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Engaging Minds, Bridging Cultures: Gamified learning for adolescent cultural awareness

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Abstract

This study aims to develop culturally responsive teaching tools to enhance both student and teacher awareness and knowledge of Malaysia's rich multicultural diversity. Social heritage and biodiversity awareness have traditionally been conveyed through various educational methods, including integration into Visual Arts Education (VAE) curricula in Malaysia. The creation of the '*Patrio Playmat*' builds on the foundational concept of board games, featuring a large interactive mat designed as a game board equipped with themed accessories. The game emphasizes multicultural elements while also spotlighting Malaysia's endangered animal species, utilizing animal figurines as educational game components. Its development was guided by SMART goals—a framework emphasizing goals that are Specific, Measurable, Achievable, Realistic, and Time-bound (Rubin, 2002)—and informed by Vygotsky's Sociocultural Theory. A design developmental research approach incorporating the case study method was employed. Data was collected through interviews and questionnaire surveys (including characteristics and usability testing) with purposively sampled participants comprising three Visual Arts Education teachers from secondary school students from Shah Alam, Selangor.

Keywords: Culturally Responsive Teaching, Educational Game Development, Multicultural Education

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1.0 Introduction

With its rich social and biodiversity heritage, Malaysia stands as a celebrated treasure of diversity. The nation's appeal lies in its vibrant multi-racial and multi-ethnic society, which embodies distinctive histories and cultural practices that have flourished since its founding years. These unique cultural elements and biodiversity awareness are imparted through various educational methods, including their integration into Visual Arts Education (VAE) curricula. The creation of the '*Patrio Playmat*' draws upon the foundational concept of traditional board games, featuring a large interactive mat serving as the game board, accompanied by thematic accessories. The game

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emphasizes multicultural themes while spotlighting endangered Malaysian animal species, using animal figurines as engaging educational components. Siti Zuraida Maaruf and Saedah Siraj (2013) underscore the importance of incorporating multicultural issues in Malaysia's education system to foster openness and mutual understanding among diverse student groups. However, efforts to enhance multiculturalism within educational curricula continue to face challenges among school students. This study primarily aims to develop the *Patrio Playmat* as a culturally responsive teaching tool for lower secondary school students. Culturally responsive pedagogy is an approach that promotes student success by fostering an inclusive learning environment. According to Hadi Prayitno, Dimas Hari Cahyo, Rasinus Rasinus, Lismina Lismina and Rosita Rosita (2024), CRP fosters student engagement, motivation, and academic achievement by integrating students' cultural backgrounds and experiences into the teaching process. Its significance is in teaching and learning development. Malaysian educators, including Siti Zuraida, Saedah Siraj, KS Hashim, and V Zulkifli (2013), advocate for incorporating these theoretical perspectives at both school and tertiary education levels to strengthen educational inclusivity and cultural understanding.

2.0 Problem Statement

Multiculturalism, as Narmina Gasimova (2024) explains, is about fostering tolerance, where people from diverse national backgrounds live together with equal rights and a sense of identity. In education, particularly in Visual Arts Education (VAE), it's vital for teaching practices to nurture meaningful learning experiences that honour and embrace this diversity. Xiaofang Gou and Manly (2024) remind us that culturally responsive teaching and cross-cultural art curriculums can bridge cultural gaps and support students' personal and creative growth. Similarly, Siti Zuraida Maaruf and Saedah Siraj (2013) stress the importance of promoting tolerance among students of different ethnicities in Malaysia's schools. Despite efforts to encourage harmony, challenges like ethnic prejudices still surface, highlighting the need for fresh, engaging solutions in education. According to Zhiheng Guo (2024) Teaching reform focusing on cultural creativity effectively improves students' learning participation, effectiveness, and efficiency in art education in border ethnic universities. Through variety of styles in teaching art education it could demonstrate opportunities in living with diversity in a society that comprises of varieties of racial and cultural backgrounds such as Malaysian society itself. Art education can help rebuild tolerance in a divided society by developing tolerance through art processes, art events, and art works (Y. Piliang, 2021). The *Patrio Playmat* offers a creative response to these challenges. By introducing young learners to the values of multicultural unity and progress, it not only celebrates cultural diversity but also encourages students to care for Malaysia's endangered species. Through this playful yet purposeful approach, students can develop empathy, appreciation for diversity, and a stronger connection to the world around them.

3.0 Research Objective

These are the objectives of the study:

1. To examine the usability and suitability of the *Patrio Playmat* as teaching aids towards promote multicultural awareness and understanding through unique cultural elements included among VAE teachers.

4.0 Methodology

This study utilizes the Design and Development Method (Richey & Klein, 2007) to develop *Patrio Playmat* that aims to enhance the teaching and learning of visual arts in secondary school and promote multicultural awareness and understanding. The research consists of three phases namely Phase 1: Needs Analysis, Phase 2: Design and Development, and Phase 3: Implementation and Evaluation. However, this paper will only present the findings from Phase 3.

a) Sample

The respondents of this study are three (3) visual arts teachers with more than five years of experience in teaching upper Form students at a secondary school. They were selected using purposive sampling techniques.

b) Research Instrument

The study employed a semi-structured interview to gather data from Visual Art teachers to identify the problems and limitations that students face when learning Interior Design in Visual Arts. The researchers designed and utilized an interview protocol to conduct semi-structured interviews. The primary objective of the interviews was to identify the barriers that hinder the students from understanding the topic of interior design.

c) Data Analysis

The data collected in Phase 1 was analyzed using qualitative analysis. The data was gathered through semi-structured interviews with three (3) Visual Art Education (VAE) teachers. The researchers recorded all the information obtained during the interviews verbatim and analyzed it thematically.

5.0 Findings

Interview with art teachers towards the usability and suitability the *Patrio Playmat*.

a. *Patrio Playmat* is interesting education game that engages teachers and students in classroom activities.

Patrio Playmat is so interesting game and it's easy to carry and at the same time to teach and learn in Visual Art Education classroom. It has variety of details that can attract students to learn. The results of the interviews showed that respondents agreed that the teacher and students can play *Patrio Playmat* in classroom.

Respondent 1 stated that:

"...Oh, in my opinion. After it been showing the steps how to play, Patrio Playmat is easy to play in the classroom. But please make sure the steps are more detailed with clear. The steps are easy and simple..."

Respondent 2 states that:

"...if we see the Patrio Playmat itself, it is really suitable to use as one of the teachings and learning in classroom. The physical of it is interesting and colourful with interactive and able to be effective teaching and learning to students..."

Respondent 3 states that:

"...my student and I think that this is the most try educational games and should be play in each class. Teacher and students can play this together to raise their good relationship between teacher and students..."

b. The *Patrio Playmat* as students' interest and attention grabber in learning the visual art topic of in the classroom.

There are many topics in art subject. The respondents stated the students like to know something new playing games experience in classroom. The results of the interviews showed that all respondents agreed that the *Patrio Playmat* was able to attract students' interest and attention in learning the art topic in the classroom.

Respondent 1 states that:

"...hmm it is very interesting to especially in learning even the game specification is dedicated more to childrens or primary school students and preschool, but this game is able to learn about visual art subject. There is many elements of Visual Art Education for example shapes, colors and others..."

Respondent 2 states that:

"...what can I observe is, Patrio Playmat is a knowledge game that easy to handle and understandable by the teachers and students, not all students have deep knowledge in variety of diversity in Malaysia, at least this game is able to catch attention to students to know Malaysia according to each state throughout this playmat game..."

Respondent 3 states that:

"...Patrio Playmat is really good and can catch attention of the students to learning English, language subjects, history and art because while learning they can play and make students not bored and will attract interest of the students for example usage of suitable visual in the game ..."

c. *Patrio Playmat* can be used across other subjects.

In some subjects it can be learned by cross learning. The respondents stated student able to learn other subjects than art subjects through playing *Patrio Playmat*. The result of the interview showed that respondents agreed that *Patrio Playmat* able to be teach other than Art subjects.

Respondent 1 states that:

"...can... Lot of subjects can be used in Patrio Playmat game. For example, civic and nationality subjects. Usually in the civic class, we usually do the activity based on paper and pen. If we are using this game, sure the learning will be more meaningful. Besides, for primary school students, maybe it will be used for mathematics subjects in terms of subtraction and additional..."

Respondent 2 states that:

"...I think, Patrio Playmat game is appropriate in subject other than visual art, for example, this game can used in history subject, Malay Language, and English Language. For example, through BM subject, students will be expose with diversity of attraction and interesting facts to know Malaysia through reading and attract students interests to know their motherland closer..."

Respondent 3 states that:

"...beside playing, students will gained general knowledge of Malaysia through icon in states and interactive question card of Patrio Playmat. As I told you earlier, many subjects can be used. As an English teacher, many things can be teach including names of places, things, animals, clothing, nature..."

d. *Patrio playmat* are useful for embracing multicultural students in classroom.

There are many subjects and tools that use a lot of diversity and multicultural elements in the classroom. The respondent stated is *Patrio Playmat* able to use for multicultural students in classroom. The result of the interview showed that respondents agreed that the *Patrio Playmat* provide practical games for use by teachers and students in the classroom.

Respondent 1 states that:

"...we are live in multicultural races and culture; I think it is suitable if Patrio Playmat is used in all classes and school to know the identity of Malaysia..."

Respondent 2 states that:

"...it really suitable if the Patrio Playmat game is joining with the students with variety differences background, so that they can learn towards each other ..."

Respondent 3 states that:

"...then, appreciate differences that exists between them, for example one playmat that being played by some students with differences background is able to make the relation closed towards each other, So through Patrio Playmat, we can know to learn culture of other friends and maybe bad activity like racism and hatred will be overcome through playing it together..."

e. *Patrio playmat* can increase patriotic and nationalism in students' awareness and understanding.

Multicultural element is an interesting topic to teach and learn in classroom. The respondents stated that students must always have patriotism and nationalist elements to produce a vision generation. The result of the interview showed that respondents agreed that the *Patrio Playmat* is capable of being used by students to increase patriotic and nationalism.

Respondent 1 states that:

"...Ya, Patrio Playmat can increase patriotic spirit and nationalism, depends on the chances information card that has been provided in the Patrio Playmat..."

Respondent 2 states that:

"...agree! I think this game Patrio Playmat is an interactive game that will raise feeling of care and love of Malaysian people towards motherland, at very least, students will be expose with geographical shape of states in Malaysia, besides general knowledge of students towards Malaysia can be improved then create patriotism in themselves..."

Respondent 3 states that:

"...Patrio Playmat able to improve spirit of love towards the country by knowing Malaysia that having a diversity of races, culture, and traditions and also variety dialects in each state..."

Observation of *Patrio Playmat* implementation in classroom.

Researchers demonstrate *Patrio Playmat* during teaching and learning sessions. Three classes of Form 1 to Form 3 students are involved in the process of data collection. Researchers choose the relief class to avoid disrupting other compulsory classes. The duration of time to play is 1 hour.



Figure 1: The Full set of *Patrio Playmat*.



Figure 2: Students showed interest reaction while playing the *Patrio Playmat*.



Figure 3: Students gather in relief class while the teacher demonstrates the game. Students answering the questions given by the researchers.



Figure.5: Students ready to play the game with friends.



Figure.6: Students rolling the dice to start the game.

6.0 Conclusion and Recommendation

The interview results revealed unanimous agreement among respondents that the *Patrio Playmat* is highly suitable for classroom use by both teachers and students, largely because it draws on the familiar concept of board games. This familiarity reduces barriers to engagement, allowing students to participate naturally while simultaneously shifting the learning environment from a traditional, teacher-centered model to a more student-centered, interactive approach. Teachers also benefit from its intuitive design, which requires minimal training and can be easily integrated into existing lesson plans. One of the strongest advantages highlighted by respondents is the playmat's ability to capture students' interest and attention in learning art topics. Its visually appealing graphics, detailed design, and clear, age-appropriate information ensure accessibility for students across different proficiency levels. The use of colourful visuals and interactive challenges not only sustains motivation but also caters to multiple learning styles—visual, kinaesthetic, and even social making it an inclusive teaching tool. This adaptability directly supports differentiated instruction, where teachers must accommodate diverse learning needs within the same classroom.

Importantly, the potential of the *Patrio Playmat* extends beyond Visual Arts Education. Respondents noted its versatility in fostering engagement in other subjects such as English, Civic Education, Science, Bahasa Malaysia, and Mathematics. For example, English teachers could use it to reinforce vocabulary in culturally relevant contexts, while Civic Education lessons could leverage the multicultural themes to stimulate discussions about identity, citizenship, and respect for diversity. Similarly, Mathematics educators might use the playmat's interactive tasks to frame problem-solving exercises within real-life cultural settings, thus contextualizing abstract concepts and making them more relatable. This cross-curricular application illustrates the playmat's value as a holistic educational tool rather than a subject-specific resource. The incorporation of multicultural elements was consistently emphasized as a key strength. Respondents viewed the playmat as particularly suitable for diverse classrooms, where fostering inclusivity and cultural understanding is essential. Its design encourages students to engage with the traditions, symbols, and values of Malaysia's multiethnic society, creating opportunities for meaningful dialogue and empathy building. This directly supports the assertion by L. Kemalova (2022), who argued that ethnic tolerance among students can be cultivated through educational and extra-educational activities, thereby preventing interethnic conflicts. The *Patrio Playmat*, by embedding cultural narratives into gameplay, becomes more than a teaching aid it is a medium for social cohesion.

Furthermore, respondents agreed that the *Patrio Playmat* holds significant potential in fostering patriotism and strengthening nationalistic values among students. Through interactive exploration, learners are introduced to Malaysia's cultural icons, historical events, and artistic legacies, which fosters pride and a sense of belonging. This aligns with the findings of Yingnan Guan and Mark Anthony G. Sumanoy (2023), who emphasized that multicultural art design education broadens students' cognitive horizons and nurtures creativity by immersing them in diverse cultural values and contemporary perspectives. In this sense, the playmat functions not only as a pedagogical tool but also as a platform for identity formation, where students internalize national heritage as part of their own personal growth. Cultivating appreciation for cultural and national heritage requires more than passive exposure; it involves active recognition, preservation, and promotion of unique cultural identities and historical significance across different regions of Malaysia. The *Patrio Playmat* contributes to this effort by blending cultural awareness with interactive learning strategies. Its gamified approach encourages

exploration, collaboration, and critical thinking, ensuring that students engage meaningfully with content rather than memorizing facts superficially.

The broader implication of this finding is that tools like the *Patrio Playmat* can serve as models for innovative educational practices that balance academic learning with social and cultural development. By weaving together visual art, multicultural education, and civic values, the playmat provides a comprehensive approach to 21st-century learning. It promotes community engagement, strengthens intercultural dialogue, and supports the holistic mission of education: to nurture not only knowledge and skills but also empathy, respect, and shared identity. Ultimately, the *Patrio Playmat* represents an innovative response to the challenges of teaching in multicultural and diverse educational contexts. By integrating play, art, culture, and heritage into the classroom, it creates a dynamic learning environment where students can explore Malaysia's rich traditions, broaden their perspectives, and develop values essential for harmonious living in a plural society.

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Paper Contribution to Related Field of Study

This paper contributes to the related field of art education by examine the usability and suitability of the *Patrio Playmat* as teaching aids towards promote multicultural awareness and understanding through unique cultural elements included among VAE teachers.

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