Digitalization of Riau Malay Dance through the *Rentak Bulian* Dance Adventure Game as Cultural Education Medium

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Abstract
Culture is an important heritage that must be preserved, including traditional arts such as the Riau Malay Dance, particularly the *Rentak Bulian* dance. This dance originates from the healing rituals of the *Talang Mamak* community in *Indragiri Hulu*, Riau Province. This study aims to develop an adventure game based on the *Rentak Bulian* dance as an interactive and engaging cultural education medium for the younger generation, focusing on the gaps in cultural education that result in a lack of understanding and appreciation for this dance. A qualitative ethnographic method was employed to gain an in-depth understanding of the cultural values and movements of the *Rentak Bulian* dance, while the Game Development Life Cycle (GDLC) method was applied to develop an Android-based game. These two methods complement each other throughout the development phases, where ethnography provides the necessary cultural context for game design, while GDLC ensures that these elements are effectively integrated into a digital format. The results of the study indicated that the developed game successfully integrates historical aspects, dance movements, and traditional music into an interactive digital format. This game was equipped with dance tutorials, educational quizzes, and adventure missions that can enhance learning motivation and user engagement. In short, the digitalization of traditional dance through this adventure game not only strengthens local cultural identity but also increases cultural awareness among the younger generation in the digital era.

Keywords: digitalization of traditional dance, Riau Malay dance, adventure game, *Rentak Bulian* dance, cultural education medium

INTRODUCTION

Riau Province possesses a highly diverse culture, tradition, and arts. In *Indragiri Hulu* Regency, there is an indigenous community that already exists and resided for hundred years, in the lowland forest of Bukit Tiga Puluh, the community has the name which is *Talang Mamak* tribe (Abni & Syefriani, 2024). The *Talang Mamak* community, located in the interior of *Indragiri Hulu* in Riau Province, is recognized for its strong adherence to customary traditions, exemplified by the *Rentak Bulian* dance. This dance is regarded as a sacred healing ritual, maintaining its spiritual significance to the present day. The dances in Riau are also highly diverse, encompassing traditional, creative, and contemporary dance forms (Syefriani 2023; Setiawan & Virgiana, 2025). According to Soedarsono, (1978), dance is one of Indonesia's noble cultural heritages that must be developed in harmony with societal progress towards renewal (Syefriani, 2016). Malay dance represents an important art form rich in cultural values (Abdha & Rohani, 2023).

Riau Malay dance is a form of artistic expression originating from the Malay community in the Riau region and is heavily influenced by the culture of the Malay ethnic group in Riau. This dance reflects the identity, values, and philosophy of the Riau Malay people and constitutes a vital part of the region's cultural heritage. Beyond entertainment, Riau Malay dance serves as an educational medium, a vehicle for moral messaging, and a component of various traditional ceremonies such as welcoming honored guests or community celebrations (Syefriani & Saearani, 2025).

One example of Riau Malay dance is the *Rentak Bulian* dance, derived from two words: "Rentak," meaning step or beat, and "Bulian," a local term in *Indragiri Hulu* referring to a dwelling place of spirits or supernatural beings. In this dance context, Bulian is associated with the summoning of spirits and functions as a medium of communication between humans and supernatural entities. As a distinctive traditional Malay dance of Riau, *Rentak Bulian* embodies profound philosophical and historical values. Given its traditional nature, it is imperative that *Rentak Bulian* be understood, preserved, and maintained by its community.

The importance of studying and understanding arts and culture lies in the appreciation and preservation of indigenous artistic expressions (Suardi, 2018). Preservation efforts for regional arts are essential (Erawati et al., 2023). The rapid advancement of digital technology presents opportunities for the preservation of local culture through digitalization. Currently, digital spaces positively impact cultural development. Cultural digitalization involves the utilization of information and communication technology to optimize various cultural aspects, particularly in management, documentation, dissemination, and the development of cultural knowledge. The digitalization of traditional dance can be approached by leveraging Android technology and current innovations as a means of preserving traditional dance in the era of the Industrial Revolution 4.0 (Daryanti et al., 2019). One promising form of digitalization is through adventure games. Adventure games offer interactive and enjoyable learning experiences, thereby addressing the challenge of low interest among the younger generation in traditional dance education, which is often perceived as monotonous and irrelevant to their digital world.

Collaboration and interdisciplinarity are inherent in the integration of dance and technology (Siegel & Jacobsen, 1998); dance technology fosters interdisciplinary dialogue (Penrod, 2005). The utilization of digital technology for cultural preservation has increased significantly in recent years, alongside growing public awareness of the importance of safeguarding local culture in the era of globalization (Trilling & Fadel,

2009). The advent of digital technology facilitates the storage, archiving, and distribution of cultural content in formats that are easily accessible to diverse audiences. Consequently, the presence of such technology enables younger generations to engage with traditional culture in formats that align more closely with their digital habits (Hobsbawm & Ranger, 1992). Digital technologies such as mobile applications and interactive multimedia are emphasized as essential tools for immersive learning experiences (Canosa et al., 2020). One of the greatest challenges in the digitalization process is maintaining the essence and original cultural values to prevent distortion during digital transformation (Cunningham & Craig, 2019). As Hall (1997) asserts, every cultural representation carries the risk of simplification or misinterpretation, making it crucial for cultural custodians to ensure that authentic values are preserved in all disseminated digital content.

Moreover, the digital transformation in the field of arts and culture often involves digital communication approaches that examine how technology alters human interaction and information sharing (Castells, 2011). The primary challenge in cultural preservation lies in sustaining traditional values amidst rapid technological change. Hobsbawm and Ranger emphasize that traditions may evolve over time, especially when confronted with continuously developing cultures. In the context of cultural preservation through digital media, it is essential to safeguard the original cultural values even when presented in different formats (Eric & Ranger, 1983). The influence of digital media on younger generations cannot be overlooked in the context of cultural preservation, asTapscott (2008) "notes that digital natives possess distinct ways of understanding and appreciating culture".

Digital media for local cultural preservation has a dual impact: it can broaden the reach of local culture to wider audiences, but there is also a risk that the original cultural values may become distorted due to commercialization and excessive exploitation. Researchers strive to remain consistent with the cultural values of Riau Malay in presenting digital content aimed at preserving the authenticity of Riau Malay dance as a traditional art form amid global content competition. The advancement of culture and digital preservation is crucial for protecting, developing, and utilizing cultural wealth. Key challenges include the loss of cultural meaning (Quintero et al., 2020; Shimraya & Ramaiah, 2017), the displacement of traditional values by dominant cultures, and difficulties in preserving and revitalizing dispersed cultural data (Borissova, 2018; Masenya, 2021).

Cultural education media play a vital role in maintaining and disseminating local cultural values, especially in today's digital era. As a strategic tool, such media function to introduce, educate, and mobilize community participation, particularly among youth, in protecting and preserving cultural heritage. Utilizing digital media such as mobile applications, interactive videos, and educational games makes cultural education more engaging, contextually relevant, and accessible to a broad audience. Local community involvement is identified as a key aspect in establishing strong connections between visitors and local culture, enhancing the tourism experience while simultaneously contributing positively to the community (Giyartini, 2018; Smithers, 2023). In the context of traditional dance digitalization, cultural education media functions not only as an information delivery tool but also as an interactive space that enables users to directly experience and understand culture through simulation and active participation.

Culture-based educational games have the potential to increase learning motivation and cultural awareness among younger generations, while also serving as effective media

for preserving traditions. Therefore, the digitalization of Riau Malay dance through the adventure game of *Rentak Bulian* dance is not only a technological innovation but also a strategic cultural education medium aimed at strengthening local cultural identity and enhancing the engagement of the younger generation in cultural preservation in the digital era. The *Rentak Bulian* dance should be developed into an adventure game to enhance the interest, engagement, and understanding of younger generations regarding local cultural heritage through media that align with contemporary developments and their habitual digital practices. The digitalization of *Rentak Bulian* dance in the form of an adventure game represents not only an innovative medium for cultural preservation but also bridges the gap between tradition and technology, instilling pride and love for local culture among youth in the digital era. Based on this background, this study focuses on developing the *Rentak Bulian* adventure game as a form of digitalization of Riau Malay dance to serve as a cultural education medium aimed at increasing youth engagement in learning about and preserving local cultural heritage.

METHOD

The research method employed in this study was qualitative with an ethnographic approach. To collect data related to the cultural content integrated into the game, perceptions from artists (in this case, the researcher), developers, and users, namely the younger generation, are required. Content analysis was also essential to ensure that the original cultural values of the *Rentak Bulian* dance are preserved and authentically represented in the game. This approach was used to deepen the understanding of *Rentak Bulian* dance and cultural digitalization in general. Relevant literature and documentation concerning *Rentak Bulian* dance, *Talang Mamak* culture, and digital technology provided a strong foundation for this study. This research focused on the digitalization of one of the Riau Malay dances, namely the *Rentak Bulian* dance. To maintain and sustain the existence of *Rentak Bulian* dance, innovative efforts were necessary to present the dance in a different and more engaging form for the broader community, specifically in the form of a game. The game development method applied is the Game Development Life Cycle (GDLC). The researcher collaborates with experts in Informatics Engineering to ensure that *Rentak Bulian* dance was effectively represented within an engaging adventure game.

The game development life cycle is a framework used to manage the entire game development process from inception to completion (Wahyudinata & Dirgantara, 2020). GDLC encompasses all stages, including initial concept, design, pre-production, production, testing, launch, and post-launch maintenance (Amin et al., 2023). This collaboration was motivated by the fact that many Indonesians, particularly those in Riau, enjoy playing games. Consequently, the game can provide a refreshing experience for players (Syefriani 2023; Setiawan & Virgiana, 2025), and indirectly, the community contributed to the preservation of *Rentak Bulian* dance by learning about its history, movements, and traditional music that accompanies the dance. For the development of the *Rentak Bulian* dance game, the informatics engineering researchers developed the game based on data obtained from the dance education researcher.

FINDINGS AND DISCUSSION
Findings

Qualitative data analysis revealed that *Rentak Bulian* dance was not merely entertainment but also reflected values of togetherness, belief in supernatural powers, and efforts to maintain harmony between humans and nature. These are essential components

of the cultural identity of the *Talang Mamak* tribe, one of the remote indigenous groups in Riau Province. The researcher also found that transforming the ritual into a dance performance has opened opportunities for cultural preservation, although challenges remain in maintaining the authenticity of its original meaning and traditional values.

The findings from the ethnographic study form the foundation for developing the *Rentak Bulian* adventure game as a cultural education medium. The qualitative data ensured that the game content remains authentic and relevant to the original cultural values. This approach also enables younger generations to understand and appreciate cultural heritage through digital media. These data served as a critical basis for the digitalization process and educational game development, allowing cultural preservation to be conducted innovatively without losing its traditional essence.

Initial Concept Stage (Initiation)

The initial stage involved initiation and planning, focusing on identifying the educational needs related to cultural preservation, specifically the *Rentak Bulian* dance. The primary objective was to create an educational medium capable of introducing and preserving *Rentak Bulian* as part of the Riau Malay culture. Preliminary discussions involve dance practitioners and technology developers to determine the main features, target audience (especially the younger generation), and cultural elements to be incorporated into the game. The development team, together with the researcher as a cultural expert and dance practitioner, conducts a literature review to collect data concerning the history, dance movements, accompanying music, and socio-cultural context of *Rentak Bulian*. The findings from this review form the basis for planning the game's content and mechanics.

Design Stage

The second stage was the game design phase, where the game is conceptualized as an interactive adventure that combines educational and entertainment elements. Interdisciplinary collaboration is essential to ensure effective integration of cultural and technological aspects. The role of dance practitioners is vital in maintaining the authenticity of cultural content, while programmers are responsible for implementing the concept into an engaging and interactive game.

The gameplay mechanics were designed to be easily accessible to the target audience, particularly the youth, featuring dance movement tutorials, interactive quizzes about Riau Malay culture, and adventure challenges that test players' understanding of the dance material. Gamification elements such as points, levels, and rewards are incorporated to enhance learning motivation and user engagement. The graphic design references the aesthetics of Riau Malay culture, utilizing authentic colors, motifs, and symbols. Additionally, traditional *Rentak Bulian* music is integrated into the game to reinforce the cultural atmosphere of the *Talang Mamak* community in Riau.

Pre-Production Stage

The third stage, pre-production, involved detailing the concept, storyline, gameplay mechanics, characters, and educational elements of the *Rentak Bulian* dance. This phase also includes the creation of storyboards and initial prototypes to test visual concepts and basic interactions. Traditional music, dance movements, and cultural narratives are collected and documented as primary materials for game content development.

Production Stage

During the production phase, all designs and concepts were implemented into a game prototype using Android-based game development technology. The development team conducts programming, animation of dance movements, integration of traditional music audio, and creation of a user-friendly and intuitive interface.

The researcher, an expert in dance education, actively participates to ensure the accuracy of the movements and cultural content. Characteristic movements of *Rentak Bulian* are transformed into realistic and interactive animations. The system includes dance tutorials, educational quizzes, and adventure missions designed to provide an engaging and immersive learning experience. Throughout production, intensive coordination between the development team and the researcher is maintained to guarantee cultural accuracy and authenticity.

Figure 1. Initial Screen of the *Rentak Bulian* Dance Game

The opening screen of the game displays a lush and mystical dense forest, filled with trees. Natural sounds such as the rustling of the wind, bird songs, and the gentle flow of a river accompany a serene and mysterious atmosphere, complemented by the sacred melodies of traditional musical instruments. In the center of the screen, an introductory text appears with the phrase: "Introducing the *Rentak Bulian* Dance." Users are then invited to begin their adventure by exploring the cultural values, history, movements, and music behind the *Rentak Bulian* dance.

Figure 2. Brief Overview of the *Rentak Bulian* Dance

In this brief overview screen, players are introduced to the *Rentak Bulian* dance, a traditional dance originating from the healing rituals of the *Talang Mamak* community in Riau Province. *Rentak Bulian* depicts healing practices that have been an inseparable part of *Talang Mamak* culture for centuries. Through this adventure game, users are encouraged to interactively understand the dance's history, movements, and the musical instruments used in *Rentak Bulian*.

Figure 3. Learning Material Options for *Rentak Bulian* Dance

In Figure 3, players are presented with learning material options consisting of two main categories: general questions about *Rentak Bulian* and questions about the dance movements. The general questions section includes basic information such as the origin of *Rentak Bulian*, the dance's functions, and the musical instruments used. Players can select questions to gain an understanding of the cultural and historical context underlying the dance. Meanwhile, the dance movements section invites players to recognize and comprehend various characteristic movements of *Rentak Bulian*. This material selection feature is designed to provide a comprehensive and in-depth learning experience, combining theoretical knowledge and practical dance movements, thereby supporting the cultural education objectives of the *Rentak Bulian* adventure game.

Figure 4. Introduction to the Character *Kumantan* or Dukun of *Rentak Bulian* Dance

In Figure 4, players are introduced to the main character of the *Rentak Bulian* dance, *Kumantan*, or Dukun, who leads the dance. *Kumantan* serves as the central figure who initiates the ritual and guides the dancers in performing movements rich in spiritual meaning. In the tradition of the *Talang Mamak* tribe in Riau Province, *Kumantan* is believed to be a healer who connects the human world with the supernatural realm through the dance. In this adventure game, *Kumantan* acts as the player's guide to begin the cultural education journey. Players are invited to answer various prepared questions. Through this interaction, players not only learn theoretically but also experience direct involvement in the *Rentak Bulian* dance ritual. The magical and sacred atmosphere associated with *Kumantan* is visualized through character design featuring distinctive Healer attributes, complete with traditional elements supporting *Talang Mamak* culture. Thus, the character of *Kumantan* serves not only as a cultural symbol but also as an educational bridge that connects players with the Riau Malay cultural heritage in a profound and interactive manner.
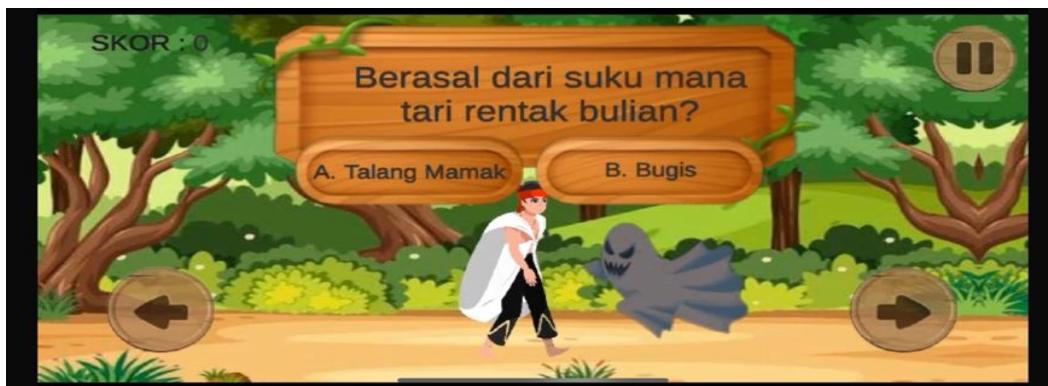
Figure 5. *Kumantan* Embarks on an Adventure by Answering Questions about the Origin of *Rentak Bulian* Dance

In the image above, *Kumantan* is presented with two answer choices regarding the origins of the *Rentak Bulian* dance. The character *Kumantan* begins his adventure by answering important questions related to the history of the *Rentak Bulian* dance. The first question tests knowledge about the origins of the *Rentak Bulian* dance, which is a ritual healing dance of the *Talang Mamak* community in Riau. Only by selecting the correct answer regarding the region and cultural background of this dance can *Kumantan* continue his adventure to the next question.
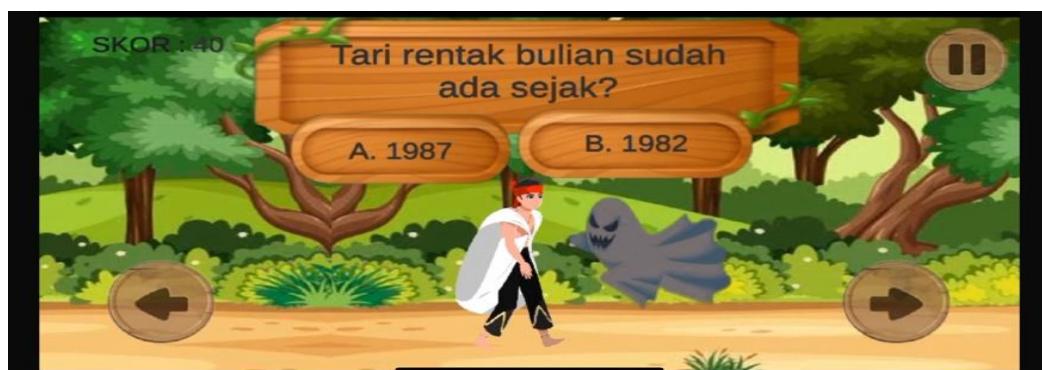

Figure 6. *Kumantan* Embarks on an Adventure by Answering Questions about the Year *Rentak Bulian* Dance was Created

After successfully answering the question about the origin of the dance, *Kumantan* proceeds to the next question regarding the year of creation of the *Rentak Bulian* dance, which is believed to have existed since 1982 as part of the Bulean ritual. *Kumantan* must determine the exact year when the *Rentak Bulian* dance was created. There are two answer options, and only the accurate choice allows *Kumantan* to advance to the next question.
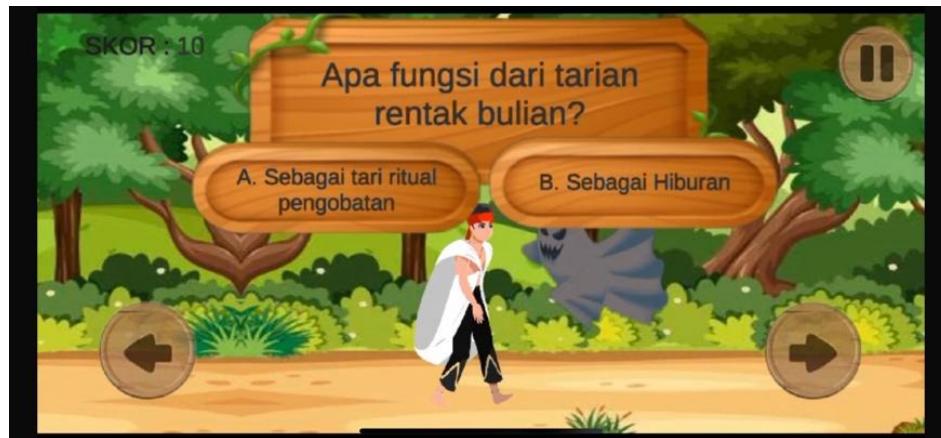

Figure 7. *Kumantan* Embarks on an Adventure by Answering Questions about the Function of *Rentak Bulian* Dance

The correct answer opens access to the subsequent question, which concerns the function of the *Rentak Bulian* dance as a ritual healing dance and a medium for communication with ancestral spirits. *Kumantan* is faced with a question about the primary function of the *Rentak Bulian* dance within the community. By selecting the correct answer, whether it serves as a healing ritual or mere entertainment, *Kumantan* can successfully complete his adventure and gain a comprehensive understanding of the *Rentak Bulian* dance.

The game mechanism is designed so that players must answer each question correctly to continue their adventure, thereby ensuring a gradual and thorough understanding of the cultural values and history of the dance. This interaction not only increases player engagement but also provides a systematic and enjoyable educational experience in learning about *Rentak Bulian*.

Figure 8. *Kumantan* Invites Players to Embark on an Adventure to Learn the Movements of the *Rentak Bulian* Dance

In Figure 8, players are invited to embark on an adventure to study the various characteristic movements of the *Rentak Bulian* dance. *Kumantan* guides the players by posing interactive questions that explore each movement within the *Rentak Bulian* dance. This adventure requires participants to understand the meaning and correct form of the movements in order to advance to the next stage.

Figure 9. *Kumantan* Embarks on an Adventure and Selects Answers Regarding the Movements of the *Rentak Bulian* dance

In Figure 9, *Kumantan* requires players to answer questions about the movements practiced through a two-choice format. *Kumantan* is presented with two movement options: *menyembah guru di padang* (bowing to the teacher in the field) or *gerak sembah* (the bowing movement). Participants must select the appropriate movement according to the context of the *Rentak Bulian* dance. Only the correct answer allows *Kumantan* to proceed to the next question.

Figure 10. *Kumantan* Embarks on an Adventure and Selects Answers Regarding the Movements of the *Rentak Bulian* dance

In Figure 10, it is explained that *Kumantan* must choose between the movements of *mengirik* (threshing*)* or *merentak* (rhythmic). The movement *merentak* is characterized by alternating footsteps typical of the *Rentak Bulian* dance, while *mengirik* is not an appropriate movement in this context. The correct choice will pave the way for *Kumantan* to continue his adventure. This movement is practiced by female dancers of the *Rentak Bulian* dance who don complete costumes.
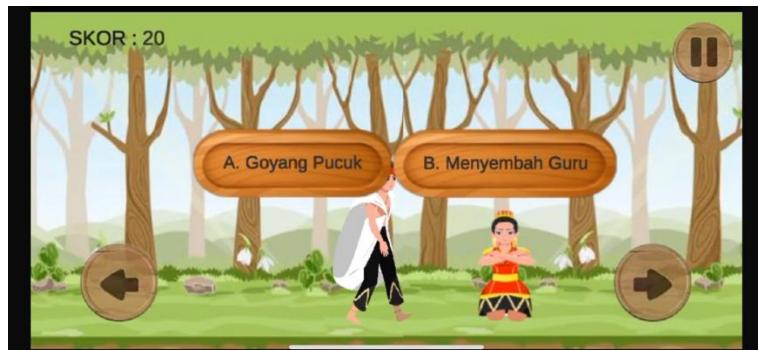
Figure 11. *Kumantan* Invites Players to Embark on an Adventure to Learn the
Movements of the *Rentak Bulian* Dance

Here, *Kumantan* challenges participants to differentiate between the movements *goyang pucuk* (shaking the tip) and *menyembah guru* (bowing to the teacher). The movement *goyang pucuk* illustrates the gathering of *mayang pinang* as preparation for a ceremony, while *menyembah guru* is a gesture of respect towards spiritual entities. Only by selecting the correct movement can *Kumantan* successfully continue his adventure. This movement is practiced by female dancers of the *Rentak Bulian* dance, using costumes that are consistent with those used in the game and have been adapted to match the original costumes worn in the *Rentak Bulian* performances.

Through this adventure, players are not only visually introduced to the dance movements but also encouraged to understand the philosophy and spiritual values inherent in each gesture. The interactive nature of the game offers an immersive and profound learning experience while preserving the authenticity of Riau Malay culture.

Testing

Although the focus of this research has not yet reached the stage of usage and evaluation, an internal testing process was conducted to ensure that the game runs smoothly, is free of bugs, and that the educational features function effectively. The prototype was tested by the development team and dance experts to gather initial feedback regarding user experience and cultural content accuracy. The testing process includes: 1) Functionality Testing: Ensuring that all game features, such as navigation, interaction, and quiz mechanisms, operate correctly without interruptions, 2) Cultural Content Testing: Involving dance experts to assess the appropriateness and accuracy of cultural material, including dance movements, music, and educational narratives, 3) User Experience Testing: Observing ease of use, responsiveness, and the attractiveness of the game to align with the target audience, 4) Bug Fixes and Revisions: Based on feedback from testing, technical corrections and content enhancements are made to prepare the game for the next stage. This internal testing is a crucial step before the game can be tested more broadly or launched.

Launch

The game was ready to be launched digitally on the designated platforms (e.g., Android). The launch phase includes several important activities: 1) Distribution Preparation: Preparing installation files, configuring device compatibility, and uploading processes to app stores or digital distribution platforms, 2) Initial Marketing: Conducting promotions through social media, cultural communities, schools, and other channels to reach the target audience, particularly the youth as the focus of cultural education, 3)

Technical Documentation: Compiling user guides, developer documentation, and supporting materials to facilitate users and the maintenance team, 4) Official Launch: Releasing the game to the public for download and play, while also gathering initial feedback from users. This launch is expected to expand the reach of cultural education through an easily accessible interactive medium.

Post-Launch Maintenance

After the game was launched, the maintenance phase becomed critically important for maintaining the quality and relevance of the game as a cultural education medium. The maintenance plan includes: 1) Ongoing Bug Fixes: Addressing technical issue reports from users and correcting errors that arise post-launch, 2) Content Updates: Adding new material, correcting inaccuracies in existing content, or adapting educational features to remain engaging and relevant to cultural developments, 3) Development of New Features: Integrating additional features such as new levels, interactive quizzes, or multimedia elements to enrich the learning experience. 4) Monitoring and Analysis: Collecting usage data to understand user interaction patterns and the effectiveness of the game as a learning medium. Although this phase has not yet been implemented in the initial research, maintenance is a crucial part of the life cycle of an educational game to ensure sustainability and long-term positive impact.

The use of the Game Development Life Cycle (GDLC) method in developing the *Rentak Bulian* adventure game enables a systematic and structured process from conceptualization to the creation of an authentic and educational digital product. The integration of interdisciplinary collaboration between cultural experts and technologists is key to preserving the cultural values of Riau Malay while leveraging digital technology favored by the younger generation.

This adventure game functions not only as entertainment but also as an interactive and contextual educational tool, addressing the challenge of low interest among youth in traditional dance learning. Through features such as dance tutorials, educational missions, and cultural narrative interactions, the game offers an immersive and enjoyable learning experience. GDLC-based development also accommodates the needs for testing and maintenance, which are essential to ensure the quality and sustainability of this educational medium in the long term. Thus, the digitalization of *Rentak Bulian* dance through an adventure game represents a strategic and effective innovation in the preservation and education of local culture in the digital era.

The *Rentak Bulian* adventure game developed includes several key features, namely: 1) Cultural Exploration: Players can explore a virtual environment that represents the cultural atmosphere of Riau Malay and interactively learn dance elements; 2) Dance Tutorial: Learning *Rentak Bulian* dance movements supported by visual and audio guides; 3) Interactive Quiz: Knowledge tests on the history and philosophy of the dance to deepen player understanding; 4) Adventure Challenges: Missions that invite players to complete cultural tasks to unlock subsequent levels.

Discussion

The digitalization of culture in the form of educational games has become an effective strategy for introducing and preserving local cultural heritage among the younger generation. Several previous studies have shown that the utilization of digital media, particularly in the form of mobile or interactive games, can enhance users' knowledge, interest, and understanding of traditional culture.

The research titled "Game Applications for Preserving Riau Culture" (Caraka et al., 2019) and the study by Sellyana et al. (2023) have developed an adventure-based Android game as an educational aid about Riau Malay at SDN 003 Pelintung. These studies emphasize that mobile games with an adventure and interactive approach can introduce local cultural elements such as traditional clothing, typical foods, and Arabic Malay script in an engaging and enjoyable manner. This finding aligns with the approach taken in the development of the *Rentak Bulian* dance game, which also features Riau Malay culture as its main content, targeting school children as its primary users.

Furthermore, the research by Daryanti et al. (2019) entitled "Digitalization of Traditional Dance: Strategies for Facing 21st Century Challenges" reveals that the use of technologies such as augmented reality and virtual reality can enhance the learning experience and maintain the existence of traditional dance in the digital era. Although the *Rentak Bulian* study has not integrated these technologies, the digitalization approach through games still holds significant potential in creating visual and educational appeal for users. This presents an opportunity for further development to enhance user interaction quality.

Meanwhile, the findings from the research by Arliansyah et al. (2024) on "Open World Educational Games for Learning Dance in West Java Using the Game Development Life Cycle (GDLC) Method" quantitatively demonstrate an increase in user understanding through pre-tests and post-tests in an educational game themed around traditional West Javanese dance. These findings reinforce the urgency of developing culture-based educational games like *Rentak Bulian*, where the expected outcomes are not only cultural introduction but also a structured increase in understanding. With the effectiveness testing results, as conducted by the researchers, the development of the *Rentak Bulian* dance game can also be directed toward systematically measuring user learning outcomes to validate the effectiveness of this educational media. However, compared to several previous studies, the unique focus of this research is on a specific dance, namely the *Rentak Bulian* from the Riau Malay culture. This specific approach enriches the diversity of cultural digitalization and avoids the homogenization of cultural representation in game formats. This specific focus also allows for a deeper exploration of content and creates a strong sense of locality within the game.

CONCLUSION

The digitalization of Riau Malay dance through the *Rentak Bulian* adventure game opens new opportunities for local cultural preservation with an approach relevant to the digital age. Consistent with previous research findings on cultural educational games in Indonesia, the use of digital technology can bridge the gap between younger generations and traditional culture, which has often been perceived as less attractive or difficult to access. This adventure game leverages high interactivity and visual appeal to attract youth interest, making cultural learning more contextual and enjoyable. This is important given that challenges in preserving traditional culture are often related to the low interest of younger generations in local arts and culture. Digitalization of traditional dance through adventure games can be an effective strategy to sustain and develop Riau Malay culture amid globalization and technological advancement.

However, challenges persist, such as the need for accurate cultural documentation and the management of content to ensure authenticity. Therefore, continuous collaboration among artists, educators, and technology developers is essential to maximize the potential of this game. Recommendations for future research and

development include further exploration of other digital platforms and the development of more interactive features to enhance the learning experience. With the right approach, the digitalization of traditional dance can serve as an effective tool for strengthening local cultural identity and increasing cultural awareness among the younger generation.

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