merchandise that reflects the nation's identity, with their tagline, 'A Piece of Malaysia.' Wearable merchandise serves as a powerful storytelling tool, allowing individuals to connect with cultural symbols in their everyday lives. By integrating architectural elements into their designs, organisations have effectively sparked greater public interest and widely adopted cultural branding and tourism marketing to enhance awareness and ensure the continued appreciation of Malaysia's architectural significance.

2.2 Transmedia Story Telling in Architectural Promotion

Transmedia storytelling is recognised as a powerful approach for incorporating technology into heritage practices, as it promotes active participation from audiences (Song *et al.*, 2023). By disseminating narratives across multiple platforms, this approach allows individuals to interact with cultural content in diverse and meaningful ways. Recently, many community museums have utilised transmedia techniques to revitalize cultural values and enhance public participation (Basaraba & Cauvin, 2023). In the context of promoting Malaysian architecture, incorporating transmedia storytelling into merchandise design can serve as a dynamic strategy. By embedding QR codes into merchandise, wearers can access multimedia narratives that delve into the historical and cultural significance of architectural landmarks. This method enriches the user experience but also fosters a deeper appreciation for Malaysia's architectural heritage among a broader audience.

Malaysian architectural designs can capture interest and inspire individuals to explore the nation's rich and diverse architectural heritage. These physical representations serve as powerful tools in fostering national pride and reinforcing a connection to Malaysia's cultural identity. By integrating practicality with storytelling, such designs can significantly enhance appreciation for Malaysian architecture, emphasizing its relevance both within the country and on a global scale.

3. Methodology

The data collection method used in this research is a quantitative research approach to investigate the perspectives of 28 Malaysians, consisting of students and civil servants, regarding the potential of wearable merchandise in fostering cultural appreciation for Malaysian architectural heritage. The respondents, aged between 20 and 60 years, represent a sample of civil servants from various government departments across Malaysia. As key figures in the public sector, civil servants play an important role in promoting national values and cultural heritage. Their involvement in the study offers insights into how individuals with a strong sense of civic duty perceive the importance of preserving and promoting Malaysia's architectural heritage. The study includes the design and development of merchandise incorporating elements from Malaysian architecture, ensuring cultural and visual significance. The survey data were then analysed to provide insights into the effectiveness of these merchandise items in enhancing awareness and appreciation of Malaysia's architectural identity.

4. Data Collection

4.1 Civil Servant Views on The Merchandise Design to Promote Malaysian Architecture

Based on the survey, most respondents agreed that digital illustrations and storytelling are effective in promoting cultural heritage sites. Table 1 summarises the respondents' views.

Table 1 *The respondents view*

Topic	Respondent Views
Essence of Cultural Heritage	All participants agreed that merchandise inspired by Malaysian architectural could effectively represent the country's culture.
Types of Merchandise	Most respondents expressed a strong preference for enamel pins as their top choices for heritage-inspired merchandise, followed by t-shirt.
Types of Digital Illustration and Innovation	Respondents preferred illustrations inspired by Traditional Malay House as iconic features to effectively represent Malaysian architecture, follow by Petronas Twin Tower, KLCC. Digital storytelling is chosen as the most favoured innovation.
Effectively Convey Malaysian Architecture	Most participants expressed pride in wearing Malaysian architecture-inspired merchandise and agreed that it fosters awareness and appreciation for cultural landmarks. They supported the idea of paying more for items that promote site preservation.

Based on survey results from 28 civil servants, most respondents strongly agreed with the potential of innovative merchandise designs to promote Malaysian architecture. All participants agreed that merchandise inspired by iconic Malaysian buildings could effectively represent the country's culture. Most respondents expressed interest in purchasing Malaysian architecture-related merchandise, with a significant number indicating a strong preference for enamel pins.

When asked about the importance of design aesthetics, the majority highlighted traditional motifs as key to making a design appealing. Most participants expressed that they would be very interested in purchasing architecture-inspired merchandise design, particularly if it helped promote cultural appreciation. Additionally, respondents felt a strong sense of pride about wearing merchandise inspired by Malaysian architecture, with most choosing to feel very proud. Most participants also agreed that the merchandise could effectively foster awareness and appreciation for cultural landmarks. There was overwhelming support for paying more for items that contribute to heritage preservation, with many agreeing that a price range of RM20–RM50 is reasonable for high-quality architecture-themed merchandise. Moreover, digital storytelling is identified by respondents as the most preferred innovation, surpassing other alternatives.

5. The Design Process

5.1 Phase 1: Choosing Material for Enamel Pin

According to the findings, it would be important to take respondents' preferences and values into account when selecting the material for enamel pins. Because they can capture the fine details of architectural patterns, hard and soft enamel are favoured. Enamel is a kind of glass-based paste that is placed to the recessed portions of a metal base (such copper, brass, or nickel) to create hard enamel pins. The enamel is positioned over the metal line and then polished to the level of the raised metal. Hard enamel pin badges have a polished, smooth surface (Aspinline, 2021). The material selected must reflect the preferences of the respondents, allowing details to be well-represented while ensuring the pins remain high-quality and long-lasting as portray in Fig.1 below.



Fig. 1 *The example of hard enamel on a metal base*

5.2 Phase 2: Choosing Malaysian Architecture and Illustration

Based on the results, when choosing Malaysian architectural buildings and illustrations for wearable merchandise, it is essential to focus on iconic architectural features that resonate with the respondents. As shown in Fig. 2, the Traditional Malay House and the Petronas Twin Towers were most frequently selected as the most iconic buildings in Malaysia, reflecting a blend of cultural heritage and modernity. To effectively represent Malaysian architectural identity, the designs should feature these structures prominently, using simplified yet recognizable elements to capture their essence. The inclusion of traditional motifs will enhance the cultural relevance of the designs and appeal to the respondents' preference for merchandise visuals.

Additionally, the design should strike a balance between traditional and modern elements to appeal to a broad audience. Incorporating both the traditional Malay house features and Petronas Twin Towers into the merchandise could create a harmonious representation of Malaysia's architectural evolution. The illustrations should be visually clear and simple, allowing the designs to maintain their recognizability, even in smaller formats like enamel pins or accessories. Clean lines and iconic shapes will ensure the merchandise is both aesthetically appealing and culturally significant, fostering pride in Malaysia's rich architectural heritage.

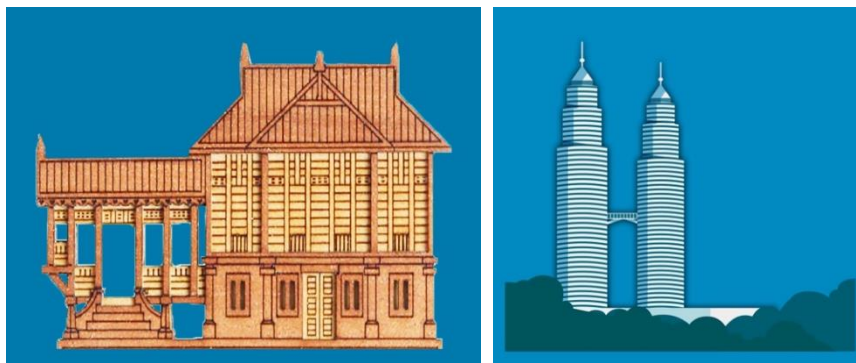
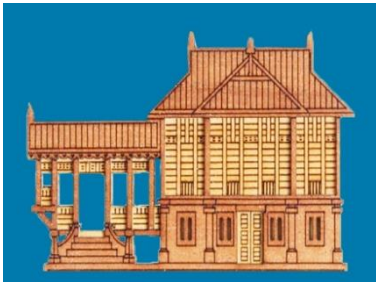


Fig. 2 The example of traditional and modern Malaysian architecture and illustrations

5.3 Phase 3: Innovative QR Code and Video Storytelling

Integrating QR codes into enamel pins introduces an interactive element that enhances user engagement by providing direct access to informative videos about Malaysian architecture. This innovation allows wearers to scan the QR code as shown in Fig. 3, using their smartphones, instantly linking them to digital content that shares the history, design significance, and cultural value of the featured structures. By leveraging transmedia storytelling, where narratives are presented across multiple digital platforms, this approach transforms traditional merchandise into an educational and immersive experience.

Architecture	QR Code Design	Informative Video
 Malay Traditional House		



Petronas Twin Tower



Fig. 3 The examples of QR codes and informative videos

5.4 Phase 4: Designing Malaysian Architecture-Inspired Enamel Pin

This stage involves finalizing the visual and structural design of the enamel pin, ensuring the graphics, colours, and QR code placement are optimized for visibility and usability. The pin is designed to be worn by civil servants, reinforcing its role as a cultural ambassador in professional settings. Fig. 4 illustrates examples of QR codes embedded in enamel pin designs of the Traditional Malay House and Petronas Twin Towers, demonstrating how they integrate cultural storytelling with modern technology.



Fig. 4 The examples of QR codes in enamel pin designs

5.5 Phase 5: The Final Product

The finished enamel pin serves as a wearable promotional tool for Malaysian architecture. It is designed for tourism, education, and cultural appreciation, demonstrating how merchandise can effectively enhance engagement with Malaysia's architectural heritage in a modern, innovative way as portrayed in Fig. 5.



Fig. 5 The final looks on work attire

6. Conclusion

This study emphasises the importance of material selection and design in creating enamel pins that promote and preserve Malaysian architecture. The pins offer a unique blend of aesthetic appeal and cultural education by incorporating iconic structures and integrating QR codes linked to video storytelling about these landmarks. This fusion of tradition and modernity fosters a deeper appreciation for Malaysia's architectural heritage. Future research could explore the effects of architectural-themed merchandise on public awareness and engagement. Additionally, investigating the potential of combining augmented reality (AR) with QR codes could provide valuable insights into promoting sustainable tourism and further enhancing cultural preservation efforts.

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Conflict of Interest

The authors declare no conflict of interest regarding the paper's publication.

Author Contribution

The authors confirm their contribution to the paper as follows: **study conception and design:** Nurhana Ismail and Norfadilah Kamaruddin; **data collection:** Nurhana Ismail and Norfadilah Kamaruddin; **analysis and interpretation of results:** Nurhana Ismail and Norfadilah Kamaruddin; **draft manuscript preparation:** Nurhana Ismail and Norfadilah Kamaruddin; All authors reviewed the results and approved the final version of the manuscript.

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