

Sustaining Botok-botok as a Malay Food Tradition Practice through the Lens of Cultural Intelligence

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Abstract

This study examined the Cultural Intelligence (CQ) of Johor's botok-botok, which has been at risk of cultural erosion. With three-fold objectives, data from 10 interviewees, with ages ranging from 23 to 62 years old, is analysed using a thematic analysis. The findings revealed that botok-botok served not only as food but also as a vessel of ancestral memory, communal identity, and heritage. While the Johorean Malays continue to use traditional methods, several respondents are innovating by incorporating alternative ingredients, utilising frozen packaging, and developing creative menu concepts. In conclusion, cultural preservation remains possible through CQ-driven adaptations.

Keywords: Culinary Heritage; Cultural Intelligence (CQ); Sustainability; Youth Perceptions

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1.0 Introduction

Malaysia has introduced the "Big Bolds" concept in the Madani Economy, which encompasses the six core values: sustainability, care and compassion, respect, innovation, prosperity, and trust (Bernama, 2023). This study connects the six core values to demonstrate botok-botok as a food heritage and cultural preservation, supporting community development and ensuring the sustainability of traditional food practices. Botok-botok exemplifies the local wisdom of Johorean Malays, linking people to their ancestors, background, and society. The dish characterised a wise use of regional resources and was popular in coastal areas.

Figure 1 presents botok-botok, a steamed protein dish made by wrapping spiced fish in noni or banana leaves with herbs, vegetables, and grated coconut. Traditionally prepared with mackerel or pomfret, it is made with turmeric, ginger, and garlic and cooked for approximately 60–75 minutes, including steaming (Bernama, 2023). Modern variations use chicken or squid while keeping their cultural essence (Hasan, 2023). Beyond flavour, its preparation fosters family bonds and sustains intergenerational culinary knowledge



Fig. 1: Botok-botok
(Source: Authors, 2025)

1.1 Issues and Study Objectives

Botok-botok is no longer a staple food in Johor, but it is still prepared during special occasions, such as festivals and weddings. It remains a symbol of ancestral heritage. While nasi lemak, rendang, and laksa are among the popular Malay foods among Malaysians, botok-botok is gradually falling into oblivion due to the availability of more convenient options, especially among younger generations. Many young people prefer fast food because it is quick and easy to prepare. As a result, modern food habits such as ordering food online and spending less time on family meals and home cooking gradually weaken cultural traditions. According to Hasan (2023) and The Star (2023), this also includes high-quality ingredients that have become increasingly scarce, resulting in limited documentation of traditional recipes. This finding raises concerns about the loss of cultural heritage.

On the other hand, certain factors, including food festivals, frozen botok-botok packaging, and educational programs, help keep the tradition alive, according to Hasan (2023). Botok-botok's evolution reflected the need to balance tradition with innovation, a delicate measure necessary for survival in Malaysia's rich culinary landscape, as stated by Natalia (2023). Although interest in traditional Malay cuisine is increasing, factors such as urbanisation, changing eating habits, and the younger generation's limited connection to cultural practices are causing traditions like botok-botok to be passed down less often.

For this reason, this study aims to gain a deeper understanding of the current importance and appreciation of botok-botok. It also explores how regional cultural heritage can be preserved using a cultural intelligence (CQ) framework. This study aims to explore how Cultural Intelligence influences the sustainability of botok-botok as a Malay food tradition in Johor. Therefore, this study has come up with threefold objective: first, to examine the cultural significance of botok-botok within the Malay community in Johor; second, to identify the key ingredients, traditional preparation methods, and ways of consuming botok-botok; and lastly, to explore the innovation of botok-botok in response to modernisation that changes consumer preferences.

2.0 Literature Review

2.1 Cultural Intelligence

CQ represents the preservation and appreciation of cultural traditions as a living part of society (Ott & Michailova, 2018). In the realm of food heritage, Kapelari et al. (2020) argue that food heritage enhances cultural understanding, promoting more sustainable and informed decisions. CQ supports this by recognising symbolic meanings, balancing authenticity with innovation, and safeguarding dishes such as botok-botok. It also helps younger generations preserve heritage foods through education, participation, and digital tools while maintaining their cultural identity. The strategy for preservation involves appreciating the cultural values, traditions, and meanings behind food, thereby advancing sustainable food education through CQ (Berry & Boyer-Davis, 2024). Berry and Boyer-Davis (2024) proposed that CQ predicts food neophobia among diverse racial and ethnic groups, whereas Xia et al. (2024) view CQ as an adaptive bridge that enhances intercultural communication. There is little focus on how CQ influences the adaptation and sustainability of traditional Malay cuisines at the community level, despite the fact that other research have examined traditional food preservation and cultural identification.

2.2 Traditional Food and Food Practice

The Malay community is the largest ethnic group in Malaysia, comprising over 58% of the population (Department of Statistics Malaysia, 2025). Their culture was shaped by Islam, which became central to their identity during the Malacca Sultanate in the 15th century (Bernama, 2012). In Johor, the Malay traditional cuisine is shaped by its diverse cultural history, influenced by the Chinese, Indian, and Javanese communities (Food Menu, 2024). Traditional food encompasses recipes, cooking techniques, and dining customs that have

been handed down through generations within a specific culture. Dishes like Nasi Ambeng and Laksa Johor reflected the community's values and creativity. Many traditional dishes were healthy too. For example, botok-botok was made by steaming fish with herbs, which provided natural nutrients and antioxidants (The Star, 2023).

These dishes use local ingredients and reflect a community's history, geography, and identity. In a study of the Widosari tourism village, local culinary traditions serve as markers of cultural identity, supporting gastronomic tourism (Suganda et al., 2024). Beyond nourishment, traditional meals play a crucial role in festivals, family gatherings, and social cohesion, preserving collective values and fostering a sense of belonging (Nor et al., 2022). They also promote sustainability through biodiversity and the use of native ingredients (Putra, 2023). Research indicates that traditional foods play a significant role in shaping cultural and social identities. The act of preparing and sharing meals, such as dumplings in China or tamales in Mexico, has strengthened family bonds and preserved traditions (Wander-Lush, 2022; Littera24, 2023). Certain foods, like Haiti's Joumou soup, symbolise national pride and resilience (Sharma, 2025). Such practices serve as powerful forms of cultural expression, particularly in an age when fast food and modern living threaten traditional cuisine (Littera24, 2023). Educational initiatives, cooking classes, and food festivals are crucial in preserving traditional dishes like botok-botok, as they remain relevant (Sharif et al., 2023; Seasonings, 2023).

3.0 Methodology

3.1 Research Design, Population and Selection of Samples

Botok-botok was selected due to its status as an endangered intangible heritage of Johor. The study used a qualitative ethnographic approach to observe traditional practices in real-world settings within Johor Bahru. As McLeod (2024) notes, ethnography offers deep cultural insights suitable for studying communities and subcultures. Fieldwork in homes, markets, and eateries documented the making, selling, and adaptation of the dish. Semi-structured interviews were conducted with home cooks, chefs, and consumers identified through purposive and snowball sampling, Facebook heritage groups, and visits to restaurants such as botok-botok Ibunda.

3.2 Research Instrument, Data Collection, and Data Analysis

A dual-method approach, combining passive observation and semi-structured interviews, was used to explore botok-botok practices among the Malay community in Johor. Observation documented authentic behaviour and food rituals through field notes, photos, and videos (Yan, 2024). Research sites included homes, local restaurants, and small food enterprises, providing perspectives on both domestic and commercial adaptations (Nor, 2022). Interviews, guided by flexible questions, collected in-depth narratives about preparation, meaning, and experience (Rahman et al., 2021). Thematic analysis, a commonly used method for qualitative data, was employed to identify and interpret recurring themes (Ahmed et al., 2025). When recurrent themes appeared and no significantly fresh insights were found in later interviews, data saturation was attained, confirming the sample size's suitability. While thematic analysis allowed for the methodical interpretation of meanings, values, and adaptations, ethnography allowed the researchers to document lived cultural behaviours related to botok-botok. In order to understand how cultural knowledge, motivation, and behaviour affect the sustainability and adaptability of traditional food practices in a contemporary setting, CQ was used as an analytical lens.

4.0 Results

4.1 Profiles of Informants

Ten participants, all knowledgeable about botok-botok, were interviewed. A sample size of ten informants is a reasonable sampling size for qualitative ethnographic research, which prioritizes data richness and depth over numerical representation. They differed in age, district, and familiarity with the dish (see Table 1). Each interview lasted 20–40 minutes and was recorded with the participant's consent, with verbatim transcripts provided. Open-ended questions encouraged detailed storytelling. Most were introduced to the dish during childhood through family meals or communal gatherings. Although not all had cooked it themselves, each possessed significant knowledge of its preparation and cultural symbolism. All informants are from Johor Bahru district, including areas such as Tampoi, Skudai and Pasir Gudang. Due to the snowballing effect, the majority typically had either experienced botok-botok as part of daily meals or during traditional gatherings.

Table 1. Profiles of Informants

Informants	Gender	Age	Occupation	District
Informant 1	Female	50	Businesswoman	Skudai
Informant 2	Female	52	Housewife	Parit Lapis Berong
Informant 3	Male	62	Retired Technician	Stulang Laut
Informant 4	Female	55	Housewife	Stulang Laut
Informant 5	Male	42	Marketing	Tampoi
Informant 6	Male	60	Marketing	Tampoi
Informant 7	Female	59	Food Vendor	Muar

Informants	Gender	Age	Occupation	District
Informant 8	Female	26	Flower shop assistance	Pasir Gudang
Informant 9	Male	30	Entrepreneur	Pasir Gudang
Informant 10	Female	23	Student	Johor Bahru

(Source: Authors, 2025)

4.2 The Cultural Significance of Botok-Botok within the Malay Community in Johor

The findings reveal that botok-botok holds profound cultural significance for the Malay community in Johor. While less common today, it remains closely tied to ancestral customs, spirituality, and family unity. It is often served at religious or communal events, such as *tahlil* (communal Tahlil prayers for the deceased), *rewang* (communal cooking activities), and Hari Raya Haji, symbolising harmony and remembrance.

“Botok-botok was something we always had during *kenduri arwah* (memorial feast) or Tahlil gatherings... It wasn't just about eating; it was about bonding and showing respect to our traditions” (Informant 8).

“Botok-botok symbolises more than food... it reminded us of our roots and the *kampung* (village) lifestyle” (Informant 4).

“I have known botok-botok since I was a child, when I lived with my grandparents... my grandmother always cooked it” (Informant 3).

These narratives align with prior research recognising traditional food as a medium of cultural memory and identity. Putra (2022) noted that communal meals express shared values and customs, while Wander-Lush (2022) highlighted how traditional dishes, like Haiti's Joumou soup, symbolise resilience, collective memory, and heritage.

Informant 1 reflected this: “Botok-botok is like a family heirloom passed through flavours... It's a story cooked in layers.”

In sum, informants described it as “a dish tied to our roots and *kampung* life” and “a family heirloom cooked through generations.” Similar to findings by Putra (2022) and Wander-Lush (2022), botok-botok embodies cultural memory, moral values, and gratitude, linking food to heritage and respect for elders. It stands as both nourishment and a vessel of identity, deserving continued preservation.

4.3 The Key Ingredients, Traditional Preparation Methods, and Consumption Practices Associated with Botok-Botok

Traditionally, botok-botok is made with Spanish mackerel, *ulam-ulaman* (traditional Malay raw herbs and vegetables), and a rich spice paste, all wrapped in banana leaves and steamed for an hour. Informants emphasised the importance of balance in spices, the freshness of ingredients, and the use of mature banana leaves.

Informant 5 noted that “the key to botok-botok is its spices; if not balanced, the fish will have a strong odour,” recommending sautéing the spice paste before steaming. This finding aligns with The Star (2023), which cites the combination of turmeric, garlic, ginger, and chili, along with herbs such as cassava shoots and young papaya leaves, and Bernama (2023), which notes layering marinated fish between herbs for optimal flavour infusion.

Informant 9 emphasised using wild banana leaves for aroma and pounding spices manually with a stone mortar and pestle, reflecting findings by Littera24 (2023) on traditional methods preserving aroma and texture, and Natalia (2023) on generational culinary knowledge. Informant 10 described preparing the spice paste for two hours before steaming the fish for an additional hour, which exceeded the 40–60 minutes cited by Foodmenu (2024), to achieve a deeper flavour.

4.4 The Innovation of Botok-Botok in Response to Modernisation that Changes Consumer Preferences

This study found that, although botok-botok, rooted in tradition, is seen by some youth as outdated. Informants noted that the traditional steaming method, herbal ingredients, and laborious preparation clash with contemporary preferences for speed, convenience, and fusion flavours.

“The younger generation is not really into botok-botok... they prefer fast food like McDonald's, KFC, and burgers. That's why they are not familiar with botok-botok” (Informant 2).

Sharif (2023) similarly observed that youth are disconnected from traditional food practices, reducing the dish's visibility and commercial presence. Some informants saw potential for revival through innovation and marketing. Informant 7 suggested that promotion and viral trends could attract interest, aligning with Seasonings' (2023) view that social media can reintroduce traditional foods through modern channels. Examples like nasi lemak burgers and sambal-infused sushi indicate that botok-botok could benefit from similar creative strategies. At another interview, Informant 6 introduced variations, which include botok-botok chicken, lamb shank, and fish roe, to appeal to younger consumers, aligning with Foodmenu's (2024) observations on chefs experimenting with alternative proteins and fusion ingredients.

5.0 Discussions, Conclusion, Limitations and Recommendations

From the viewpoint of cultural intelligence, the on-going production of botok-botok shows high cognitive CQ, and the informants demonstrate a thorough understanding of the meanings connected to this dietary custom. The loyalty to the culture practised, despite the decline in popularity, already demonstrates cognitive CQ, as it is displayed through the adaptation strategy they employ, which involves incorporating new foods and methods of cooking while maintaining traditional ethical standards.

This study successfully achieved threefold objective. As for the first objective, the investigation confirmed that botok-botok serves more than just traditional food. Although a gradual decline occurs among younger individuals, botok-botok remains a significant symbol of cultural identity, historical memory, and community connection. This statement aligns with the work of Chukwurah et al. (2025), Putra (2022), and Wander-Lush (2022). Meanwhile, the second objective reveals that the informants' focus on fresh ingredients, manual preparation, and layered corroborated accounts highlights a generational culinary wisdom often absent in modern adaptations. Practices such as sautéing the spice paste and selecting mature banana leaves demonstrated careful attention to technique and flavour integration. They noted that pounding spices manually and sautéing paste enhanced flavour and aroma, consistent with The Star (2023) and Berita (2023). Informants' techniques reflected generational wisdom and careful craftsmanship, demonstrating how culinary knowledge is intertwined with cultural continuity (Natalia, 2023; Foodmenu, 2024). The findings of the third objective demonstrated that the contrast between those embracing innovations and those preserving tradition shows botok-botok at a crossroads between authenticity and adaptation. Informants and sources, such as Seasonings (2023), suggested that creative marketing and social media could revive interest, as seen with fusion dishes like nasi lemak burgers. Modern chefs now experiment with variations such as chicken, lamb shank, or fish roe botok-botok (Foodmenu, 2024). The dish thus sits between authenticity and adaptation—its revival depending on striking a balance between tradition and innovation.

Hence, from the CQ perspective, botok-botok represents the enduring bond between ancestral memory and Malay food heritage. Its continued relevance depends on thoughtful innovation, through packaging, ingredients, and convenience formats, while maintaining cultural integrity. Aligned with Madani Economy principles, preserving botok-botok supports community cohesion, sustainability, and cultural entrepreneurship. Initiatives like food festivals and digital storytelling can engage younger audiences, while academic documentation enriches heritage studies. Recognised as a National Heritage Food in 2009 (Basaruddin, 2025), botok-botok continues to gain attention through events such as Festival Cita Rasa Warisan 2025, reinforcing national pride and cultural learning.

However, this study has limitations because the researchers focused only on the Johor Bahru district and used a small qualitative sample, which limits the generalisability of the findings. In addition, the study did not adequately represent the younger generation's views on traditional eating practices, as most respondents were from the older generation. As such, in the future, the approach of the initiatives should include the involvement of the wider region and the youth. Even so, "heritage innovation, such as frozen foods, packaging design, and online promotion, could enhance the accessibility and relevance of the dishes." At the same time, educational and community-based cooking programs and activities in relation to botok-botok would improve intergenerational transmission and the sustainability of the dishes.

On the other hand, including botok-botok in cultural and culinary tourism activities can increase public appreciation for traditional Malaysian dishes. Future comparative studies across Malaysia and Indonesia could further strengthen preservation efforts in a globalised era. As noted by Suganda et al. (2024), local culinary traditions serve not only as expressions of cultural identity but also as valuable tourism assets that promote gastronomic tourism and support authentic place-making.

To summarise, botok-botok, which has been maintained via cultural inventions and knowledge, continues to be a significant cultural emblem for Johor's Malay community. Even in the face of modernisation that threatens cultural preservation in Malaysia, cultural intelligence enables individuals to maintain cultural innovations and customs, ensuring that botok-botok remains relevant. This argument demonstrates how cultural adaptation promotes sustainability and cultural preservation.

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Paper Contribution to Related Field of Study

By applying CQ as an analytical framework, this study contributes new insights to the field of culinary cultural heritage. Methodologically, it demonstrates the value of ethnographic research for documenting culturally protected practices. Additionally, the research offers practical applications for areas such as culinary tourism, cultural education, and heritage entrepreneurship.

References

- Ahmed, S. K., Mohammed, R. A., J. Nashwan, A., Ibrahim, R. H., Abdalla, A. Q., M. Ameen, B. M., & Khedher, R. M. (2025). Using thematic analysis in qualitative research. *Journal of Medicine, Surgery, and Public Health*, 6. 8AN
- Basaruddin, A. (2025, September 14). *Botok-botok juadah unik, hampir pupus*. Sinar Harian. Online
- Berita. (2012, July 25). Botok-botok Sajian istimewa johor di bazar ramadan. Malaysiakini. https://www.malaysiakini.com/news/204588?utm_
- Berita, B. (2023, September 2). Botok-botok - a popular giveaway, souvenir in Pulau by-election: New Straits Times. NST Online.

- Berry, K., & Boyer-Davis, S. (2024). The Recipe of Cultural Intelligence and Racial Diversity in Predicting Food Neophobia: A Stepwise Regression Analysis Approach. *Journal of Business Diversity*, 24(2).
- Chukwurah, G. O., Okeke, F. O., Isimah, M. O., Enoguanbhor, E. C., Awe, F. C., Nnaemeka-Okeke, R. C., Guo, S., Nwafor, I. V., & Okeke, C. A. (2025). Cultural Influence of Local Food Heritage on Sustainable Development. *World*, 6(1), 10. <https://doi.org/10.3390/world6010010>
- Department of Statistics Malaysia. (2025, July 31). The population of Malaysia. OpenDOSM. <https://open.dosm.gov.my/dashboard/population>
- Foodmenu. (2024, February 11). The Flavors of Johor: Discovering southern Malaysia's unique food heritage
- Hasan, N. H. (2023). Frozen botok-botok: A bridge between generations. *Munch Malaysia*.
- Kapelari, S., Alexopoulos, G., Moussouri, T., Sagmeister, K. J., & Stampfer, F. (2020). Food heritage makes a difference: The importance of cultural knowledge for improving education for sustainable food choices. *Sustainability*, 12(4), 1509. <https://doi.org/10.3390/su12041509>
- Littera24. (2023). The cultural bond in traditional cooking: From dumplings to tamales.
- McLeod, S. (2024). Ethnography In Qualitative Research. *Simply Psychology*.
- Natalia, M., & Munch Malaysia. (2023). Malaysian Food. A Taste of Tradition: Unveiling the Allure of botok-botok in Malaysia.
- Nor, M. H. M., Aziz, N. A., & Shahidan, S. (2022). Traditional food knowledge among youth: Challenges and opportunities. *Malaysian Journal of Society and Space*, 18(4), 55–65.
- Ott, D. L., & Michailova, S. (2018). Cultural intelligence: A review and new research avenues. *International Journal of Management Reviews*, 20(1), 99–119.
- Putra, F. K. K., Putra, M. K., & Novianti, S. (2023). Taste of ASEAN: traditional food images from Southeast Asian countries. *Journal of Ethnic Foods*, 10(1).
- Rahman, S. a. G., Ishak, F. a. C., Arshad, M. M., Sharif, M. S. M., & Karim, S. A. (2021). The impact of modern technology towards Malay traditional foods preparation and cooking processes in Malaysia. *International Journal of Academic Research in Business and Social Sciences*, 11(16).
- Seasonings. (2023). From tradition to trend: How Malaysian food is going viral.
- Sharif, M. S. M., Nor, M. A., & Md. Sharif, M. S. (2023). Unfolding Key Factors in Sustainability of Malay Traditional Food: A Systematic Analysis.
- Sharma, L., & Rana, R. (2025). Modernization transforming traditional food and eating habits. *International Journal of Innovative Research in Technology*, 11(12), 6894–6899.
- Suganda, R.S.A., Nurkomariah, N., Hidayat, N.M., Mohd Salleh, P.M., Wijaya, C.T., & Saputra, N. (2024). Identification potential tourism and culinary deliciousness in Widosari Yogyakarta tourism, village. *LIB PRO*, 44(3), 1-, <https://doi.org/10.48165/bapas.2024.44.2.1>
- The Star. (2023, July 14). Preserving heritage with botok-botok.
- Wander-Lush. (2022). How traditional food preserves history and identity.
- Xia, Y., Shin, S. Y., & Kim, J. C. (2024). Cross-cultural intelligent language learning system (CILS): Leveraging AI to facilitate language learning strategies in cross-cultural communication. *Applied Sciences*, 14(13), 5651.
- Yan, J. (2024). # Instafood: a speculative design exploration of the eating experience, perception, fabrication, and consumption.