Gamification and Graphic Design: A Study of Malaysia's Cross-Cultural Traditional Board Games

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ABSTRACT

Through the use of this iterative method, the initiative seeks to improve gamification's ability to foster intercultural understanding in Malaysia. This research investigates the commercialization of gamified classic board games as a means of cultural education. The use of board games in this context is a component of a comprehensive module created by the National Unity and Integration Department (JPNIN), aimed at enhancing the understanding of Malaysia's extensive cultural variety. Malaysia, a nation characterized by diverse races and cultural heritages, encounters persistent challenges in sustaining cultural peace. The incorporation of graphic design into the gamification of conventional board games provides an interesting and interactive method to educate varied audiences about Malaysia's cultural history. This project employs an integrated approach, combining theory, methodology, and practice to illustrate how graphic design can enhance cross-cultural learning while also functioning as a kind of family entertainment. The study emphasizes the creation and manufacturing of several conventional board games, focusing on the significance of graphic design in improving the user experience. The reconfiguration of design features in these games modernizes their appeal and enhances their instructional value, rendering cross-cultural learning more engaging and accessible to a broader audience. This methodology enhances the domains of graphic design and cross-cultural education in Malaysia.

INTRODUCTION

Malaysia comprises a multitude of diverse cultures due to historical changes. The distinctions and variety of cultures, races, nationalities, faiths, and beliefs constitute the cultural identity of a pluralistic community. The Department of National peace and National Integration (JPNIN) within the Prime Minister's Department spearheads efforts to foster peace and harmony in Malaysia. The objective of JPNIN is to enhance national unity and harmony in accordance with the federal constitution and national principles. JPNIN's mission in fostering national unity involves educating the people to value unity and to conserve, maintain, and enhance racial relations for the sake of national equality. JPNIN also contributes to fostering inter-religious comprehension and harmony.[1] asserts that the Malaysian community has seen a phase of multicultural knowledge transmission. The virtual phase begins to progressively transition into direct experience in accordance with the evolution of the land, water, and air transport sectors. Former Minister of Education, Dr. Maszlee Malik, stated in Bernama (2019) that by appreciation via diverse activities, we may collectively comprehend the essence of life. This research aims to enhance the community's understanding of the composition of a pluralistic society in the country, while also reinforcing national integration and promoting the unification agenda. Cross-cultural games can facilitate an understanding of culture as a medium that generates positive and meaningful dialogue for community members[2]. Cross-cultural board games can offer pupils early insight into the realities of Malaysia's multi-racial society and facilitate mutual cultural understanding in a harmonious and peaceful environment.

Problem Statement

In Malaysia, a country characterised by many cultures and races, promoting unity and understanding through

cross-cultural education is a significant challenge. Notwithstanding numerous educational reforms and programs, like the National Education Philosophy and the Vision School projects, endeavours to foster multicultural understanding frequently encounter challenges stemming from ethnic conflicts and structural disparities rooted in historical and political settings. These difficulties encompass inequitable access to resources, conflicts between majority and minority groups, and the continuation of race-based policies like as the New Economic Policy (NEP), which has historically advantaged Bumiputera populations over others. These initiatives, although intended to mitigate socio-economic inequality, have exacerbated divisions among ethnic groups[3],[4].

In this context, gamification presents an innovative strategy to improve cross-cultural education through the incorporation of interactive and engaging techniques. Board games are effective instruments for promoting teamwork and cultural exchange, functioning as instructional media to overcome ethnic and cultural boundaries. Incorporating components of Malaysian traditional board games with cross-cultural themes, gamification can establish an inclusive platform that enhances intercultural learning, cultivates empathy, and alleviates cultural misconceptions. Moreover, studies indicate that strategically designed gamification improves motivation, engagement, and learning outcomes by promoting significant interactions among participants[5].

In summary, although Malaysia faces many obstacles on its path to intercultural harmony, cutting-edge teaching strategies like gamification can help close cultural divides and create a more united community.

Objective/Purpose and Context

This research seeks to provide the community with a profound and immersive learning experience, since the cross-cultural module has played a pivotal role in molding society and the future. It also provides learners with analytical and evaluative abilities applicable in disciplines beyond culture. Furthermore, individuals may draw inspiration from notable persons by emulating their characteristics and other essential competencies, such as leadership. Employing the board game to construct this cross-cultural module would represent a creative innovation, transforming traditional learning methods into a more engaging experience.

LITERATURE REVIEW

Graphic design plays a crucial part in contemporary society, as effective design may offer aesthetically pleasant visuals and convey information clearly [6]. The function of design is to provide documents, graphics, goods, publications, and packaging that provide visuals capable of significantly influencing and capturing consumer attention to encourage purchasing behaviours. A designer must understand how to effectively visualise the design to appeal to the target consumer. Moreover, graphic design will be the most beneficial method for enhancing the efficacy of the learning process.

The involvement of designers in the integration of new technologies into pedagogical content or material creation is beneficial not only in educational settings but also in graphic design [7]. According to [8], creativity in design is frequently characterised as a 'problem-solving strategy' within design education, encompassing the identification of cultural and social components. It serves to enhance creativity and provides implications for problem-solving and skills among graphic designers. Research conducted by [9] characterised graphic design as a form of communication design, wherein the art and practice of designing and projecting ideas also provides experiences of visual and textual context. It may manifest as tangible written messages or as virtual digital information comprising images, text, and graphics, with experiences potentially residing in memory for either a brief or extended duration. A graphic designer use visuals as a medium for conveying information, facilitating communication with the user and transforming it into an enjoyable interaction [10]. In education, employing visual design is crucial for sustaining and enhancing knowledge acquisition, hence augmenting the content's value and preserving user engagement.

As the world evolves, its requirements transform, necessitating a corresponding adaptation in the methods and pace of education delivery. One crucial sort of education is the invaluable lessons students can get from diverse cultures; this approach is a commendable technique for cross-cultural education and is receiving significant

attention from higher education institutions [11]. Education has been the most potent instrument in shaping the social element, particularly nationality, since it facilitates the development of identities for each new generation in nearly every nation [12]. Key attributes for comprehensively understanding others include a belief in shared aspirations, the perception of learning, the discovery of differences, the necessity of open-mindedness, the pursuit of knowledge about others to foster closeness, the exchange of perspectives, and collaboration [13]. Perceived learning is associated with design thinking by designers, encompassing several methodologies employed in the creation of an innovative product.

According to Kelly, design thinking is referred to as 'the hidden weapon for innovation' and has been embraced by corporations, higher education institutions, and governments as a methodology for innovation [14]. In a research by Retna, described design thinking as an innovative approach to augmenting student learning and offering educators a structured framework for creative problem-solving in educational practice[15], [16]. Asserted that design thinking has emerged as an effective tool for 21st-century skills, since participants engage in the processes of knowledge gathering and organisation to address problems. The collaborative learning environment and participant engagement in iterating a solution grounded in logic and reality provide an authentic experience and feedback. Design thinking parallels the concept of gamification, wherein information systems provide experiences and incentive akin to those found in games, aiming to influence user behaviour [17].

The intended results of employing games or game design features in entertainment, whether online or offline, are termed 'gamification' [18]. It has been acknowledged as the result that offers the greatest potential for enhancing student learning. By enabling the player to address challenges and derive insights from their repeated endeavours and setbacks, gamification renders the learning process engaging, characterised as a "positive failure that can inspire learners to undertake challenging tasks" [19]. Gamification, defined as the implementation of competitive gaming systems that incorporate rewards and the measurement of player or user behaviour, has gained significant popularity, as evidenced by over 26,000 hits in a Google Scholar search [20]. Gamification can be employed in the development of board games for the cross-cultural learning module.

Research by Purwidiantoro (2020), indicated that board games can enhance cooperation levels and diminish smartphone dependence, all while maintaining enjoyment and educational value in the game[21]. Board games can enhance learning outcomes and motivate gamification activities, while also providing good experiences related to flow antecedents and experiences[22]. Integrating instructional and entertainment components to study the cross-cultural module will enhance engagement and enjoyment, as development is crucial for motivating learners to participate in the game and improving learning efficacy. Board games are more effective for educational purposes than the conventional way of utilizing presentation slides by instructors.

METHODOLOGY

This research on the cross-cultural module entails a board game product consisting of game cards featuring 40 sets of questions that encompass the three cultures of Malaysia. It also encompasses several enquiries on a pluralistic society. The selected questions pertain to real-life scenarios within the community or the nation and encompass many board games within a single package. It is a game that assesses knowledge, comprehension, and appreciation of interpersonal interactions among students or communities of diverse races. This cross-cultural game will influence the mindset of future generations by altering the negative perceptions of other nations' cultures and indirectly fostering interracial understanding. The incorporation of green in the logo promotes healthy development and optimistic cognition during play. Meanwhile, the usage of blue can develop intimate ties that indirectly promote stability, harmony, and beliefs that are consistent with the cross-cultural aims for which they have created an inter-racial understanding with a peaceful atmosphere [23].

This research project employs the design thinking paradigm and concentrates on the creation of the board game. It employs a strategy that has been extensively utilized by designers in product development. The design explanation will be articulated to foster comprehension of the product. The rationale has been selected to govern the content during the design process of the board game. The result of the product will be a board game that fosters cross-cultural education.
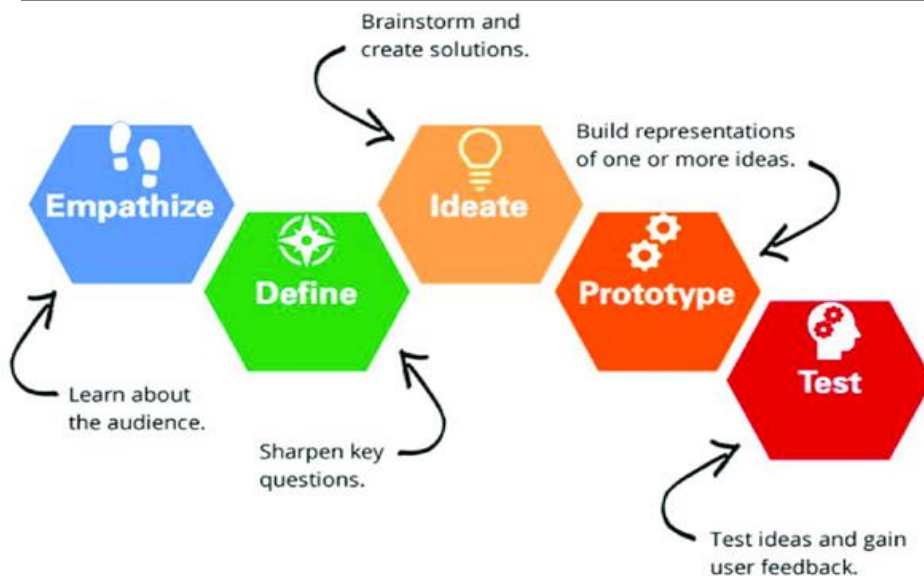
Fig.1 Design thinking process explained by (Cole Hoover, 2018).

The design thinking methodology comprises a five-stage approach, which includes the processes of empathise, define, ideate, prototype, and test, as established by the Hasso Plattner Institute of Design (2018)[24]. We designate the cross-cultural module as the phase for empathy. Identifying the issue causing the participant's disinterest in the module and delineating the innovative offering facilitates the development of appeal during the definition phase. The ideation phase encompasses many games that incorporate the design process and mockups. During the prototyping process, it has been determined that the product would take the form of a board game, which enhances engagement and facilitates comprehension through the incorporation of many games within the product box. The final phase is testing, during which we concentrate on obtaining input regarding the design and commercialization.

RESULT AND DISCUSSION

Design thinking is a methodology for problem-solving and creativity in education that facilitates participants' engagement in cross-cultural learning activities. The following elucidates the design thinking approach employed in the development of the board games:

Table 1 Five stages of design thinking process

Stage	Purpose
Empathise	Comprehend the challenges associated with studying the cross-cultural module. It is analogous to other methods that utilise slide presentations delivered by trainers or facilitators for educational purposes.
Define	Establish to formulate features, functionalities, and other components that would facilitate problem resolution or, at a minimum, enable users to address difficulties independently with minimal difficulty, while selecting the appropriate product for cross-cultural learning. The team resolved to develop a gamification solution for cross-cultural education. The item will be a board game.
Ideate	Commence the design of the concept and the formulation of the board game's framework.
Prototype	Developing and producing the product in accordance with the established design while finalising a version that is more accommodating to participants.
Test	Evaluate the product and obtain consumer feedback.

Fig. 2 The initial board game has been developed.

The initial prototype of the board game was constructed solely from foam, manila card, and model-making board. It employed solely colour to distinguish the Malay, Indian, and Chinese segments. Participants' feedback revealed a lack of enthusiasm for the game due to its simplicity and lack of appeal.

Fig. 3 Redesigned packaging for the cross-cultural board game.

Fig.4 Player guide for the cross-cultural board game

This input informed the development of the second iteration, which included appealing colours and employed traditional dance to symbolise Malaysian culture. Research by Yanuartuti & Winarko (2019) demonstrated that revitalising ancient dances aims to reintroduce local knowledge values, which can cultivate and impart to Generation Y the qualities of passion and asceticism[25]. The design inspired by traditional dances can enhance the younger generation's appreciation of their culture. Participant evaluation for the game revealed that the character design is appealing, and the vibrant background colours enhance the design's prominence compared to the prior board game.

A player manual has been prepared to elucidate the fundamental rules and regulations of the board game, illustrating its progression. The guidebook's idea derives from the Monopoly board game, which effectively provided the manual and elucidated the rules for playing Monopoly.

Table 2 Acceptance of the product by respondents

Attributes	Respondents(N)	Acceptance toward product
Knowledge	50	Acceptable
Interest	50	Acceptable
Price	50	Acceptable
Willingness to buy	50	Acceptable
Commercialization	50	Acceptable

A survey has been administered to undergraduate students participating in the cross-cultural module to gather input on commercialization. The outcomes of the data analysis conducted on the characteristics of the cross-cultural board game are displayed in Table 2.

This quality facilitates the acceptance of responses and the preparedness of the cross-cultural board game for worldwide commercialization. Consequently, the board game can be utilized in an educational module that incorporates gamification.

Fig. 5 Implementation of the board game within the container design.

CONCLUSION

This research underscores the vital role of gamification and graphic design in transforming educational approaches and fostering deeper engagement among Malaysian learners. As education increasingly shifts toward digital platforms, integrating elements of gamification and well-crafted graphic design can enhance both learning experiences and educational outcomes. Specifically, cross-cultural board games offer a powerful medium to engage digital learners by blending traditional educational content with interactive and visually stimulating designs. These games leverage the principles of design thinking—emphasizing creativity, empathy, and user-centered problem-solving—to provide an immersive learning experience that resonates with today's tech-savvy students. The inclusion of gamified elements not only motivates learners but also contributes to a more personalized and dynamic learning environment. This shift can significantly impact learners' literacy, critical thinking, and cultural awareness by making educational content more accessible and engaging. Gamification

taps into intrinsic motivators such as curiosity, achievement, and competition, leading to higher retention and greater educational interest among students. Furthermore, the integration of graphic design plays a pivotal role in creating visually appealing and culturally sensitive game environments, enhancing the overall educational impact of these tools. By utilizing cross-cultural board games, this research aims to foster spiritual unity in Malaysian society, encouraging mutual trust, respect, tolerance, and cooperation between players of different cultural backgrounds. These games serve not only as educational tools but as platforms for dialogue and understanding, promoting a deeper awareness of the cultural diversity that defines Malaysia. Through gameplay, players are introduced to the customs, traditions, and taboos of various Malaysian ethnic groups, which helps build empathy and appreciation for cultural differences. This reinforces the importance of intercultural respect and cooperation, essential in maintaining Malaysia's social cohesion in a multicultural society. Ultimately, this research demonstrates how gamification, design thinking, and graphic design can revolutionize the education landscape by making learning more engaging, culturally inclusive, and aligned with the needs of digital learners today.

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