



# Tourists as Gamers: Gamification to Leverage Tourism in Indonesia

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**Abstract:** This research investigates the use of gamification to enhance tourism experiences in Indonesia, with a focus on travelers as gamers. Using a qualitative research approach, this study combined literature review and interviews with game developers (2 participants), game users (2 participants), and destination managers (2 participants), located in Jakarta between 22 May - 10 June 2023. The limited number of participants is a limitation of this study and may affect the generalizability of the study. Findings showed strong support from game developers to utilize gamification to promote tourism through immersive gameplay and engaging stories. Jakarta-themed games and the incorporation of Indonesian cultural elements, such as mythical creatures like *Butoljo*, are examples. However, this research identifies a significant challenge of a lack of investor confidence in the storytelling capabilities of Indonesian game developers. Gamers showed a clear preference for games that facilitate exploration of tourist destinations, emphasizing the importance of strong narrative elements. This research underscores the importance of developing tourism-focused games with compelling narratives and culturally relevant features to effectively attract and engage tourists. Collaborative efforts between game developers, government and tourism stakeholders are crucial in creating tourism-related games that are competitive and promote destinations in Indonesia effectively. This study contributes to understanding how gamification can enhance tourism in Indonesia and highlights the importance of collaborative efforts in developing immersive tourism experiences.

**Keyword:** Gamification, Indonesia, Mobile Gamers, Storytelling, Tourism.

## 1. Introduction

The tourism industry is one of the largest sectors in the world, which has influence in various areas such as transport, accommodation, food services, and tourist attractions. The growth of this industry continues to increase from year to year. In 2021, travel and tourism will contribute approximately USD 5.8 billion to global GDP (Statista Research Department, 2022). Many people consider tourism to be an attractive business and has the potential to influence the world's perception as a cultural activity. The tourism industry is also an unlimited economic resource, but its use must be adjusted to the social conditions of society and technological developments (Baloch et al., 2021). Competition among tourist destinations is increasing. Foreign tourist visits are increasing, so many destinations are competing to get a better position in the global market. Projections from the World Tourism Organization show that by 2030, the number of international tourists is expected to reach 1.8 billion (UNWTO, 2017). Therefore, a good tourism policy will continuously strive to ensure optimal services for visitors to maximize benefits for stakeholders while minimizing negative impacts, costs, and consequences associated with achieving the desired goals (Waheed et al., 2019).

In today's technology-driven society, the use of gamification techniques is becoming increasingly popular in various industries, and one of the sectors realizing the potential of gamification is the tourism industry. Gamification refers to the application of game elements in non-game contexts to enhance user engagement, motivation, and experience (Deterding et al., 2011). By incorporating game elements into the travel experience, destinations can engage and motivate travelers, thereby increasing overall visitation. At the opening of the UNWTO World Tourism Organization's International Workshop in Hamedan in November 2018, it was formulated, among other things, that "Technology and innovation, including ICT, can improve the quality of the tourist experience. They can improve governance, profitability and the well-being of residents. It can preserve intangible and tangible heritage resources for the sustainable development of cultural tourism." (UNWTO, 2018). Society's increasing reliance on technology has paved the way for new approaches to attracting tourists. The widespread use of electronic devices and the internet has created new perspectives for public and private organizations to innovate and optimize their activities. This fact has fuelled the adoption of gamification techniques by companies in various fields including tourism.

Facts show that individuals are more interested in digital games than traditional games (Waheed et al., 2019). A study shows that one in three people worldwide play free games on PCs and mobile devices. In 2017, consumers spent over \$14 billion more on mobile games than the previous year. Games such as *Arena of Valor* and *Fantasy Westward Journey* published by Asian companies such as Tencent and NetEase have played a significant role in the growth of the worldwide mobile market, with year-on-year growth of 31%. In 2018, the mobile market in Asia surpassed North America and Europe in terms of popularity. Interestingly, games have also become the

second most popular content after YouTube (Superdata, 2017). Today, many games provide the experience of exploring a virtual city and allow players to move around like a tourist. Examples include Assassin's Creed Unity, which allows players to walk around Paris, or Watch Dogs 2, which allows players to drive vehicles on the streets of San Francisco. These games provide an opportunity for players to experience the city in an original and unique way. (Dubois & Gibbs, 2018), including a Spider-Man game that explores New York City in its visuals.

The gaming industry has become a global phenomenon, and Indonesia is no exception. According to the Coordinating Minister for Maritime Affairs and Investment of the Republic of Indonesia, Indonesia's gaming potential is huge, reaching two billion dollars (28.6 trillion Rupiah at an exchange rate of IDR 14,300 per US dollar). So it is hoped that the game industry can make a greater contribution so that local games can develop (Akbar & Widiastuti, 2021). Even according to Ivan Chen, CEO of Antarupa Studios, the capacity of the Indonesian game market is actually very large, even in 2020 by attracting one-third of Indonesia's population to become players, the Indonesian game market can reach up to 27 trillion rupiah (Saputro, 2022). This is proof that Indonesia has a very large potential population of game players. According to data from Statista in 2021, it is stated that game players in Indonesia spend time playing games in several categories, namely (1) 4 - 7 hours / week by 17.4%, (2) 7 - 12 hours / week by 15.8%, (3) 1 - 2 hours / week by 15.4%, (4) 2 - 4 hours / week by 14.2%, (5) more than 20 hours / week by 13.8%, (6) 12 - 20 hours / week by 12% and (7) less than 1 hour / week by 11.4%. (Annur, 2021). Gamers can choose the platform that will be used to play games such as (1) PC Games which are the original form of the world's first game. In PC games, game players can use the keyboard and mouse as the main tools. (2) Console games, which are popular gaming platforms such as Nintendo, Playstation, X Box, Series X, and others as platforms used worldwide, and (3) Mobile games which are increasing due to the use of smartphones. Mobile games are designed for a more general market, and can be played anytime and anywhere (Gustav, 2022). Many Indonesians are unaware that many Indonesian-made games, including horror games, have been successful in the global market. Manggalani U (Suara.com, 2022) mentions seven Indonesian games that went global, such as Dread Out 1 (2014), Dread Out 2 (2018), Ghost Parade, Valthirian Arc: Hero School Story, Ultra Space Battle Brawl, Motte Island, and Just Deserts.

According to the Indonesian Game Association (AGI), 52.6 million Indonesians are connected online and 34 million play games. After calculating, the total shopping transaction for playing online games in 2018 was worth US\$ 1.1 billion, and reached the Global Top 5 by reaching a transaction value of US\$ 4.3 billion in 2030. But unfortunately, local game developers only get a portion of 0.4% or in other words, 99% of Indonesia's game money circulation for foreign digital services (Muzandi, 2020). Data published by Clement J on 14 November 2022 states that video games have long been a popular pastime, but reached their peak in terms of spending and user engagement during the beginning of the global COVID-19 pandemic outbreak. Players around the world turned to gaming as a new or entertaining hobby, to connect with friends and family, or to make new friends as various social restriction mandates were enforced around the world. As the world slowly moves towards a post-pandemic mindset with all the factors that define a post-booming industry, revenue projections for the video game industry are also normalizing after digital growth doubles in 2020 and 2021. Nonetheless, global video game industry revenue will surpass \$200 billion for the first time in 2022 (Statista Research Department, 2022). Recently, Indonesian game developer Gamecom Team has released their flagship game titled Trouble Maker. This game has been developed since 2020, titled Parakacuk but later changed to Trouble Maker. This game tells the story of a fight between high school gangs with a character named Budi who carries out his activities as a student but wants to improve his reputation to be the strongest through fights between school groups with a gang called Raise Your Gang. This game can be obtained by gamers from outside Indonesia for US\$20 and played on PC (Clinten, 2023).

In the context of changing demographics, technology and competitive environments, smart leadership in all types of companies, including non-profit and government organizations, are increasingly using gaming as a tool for organizational transformation. Through this approach, there is unprecedented engagement with customers, with the aim of bringing them closer and introducing innovations that may have seemed impossible a decade ago. Corporate leaders realize that their strength lies in the right combination of information, motivation, and most importantly, public engagement to achieve business goals. This concept is known as gamification, which is the application of ideas from games, loyalty programs, and behavioral economics to attract users (Zicherman & Linder, 2013). Gamification is becoming a significant issue for the future of the tourism industry. The term gamification refers to the application of game design elements and thinking principles to non-game contexts. In the service improvement process, gamification involves the use of game-related features that support the creation of overall value for users (Baptista & Oliveira, 2019). Gamification is also defined as a product, thinking approach, process, experience, design, and system that simultaneously uses game elements to solve non-game problems. The basic idea behind gamification is to increase motivation in an activity (Landsell & Hägglund, 2016). The limitations in information processing that we experience when looking at a computer, TV or mobile phone screen, whether at home, work or even in the car, have caused us to get caught up in things that increase stress and possibly reduce our intelligence. The impact of this trend is slowing down economic growth and affecting various sectors

of the economy. However, this impact does not apply to gaming. While gaming may be seen as part of the problem, it is actually one of the only things we do and enjoy.

The widespread adoption of gamification has been seen in various education sectors, including the healthcare industry, business training, marketing and more. Tourism is also one of the sectors adopting the use of gamification. As an emerging topic, gamification is a future trend that can be applied in the tourism industry in various ways to increase motivation and change behavior (Xu et al., 2014). In this context, there are three concepts in game technology, namely entertainment games, educational games, and gamification. Gamification uses elements of entertainment games as a basic concept and integrates them into a framework. Game elements such as points, levels, leaderboards, and others are developed in gamification. After that, gamification is implemented to present a more attractive system mechanism to increase user retention (Marisa et al., 2020). Gamification uses game elements to generate motivation and enthusiasm for activities (Landsell & Hägglund, 2016). Some terms such as "game-based learning", "serious games", or "pervasive games" are adopted in the concept of gamification (Kapp, 2012), making it confusing to distinguish between the concepts of "games" and "gamification". Serious games have the ability to change behavior and impact users. Research conducted by Sigala (2015) proved that gamification can enhance the traveler experience by creating an engaging, fantastical and entertaining simulation of the tourism world. Gamification can benefit tourism marketing in various aspects, such as increasing brand awareness, enhancing the traveler experience, engaging users, increasing customer loyalty, providing entertainment, and managing employees (Bordeianu & Bilic, 2020).

Despite the promise of gamification in enhancing tourism experiences in Indonesia, challenges and knowledge gaps still need to be solved. One of them is the lack of understanding on how to integrate gamification elements into tourism games to create engaging and culturally relevant experiences. In addition, the knowledge gap is also related to investors' perceptions of Indonesian game developers' ability to design strong stories. This study, therefore aims to investigate the use of gamification in enhancing tourism experiences in Indonesia, with a focus on game players. Through a deeper understanding of the influence of gamification on the traveler experience, this research is expected to contribute to the development of more engaging and effective tourism games. This research will also strengthen investor confidence in the Indonesian gaming industry and encourage collaboration between game developers, government, and tourism stakeholders.

This research will provide significant benefits to various related parties. For game developers, this research will provide valuable insights into the preferences and needs of tourism game users, so that they can design more engaging and competitive games. The government and tourism stakeholders will also benefit from the recommendations derived from this research to improve the promotion and development of tourism destinations in Indonesia. Currently, there is a knowledge gap in terms of gamification integration in tourism experiences in Indonesia. Previous research has mainly focused on gamification applications in other contexts, such as education and business. This research will fill the gap by providing a deeper understanding of the use of gamification in the context of tourism in Indonesia. This research is expected to make an important contribution in understanding the potential use of gamification to enhance the tourism experience in Indonesia, especially in terms of the use of mobile games. The results of this study are expected to provide guidance to game developers in creating tourism games that are more engaging and evocative of the beauty of Indonesian culture. In addition, the findings of this study are expected to provide valuable input for the government and tourism stakeholders to strengthen the promotion and marketing of Indonesian tourism through gaming platforms. By understanding the preferences and expectations of tourism game users, related efforts can be designed more effectively and appealing to tourists. This research is also expected to fill the knowledge gap regarding the utilization of gamification in the context of Indonesian tourism. With the lack of previous research in this area, this study can serve as a basis for further research on the use of gamification in tourism in various locations in Indonesia.

Therefore, the research question that arises is: (1) How can the use of gamification enhance the tourism experience in Indonesia, with a focus on tourists as game players?; (2) How do game developers respond and support the use of gamification to promote tourism through immersive gameplay and engaging stories? And what is the role of Indonesian cultural elements in enriching the tourism experience?; (3) This research focused on the use of gamification in tourism experiences in Indonesia, with a focus on game players who undertake tourism activities due to the influence after playing the game. In addition, the research was conducted in Jakarta, Indonesia from 22 May to 10 June 2023.

## 2. Methodology

This research uses a descriptive qualitative approach with the aim of gaining an in-depth understanding of the use of gamification in improving the tourism experience in Indonesia. The qualitative approach allows researchers to explain and understand the phenomena that occur from the participants' point of view (Sumartono, 2017). By using a qualitative approach, this research can explore participants' perspectives, views, and experiences in depth, as well as understand the cultural and social context involving the use of gamification in tourism.

Qualitative research is a type of research that aims to explain a phenomenon as a whole. The phenomenon cannot be separated into separate elements. Qualitative research results should take a holistic approach by considering social conditions that include locations, sources of information, and activities that interact synergistically (Jaya, 2020). This research began with the aim of investigating the use of gamification in enhancing the tourism experience in Indonesia, with a focus on game players. The next step was to seek and understand the theories related to the use of gamification in the tourism context. After that, the research design chosen was descriptive qualitative research to get a description and interpretation of the use of games in the tourism experience in Indonesia. Data were collected through interviews with participants including game producers, game players, and destination managers. The purpose of the interviews was to obtain their views and experiences regarding the use of gamification in the context of Indonesian tourism. Next, data analysis was conducted. Data derived from the literature review and interviews were analyzed qualitatively. The results of the research will reveal the main findings. Ultimately, this research provided practical implications for game developers, government, and tourism stakeholders in Indonesia.

The primary data were collected through interviews with the participants involved in this study. The interviews involved 2 game developers, 2 game users, and 2 people from the destination managers, all of whom are male. Topics discussed in the interviews include their experiences in using gamification in tourism, preferences of tourism game users, challenges faced by game developers, and their expectations for the development of tourism games in Indonesia. In addition, secondary data will be obtained through a comprehensive literature review on the use of gamification in tourism. This literature review involved previous studies, academic journals, books, research reports, and other reliable sources of information relevant to the topic of this research (Jaya, 2020). Secondary data provided a theoretical and contextual understanding of gamification in tourism. Research validity is maintained through data triangulation, which combines observations, interviews, and documents from various existing data sources (Jaya, 2020). In addition, different participants who have different roles in the gaming and tourism industry increased the validity of the findings. Meanwhile, to create reliability, the research was conducted through interviews using a pre-prepared question guide to ensure consistency in data collection from participants, and the research was conducted in Jakarta, Indonesia from 22 May to 10 June 2023.

This research is expected to make an important contribution to understanding the potential use of gamification to enhance the tourism experience in Indonesia, particularly in relation to mobile game users. The results of this study can provide guidance for game developers in developing tourism games that are more engaging and relevant to Indonesian culture. In addition, this research also provides input for the government and tourism stakeholders to improve the promotion and marketing of Indonesian tourism through gaming platforms. By understanding the preferences and expectations of tourism game users, relevant parties can design tourism initiatives that are more effective and attractive to tourists. The results of this study are expected to fill the knowledge gap on the use of gamification in the context of Indonesian tourism. With the lack of previous research in this area, this study can serve as a foundation for further research on the use of gamification in tourism in various locations in Indonesia.

### **3. Results and Discussion**

#### **Gamification in Indonesian Tourism**

Indonesia has a very large population of mobile game players. In fact, assuming that only one-third of Indonesia's total population are gamers, the gaming market in Indonesia has the potential to reach revenues of up to 27 trillion rupiah. This potential is impressive, considering that the average individual plays games for 4-7 hours per week, meaning that every day they spend an average of 1 hour playing online games. At the onset of the global COVID-19 pandemic, video games became an extremely popular pastime and reached its peak. Players around the world turned to video games as a new hobby that connected them with friends or even made new friendships. This phenomenon has led the video game industry to experience rapid growth, with industry revenue projected to increase significantly in 2020 and 2021.

Are the types of games played by game players the types of games that provide tourism experiences in Indonesia? Do local Indonesian games have enough attention to make games that can support this? This is still something that deserves to be researched more deeply. One of the games that might answer these questions is a local game that is worldwide by the late Mohammad Fahmi, namely the game "Coffee Talk". This game is a casual narrative-based game. However, the game received positive reviews from renowned external media such as The Verge and Game Informer. Even Steam, a specialized marketplace service for digital game goods developed by Valve Corporation, gave a very positive rating for the All Reviews group or 94% of the 4,215 game players. Coffee Talk is a game that focuses on the aspect of listening to people's problems and providing help by serving warm drinks made from available ingredients. The game aims to create a very human experience of everyday life, with characters that are more than just ordinary people. The atmosphere and storytelling in this game have reflected one of the activities in the field of tourism. But the protrusion of the character is a concern. Toge Production also produced the Coffee Talk 2 game with the title Hibiscus and Butterfly with the background

of the city of Seattle United States which features a human narrative that coexists with other creatures such as orcs, elves, succubus. But this game remains in the game of a barista at the Coffee Talk shop. This type of game can be played on PC, PlayStation, Xbox, or Nintendo Switch.

In interviews with participants who are game developers, they admitted that Indonesian local games have been able to penetrate the world market. Even since 2021, Indonesia has been included in the category of a group of countries that use the Epic Game engine. That means Indonesian game developers in making games have used Unreal Engine which is a popular and widely used game engine in the game industry. According to them, the game "Trouble Maker" is a game with visuals that depict the atmosphere of high school students in Jakarta with a look and atmosphere that is made similar to the real situation. Likewise, the environment is similar to the atmosphere of the neighborhood in Jakarta including the small streets. Indirectly, the game "Trouble Maker" is a local Indonesian production game that tells about the game experience for travelling. This is also reminiscent of games made with the same background and atmosphere as the location where the game is heading such as the game "Spider-Man: Miles Morales" on the PS 4 platform which shows the atmosphere and setting of the snowy city of New York. Marvel's Spider Man and Marvel's Spider Man: Miles Morales have the iconic superhero character Spider Man exploring the beautiful world of New York. The strength of this game is reflected in the storytelling presented, with the quality of visualization that is dazzling in the middle of New York City. Participants representing game players welcomed gamification that supports the tourism industry. When told about the game "Trouble Maker", they realized and agreed that the game explored the lives of high school children in Jakarta. Since the participants were from Jakarta, they were familiar with the atmosphere in the game's visuals. However, for game players, the main character in the game, the power of storytelling that leads players to the next step in the story, the visualization that is close to real and the easy way to play are their main concerns. Meanwhile, parties from destination managers are very enthusiastic about gamification which can lead game players to do tourism activities because of the game they play. They hope that the elements in the game both storytelling, characters, and visuals created lead the subconscious of game players to do tourism activities. This is realized because by playing games a person can fulfil their psychological needs to get recognition from others into the pleasure felt after achieving goals that are full of obstacles to reach the highest level.

The objectives of the research show that there is strong support from game developers for the use of gamification in promoting tourism through in-depth gameplay and interesting stories. The results of interviews with participants from Indonesian game developers said that Indonesia had also produced a game entitled "Dread Out". This game is a type of horror game that brings up magical creatures that are made fantasy, including a creature called Butojo which is an ethereal creature originating from Indonesia. In fact, seven locally produced Indonesian games have gone global. These games are DreadOut, DreadOut 2, Ghost Parade, Valthirian Arc: Hero School Story, Ultra Space Battle Brawl, Mottle Island, and Jus Dessert. From this, it can be said that one important aspect of Indonesian tourism gamification is the incorporation of local cultural elements. Similarly, the game "Trouble Maker", a locally produced Indonesian game themed on Jakarta, features the city's unique attractions and incorporates elements of Indonesian culture. The cultural elements not only make the game more interesting but can also promote Indonesian heritage and attract tourists. As we know gamification can enhance the traveler experience by creating a simulated world of tourism that is enthralling, fantastical, and entertaining, and cultural elements are one of the supports to achieve this goal.

### **Promote Tourism Through Immersive Gameplay and Engaging Stories**

The overall results of the study were in line with the set research expectations. The findings show strong support from game developers in utilizing gamification to enhance the tourism experience in Indonesia. Despite the promise of gamification in Indonesian tourism, there are challenges faced by game developers. In an exploration with participants, it was stated that one significant hurdle is the lack of investor confidence in the storytelling ability of Indonesian game developers. As a result, the narrative is crucial to provide an immersive gaming experience, which can increase motivation in an activity (Landsell & Hägglund, 2016). This suggests a gap in the understanding and appreciation of the quality of stories produced by Indonesian game developers. Challenges need to be addressed through collaborative efforts between game developers, government, and tourism stakeholders to increase investor confidence in Indonesia's game industry.

### **Creating An Immersive Travel Experience**

Gaming in Indonesia has shown a preference for games that facilitate the exploration of tourist destinations. This preference highlights the importance of incorporating strong narrative elements into tourism-focused games. Well-crafted storylines not only engage players but also allow gamers to immerse themselves in virtual worlds and provide unique and memorable tourism experiences.

To effectively utilize gamification in tourism, collaborative efforts between game developers, government agencies and tourism stakeholders are essential. By working together, these entities can create competitive tourism-related games that effectively promote Indonesian tourism. This collaboration can help overcome

challenges such as investor confidence and ensure that games are in line with the tourism industry's goals and appreciation.

#### 4. Conclusion

This research is useful in understanding how gamification can enhance tourism in Indonesia. By incorporating strong cultural and storytelling elements, game developers, government and tourism stakeholders can create engaging and authentic tourism experiences for tourists. Collaboration among game players is also important to create an ecosystem that supports competitive tourism development and is effective in promoting Indonesian destinations. Future research can involve many participants from various regions in Indonesia to get a comprehensive picture of the preferences and challenges faced in using gamification. Therefore, the recommendation for future research is to explore the influence of gamification on tourist motivation and behavior and identify effective strategies between tourism games, digital platforms, and overall tourism promotion. It can also broaden the scope to include other stakeholders such as tourism companies, local communities, and international travelers to gain a broad perspective.

This research makes an important contribution to understanding the potential use of gamification to enhance the tourism experience in Indonesia, especially in the aspect of using mobile games. The findings from this study provide valuable guidance for game developers in creating engaging and culturally appropriate tourism games for Indonesia. In addition, the results of this study provide important input for the government and tourism stakeholders in strengthening the promotion and marketing of Indonesian tourism through gaming platforms. By understanding the preferences and expectations of tourism game users, related efforts can be designed more effectively and appealing to tourists. This research also successfully fills the knowledge gap on the use of gamification in the context of Indonesian tourism. As a research base, this study encourages further research on the use of gamification in tourism in various locations in Indonesia to support the development of a more competitive and attractive tourism sector.

This study has some limitations that need to be recognized. The findings found may have limitations in generalizability as they are limited to the context and sample of the study used. In addition, the limited time and location of the study, which was conducted in Jakarta, may affect the representativeness of the results. The number of participants involved also limited this study. Although efforts were made to select relevant and representative participants, the limited number of participants may affect the depth of the analysis. Nonetheless, the steps taken in this study are expected to provide valuable insights and significantly contribute to understanding the use of gamification in tourism in Indonesia.

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