



Gamification of Heritage Preservation: Exploring Values and Transmission

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Abstract. Every time Indonesia commemorates its Independence Day, it is always enriched by traditional competitions that have been held for generations and are widespread throughout the nation. This paper aims to uncover the significance of the August 17th competitions as an intangible cultural heritage. The case study encompasses sack races, greasy pole climbing, cracker eating, and coin biting competitions, with a focus on documenting this intangible cultural heritage from initial recording to official recognition by the Ministry of Education and Culture of the Republic of Indonesia. These contests hold deep cultural importance during this celebratory period. The paper delves into the underlying cultural meanings of these activities, examining the concept of gamification within the framework of heritage preservation. The research methodology employs a qualitative approach through a case study methodology. The research is guided by the Heritage Cycle framework: Enjoying, Understanding, Valuing, and Caring. Key findings suggest the potential recognition of the August 17th competitions as an Intangible Cultural Heritage. Additionally, the study demonstrates that these competitions have been effectively conserved over decades, forming a dynamic facet of cultural practices that transcend geographical boundaries. This aligns with the principles of The Heritage Cycle. In conclusion, the application of gamification emerges as an effective approach to the pragmatic preservation of cultural heritage.

Keywords: Cultural Heritage, August 17th, Heritage Cycle, Transmitted values.

1 Introduction

1.1 Background

During the celebration of Indonesia's Independence Day on the 17th of August, Indonesian citizens typically organize games and competitions. These activities serve not only as forms of entertainment but also as a means of commemorating and imbuing significance into the struggles of the fallen national heroes against colonial forces. The majority of these games symbolize attributes such as cooperation, resilience, and skill among the participants. This tradition has endured and evolved over time. Scholars and academics have engaged in extensive discussions concerning

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A. Hidayat et al. (eds.), *Proceedings of the International Conference on Multidisciplinary Studies (ICoMSi 2023)*, Advances in Social Science, Education and Humanities Research 829,

https://doi.org/10.2991/978-2-38476-228-6_42

the structure and nature of these competitions, as well as their inherent values and societal implications. The expression of these games within this competitive framework has been formally recognized as an intangible cultural heritage of Indonesia. Examples of these games include sack races, greasy pole climbing, cracker eating contests, and coin-biting competitions. Such competitions are documented as integral components of Indonesia's cultural heritage and are firmly situated within the domain of oral expression and tradition.

According to Heri Priatmoko, a history lecturer featured in KOMPAS newspaper in Indonesia, the tradition of holding competitions during Independence Day celebrations became widely established in 1950 [1]. JJ Rizal, as cited in TEMPO, also asserted that 1950 marked the official recording of these competitions throughout the nation, although they had already gained popularity during the Dutch colonial era [2]. This assertion is supported by photographic evidence from the Tropenmuseum in the Netherlands, which contains archived photographs depicting events such as the pinang climbing competition dating back to the period between 1917 and 1930.



Fig. 1. A photograph depicting the scene of pinang climbing, accompanied by the inscription "Macassar, Native New Year."

While the August 17th competition added vibrancy to the celebration of independence, certain sources have documented a darker history associated with these events. For example, the cracker eating competition has been likened to the harsh economic conditions of the era, the pinang climbing contest symbolized the societal struggle for basic sustenance, and the sack races were emblematic of the colonized society's clothing. These competitions were originally staged as spectacles for colonial citizens of that period. However, as time has progressed, these events have evolved into a collective memory within society, passed down to subsequent generations as competitive games.

The games that have been played across generations hold cultural significance, imbued with historical and philosophical meanings. Both individuals and communities attach great importance to these games and competitions, considering them integral traditions to be upheld during every Indonesian Independence Day celebration. However, in the context of today's dynamic society, characterized by shifting lifestyles, global challenges, and rapid technological advancements, concerns have arisen regarding the potential erosion of these traditions associated with the games played in these competitions. The threat to traditional games arises from the emergence of video games, which have evolved into modern competitive esports.

This research examines the significance of the cultural elements associated with August 17th as intangible cultural heritage. It also investigates how the implementation of a gamification approach can facilitate the transformation of previously negative connotations into new cultural meanings infused with positive learning content. The primary objective here is to explore the cultural values embedded within Indonesia's Independence Day games, particularly those celebrated on August 17th, and to analyze the transmission of these values across generations. The research aims to address the fundamental question: How are traditional values transmitted through Indonesia's Independence Day games?

2 Method

This research employs a qualitative research design, utilizing a case study approach to investigate the role of competitions and games within Indonesia's Independence Day celebrations, which occur annually on August 17th. Data collection involves both direct observations of these games and digital/virtual sources, as well as an extensive review of literature, encompassing textbooks, archives, and academic journals.

The analytical framework applied in this study utilizes the Heritage Cycle, comprising four phases: enjoying, understanding, valuing, and caring. This approach is employed to elucidate the practices of preservation and the intrinsic values associated with each game featured in the competition. It is posited that each phase of the Heritage Cycle incorporates gamification practices that influence the structure, form, and values inherent in the games featured in the competition.

The specific games under examination in this study are sack races, pinang climbing, and cracker eating, chosen due to their widespread popularity and frequent participation during Independence Day celebrations. Through an examination of the games, this study aims to analyze their structure, assessing whether they emphasize individual participation or necessitate teamwork. Additionally, it explores the demographics of the players, and their cognitive and psychomotor involvement, and evaluates the Heritage Cycle framework's ability to identify societal contributions and engagement in these activities. For society to derive enjoyment, a comprehensive understanding of the game rules is imperative, enabling the internalization of associated meanings and values within each individual. Positive perceptions of these values can foster a sense of care within game activities and influence the transmission of these values.

The interpretive paradigm applied following the examination of those games utilizes the thematic analysis to explore whether the transformation will become a substitute for the traditional games or merely an extension in a new modern media. The transformation and adaptation of chosen traditional games result in two types of consequences. If the gamification elements undergo significant changes and advancements, society might perceive the evolved games as new and innovative, more relevant to current times. This situation could pose a threat to the existence of traditional games. On the other hand, if the gamification elements are retained without radical alterations, the emergence of new games serves as an extension or elaboration of the original traditional games. This extension can influence the expansion of the player base for these games and broaden their reinterpretation.

2.1 Literature Study

Cultural Heritage embodies the cumulative result of a community's evolving way of life, passed down through generations. It encompasses a wide array of elements, including traditions, practices, physical sites, artifacts, artistic expressions, and a system of values (Icomos, 2002). Cultural Heritage can be broadly divided into Intangible and Tangible Cultural Heritage. In the realm of human activity, Cultural Heritage yields tangible representations that encapsulate the essence of value systems, beliefs, traditions, and ways of life. This integral facet of culture engenders discernible and palpable vestiges, spanning from antiquity to more recent times. Intangible Cultural Heritage encompasses aspects such as voices, values, traditions, and oral histories, often manifesting through culinary traditions, clothing, architectural styles, traditional craftsmanship, technological expertise, religious rituals, performing arts, and storytelling. UNESCO has documented twelve instances of Intangible Cultural Heritage from Indonesia between 2008 and 2021, including treasures like wayang puppet theater, kris, batik, batik education and training, angklung, saman dance, Three Genres of Balinese Traditional Dances, noken, pinisi, pencak silat, pantun, and gamelan (Unesco, n.d.). It is important to note that the significance of Intangible Cultural Heritage extends beyond surface manifestations; it resides in the wealth of knowledge and skills transmitted across generations.

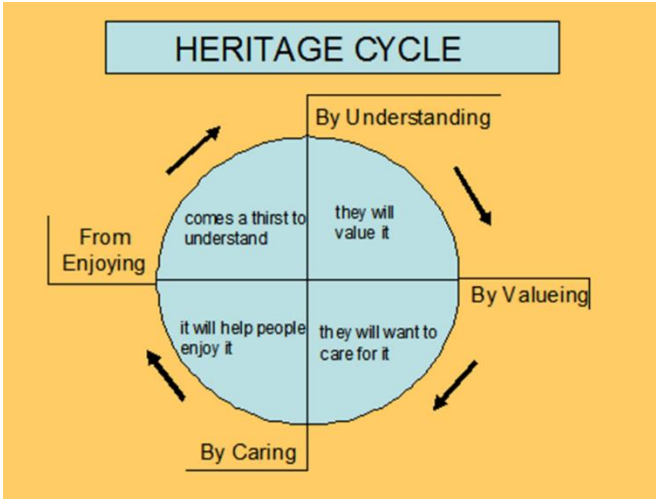


Fig. 2. Heritage Cycle Framework

In Fig.2. The Heritage Cycle is a widely recognized framework within the field of cultural heritage management. While it has benefited from contributions by various experts, its primary association lies with organizations and initiatives dedicated to the preservation and promotion of cultural heritage. This conceptual framework places a significant emphasis on the various phases involved in engaging with cultural heritage. It emphasizes the pivotal role of these stages in ensuring the long-term sustainability and appreciation of heritage. Typically, the Heritage Cycle comprises the following sequential stages:

1. **Enjoying:** This initial phase involves individuals experiencing and appreciating cultural heritage in various forms. This might include visits to historical sites, participation in cultural events, or engagement in traditional customs.
2. **Understanding:** The enjoyment of cultural heritage often triggers a desire for a deeper understanding. At this stage, individuals seek to grasp the historical, societal, and cultural contexts that underpin the heritage in question.
3. **Valuing:** As individuals delve into the heritage's intricacies, they gradually come to recognize its broader significance and value, not only on a personal level but also within the context of society.
4. **Caring:** Acknowledging the value of cultural heritage prompts a sense of responsibility for its preservation. Stewardship involves tangible actions aimed at safeguarding heritage sites, traditions, and artifacts.
5. **Sharing:** The ultimate objective of the Heritage Cycle is to facilitate the sharing of cultural heritage with others. This can take various forms, including educational initiatives, cultural events, or the passing down of traditions to future generations.

The Heritage Cycle underscores the dynamic and cyclical nature of cultural heritage appreciation and preservation. It underscores the interconnectedness of these stages and their collective role in sustaining cultural heritage.

Huizinga (2002) discusses the fundamental role of play in human culture, emphasizing that play is not merely a leisure activity but a cornerstone of civilization. He argues that play is not bound by age or circumstance; it is a universal phenomenon deeply ingrained in human society [3]. Furthermore, play serves as a powerful force in shaping language, art, rituals, and social structures. Play is not just a frivolous pastime; it is the crucible in which the essence of culture is molded and preserved.

Vygotsky, a psychologist renowned for his research of children's psychological development, posited that during play, children still require the accompaniment of adults or parents. He asserted that within a specific territory, children necessitate external stimulation to aid in their cognitive processes. Simultaneously, children can also engage in independent learning without external stimuli. This concept is recognized as proximal development. According to this theoretical framework, a child's progress can be assessed through two distinct dimensions. Firstly, the actual phase, where their problem-solving abilities are observed and determined based on their autonomy in addressing challenges. Secondly, the child's growth potential, which is evaluated through guidance and collaboration with parents, teachers, or other individuals capable of facilitating problem-solving [4].

According to Vygotsky (Nilsson & Ferholt, 2014), play does not emulate typical daily life activities. In everyday life, children often exhibit spontaneity and engage in behavior devoid of specific intentions. It is only through play that children adhere to rules, as it elicits joy and enjoyment [4]. During play, children discover novel desires and acquire an understanding of their roles within games. This process represents a significant accomplishment for children, contributing to the formation of fundamental moral values and future behaviors [5]. Furthermore, the inculcation of values through participation in traditional games and sports has been a subject of examination, as noted by Parilla (2021). It is suggested that these expressions serve as reflections of culture and tradition, ensuring the continuity of material and social relationships [6].

Raph Koster, a renowned video game designer, asserts that fun transcends mere entertainment; it serves as a profound motivator for human engagement and learning. At the heart of what renders games enjoyable lie challenges and obstacles, which players relish overcoming, thereby deriving significant enjoyment [7]. One of the most subtle releases of chemicals occurs during the triumphant moments when we acquire new knowledge or master a task. This often prompts a spontaneous smile, and our bodies reward us with a rush of pleasure, facilitated by dopamine. Furthermore, Koster underscores that games serve as potent educational tools, operating as dynamic systems that facilitate the acquisition of fresh skills and knowledge.

Gamification is referred to the use of game elements or game-like processes in non-game contexts. This incorporates elements of motivation and reward, such as point systems or other forms of incentives like the acquisition of badges and medals. Additionally, it encompasses interactive patterns characterized by a playful approach [8].

Krath (2021), in their article titled "Revealing the Theoretical Basis of Gamification: A Systematic Review and Analysis of Theory in Research on Gamification, Serious Games, and Game-Based Learning," delineated the fundamental framework of gamification into three pivotal components: theoretical foundations emphasizing affect and motivation, behavior, and learning [9]. The first facet comprises the foun-

dational aspect of gamification, which places a particular emphasis on affect and motivation. This foundation delves into the realm of motivational mechanisms and the factors that underlie motivation, including fundamental psychological needs, autonomy, competence, and relatedness, drawing from self-determination theory [10]. Additionally, it encompasses the concept of self-efficacy, which describes an individual's belief in their ability to successfully execute the required behavior, as proposed by Bandura (1982) [11]. The second foundational element of gamification centers on behavior, as it constitutes a fundamental aspect for evaluating the impact of gamification on various determinants, including behavioral attitudes, subjective norms, and perceived behavioral control. The third foundational pillar of gamification pertains to learning. This concept plays a pivotal role in game-based learning, as it introduces mechanisms that facilitate processes such as social observation [12], as discussed by Jeen et al. (2007).

3 Finding and Discussion

This section presents the findings derived from direct observations of traditional games and digital/virtual sources during the celebration of Indonesia's independence. The games observed included sack races, pinang climbing, and cracker eating.

Sack races are among the popular games featured in competitions during the celebration of Indonesia's independence. On the social media platform Instagram, there were recorded 19,246 posts with the hashtag #balapkarung, which translates to sack races in Bahasa Indonesia. The sack race, initially, involves participants jumping while their legs are enclosed in sacks, requiring them to traverse the distance from the starting point to the finish line as quickly as possible. This game has been played since the Dutch colonial era and has endured through the years. Over time, sack racing has witnessed various innovations. Originally limited to children, it is now enjoyed by individuals of all ages and genders. Moreover, it has evolved to incorporate additional elements such as running while inside the sack and passing the sack from one player to another in relay fashion. A recent adaptation involves wearing a motorbike helmet and squatting while racing. Notably, the digital realm has also seen transformations in sack racing, exemplified by a trading company called Pintu that utilizes sack racing video games to generate cryptocurrency.



Fig. 3. Sack race transformation

Another game featured prominently is pinang climbing, often associated with the hashtag #panjatpinang, which has garnered 49,574 posts on Instagram. Pinang climbing stands out as a highlight during the Independence Day celebration. This traditional game involves the utilization of a greasy pole, known as "pinang," situated in a pool of slimy mud. At the pinnacle of the pole, various prizes, typically consisting of essential commodities like cooking oil, rice, and sugar cane, are affixed. Participants are required to ascend the pole in pursuit of these prizes. Typically, a human pyramid is formed to facilitate the climbing process, with stronger individuals forming the base and others ascending until one successfully retrieves the prize. Over time, pinang climbing has undergone innovations, including the substitution of traditional prizes with electronic goods. Notably, this game has transitioned from being exclusively participated in by men to including women as players. Additionally, pinang climbing has been adapted to take place above bodies of water, either in a vertical or diagonal orientation. This not only enhances the entertainment value for spectators but also ensures enhanced safety measures are in place.



Fig. 4. pinang climbing transformation

The cracker eating competition, identified by the hashtag #lombamakankerupuk, has garnered 20,274 posts on Instagram. This competition is inclusive of participants of all ages and genders. Cracker eating is a game that entails the consumption of crackers suspended on a string, with the stipulation that participants must do so without employing their hands. The game often commences with a running stage, where participants strive to reach the suspended cracker before consuming it. In certain instances, the level of difficulty is heightened by having the organizer or committee shake the suspended cracker. Notably, during the COVID-19 pandemic, innovative adaptations emerged, including the utilization of the Zoom meeting platform for virtual participation.

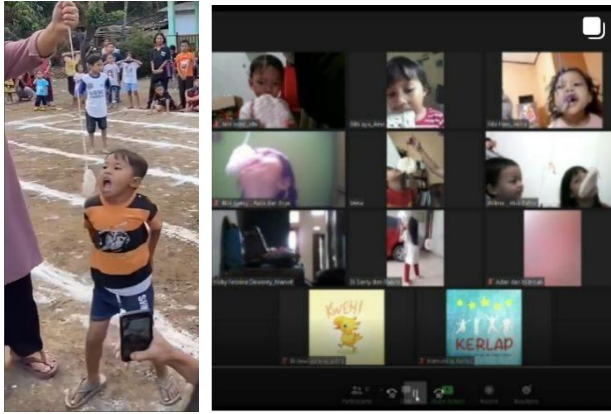


Fig. 5. Eating cracker transformation

Based on the heritage cycle framework, the intangible cultural heritage must undergo a series of phases encompassing understanding, valuation, care, and enjoyment to enable sharing. By adhering to this cycle, certain traditions can be preserved as participants become cognizant of their significance, value, and role in their lives.

Enjoyment. According to the data, the enjoyment process can be categorized into two distinct forms. Firstly, there are those within society who directly engage in the experiences, either as participants, spectators, or organizers of competitive events. Alternatively, individuals may partake indirectly by consuming digital content, particularly through social media platforms. The commemoration of these competitions manifests at various levels, including Neighborhood Associations (RT/RW), educational institutions, workplaces, and even local governmental bodies, typically taking place on August 17th or subsequent dates.

Understanding. The data suggests that the process of comprehending these competitions and games generally does not extend to the historical or philosophical dimensions. Organizers often omit providing specific historical or philosophical context for each game, opting instead for more general values, such as commemorating the nation's heroes' struggles and emphasizing the significance of independence for Indonesian citizens. Individual understanding primarily derives from societal and communal values associated with feelings of joy, excitement, laughter, friendship, unity, and community bonding. These sentiments arise because these games necessitate substantial participation and spectatorship, fostering a sense of kinship among those involved.

Valuing. While the significance of these competitions does not typically delve into the historical or philosophical specifics of each event, participants tend to associate them with broader notions of independence and the heroism of independence figures. Ultimately, the values they discern align closely with the daily life experiences of

their communities, as reflected in the elements of the competitions and the community's response when engaging with them.

Caring. Demonstrations of care are evident in the desire to preserve these traditions, driven by their perceived value as positive and enduring cultural practices. One manifestation of this care is the formation of organizing committees responsible for overseeing these events, particularly at the Neighborhood Association (RT/RW) level. Initially, local children participate as players or spectators, but as they mature, they often transition into roles within the *karang taruna* (local youth organization), where they assume responsibilities for managing these competitions. Additionally, caring is exemplified by the wider community's contributions to competition activities. Typically, one month prior to August 17th, youth organizations and local communities conduct outreach campaigns to secure financial support from businesses. This fundraising effort may involve distributing flyers, visiting specific locations, or setting up booths along thoroughfares to collect donations from passing motorists.

Sharing. According to the data, these three competitions have been shared on Instagram hashtags more than 10 thousand times, underscoring the public's enthusiasm for disseminating their experiences as participants or spectators of the August 17th competitions. The act of sharing these moments also generates digital content that serves not only as a medium for sharing but also as a platform through which netizens can engage with and enjoy the cultural heritage experience in digital form, leveraging their smartphones. This ensures that individuals who cannot directly partake in the experiences can still relish the festivities, perpetuating the heritage cycle in a linear fashion.

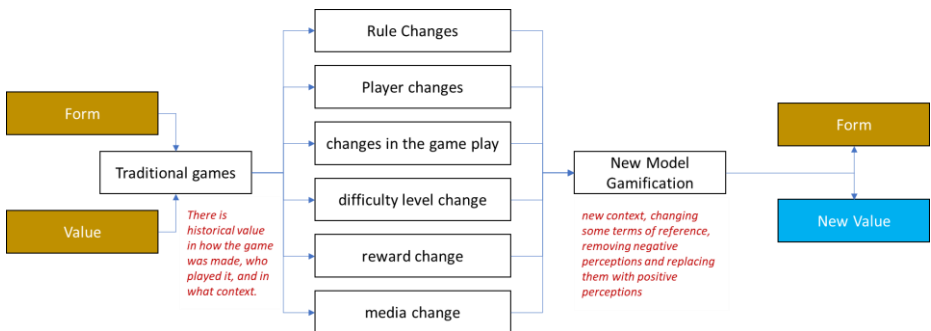


Fig. 6. overview of changes in gamification of traditional games

4 Conclusion

The activities involving competitions and games held to celebrate Indonesia's independence on August 17th have been meticulously preserved for over 70 years, dating back to their documentation in 1950. They are widely regarded as having successfully

adhered to the heritage cycle principles, ensuring the longevity of cultural heritage. Currently, the implementation of gamification in traditional games has undergone substantial development, introducing a surge of innovation and improvisation. This shift encompasses the integration of technology, such as mobile applications, augmented reality, and virtual reality, to enhance the gaming encounter. Additionally, the utilization of online platforms has been instrumental in both safeguarding and sharing traditional games with a wider demographic.

The integration of gamification into traditional games associated with Independence Day competitions aligns with the fundamental principles of fostering affection and motivation. These games have become a cornerstone of competence and have facilitated numerous achievements within the community and in social relations. Moreover, gamification applied to game preservation shapes behavior and imparts values and knowledge in an engaging and enjoyable manner, as elucidated by Brom (2019). It is important to note that an excessive cognitive load can hinder productive learning, as discussed by Brom et al. (2019) [13].

In the context of traditional games featured in the commemoration of Indonesia's Independence Day, gamification has successfully transformed a previously somber historical narrative that denigrated the nation into an educational game imbued with lasting value. This approach, characterized by playful engagement, ensures the transmission of this cultural legacy from one generation to the next. At the end, the importance of transmitting cultural heritage values is to preserve a nation's identity along with its traditions and history. It also serves to maintain a timeless bridge that connects past, present, and future generations.

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