

Developing and Implementing the *MULA* Module and *Wau Sobek* Kit to Strengthen Pre-Service Teachers' Pedagogical Understanding of the Malay Traditional Game *Wau* in Visual Art Education

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ABSTRACT

This study examines the educational impact of the *MULA: Malay Traditional Game Wau Module* and the *Wau Sobek Kit* as interactive teaching and learning resources in secondary school Visual Art Education. The research aims to explore how these culturally grounded instructional tools enhance students' understanding of the Malay traditional game *Wau* while fostering cultural appreciation and engagement. A qualitative research design was employed, involving semi-structured interviews with two pre-service Visual Art Education teachers to investigate their experiences, perceptions, and pedagogical reflections regarding the implementation of the module and kit it also to evaluate their understanding of the Malay traditional game *Wau* and to gather qualitative insights into their teaching and learning experiences. The findings reveal that both pre-service teachers responded positively to the use of the *MULA* module and *Wau Sobek Kit*. Participants highlighted the effectiveness of these tools in promoting interactive learning, increasing cultural awareness, and enhancing students' conceptual and practical understanding of traditional Malay games. The results further suggest that integrating culturally responsive teaching materials into art education can meaningfully support the preservation and transmission of traditional knowledge within contemporary educational contexts. Overall, this study underscores the pedagogical value of culturally embedded instructional modules in strengthening heritage education and enriching the teaching and learning process in Visual Art Education.

Keywords: Multicultural Education, Traditional Game *Wau*, Teaching Strategies, Visual Art Education

INTRODUCTION

Kite-flying is a living tradition that transcends geographical and cultural boundaries, uniting communities through shared joy and collective participation. In Malaysia, the *Wau*, a traditional Malay kite, symbolizes cultural identity, creativity, and refined craftsmanship. Distinguished by its intricate hand-cut motifs and balanced proportions, the *Wau* functions not only as a recreational object but also as a significant ornamental motif embedded in Malay artistic tradition. Its decorative elements convey symbolic meanings and are associated with architectural embellishment and the expression of cultural values (Kamaruddin, Kamaruddin, & Rosli, 2021). Beyond aesthetics, the *Wau* represents communal bonding and imaginative play, stimulating children's creativity while strengthening social ties. As a traditional game passed down through generations, it serves as an important cultural asset that supports heritage preservation and intergenerational knowledge transfer. Play-based

engagement with such traditions contributes to holistic development, including cognitive and socio-emotional growth (Nur, Ma'mun, & Fitri, 2020). Malaysia features several types of Wau, including *Wau Bulan*, *Wau Puyuh*, *Wau Kucing*, *Wau Jala Budi*, and *Wau Kapal*. Among them, *Wau Bulan* is the most iconic, recognized for its crescent-shaped form and its connection to Islamic aesthetic principles. The symmetry and rhythmic patterns of Wau ornamentation resonate with the structural harmony characteristic of Islamic geometric art (Cromwell, 2011). Overall, the Wau transcends its function as a traditional game; it is a cultural emblem that integrates artistry, symbolism, education, and heritage continuity.

Problem Statement

Promoting cultural heritage awareness among younger generations is essential for sustaining cultural identity and ensuring the continuity of traditional knowledge. Heritage education fosters a sense of belonging by connecting individuals to their historical roots while inspiring creativity in education, art, and design. Educational institutions play a crucial role in transforming cultural heritage into a shared societal asset through multidisciplinary and adaptive learning approaches (Achille & Fiorillo, 2022). The evolution of arts and crafts reflects continuous cultural reinterpretation shaped by historical, technological, and societal changes (Ji & Liu, 2022). Curriculum reform in visual arts education aims to align with these evolving values while nurturing creativity, flexible thinking, and innovative capabilities among learners (Boughton, 2015; Ssegantebuka et al., 2021). However, limited access to diverse art materials often restricts comprehensive artistic exploration, particularly among Pre-Service Visual Arts Teachers (Ssegantebuka et al., 2021). Visual arts learning integrates perceptual, cognitive, and motor processes, supporting transferable creative skills across domains (Tyler & Likova, 2012). Although direct instruction remains useful, contextualized learning within meaningful cultural frameworks enhances deeper understanding. Given the declining awareness of traditional games among youth (Nur, Ma'mun, & Fitri, 2020), integrating cultural heritage elements into visual arts education is both timely and necessary.

Research Objectives

Among the objectives in this study are:

1. To design and develop an interactive teaching and learning approach to the Malay Traditional Game (*Wau*) in Visual Art Education.
2. To evaluate the usability of the teaching approach to the Malay Traditional Game (*Wau*) in Visual Art Education.

METHODOLOGY

This study employs a predominantly qualitative research design to examine the development and usability of an interactive teaching and learning approach to the Malay Traditional Game *Wau*. The methodology outlines the data collection procedures, sampling strategy, research instruments, and overall framework aligned with the study's objectives. The first objective focuses on designing and developing the interactive module and kit, while the second evaluates the usability and educational impact. Data are collected through semi-structured interviews with teachers to assess engagement and understanding. This approach enables a comprehensive evaluation of the module's effectiveness in enhancing knowledge of Malay traditional games, particularly *Wau*. Grounded in a descriptive qualitative framework (Tortosa, Pérez-Fuentes, & Molero, 2024), the study explores participants' perceptions and experiences in depth. Participants are purposively selected, and ethical principles including informed consent, confidentiality, and voluntary participation are strictly observed. Interviews are audio-recorded, transcribed verbatim, and analyzed using thematic and narrative analysis. In-depth interviews, which reflect natural conversational interaction, provide rich and contextualized data (Knott, Rao, Summers, & Teeger, 2022). Overall, this methodological framework ensures rigor and credibility, generating meaningful insights into enhancing students' understanding and appreciation of the Malay Traditional Game *Wau* through culturally responsive educational tools.

Findings

The Design and Development Phase

a. Alignment the module development with the SDG



Picture 1: List of Sustainable Development Goals

Promoting the *Wau* as a symbol of Malaysia’s cultural heritage supports multiple Sustainable Development Goals. For **Quality Education (SDG 4)**, integrating the *Wau* into school curricula enhances students’ understanding and appreciation of their cultural identity, fostering inclusive and meaningful learning experiences while potentially addressing broader societal challenges such as gender inequality and unemployment (Saini, Sengupta, Singh, H., Singh, & Singh, 2022). For **Life on Land (SDG 15)**, *Wau* making encourages sustainable use of natural materials and responsible land management, contributing to biodiversity conservation and the preservation of local ecosystems. Implementing SDG 15 effectively requires long-term strategies that extend beyond 2030, ensuring sustainable practices that benefit both current and future generations (Sayer, Sheil, Riggs, & Galloway, 2019).

b. Sketch Process

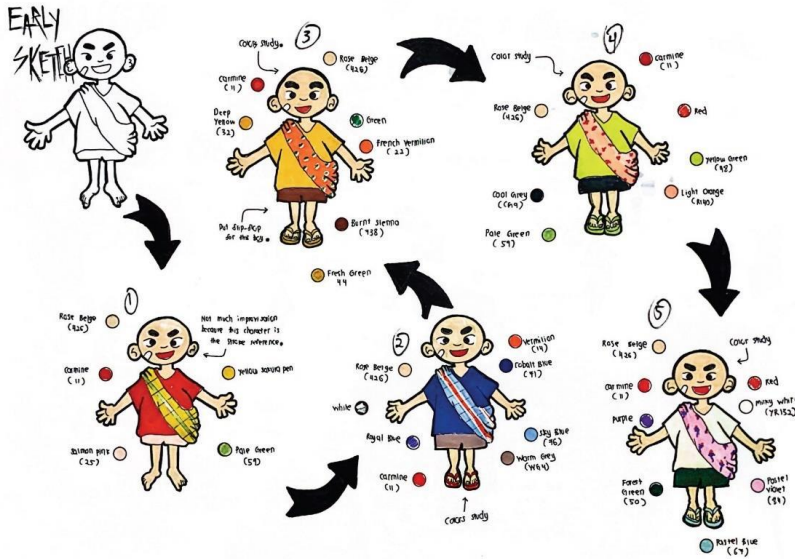
To develop the module and learning kits, the researchers adopted a character design approach to create engaging and relatable educational resources. Well, designed characters play a critical role in shaping audience perception and enhancing the appeal of visual learning materials; they must be distinctive and visually striking to stand out in animation or comic formats (Yu & Tsao, 2022). In alignment with the Sustainable Development Goals Particularly Quality Education (SDG 4) the researcher illustrated 26 types of traditional kites, including variants such as *Wau Moon*, *Wau Kucing*, *Wau Jala Budi*, *Wau Seri Bulan*, *Wau Kapal*, *Wau Kebayak*, and *Wau Rama-Rama*, among others. These illustrations are intended to enrich educational content, foster cultural appreciation, and support inclusive, culturally responsive learning.



Picture 2: The Sketches of Ideation Characters

c. Ideation

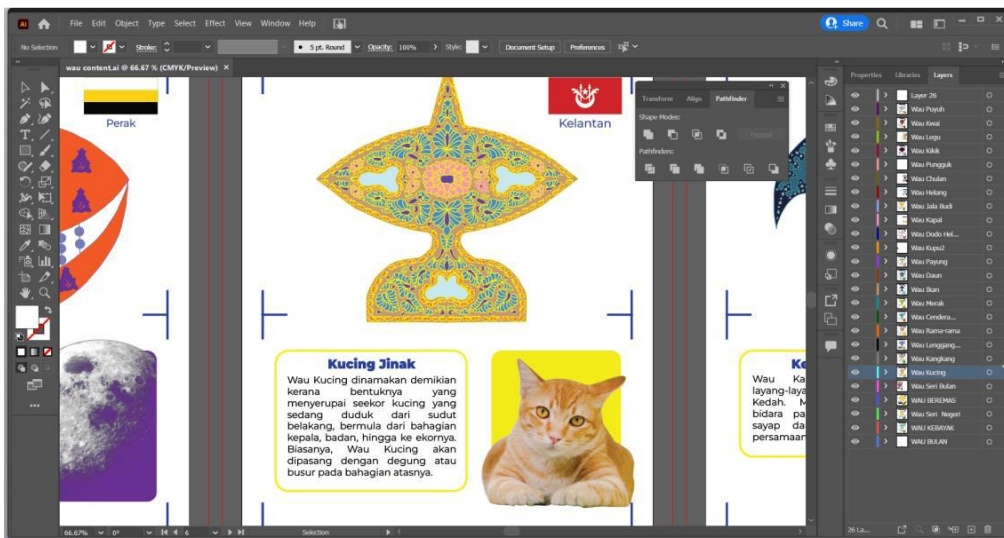
One sketched concept was selected for further development, emphasizing rapid ideation and efficient design, where drawing skills are essential for problem identification and solution generation (Özker & Makaklı, 2017). In developing the module and learning kit packaging, character design focuses on creating engaging personas that resonate with learners, enhance comprehension, and support retention of key concepts. Thoughtfully designed characters act as guides and motivators within educational materials, with their identity, background, and personality carefully aligned to the narrative and learning objectives (Yu & Tsao, 2022).



Picture 3: The Ideation of Characters

d. Digital Illustration

Digital technology has a positive impact on productivity by streamlining workflows and enhancing output quality (Sutarwiyasa, Putra, & Kusuma, 2022). In this study, character illustrations for the Wau module were created and refined using Adobe Illustrator, leveraging its advanced vector graphic tools for precise, scalable, and customizable designs. This approach allows for detailed coloring and vibrant visual presentation while preserving the integrity of the original sketches. Although stylistic constraints exist in digital illustration, the resulting vector and raster images remain distinguishable and provide a lasting visual impact (Nurmakhamadovna, Mavlonova, & Isaqova, 2024).



Picture 4 & 5: Making *Wau* Contents (Adobe Illustrator)

Adobe Illustrator was used to create a high-quality module cover and educational materials for the *Mula: Learning Module of Traditional Games Wau* and the *Wau Sobek Learning Kit*. Its advanced vector graphics capabilities enable crisp, detailed, and scalable illustrations that integrate both character and Wau elements, enhancing the visual appeal and cultural representation of the module (Nurmakhamadovna, Mavlonova, & Isaqova, 2024). Gradient tools and shape features were applied to produce realistic textures and shadows, adding depth and lifelike qualities to characters and Wau designs. Psychologically, effective visual communication leverages the human senses, particularly sight, to convey meaning and engage learners (Seto & Prihatmoko, 2024). Vector images also provide a more compact and precise representation compared to raster graphics, maintaining clarity while facilitating scalable illustrations (Tian & Günther, 2024). Collectively, these design strategies ensure that the module and learning kit are both visually engaging and pedagogically effective, supporting students' understanding of Wau construction, motifs, and cultural significance.

e. Video

Storyboard and Editing Software

Creating a storyboard is a crucial first step in producing a clear, engaging, and well-structured video, as it outlines key scenes, characters, actions, dialogue, and camera angles while considering audience, length, and shot types. For documenting the Wau Sobek crafting process, researchers filmed the video and edited it using CapCut, which enables sequencing clips, adding transitions, music, and text overlays, resulting in a polished and informative final product (Qin, Omar, & Musetti, 2022). The video incorporates voice-over narration to provide instructional explanations and enhance accessibility, giving life to characters and plot while facilitating comprehension (Niroula, 2023; Seaborn, Sekiguchi, Tokunaga, Miyake, & Otake-Matsuura, 2022). This approach ensures that the Wau Sobek video is visually engaging, pedagogically effective, and culturally informative, leveraging both audiovisual storytelling and digital editing tools. Additionally, the popularity of short-form video platforms like TikTok illustrates the global reach and impact of concise, well-edited visual content (Zeng, Abidin, & Schäfer, 2021).



Picture 6 & 7: Storyboard for Wau Sobek Video and editing process

f. Final Product

The *Mula: Learning Module of Traditional Games Wau* provides a comprehensive introduction to Wau, covering its history, cultural significance, and the various types found across Malay states. It situates Wau within Malaysia's broader traditional games, such as Wau Bulan, Sepak Raga, Batu Seremban, Gasing, Silat, Congkak, and Wayang Kulit, which engage players of all ages (Yusoff, Kuay, Mohd Salleh Ismail, Ahmad, & Antoine, 2020). The module combines colorful illustrations with clear, accessible text that adheres to standard language conventions, enhancing readability and comprehension (Susanti, 2020). Its compact A5 format makes it portable and user-friendly for students and educators. Interactive QR codes embedded in the module allow students to access additional multimedia content, including videos and interactive materials, making learning more dynamic

and engaging (Law & So, 2017). Complementing the module, the *Wau Sobek Learning Kit* provides hands-on materials and resources for constructing Wau, offering experiential learning that reinforces understanding of Wau structure and design. The kit's creative and culturally relevant packaging increases engagement and interest, supporting both educational and commercial potential (Shukla, Singh, & Wang, 2022).



Figure 8 (a,b): Mula: Module of Malay Traditional Game Wau and Wau Sobek Kit

The *Mula: Learning Module* and *Wau Sobek Learning Kit* aim to connect Malaysian youth with the traditional art of Wau by teaching its history, motifs, and construction. These resources foster cultural appreciation, enhance creative thinking skills, and may inspire future Wau artisans, helping preserve this heritage for future generations. To ensure accessibility, both the module and learning kit are designed with user-friendly interfaces and affordable features, addressing common challenges faced by educators with limited experience in instructional technology or costly software tools (Schoenherr, Dereski, Bernacki, Khayyata, & Attardi, 2022).

The Evaluation Phase

Usability Data Interview

Usability of the *Mula: Malay Traditional Game Wau Module* and *Wau Sobek Kit* were evaluated through interviews with two pre-service secondary school art teachers to gather insights on their classroom experiences and perceptions. The interviews explored teachers' familiarity with Wau, its importance in visual art education, and its potential to promote cultural awareness. Teachers highlighted the module and kit's user-friendly design, which facilitated integration into lessons and encouraged hands-on engagement with Wau. They reported that these tools enhanced students' understanding of *Seni Ragam Hias Wau*, fostered creativity, and strengthened appreciation for cultural heritage. Overall, the feedback underscored strong support for incorporating Wau into school curricula as an effective means of preserving cultural traditions while enriching students' educational experiences (Phillips & Mrowczynski, 2019).

a. Pre-Service Teachers knowledge about the Malay Traditional Game Wau, an indigenous community in Malaysia known for its unique culture and art forms such as Wau.

Through the interview, both teachers learned about the traditional Malay game of Wau includes many types, each with different shapes and designs. In Malaysia, everyone should know at least one type of Wau, like Wau Bulan or Wau Puyuh. Wau Bulan is especially famous and known around the world as a Malay kite.

Respondent 1 stated that:

Among them are Wau Bulan and Wau Puyuh.

Respondent 2 stated that:

Wau is one of the traditional Malay games that are popular in the state of Kelantan and other states such as Negeri Sembilan, Johor, and Terengganu. It has charm with 4 types of motifs such as floral, abstract, animal, and geometric motifs. Generally, Wau will be played by two players who hold the Wau and another one who holds the string is called Juru Anjung. It will be played when an area is blowing and the string will be pulled against the wind (stretching and pulling) until it flies high into the air. Among the types of Wau that are popular and always the talk of the town is Wau Bulan from the state of Che Siti Wan Kembang, Wau Burung in the state of Terengganu, and others. It has its uniqueness which makes Wau from each state have a high symbolism in terms of the identity of each state.

b. The important to preserve and promote the Malay Traditional Game Wau as an art form and learning topic in visual art education.

Both teachers agreed that is important to preserve and promote the Malay traditional game Wau in visual art education and to foreign visitors. Wau is a key part of Malaysia's culture and history, showing the country's creativity and craftsmanship. Teaching Wau in schools helps keep this tradition alive, helps students learn about their culture, and encourages appreciation for traditional arts. Promoting Wau to foreign visitors can also boost cultural tourism, allowing people from around the world to appreciate and enjoy this unique aspect of Malaysian heritage. This can foster international cultural exchange and pride in Malaysia's traditions.

Respondent 1 stated that:

Yes, very much because that is the uniqueness of a country and can attract foreign visitors to come to our country.

Respondent 2 stated that:

Traditional games from each state need to be emphasized to the new generation through learning since school because it is a culture passed down from generation to generation with treasure value that reflects the culture in each state. So thoroughly Wau Traditional Malay Game needs to be preserved and maintained for future generations by placing it as one of the learning in the subject of Visual Arts Education at school. This is because Wau has become a continuous identity of the state of Kelantan and other states. Apart from that, Wau also symbolizes an important characteristic of Malaysia when it is placed on the Malaysian Ringgit currency which is symbolic of this country. This fulfils the need of how important Wau is in the eyes of Malaysia and future generations need to know the symbolism of Wau that there is ringgit padi and Malaysian coins.

c. Pre-Service Art Teachers opinion on learning making Wau motifs by using the MULA Module and Wau Sobek Kit can help promote cultural awareness and understanding in local community.

Both teachers understand and believe that the motifs play an important role in the movement of Wau in Malaysia. Based on the *MULA* Module and *Wau Sobek* Kit, the designs are inspired by the Malay surroundings, with two major types of motifs: flora and fauna. Flora motifs are especially popular among Wau makers because they use the "Awan Larat" technique, which shows the movement of plants in the design. This term reflects how motifs represent Malay cultural identity.

Respondent 1 stated that:

Yes, the Wau motif shows the local cultural art itself.

Respondent 2 stated that:

By studying the art of Wau's heritage, the community will indirectly understand the importance of the historical value contained in Wau. It is not only a traditional game but has a high historical symbol in it. Taking the example of Wau Bulan, this design of Wau Bulan which originates from the Srivijaya period is a symbol of unification. By learning how to produce Wau motifs, helps to learn the history of a state.

d. *Pe-Service Art Teachers opinion on their experiences on practiced or created any Wau motifs crafts or art pieces using MULA Module and Wau Sobek Kit.*

Respondents' belief the knowledge of Wau making, design motifs, and flying is very valuable for young people to learn. It's not just about creating a Wau, but also about understanding the rich history and experience behind it. Although the process of making a Wau can be complex, it helps young people develop important skills like critical thinking and hands-on abilities. By learning to make Wau, they can also see the careful work and creativity involved. This can attract people to watch and appreciate the art of Wau making, helping to keep this traditional craft alive and celebrate Malaysia's cultural heritage.

Respondent 1 stated that:

It was during the exhibition. Year 5 students in a class at SK Wakaf Bharu used to make moon kites after school while waiting for their parents to come home. They use existing materials such as skewers and waste plastic. The children in this Tumpat area are very interested in the hobby of playing kites and even some of their families make this kite as their side income.

Respondent 2 stated that:

The beginning of interest in Wau making when I saw my grandfather drawing a pattern art that attracted my attention because the motifs shown were beautiful and mesmerizing. From there, he developed an interest in art full of symbolism and this unique identity. This manufacturing experience begins with making Wau motifs inspired by flora and fauna (creeping art). Items such as paper, bamboo, thread, and glue are used during the learning process with the grandfather. At that moment, I just found out that we are not painting kites but punching and sawing patterns to colour them.

e. *Pre-Service Art Teachers perception on the value in teaching Malay Traditional Game Wau in schools.*

According to both respondents, there is value in teaching the Malay traditional game Wau in schools as it offers many benefits to students. It helps them learn about Malaysian culture and feel proud of their heritage. Making and decorating Wau encourages creativity and artistic skills while building and flying it develops fine motor skills and hand-eye coordination. The process also improves critical thinking and problem-solving abilities, promotes teamwork, and fosters an appreciation for traditions. Additionally, flying Wau is a fun outdoor activity that gets students moving and enjoying nature. Overall, teaching Wau combines cultural learning with practical skills and learning experience.

Respondent 1 stated that:

The soul of a fighter because of learning to appreciate the Art heritage of our ancestors. Creatively using existing materials. It's wise to make kites using existing materials.

Respondent 2 stated that:

As stated above, the value of teaching Traditional Malay Wau Games in schools needs to be emphasized because we need to maintain the appreciation and skill of making Wau. This is because these skills will continue to be preserved and continued from generation to generation so that they will not be lost in the future. Its unique making requires special learning of the traditional game that is symbolic of the country of Malaysia.

f. *Pre-Service Art Teachers perception on Malay Traditional Game Wau through the usage of MULA Module and Wau Sobek Kit can enhance students' creativity and artistic expression.*

Both respondents agreed that the basic on the teaching and learning process of the Malay traditional game Wau by using the MULA Module and Wau Sobek Kit starts with drawing the motifs. Students need to understand how the motifs move according to the discipline of 'Awan Larat'. Learning about Awan Larat helps develop students' critical thinking and creativity, allowing them to progress from drawing simple motifs to more complex ones.

Respondent 1 stated that:

Yes, in a way that requires thinking to produce paintings, creative in problems and innovative.

Respondent 2 stated that:

Yes. Because making Wau requires high creativity. There are 14 states in Malaysia and each of them has a kite that symbolizes the respective state based on a pattern, for example. It will provide high creativity value during the manufacturing process in terms of drawing, sketching, and sharpening bamboo. In one manufacturing, we can express different creativity in one art of the same product.

g. Learning and practicing the Malay Traditional Game Wau can have any social and emotional benefits, through using the MULA Module and Wau Sobek Kit.

Both Pre-Service Art Teachers suggest that learning and practicing the Malay traditional game Wau using the *MULA* Module and *Wau Sobek Kit* can have social and emotional benefits. It can build teamwork as students work together to create and fly the Wau, encouraging cooperation and collaboration. It also promotes mindfulness because designing and making Wau requires focus and attention to detail. Additionally, practicing Wau leads a sense of community by connecting students with their cultural heritage and bringing people together through shared activities and traditions.

Respondent 1 stated that:

There was a time when the 5th-grade relief class was taking care of a class of Art students with wood carving projects and batik motifs. I could see the students were creative in producing a painting project. Collaboration in groups in producing quality projects that are beneficial to others. Productive because they plan their work well in producing a good coursework project.

Respondent 2 stated that:

The traditional game of Wau must foster a more integrated society because the making of Wau is usually done. Like the organization of the Tumpat International Wau Festival program, Kelantan - the event indirectly forms a community/society that gathers to appreciate the historical art of Wau. Indirectly, it brings the local community closer together.

DISCUSSION

The *Mula: Malay Traditional Game Wau Module* and *Wau Sobek Kit* were developed to provide students with engaging, hands-on learning experiences that deepen their understanding of Wau, a traditional Malay kite. The module offers structured lessons on the history, cultural significance, and techniques of Wau-making, including key motifs such as Kangkung, Lada Hitam, Susu Kambing, Bunga Telang, Bunga Mawar, Kopi, Kenerak, Petola Pagi, Tembikai, and Bunga Labu, which are derived from the Awan Larat tradition (Sabri, Rafien, Ismail, Afiq, Taher, & Safwan, 2021). It also highlights the diversity of Wau across Malaysian states for instance, Wau Puyuh in Kelantan, Wau Seri Bulan in Perak, and Wau Dodo Helang in Terengganu illustrating the unique cultural heritage of each region (Ololdi, 2020). The *Wau Sobek Kit* complements the module by providing all necessary materials and step-by-step instructions for constructing Wau, facilitating interactive and enjoyable learning. This approach supports the development of students' skills, promotes appreciation for traditional arts, and helps preserve Wau-making as a culturally significant practice (Kob & Abdullah, 2019). Together, the module and kit enrich students' educational experiences while fostering cultural awareness and ensuring the sustainability of this heritage art form. Interview with teachers on the usability of the module indicate that the *Mula: Malay Traditional Game Wau Module* and *Wau Sobek Kit* are highly effective educational tools. Teachers reported that the modules foster cultural awareness, pride, and a deeper understanding of Malay heritage, while also enhancing students' creativity, critical thinking, and collaborative skills. Students found the hands-on activities engaging and enjoyable, which promoted active learning and attention to detail. Overall, both teachers and students agreed

that these resources successfully integrate traditional arts into the curriculum, enriching the learning experience and strengthening community and cultural appreciation.

CONCLUSION

The *Mula: Malay Traditional Game Wau Module* and *Wau Sobek Kit* serve as highly effective educational tools that not only preserve but also actively promote the understanding of the traditional Malay game *Wau*. By providing hands-on, experiential learning opportunities, these resources allow students to engage directly with the cultural, historical, and artistic dimensions of *Wau*. Through guided activities and creative construction, students develop a deeper appreciation for traditional motifs, techniques, and symbolism, enhancing both their cultural literacy and artistic competencies. Engagement with the module and kit encourages learners to explore the origins and symbolic meanings of *Wau*, fostering a richer understanding of Malay cultural heritage. This immersive approach enables students to internalize the values, aesthetics, and historical context embedded within *Wau*, bridging generational and cultural gaps while cultivating a sense of pride and belonging to Malaysian tradition (Zhang, Xie, & Luo, 2022). Beyond classroom learning, these educational tools have the potential to contribute to broader societal outcomes, including the promotion of cultural tourism and sustainable socio-economic development, as traditional arts can become a source of community income and creative entrepreneurship when effectively leveraged (Hoang, 2021). Moreover, integrating these resources into Visual Art Education aligns closely with the National Philosophy of Education, which emphasizes holistic development through the cultivation of creativity, critical thinking, and a competitive yet culturally grounded mindset (Noor & Ibrahim, 2019). By combining theoretical knowledge with practical application, the module and kit enhance student engagement, encourage collaboration, and support the preservation of intangible cultural heritage. Ultimately, these tools exemplify how innovative, culturally responsive educational resources can simultaneously enrich learning experiences, strengthen national identity, and sustain traditional arts for future generations.

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