

An Interactive Stamp Trail for the Preservation of Malay Kuih Heritage

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ABSTRACT

Malaysian culture places great importance on traditional Malay dessert, which reflects the country's varied culinary traditions and rich background. However, modernization and shifting nutritional choices provide obstacles to the preservation of these ancient treats. This project explores a novel method of conserving Malay dessert history by means of an Interactive Stamp Trail, a gamified engagement technique intended to raise cultural awareness among the young generation. Through the integration of interactive experiences and educational components, the new innovative approach enables users not only to learn about the traditional food but also can appreciate various kinds of traditional Malay dessert, their historical value, and regional origins. 1000 young adults from Selangor state in Malaysia between the ages of 18 and 30 participated in a survey to gauge their interest in culturally immersive activities and knowledge with traditional Malay dessert. The findings shown the Interactive Stamp Trail offers a viable means of preserving Malaysia's culinary legacy.

INTRODUCTION

Malays, Chinese, Indians, and indigenous peoples are among the biggest ethnic groups that have shaped Malaysia's rich cultural tapestry. The nation's culinary customs, which are an important component of its cultural character, reflect this heterogeneous landscape. The classic Malay desserts are part of these culinary marvels where these treats are more than just a food but they are symbolic of the social customs, historical narratives, and shared values of the Malaysian community. Commonly, traditional Malay desserts include a broad variety of savory and sweet snacks that are frequently prepared with rice flour, coconut milk, and palm sugar. They are also aesthetically pleasing because they are usually colorful and crafted complexly. Moreover, it is sometimes referred to as a "Malaysian snack" because of its impromptu and diverse daily consumption (Hamzah et al., 2015).

Furthermore, Malaysians eat traditional Malay desserts as part of their daily diet. According to the previous studies done, more than 70 types of traditional Malay desserts are still in demand. These include the popular type of traditional Malay dessert that is sold by street vendors and is usually prepared fresh either at the booth or earlier in the day of sale (Shamsudin et al., 2014, Omar et al., 2011). However, there have been multiple challenges to the preservation of traditional Malay desserts in recent years. According to Hamzah et al. (2015) and Kamaruzaman et al. (2022) who both claimed that many younger generations favor quick, contemporary meal options over traditional preparations, there is a widening gap between them and their cultural culinary heritage. The sustainability of traditional culinary practices and the possible loss of cultural identity linked to them are issues raised by this movement. According to this perspective, the preservation efforts will involve the use of novel tools. This project attempts to preserve traditional Malay dessert heritage by using technology and interactive experiences to create an interactive cultural engagement idea that honors the rich history, flavors, and stories of these traditional treats.

Traditional Malay Dessert

With a wide variety of regional cuisines from numerous races and ethnic groups, Malaysia boasts a rich, authentic, and lively cultural past. The Malay culture is principally to blame for its origins, as it is the largest

ethnic group in the country. The Malays themselves have impacted many regional cuisines, including appetisers, soups, main dishes, and desserts. The diversity of Malay traditional desserts, in particular, is evidence of the depth of Malay culture and culinary traditions (Kamaruzaman et al., 2022). However, the significance of traditional Malay desserts, or *kuih*, from a broader cultural perspective has received very little study (Kamaruzaman et al., 2022, Mustafa et al., 2012).

The term "traditional food" is used extensively worldwide and can mean different things depending on the location. Each traditional cuisine also has its own history and context. It typically entails unique preparation techniques that were first created by a community of individuals in a given area who share comparable cultural customs and lifestyles (Shin, 2010). According to Albayrak (2010), a nation's cultural variety determines the type of traditional food that is served there. The cuisine itself possesses certain traditional qualities. Traditional cuisine with a particular cultural identity, historical era, and legacy, as well as the genuineness and distinctiveness of certain locations are intimately associated with this concept.

Conversely, "traditional food" describes a unique cuisine that represents the ethnicity and culture of a certain area (Shin, 2010). For instance, the Malay people in Malaysia are fortunate to have a wealth of traditional dishes (Raji, 2017). Some of the more well-liked ones are *Nasi Lemak*, *Nasi Ayam*, *Laksa*, and various forms of *Kuih*, the traditional Malay dessert (Kamaruzaman et al., 2022). Various *Kuih* are usually offered during teatime, but they are also occasionally served during special occasions, festivals, and other times of the day, such as for breakfast and afternoon snacks. *Kuih* can be broadly divided into two categories which are savoury and sweet (Raji, 2017). Meanwhile, Sharifah, Shafii, and Haron (2015) talked about how the Malay *Kuih* have a unique flavor, texture, and look. Sweet potato flour, tapioca flour, coconut milk, shredded coconut, banana, palm sugar, sago palm, and glutinous rice are the usual ingredients of the majority of Malay *Kuih*, which are chewy, creamy, and sweet. They are readily available at night markets, roadside stands, cafés, and restaurants and can be fried, grilled, steamed, or baked (Raji, 2017).

METHODOLOGY

This study is conducted with the aim to gauge the awareness level among youths in sustaining the traditional Malay dessert in Selangor state, Malaysia. Non-participant observations were conducted throughout many of restaurants, bazaars ramadan, cafeterias and food stalls, while a series of surveys were carried out with local youth, all of whom provided their memories and reflections on traditional Malay dessert. In this paper, only survey data will be presented and discussed towards the aim.

Specific study components are targeted by each section of the survey questionnaire, such as demographic data, familiarity with different traditional Malay desserts, and interest in taking part in preservation initiatives. 1000 volunteers between the ages of 18 and 30 from different parts of Selangor states in Malaysia participated in the online survey. The next parts will present the results of the survey.

Data Collection

Demographic of Participants

It is clear that young people are the main target audience because the majority of participants (60%) were between the ages of 22 and 25. In contrast, just 10% of respondents were from the younger 18–21 age bracket, indicating a substantial secondary audience, with 30% of respondents being between the ages of 26 and 30 (Fig. 1).

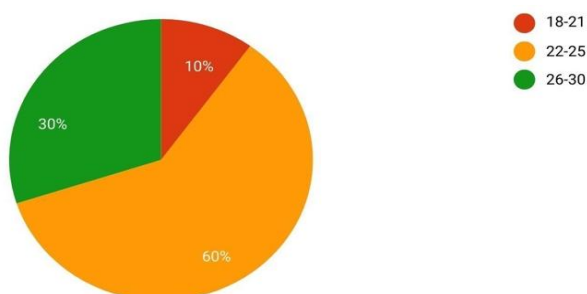


Fig. 1 Age and Background of the Participants

Awareness and Interest in Interactive Experiences

Participants' past experiences with interactive activities and their knowledge of traditional Malay desserts were both evaluated in the survey. Since the majority of respondents (80%) had never taken part in interactive experiences previously, this effort would likely be new to them. Nonetheless, 20% of respondents had some prior experience, indicating that the target audience may be accustomed to these interactive exercises (Fig. 2).

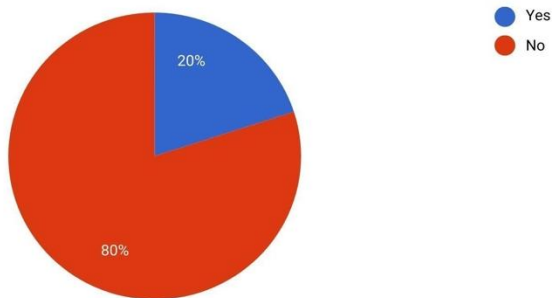


Fig. 2 Participants' Past Experiences

A significant portion of participants (60%) reported being very familiar with Malay *kuih*, showing strong cultural knowledge and interest. Meanwhile, 40% were somewhat familiar, suggesting that while they recognize Malay *kuih*, there is still room for greater awareness and engagement through the stamp trail (Fig. 3).

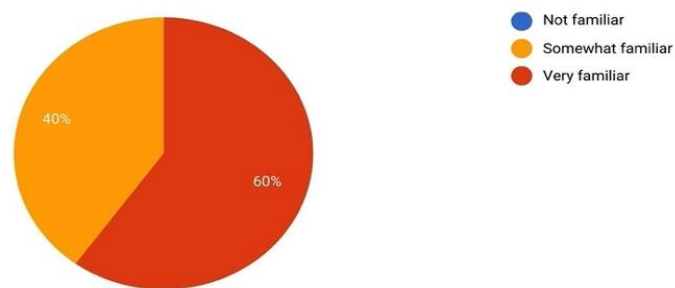


Fig. 3 Participants Familiarity with Malay Kuih

Participants Preferences on the Malay *Kuih* Stamp Trail Design

Participants were asked to share their preferences regarding the design and execution of the stamp trail. Half of the participants (50%) preferred a design that blends Malay *kuih* with cultural elements such as traditional patterns or motifs. This suggests that incorporating heritage elements into the stamp trail would be highly appealing. Meanwhile, 40% favored detailed illustrations of specific *kuih*, emphasizing the importance of visually recognizable *kuih* representations (Fig. 4).

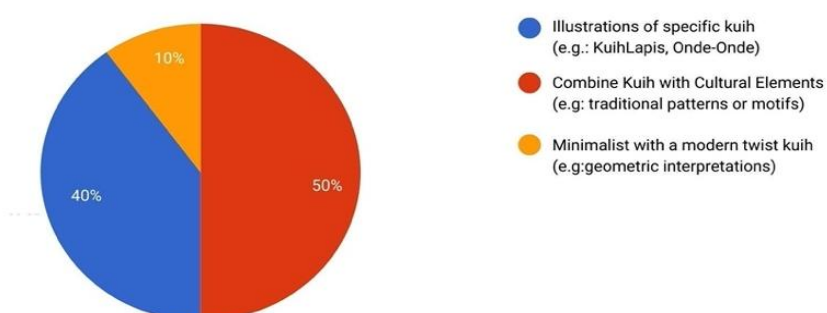


Fig. 4 The Participants Preferences Regarding the Design Reflect Malay *Kuih* Heritage

Therefore, an overwhelming majority (80%) preferred a diverse selection of *kuih* from various regions, suggesting that participants value a broad cultural experience rather than focusing on a single type. Only 20% expressed interest in a specialized *kuih* theme, such as those with coconut-based ingredients. This highlights the importance of showcasing regional diversity in Malay *kuih* heritage through the stamp trail.

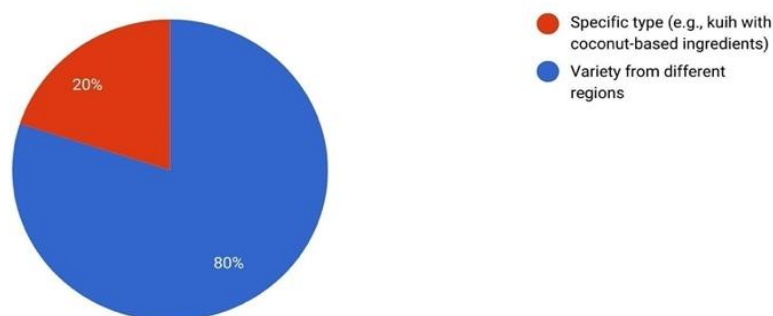


Fig. 5 Percentage of the Malay *kuih* stamp trail preferences

The physical map or booklet (60%) was the most popular choice, indicating a preference for tangible, collectible materials that enhance the trail experience. Many participants may appreciate the nostalgia and keepsake value of a printed guide. However, 30% of participants favored a mobile app, suggesting that digital and interactive features could enhance user engagement. A mobile app with GPS functionality could cater to tech-savvy users who prefer digital convenience.

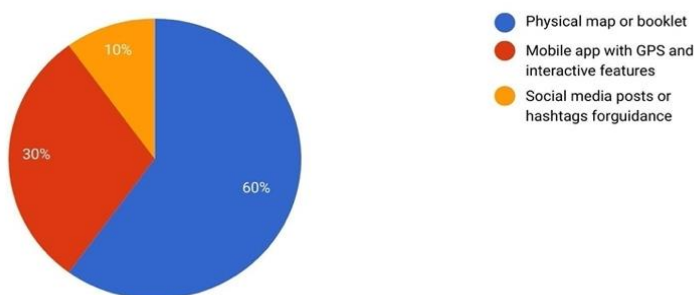


Fig. 6 The preference of the trail navigation

The Design Process

Phase 1: Selecting the Traditional Malay Desserts

This phase was to identify the traditional Malay desserts from each state that would be featured on the stamps. This process involved careful consideration of the popularity, cultural significance, and unique characteristics of the *kuih*. The selected *kuih* represent not only iconic delicacies but also the rich cultural heritage of their respective states. The *kuih* chosen for the study include *Kuih Bakar* (Selangor), *Kuih Abuk-Abuk* (Johor), and *Kuih Pena* (Pahang). Future iterations of the stamp trail are envisioned to include traditional *kuih* from other Malaysian states and reflect diverse ethnic culinary traditions such as Peranakan, Indian and Chinese *kuih* enhancing national inclusivity.

Table 1 Example of Traditional Malay Desserts







Malay Kuih	Region/State	Characteristic
Kuih Bakar	Selangor	Traditionally baked in flower-shaped molds, contributing to its aesthetic appeal.
Kuih Abuk-Abuk	Johor	Shaped into small cones or packets using banana leaves.

Kuih Pena	Pahang	Usually shaped into small, rectangular or square pieces, often wrapped in banana leaves for steaming. There are small stars in it.
Kuih Keria	Melaka	shaped like small doughnut rings or bracelets.

Phase 2: The Malay *Kuih* Design

In this phase, the designs are tailored to highlight the unique identity of specific Malay *kuih*, connecting them with their region of origin. The designs incorporate imagery, and text that reflect the cultural and historical essence of each *kuih*. Flower motifs are shown in each design as an identity of each state.

Table 2 Example of the Malay *Kuih* Design

Malay <i>Kuih</i>	State Flower Identity	The Design
 <i>Kuih Bakar</i>	(Selangor) Bunga Tanjung Pecah 9	
 <i>Kuih Abuk-Abuk</i>	(Johor) Lada Hitam	
 <i>Kuih Pena</i>	(Pahang) Pokok Kopi	
 <i>Kuih Keria</i>	(Melaka) Bunga Kesidang	

Phase 3: QR Code

Each *kuih* in the Stamp Trail will have a QR code embedded into the design, as well as a visual depiction of its history. Participants may discover extensive details about the history and cultural importance of the *kuih* represented on the stamp by scanning the QR code with their smartphones. This feature increases the requirement for participants to manually search webpages or use search engines such as Google or Safari. As shown in Table 3, the QR code is strategically integrated inside the stamp design, emphasising its interactive feature.

Table 3 Example of QR Codes Scan

	<p>KUIH BAKAR</p>  <p>Kuih Bakar, a well-loved traditional Malay kuih from Selangor, is a rich, fragrant cake with a slightly crispy outer layer and a soft, custard-like center. Made from a blend of flour, eggs, coconut milk, sugar, and pandan juice, it is often baked in a flower-shaped mold, giving it its distinct and elegant appearance. The golden-green hue from pandan extract adds to its visual appeal, while its slightly charred edges enhance its unique taste and texture.</p> <p>The Bunga Tanjung as a motif, with its nine delicate petals (Kelopak 9), holds special significance as a symbol of elegance, purity, and cultural heritage in Selangor. Historically, this flower was associated with the royal courts and traditional Malay customs, representing refinement and prestige. Its presence in Selangor's emblem and cultural motifs reinforces its importance as an enduring state symbol.</p> 
	<p>ABUK-ABUK</p>  <p>Kuih Abuk-Abuk is a traditional Johor delicacy that captures the essence of simplicity and tradition. Made from steamed sago pearls, grated coconut, and palm sugar, this kuih is wrapped in banana leaves, enhancing its aroma and adding an authentic touch to its presentation.</p> <p>The highlight of Kuih Abuk-Abuk is its delightful contrast of textures: the chewy sago, the sweet and slightly caramelised palm sugar filling, and the soft, moist coconut. Its preparation is a meticulous process that reflects the care and craftsmanship of Johor's culinary heritage.</p> <p>The Bunga Lada Hitam (Black Pepper Flower) is a representation of Johor's historical significance as a major hub for the spice trade, particularly in black pepper cultivation. Johor was once renowned for its thriving spice plantations, which played a crucial role in the region's economic and cultural development.</p> 
	<p>KUIH PENA</p>  <p>Kuih Pena, also known as Kuih Kepena, is a traditional dessert deeply rooted in the cultural heritage of Pahang, particularly in the Chenor district. This kuih is part of the renowned trio of traditional sweets called "Tiga Beradik," which also includes Kuih Badak Kubang and Dodol Kukus. Together, these delicacies symbolize the culinary richness of Pahang and are especially cherished during festive occasions like Ramadan and Eid celebrations.</p> <p>Kuih Pena is made from a blend of rice flour and coconut milk, giving it a soft and rich texture. It is carefully steamed to perfection, ensuring a delicate consistency that melts in the mouth. The kuih is lightly sweetened, often using traditional ingredients like palm sugar, which adds depth and a hint of caramelized flavor.</p> <p>The Coffee Plant (Pokok Kopi) has long been associated with Pahang's agricultural legacy, particularly in the highlands and fertile riverbanks, where coffee cultivation thrived during the colonial era. The plant symbolizes prosperity, endurance, and resilience, reflecting the hardworking spirit of Pahang's people. Its deep roots in the region's economy highlight its role in trade and local livelihoods, making it a meaningful emblem of the state's identity.</p> 
	<p>KERIA</p>  <p>Kuih Keria is a beloved traditional delicacy from Melaka, often referred to as Malaysia's version of a doughnut. Made from sweet potato, this kuih is shaped into a ring, deep-fried until golden brown, and then coated in a glossy layer of caramelized palm sugar. The result is a delectable treat that perfectly balances sweetness with the earthy flavor of sweet potatoes.</p> <p>Kuih Keria stands out not only for its taste but also for its simplicity and rustic charm. Its crispy exterior contrasts beautifully with the soft, fluffy interior, making it a delightful snack that has won hearts across generations.</p> <p>As a state symbol, Bunga Kesidang represents resilience, tradition, and cultural pride, much like Melaka itself—a place renowned for its deep historical roots and heritage preservation. The flower's understated beauty mirrors Melaka's unique charm, where tradition and modernity blend harmoniously. Just as Bunga Kesidang remains an iconic representation of Melaka, Kuih Keria continues to be a treasured delicacy, connecting generations through shared flavors and memories.</p> 

Phase 4: The Stamp Trail Card Design

The concept of using interactive stamp trails is an approach to cultural preservation. Such trails can serve as educational tools that guide participants through significant cultural sites while providing opportunities to learn about traditional *kuih*. According to Asari and Ikuta (2021), stamp collection and quiz games are popular instructional activities due to their simplicity and leisure value. By collecting stamps at various locations, each stop can represent different *kuih* or culinary practices. This may deepen their connection to history.

The trail route serves as the central element of the interactive stamp trail connecting participants with the locations where they can explore and experience traditional Malay *kuih*. By using the trail route, participants can navigate the Malay *kuih* with each stop. In Fig 7, (b) Inner page, each stop has a different type of *kuih* for each region. Then, (a) outer page included an empty space for the stamp collecting and a QR code for the details about the *kuih* itself.



(a) Outer Page

(b) Inner Page

Fig. 7 The Example of Stamp Trail Card Design

Phase 5: The Final Product

The final product brings together all the designed elements into a cohesive and engaging experience. This phase ensures that the stamps, trail card and interactive features function seamlessly. It offers participants an enjoyable and educational journey of preservation of Malay *kuih* Heritage.

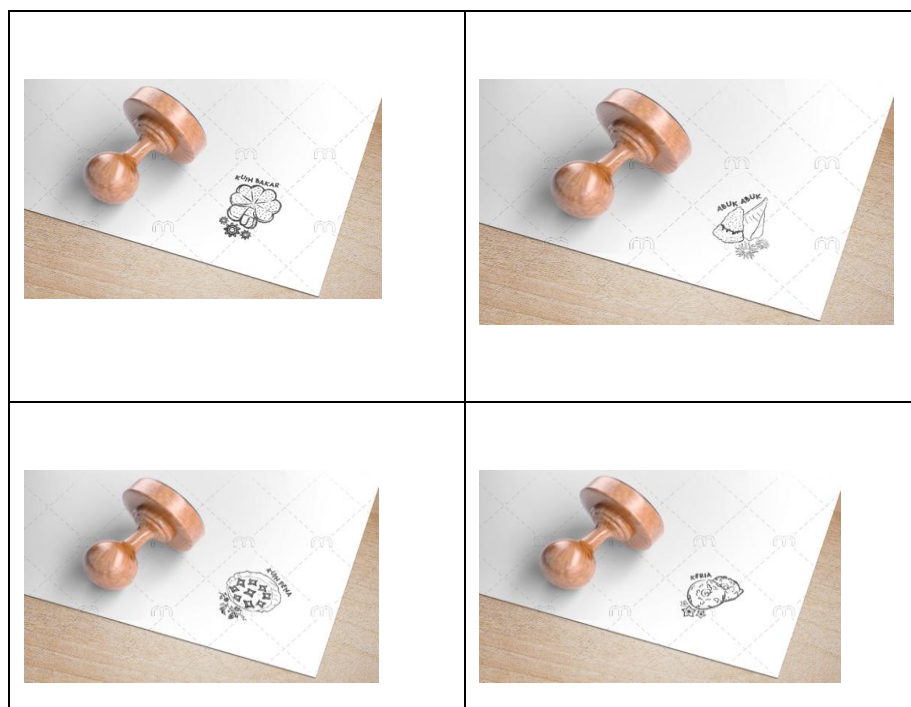


Fig. 8 The Example of the Final Look of Malay Kuih Stamp Trail

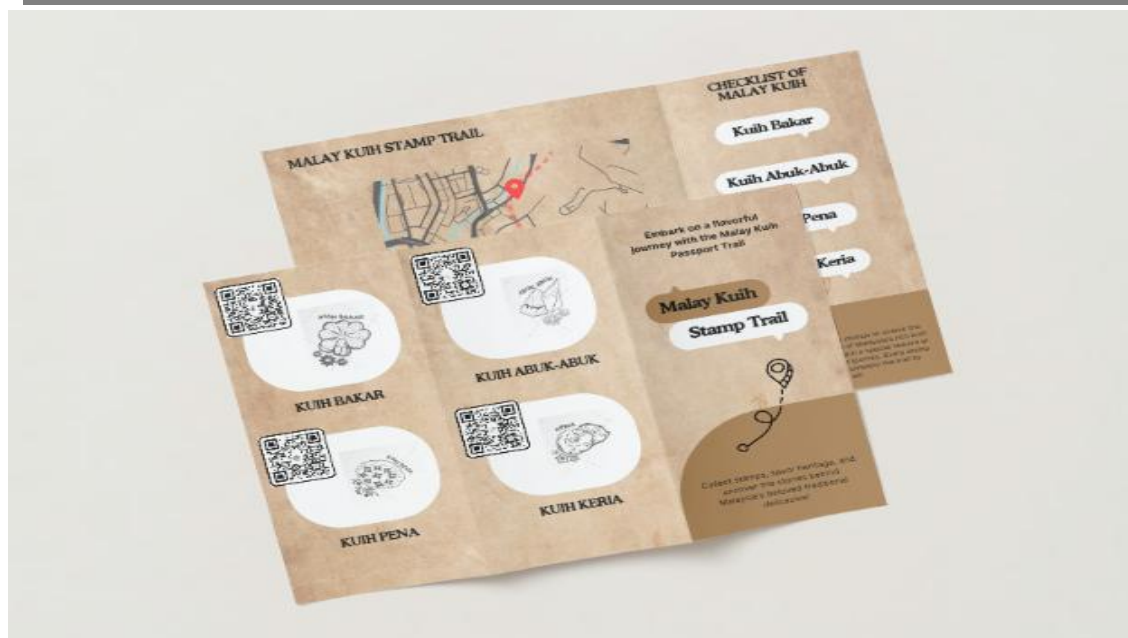


Fig. 9 The Example of the Final Look of Malay Kuih Stamp Trail

To evaluate the practical effectiveness of the Interactive Stamp Trail, a pilot study is planned in collaboration with selected community centers and local cultural festivals in Selangor. This pilot will allow participants to engage with the complete stamp trail experience collecting stamps, interacting with embedded QR codes and providing feedback on usability, engagement and cultural resonance. Insights gathered will be used to refine design, identify areas for improvement and guide potential scaling efforts to other Malaysian states.

CONCLUSION

In conclusion, the preservation of cultural heritage is strengthened through the Interactive Stamp Trail, which encourages engagement with traditional Malay *kuih* while incorporating elements of Malaysia's historical identity. By integrating a gamified experience with QR codes providing historical insights, this initiative fosters deeper appreciation and awareness of Malaysia's diverse *kuih* traditions. Through the carefully designed stamps and trail map, participants not only rediscover the flavors of Malay *kuih* but also connect with the cultural and historical significance of different regions. Additionally, this interactive approach offers both Malaysians and tourists an immersive way to experience and appreciate the richness of Malaysia's culinary and cultural heritage. Therefore, this stamp trail can serve as an innovative tool in safeguarding traditional *kuih* while promoting a broader understanding of the nation's cultural identity. To strengthen the legitimacy and reach of the initiative, collaboration with institutions such as the Department of National Heritage, local museums and educational institutions is being explored. These partnerships may facilitate integration into school programs and cultural exhibitions ensuring long-term sustainability.

Conflict of Interest

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

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