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Meaning of Fun in Hotel Gamified Applications

Demos Parapanos¹  and Elina Michopoulou² 

- ¹ Institute of Business, Industry and Leadership, University of Cumbria, Carlisle, UK
Demos.parapanos@cumbria.ac.uk
- ² Centre for Contemporary Hospitality and Tourism, University of Derby, Derby, UK
E.michopoulou@derby.ac.uk

Abstract. The hospitality industry faces significant challenges from the acceleration of travelers using mobile technology, especially in the Covid-19 aftermath. Consumer behaviour is changing in the service sector, creating new forms of mobilities and types of tourists. Users are taking advantage of the opportunity to access information easier and faster, anywhere causing new promotional strategies for hospitality businesses. However, it is recognized that the adoption of mobile applications does not guarantee competitive advantage. This research is inspired by the success of mobile games, and the importance of delivering fun. It explores hotel visitors' meaning of 'fun' when using a mobile hotel gamified application. This is to give mobile gamified application developers an indication on the fun elements that would make such a technology engaging with the users. Visual materials were used applying game mechanics and aesthetics in a hotel application helping participants understand how the fun elements are incorporated so they can focus/target on the elements they find more attractive.

Keywords: Gamification · Fun · Hotels · Hotel Visitors · Innovative Technologies

1 Introduction

The Covid-19 pandemic has left significant impact on the hospitality industry [1], one of them is the acceleration of travelers using mobile technology on the go [2]. The number of technology-savvy travelers using various mobile technologies increased after the pandemic, for activities like browsing the internet and pre-check into their hotel rooms [3]. As a result, consumer behaviour is changing creating new forms of mobilities and types of consumers that show specific traits. Users are taking advantage of the opportunity to access information easier and faster, anywhere resulting in the demand for new promotional strategies for service sector businesses [4]. For example, the hospitality industry will have to adapt to this new change and, apply innovative technologies at multiple stages of the customer journey [5]. Innovative technologies aim to increase engagement, through providing additional benefits to the end user, with game mechanics and gamification as the most popular trends in this respect [6].

Gaming behaviour is at its early stages in many industries, and the hospitality is a late adopter with few successful examples established, though focused on treasure hunts and

culture heritage applications [7]. Gamification is more favourable to be applied through technology means [8], capitalizing on the evolution of mobile technologies. Gamification is defined as the use of game design elements in a non-game context [9], and has been applied for several objectives, such as increasing brand awareness and encouraging consumer engagement [7]. Technology with gamified characteristics is relatively new in the service sector and factors enhancing behaviour have yet to be studied [10]. Fun in this case is taken as a perception of experience from the users' point of view and may be significantly instrumental in the consumption of products or services [11]. The concept goes further, considering quotations stating that fun is the future marketing [12].

Several studies tried to explain the meaning of fun in the gaming industry (see [13–15]), with different results depending on the type of game. Little has been done on the explanation of the meaning of fun in a gamified application [16], for the hospitality industry. Considering that gaming literature has shown different results exploring fun, it could be assumed that different results might be discovered looking at understanding the element of fun in the concept of gamified applications in the hospitality industry. This research tries to fill this gap and enlighten existing gamification research by exploring the meaning of fun for mobile applications with game design elements and attach game mechanics with each category. Exploring the meaning of fun could offer several advantages to hotels by providing relationship marketing and engagement, increasing revenue and strengthening customer loyalty.

2 Theoretical Background

The addition of game mechanics is used in various domains, such as e-commerce, mobile marketing and innovation [17] aiming to make the technology usage fun. Hospitality industry used such strategy also defined as gamification to encourage engagement and enhance tourist experience [18], taking advantage of the fact that a tourist is someone who has little or no knowledge of the environment, so using game mechanics to allow them to learn more about the local environment [19]. This interaction allows hotels to promote the history of the location around them to create an emotional experience between the visitor and Point of Interest [20], capitalizing on the increased use of smartphones altering marketing and location-based promotion, transforming mobile technology into a multi-functional tool providing yet more marketing opportunities [21].

Increased use of mobile technologies and the constant accessibility to information is changing the travel experience considering that visitors can change their plans during the trip, revolutionizing the tourism and hospitality industry and transforming both visitors and destinations [22]. Visitors have become more flexible since they can find information, make decisions on the go and share experiences using mobile devices [23] through applications. Mobile applications have several purposes in the tourism and hospitality industry from small daily activities like the distribution of rooms, to more strategic plans like customer relationship management and loyalty [24]. However, the widespread adoption of mobile application does not guarantee competitive advantage [22] putting in danger on the investment of hotels and destinations in those applications.

Games on the other hand can overcome those traditional boundaries in which they were confined [25] and find more ways to increase the engagement with the gamer. One

of the reasons of the widespread use of video games is the development of smartphones, which made gaming more attractive to a larger demographic of players [18], available in the hands of more people. Since 2007 and the introduction of smartphones and the widespread broadband connections mobile gaming opportunities have changed [26], becoming a multi-billion industry overcoming in revenue music and movie industries combined [27]. Since then, mobile games have become the most successful example of mobile applications. For example, in 2016, Apple's "App Store" and Google's "Google Play" announced that 19.2 billion mobile games were downloaded [28]. During the same year, it was announced that iPhone users spent on average \$40 per device on premium applications (showing an increase from the previous year), with mobile games dominating the spending spree [28]. Two years later, Apple Store and Google Play announced that the number of mobile game downloads increased (21.8 billion) with reports estimating the numbers will only rise because of the addition of further features like socialising, personalization, stream quality and event attractiveness [29].

The technological advances are seen from the element of an aesthetic point of view, providing a sense of fun in at least two ways: the aesthetics are visually attractive, and they serve as milestones marking player achievement [30]. However, it is not only the technological advances of games that enhances the engagement between the gamer and the game. From the psychological standpoint, the concept fun is seen as the most important and necessary factor in game playing [31]. Considering the nature of games, gamers are only likely to return to the game if they found their experience positive [31], so game development create games with more attractive interfaces, better graphics and sound to provide a more appealing and satisfying gameplay experience, but also make the experience more fun. Understanding gamers' behaviour contributes towards engagement with games [10], hence similar results are expected building an effective gamified mobile application for hotels by understanding the meaning of fun for mobile applications with game mechanics and aesthetics to produce a new engaging strategy. Although there has been some research on video games and the meaning of fun [13–15], it is only focused on video games, and not enough research is done on the meaning of fun on gamified applications for hotels [16]. Even though fun has been found to influence engagement between games and gamers [13], they still differ per individual when deciding to play specific games.

Klug and Schell types – recognizes that players combine two or more types depending on the style of the game, meaning that the typology should not be seen as a generic form rather than guideline depending on the game design [14]. The typology classifies players as the *Competitor* (plays to be better than other players), the *Explorer* (plays to experience the boundaries of the play world), the *Collector* (plays to acquire the most stuff through the game), the *Achiever* (plays to not only be better now, but also better in rankings over time), the *Joker* (plays just for the fun through the social aspect), the *Director* (plays for the thrill of being in charge), the *Storyteller* (plays to create or live in an alternate world and build narrative out of that world), the *Performer* (plays for the show they can put on) and the *Craftsman* (plays to build, solve puzzles and engineer constructs).

Leblanc's taxonomy of game pleasure – recognizes that there are several kinds of pleasures per individual, hence it is useful to examine these different pleasures, as

different individuals place different values on each one [15]. The typology of pleasure understands *Sensation* as a pleasure of seeing something beautiful, hearing music, and smelling or tasting delicious food are all pleasures of sensation. *Fantasy* is the pleasure of the narrative of the imaginary world, being something, you are not. *Narrative* is the pleasure, which is not direct telling of a prescribed linear story, but instead a dramatic unfolding of a sequence of events. *Challenge* is a core pleasure through solving problems. *Fellowship* refers to everything enjoyable about friendship, cooperation and community. *Discovery* is the pleasure of finding something new any time in a game. *Expression* is the pleasure of expressing and creating things such as new outfits even though it does not help progress in the game. Finally, *Submission* is the pleasure of entering the magic circle, of leaving the real world behind and entering a new and more enjoyable set of rules and meaning.

Bartle types - identified four characteristics of gamers suggesting that the element of fun seemed to have different meaning in the game, based on players' profile. Most individuals leaned at least a little at all four, but each tended to have some preference. *Achievers* give themselves game-related goals and vigorously set out to achieve them. *Explorers* would try to find out as much as they can about the virtual world. *Socialisers* use the game as a communicative facility and apply the role-playing that these engender as a context in which to converse (and interact) with other players and *Killers* use the tools provided by the game to cause distress to other players.

Identifying the meaning of fun for the game industry results in the innovation and attachment of the appropriate game mechanic to stimulate the feeling. There is a variety of game mechanics a designer could add into a gamified system capitalizing on them for their success. For example, games like Angry Birds, Farmville, Pokémon or Words with Friends, build on different principles, utilizing different mechanics for their success. Commonly implemented game mechanics in gamification are points, levels [9], badges and leaderboards [32]. However, these are not the only tools in the game industry. Study by [33], recognize game mechanics as core components of gamification applications and reveal 12 mechanics (points, badges, leaderboards, virtual goods, avatars, user turns, skill tests, quizzes, tasks times, quests, groups and levels). Study by [34] exploring gamification in corporate training recognizes points, scoring, leaderboards, progress bars, ranks, rewards or incentive, story or narratives, goals, challenges, personalization, rapid feedback, visible feedback, freedom of choice, freedom to fail, achievement, social interaction, immersion experience and social engagement. Lastly, [35], looking into effective gamification design processes identify 58 game mechanics (achievement, avatar, badges, boss fights, built from scratch, challenges, collections sets, competition, count down, creativity tools, customization, development tools, easter eggs, exchangeable points, gifting, group guests, guilds, inventory, leaderboard, levels/progression, milestone unlocks, mini-guests, points, progress bars, sharing knowledge, social discovery, social network, social status, status points, virtual currency, and virtual goods) to link with motivators.

Game literature reveal studies categorizing gamers based on their explanation of fun playing games (see [13–15]), but limited research is done on understanding the meaning of fun when using hotel gamified applications [16], especially from the hotel visitors point of view. With gamification still being at its early stages [32], further research

is required to understand the meaning of fun to make the experience more enjoyable, hence engaging in the hospitality industry. Doing so will help to attach appropriate game mechanics for each category of users to enhance fun and increase the usage, creating more engagement between the user and the company. Thereafter, this research aims to explore hotel visitors' meaning of fun when using a mobile hotel gamified application and attach game mechanics with each category.

3 Methodology

The aim of this research is to explore hotel visitors' meaning of fun when using a mobile hotel gamified application and attach game mechanics with each category. To achieve this aim needs to get in depth understanding towards opinions and reasons behind certain behaviours [33], hence qualitative inductive approach is more suitable. The qualitative approach allows to get in-depth understanding of peoples' opinions when exploring the meaning of when using a mobile hotel gamified application. This study used a purposive sampling technique, and part of the selection criteria focused on having prior experience with hotel mobile applications and being a hotel visitor within the last six years. To identify sample with these criteria snowball sampling was implemented.

Theoretical saturation [34] was achieved at 19 interviews, but 6 further interviews were carried out in case new information arose. Respondents were fairly equal in numbers: (11 male 14 female). The average length of gathered semi-structure interviews was between 35–45 min with probe and follow up questions prepared focused on concepts like gamification motives and gamification and gameplay. This research involves looking for patterns in the long list of codes to create a short list of themes, hence thematic analysis was used. The rationale of this approach is to search for themes that occur across a data set helping to understand the key explanations of fun when using gamified applications to achieve the aim of the study. The use of thematic analysis is appropriate and valuable in tourism research because of the descriptive passages, narratives, and visual text form the empirical material for interpretation [35].

Since there is no existing mobile gamified application in the hospitality industry based on the literature review, visual material was designed based on the definitions of gamification, the game mechanics (i.e., points, badges) and game motives (i.e., exploring, achieving) (see Fig. 1). The scope of visual material is to help participants understand how the fun elements are incorporated in a mobile hotel gamified application, so they can focus on the elements they find more attractive and encouraging to use, making the discussion more focused. Using materials directly linked with the hospitality industry manipulated the conversation with participants in the meaning of fun specifically on the feeling on being hotel visitors. The outcome of this research is to provide mobile gamified application developers an indication on the fun elements that would make such a technology engaging with the users and the appropriate game mechanics for each typology.



Fig. 1. Example of visual material

4 Findings and Discussion

Both genders were almost equally represented among the participants involved in this study with 56% being female and 44% male. All the participants are adults with 60% in the 21–31 years old group, 24% between 32–41 and 16% 42 and above. Data reveal 7 categories (Socialising, Exploring, Achieving, Challenge, Competitiveness, Interactivity, and Personalization) of people towards the meaning of fun when using a mobile hotel gamified application. It also reveals 1 more typology the Disrupting which defined as people who find fun in bragging about their achievements and superiority within the system. Out of the 8 categories it is understood that one of them (Disrupting) is a negative behaviour within the system.

Very important generic findings for the implications of adding elements that would make the technology fun for the user is the fact that still participants clarify they enjoy the fun implementation in the technology however, they would not behave as gamers, but visitors: [*“I see myself as a visitor and not a gamer” (I16)*]. This idea is linked a lot with another finding which highlights the importance of the reward as part of fun activities. [*“Achievement, challenge and competitiveness are elements more lined to the reward site and I enjoy them. For example, when I am encouraged to explore the surroundings of the hotel I would do it because I like it and because this is the reason I am there anyway, so when I can get a reward out of this activity it makes it even more fun and engaging (I18)*]. Thus, the application has to be more personalized to the individual’s habits, encouraging activities that are already planned or scheduled by the individual, to enhance the element of fun without frustrating the user. This finding also indicates that users are more likely to fall into more than one typology of fun agreeing with the literature and [13] and [15], considering the interdependence of the tasks.

Previous literature found that mobile applications with gaming elements and mechanics focus on the power of competitiveness and achievement with the introduction of rewards, challenges and contests [36]. Finding of this research indicated more desirable elements that should be taken into consideration when designing a mobile hotel gamified application for hotel visitors.

Socialising – showed a significant importance towards the technology becoming fun and enjoyable: [*“makes the application fun and probably it could make my holidays more enjoyable and memorable. Being able to socialise with others during my visit in a destination” (I7)*]. The results agree with the literature as both [13], and [15] the interaction of players to empathize with people, joke, listen, sympathize and entertain. It is particularly important since users interested in parts of the system that enable them to socialize as they will promote and evangelize their internal social network. To do so it is recommended to use mechanics like chat box. The results highlight the importance of socialising through the application for the users to have fun, and it proves that it is a valuable element when designing the technology.

Exploring - appears to contribute towards the technology becoming fun and enjoyable: [*“exploring is fun, since I am always a tourist visiting a foreign environment. Not so much in exploring the application itself but mostly the hotel and the local area of the destination” (I23)*]. The results partly agree with the literature as [13, 14] and [15], all comment on the importance of exploring in a virtual environment to make the game fun. However, looking more in detail on the opinion of participants they all agree that exploring for a hotel visitor will not encourage exploring the virtual environment, but the physical environment near the hotel. This is to show that the technology should promote exploration of the destination when building the tasks.

Achieving – implementing game mechanics like levelling up and points will enhance achieving behaviour and make the mobile application more fun and enjoyable: [*“I like the levelling up and collecting points and badges element. As I said it is giving me a feeling of achievement. [...] Achievement comes first as promoting the element of fun” (I13)*]. The results of this phase agree with the literature [13–15]. However, for hotel visitors’, achievement was further linked with tangible rewards to become more engaging: [*“the achievement is there as you have achieved to move on in levels or move beyond certain people. If the tasks are physically possible to do and not something big or stupid to do during my holidays it is fun and combine it with tangible reward gets because I will be expecting more from the brand” (I2)*]. This result further highlights the importance of applying game mechanics like points, progress and badges to enhance achievement through the application for the users to enhance the fun element. It also explains that physical rewards are much, if not more, important for users and it is associated with the meaning of fun as it stimulates the excitement.

Challenge – users of such technology would like to have challenges to overcome, and it helps to make the experience fun: [*“the element of challenge is the more attractive as a fun element. I am a person who likes to be challenged and improve through a game or anything I do. I would like to be challenged” (I21)*]. The results agree with the literature [15], and users would challenge themselves and improve their skills. Despite the urge to overcome challenges participants again clarify that the gameplay experience must be balanced as they see themselves as visitors, and they would not be engaged in case the challenge interferes with their plans, hence the tasks have to be related with experiences that promote the environment. This further shows that challenging tasks should be included in a mobile hotel gamified application to enhance the fun element.

Competitiveness – explains that having mechanics such as leaderboards and tasks to create competitiveness between users makes the technology more fun and enjoyable:

["competitiveness is important if reaching the top spot of a leaderboard and competing with others to reach there shows some form of acknowledgement. Then I would see how it will make it fun to me" (I11)]. This result agrees with the literature [14], and the urge to be better than others. However, it was explained that there is thin line between being competitive and frustrating. Participants agreed that reaching the top (or close to the top) should be something achievable and not frustrating. The results indicate that competing is important for users to enhance the fun element, with emphasize shown on the game mechanic of leaderboard as the most popular tool associated with behaviour. Hence, it is advisable to develop a leaderboard in a mobile hotel gamified application to enhance the fun element.

Interactivity – of the technology is explained to be a given, otherwise the system loses value and devalues the meaning of fun: *["I like this idea of having immediate feedback when something is asked" (I9)].* As a meaning of fun interactivity is a unique element probably because in games it is a given. For a mobile hotel gamified application as an innovative technology, creates significant importance, and it is translated to the mechanic of avatar. Almost every participant mention that the tasks being delivered by an avatar towards using this technology in promoting the fun experience: *["for me the most important characteristics here is the element of interactivity through the avatar. I mean it is more fun when you can act and achieve towards the reward rather than the boring current activities (I10)].* This is to show that adding an avatar interacting with the user will make it significantly more fun and highlights its importance in differentiating this technology from previous technologies.

Personalization – having mechanics to personalize the experience make the technology more fun and enjoyable: *["this element of personalization contributes towards fun because I like the fact that it talks to me and gives me the reward directly and immediately" (I5)].* This result agrees with the literature [14] and [15], recognizes that gamers want to see something of themselves in the game and so do the users of this technology. Participants do go further to explain that this innovative way of communicating tasks through the avatar based on previous experiences or behaviours makes the application more fun and engaging: *["it is talking directly to me it is sending me tasks more attractive to me. It creates that feeling that I am important as a person to the brand, which for me is more like how games have created that form of personalization" (I10)].* The results show that users want to create their personal journey on holidays, and they like the idea of having the fanciest avatar, to create the most personal experience. This is to show the importance of personalization for the system to be more fun and enjoyable experience.

Disrupting – Lastly an interesting result shows that participants recognize that in the system there is also a group of users who would like to show off their skills and achievements: *"show off is something I would not do and would not want others to do within the application. Let's say that someone is trying to brag about achievements he has done and try to minimize I would just stop using the application and delete it from the app no matter how good it looks" (I2)].* This outcome is also obvious in the literature [13] and [14], with gamers showing excitement on bragging about their achievements and superiority. However, all participants agreed that if they recognize other users with this behaviour, it is discouraging them to keep using the technology. Even though the results agree with the literature on recognizing this typology it disagrees on the importance of

them being in the environment. Users with this behaviour should be identified and either encourage them to change behaviour or ban them from the system as they promote no value for the system or other users.

The second part of the aim is to attach game mechanics with each category of fun meaning to help mobile gamified application developers attract each typology with the appropriate mechanics, based on the preferences and opinions of hotel visitors. To achieve that the following table attached game mechanics identified in the literature with the typology of fun as emerged from the data collection. From the table is excluded the typology of Disrupting due to hotel visitors’ opinion that when users with such characteristics are identified in the system it leads them to discourage to use the system themselves and is seen as a negative factor. Instead, it is proposed for the system to isolate and ban hotel visitors that present this kind of behaviour for the benefit of the ecosystem (Table 1).

Table 1. Typology of fun and the linked game mechanics.

Fun typology	Proposed game mechanics
Socialising	Groups, Group quests, Social interaction, Social engagement, Gifts
Exploring	Easter eggs, Built from scratch, Inventory
Achieving	Points, Badges, Levels, Progress bars, Mini guests
Challenge	Skill tests, Goals, Challenges, Milestone unlocks
Competitiveness	Leaderboards, Ranks, Social status, Boss fights
Interactivity	Rapid Feedback, Visible feedback, Sharing knowledge
Personalization	Avatar, Narrative, Personalization, Freedom of choice, Freedom to fail

5 Conclusion

The tourism and hospitality industry have been affected by the acceleration of travelers using mobile technology on the go [2], due to the widespread adoption of technology. As a result, tourists’ behaviour is changing creating new forms of mobilities and types of tourists. Users are taking advantage of the opportunity to access information easier and faster, anywhere resulting new promotional strategies for tourism businesses [4]. However, it is recognized that the adoption of mobile application does not guarantee competitive advantage [22]. This research inspired by the success of mobile games and the importance of delivering fun. The aim to is to explore hotel visitors’ meaning of fun when using a mobile hotel gamified application to give mobile gamified application developers an indication on the fun elements that would make such a technology engaging with the users.

This research added to the knowledge of the meaning of fun since previous studies focused on understanding the meaning of fun when playing games [13, 14] and [15], but little on the explanation of the meaning of fun in a gamified application [16] for the

hospitality industry. Participants reveal 7 categories (Socialising, Exploring, Achieving, Challenge, Competitiveness, Interactivity, and Personalization) as the meaning of fun when using a mobile hotel gamified application. And 1 more typology the Disrupting which results negative outcome for the other 7 in the environment. It also reveals some managerial implications with significant attention on the interactivity and the mechanic of tasks towards the perception of fun. Users need to be able to access their account at any-time and anyplace and receive tasks appropriately constructed. Hence, the system must update users' accounts frequently, utilizing data collected from previous experiences and behaviours to enhance the element of personalization. Any delay of the information will undermine the users' experience and reduce the level of fun for users. Secondly, it highlights the importance for hotel managers to take advantage of the nearby unique sightseeing and the history of the location to provide a unique and fun content for the system. Furthermore, there is a second implication deriving from the meaning of exploration, as it highlights the importance to establish collaboration with local businesses. It is recommended that hotel managers will seek to develop a relationship with local business owners such as local restaurants, tourist guides, museums and transportation to create tasks that would benefit the local environment.

This study comes with inherent limitations. Sample's opinions are based on the visual material developed by the researcher, and not an existing product, due to the limited existing use of game mechanics in a mobile application by hotels. It is worth mentioning that the sample age is younger hotel visitors so future studies should look into other age groups either qualitatively or quantitatively. Additional factor to take into consideration for future studies is the purpose of visit a hotel (i.e., business or leisure) and whether different meaning of fun appears. To provide generalisability, future studies should consider quantitative methodologies and it might also clarify different meaning of funs based on demographics and the purpose of staying in a hotel. Summarizing, considering the widespread adoption of mobile technologies has created a competitive environment for hotels when designing mobile applications and applying gamification and game mechanics is seen as a popular trend in this respect [37], highlighting the importance of the innovation for hospitality organizations.

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