



# Exploring the Impact of Gamification Elements in Brand Apps on the Purchase Intention of Consumers

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## ABSTRACT

The purpose of this manuscript is to understand how the elements of the game apps impact the intention of purchase of a consumer with the mediating effect of perceived enjoyment, hedonic value, and social interaction to derive benefits designed in terms of marketing strategies. Quantitative data obtained from the non-probability sampling via a standardized questionnaire in the design of exploratory analysis was done to examine the effect of gamification on behaviour intention by adopting mechanic-dynamics-aesthetics (MDA) framework. The findings of the research indicated that fun as a sub-element of mobile gamification can significantly affect social interaction, and storytelling has a significant impact on perceived enjoyment. The study identifies perceived enjoyment as an important antecedent of consumer intention to involve gamification. This provides managers and developers to focus on dynamics, mechanics, and proper feedback systems with the emergence of new technologies.

## KEYWORDS

Brand Apps, Brand Experience, Brand Loyalty, Customer Engagement, Gamification, Marketing Strategy, Purchase Intention

## 1. INTRODUCTION

In the digitalized market in today's era, innovative business strategies have become a necessity. One such innovative marketing strategy is integrating 'Gamification' for an increased engagement from the target customer (Behl et al. 2022). Gamification has been used in several areas like healthcare management (Hammedi et al. 2017; Silja et al. 2020), online education (Dicheva *et al.*, 2015; Parra-González *et al.*, 2020), engagement, and development towards the community (Hassan, 2017), disaster

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management (Behl and Dutta, 2020), human resource and knowledge management (Armstrong et al. 2016; Buil et al. 2020), marketing (Huotari and Hamari, 2017; Tobon et al. 2020; Xi and Hamari, 2020), etc. In a report by Forbes (2021), 70% of the Forbes 2000 companies have adopted gamification especially in mobile marketing (Park and Bae, 2014). Bloomberg (2019) has estimated that the global gaming market is likely to exceed \$525 Billion by 2023. There is an increase in the number of organizations that are using gaming techniques and game-style rewards to increase customer engagement (Gartner, 2014). Gamification with mobile coupons is a marketing technique used by 40% of US brands. Thus, there is an increase in the interest in the studies of gamification among the researchers and practitioners, as it is considered to be an efficient marketing and promotional tool (Marchand and Hennig-Thurau, 2013; Terlutter and Capella, 2013; Al-Zyoud, 2020).

Gamification can be defined as the innovative use of game design elements for enhancing engagement of the company's products and services. Gamification increases the customer value and could enhance desirable consumption, loyalty, and product advocacy (Gabe Zichermann, 2010; Blohm and Leimeister, 2013; Huotari and Hamari, 2017). Past research shows that gamification enhances arousal (Poels *et al.*, 2012), perceptions of self-efficacy, competence, and autonomy (Przybylski et al. 2010); and social interactions among consumers (Nevskaya and Albuquerque, 2019). It has been found that games play a vital role in influencing people's attitudes and may generate positive thoughts (Anderson and Dill, 2000). The gamification tools have been advantageous for major industries, as a game could substantively change and impact consumer behaviours and attitudes towards the brand (Buil et al. 2020). Thus, the use of gamification can impact the marketing effectiveness of the brands. Many companies have started inculcating the game mechanics into their Brand apps which are brand applications software programs that have been designed to deliver a brand-related online experience by communicating effectively with the target consumers (Lee and Jin 2019). Some examples of successful brand apps used for gamification are the fashion retailer Lamoda's virtual shoe shop app which now has 150,000 mobile users since it was launched in 2019. Apps like IKEA Studio and Amazon's AR View have helped the consumers find out what new they need in their purchases at home (Forbes, 2021). These brand apps have now become critical as through the gamification in them, they are delivering a new brand experience to the consumers. These experiences are very different from what the customer comes across in the social or mass media promotions in the brand. Thus, this area of brand app development along with the convergence of gamification becomes crucial as a method of delivering unique brand experiences to the customers. This can also act as a differentiating factor for the company.

The gamification app for a brand includes the loyalty programs like points, miles, and status (like platinum or gold). For example, the brand game apps like Starbucks Rewards help consumers earn gold stars and pay as per granted status levels and star levels (Blohm and Leimeister, 2013). Gamification thus becomes a loyalty program where the customer gets social and motivational benefits by the product usage rather than only expenditures (Blohm and Leimeister, 2013; Huotari and Hamari, 2017). Moreover, the hope to achieve the rewards like points, badges, or levels can further boost customer engagement as per the expectancy-value theory (Shepperd, 2001; Domínguez *et al.*, 2013; Rughinis, 2013). Still the poor design of gamification has been critical in failing the achievement of fulfilling marketing and business objectives.

A lot of academic research is present on the interactions with gamified interfaces of service firms. Gamification has been studied through the utilization of game plan components. Past studies have also tried strategies to draw in target customers from non-game settings. Gamification has been found to be crucial in e-learning for young learners too (Behl et al., 2022). Customised gamification designs have also been studied in the past on the basis of user input by reducing the success rate of universal gamification. The customization of the process should have to be done with the user and contextual variables in mind. Studies have also spoken about the various components of the gamification platforms like the leader boards, virtual feedback, virtual scores, comments, badges, and levels. Marketing literature has also worked on gamification in different contexts. Case-based studies also show that the

game artefacts could help firms increase their sales, and act as a competitive advantage among the competitors (Spais et al. 2022). There is but still a huge gap in critically analysing the current state of gamification when it comes to branding and making predictions about the future of gamification by brands with advancing technologies Jayawardena et al. (2021).

There are further studies that try and examine the game design and elements that impact the user intention. Despite these studies, Al-Zyoud (2020) has pointed out that there is still a dearth of studies that consumers will behave or defining the purchase intention among the stakeholders with the adoption of gamification tools. Here purchase would mean the tendency to actually engage with the Brand app. For example, when IKEA launches a game app for the target consumers, consumers might get engaged with the games on the app and decide to purchase some of IKEA's products after engaging with the brand on the app. Further, Yang et al. (2017) have stressed the need for a study on the impact of gamification on consumer behaviour. Current gamification literature remains anecdotal and lacks academic rigor (Hamari and Tuunanen, 2014). There is no uniform approach in implementing gamification successfully in an existing process. Thus, there is limited knowledge on how gamification could be structurally applied to the marketing process of a company.

There is very scant literature on understanding how the elements of the game impact the intention of purchase of a consumer (Deterding *et al.*, 2011; Ferrara, 2013). The past literature concentrates on the basic elements of games namely points and awards, neglecting other elements of games like fun, storytelling, mechanics, aesthetics, dynamics and reward (Conaway and Garay, 2014). There is also a lack of study on if gamification could change people's behaviour or attitude in every type of marketing and business processes. Also studies to relate the effects of gamification to the purchase intention of a consumer for devising a better marketing strategy is lacking.

Huotari and Hamari (2017) has highlighted that previous studies have considered the individual differences concerning gamification. However, hedonic value and the degree of involvement like social interaction with perceived enjoyment are required to be considered as a moderating factor affecting purchase intention (Koivisto and Hamari, 2014). There are not enough studies that have considered all the features of gamification along with the experience of gamification activities together.

This study fills this gap in the literature. One of the objectives of the research article is to fully identify the different elements of game design that have not yet been studied in the past and understand their implication on consumers' purchase intention.

The study tries to understand how gamification can enhance marketing, mobile advertising (Grewal *et al.*, 2016), mobile promotion (Andrews *et al.*, 2016), and mobile shopping intention (Shankar *et al.*, 2010). The study starts by listing some crucial elements of gamification which have not been studied in past research like fun, aesthetics, mechanics, dynamics storytelling, and reward. These elements have been identified as crucial by studies of Hunnicke et al.(2004) and Kim & Lee (2015). The same are based on the MDA approach to understanding games to connect the game design and development, and technical game research. From here, the authors have discussed the effect of these elements on perceived enjoyment, hedonic value and social interaction. The impact of these constructs is then assessed on purchase intention.

To fill these gaps in the study, the study examines the following research questions:

1. What is the relationship between various factors related to gamification, such as fun, story, mechanism, aesthetics, dynamism, and reward with purchase intention?
2. What is the impact of mediating effect of perceived enjoyment, hedonic value, and social interaction on purchase intention?

The rest structure of the paper is as follows. Section 2 discusses the theoretical and empirical background of gamification and how the research gaps could be explained in understanding consumer's behaviour using gamification and also elaborates on the formulated hypotheses. The details of the research design and the systematic data collection approach are discussed in Section 3. The results

and the unique findings are reported in Section 4. The detailed discussion on each of the hypotheses and the implications of the study are mentioned in Section 5. Section 6 presents the implications of the study. The conclusion and limitations of the study are highlighted in Section 7.

## 2. THEORETICAL AND EMPIRICAL BACKGROUND

The term ‘gamification’ has been coined by Nick Pelling in 2002, which was meant for solving problems and engaging users in game and mechanics in non-context situations (Lu and Ho, 2020). Gamification is a term associated with higher levels of enjoyment and engagement. Gamification is regularly defined as the use of game elements in non-gaming contexts. Gamified activities primarily aim to increase motivation in a wide variety of activities to increase the quantity and quality of the output of the corresponding activity. Gamification appeared in the context of computer games in 2002 and was commonly known as 2010. Ever since that the term has been used in academic journals in varied context. Also the serious games is a category of full-fledged games which are modelled from the real-world systems. At the same time gamification can never exist on its own and is always a part of a real-world system that maintains its instrumental functionality (Staller & Koerner, 2021).

Where most of the studies have tried to explain the traditional marketing incentive systems to arouse the individual’s extrinsic response, gamification elements focus on stimulating the individuals’ intrinsic response and social connections (Koivisto and Hamari, 2014; Kuo and Chuang, 2016; Suh et al. 2018; Zheng *et al.*, 2019). Kim (2021) has classified gamification as gamefulness, gameful interaction, and gameful design which allows a consumer to go through the gamification process of crafting, designing, and experiencing it thoroughly. Thus the gamification elements could trigger the users’ perceived enjoyment and social reactions when it comes to the purchase decision of the consumer. This study takes the elements of the gamification namely fun, aesthetics, mechanics, dynamics storytelling and reward as significant stimuli, and introduces three reactions namely social interaction, perceived enjoyment, and hedonic value as the prominent organisms in the research model with respect to the Brand apps.

The past research lists many elements of gamification. This study uses the Mechanic-Dynamics-Aesthetics (MDA) framework to explain the impact of gamification elements on the purchase intention of the customer. The elements selected by the authors are primarily based on the MDA framework (Mechanics, Dynamics, and Aesthetics) (Hunicke, Leblanc and Zubek, 2004). MDA could be seen as a formal approach to understanding the process of gamification. This model tries to explain the processes of game design, game criticism, and technical game research. This model will further strengthen the marketing processes for brand managers and make it easy to innovate in-game designs and game artefacts best suited to the target consumers through a gamification in brand app.

### 2.1 Gamification Design Aspects

Gamification may be defined as “the design approach that ultimately attempts to generate positive experiences thereby affecting cognitive behaviour of the users as a whole” (Huotari and Hamari, 2017; Hamari, 2019). Many researchers have defined gamification in several contexts based on the gaming experience that may satisfy their intrinsic need (Högberg *et al.*, 2019), on the design of the game (Deterding *et al.*, 2011). Gamification may be used to engage, motivate and influence various groups and communities to generate desirable output (Xu, 2011; Glover, 2013; Nicholson, 2015). There has been a gradual increase in the rise of games in the marketing domain (Al-Zyoud, 2020). The ultimate objective of gamification considering any of the allied areas is customer engagement (Ng et al. 2020; Syrjälä *et al.*, 2020). However, it seems to be a bit more challenging when applied in the marketing domain (Jang et al., 2018; Hollebeek et al., 2019). With an increase in the number of smart phone users, Brand apps have increased the interest in the gamification app marketing industry. ‘Brand apps’ could be defined as a software which can be downloaded in a mobile device

and can make the brand identity stand out, through the name and visuals of the Brand logo in the app (Bellman et al. 2011).

There is a dearth of studies related to consumer engagement & benefits and the application of gamification in the brand apps. Therefore, there is a huge scope for research in marketing research area (Lucassen and Jansen, 2014; Hofacker *et al.*, 2016; Teotónio and Reis, 2018; Mulcahy et al. 2020). An example of the application of all the elements of gamification in a brand app is the McDonald's Kineo app (Figure 1) which is successfully inculcating the major elements of game dynamics like fun, aesthetics, dynamics, storytelling, mechanics and reward too (Kineo, 2022).

### 2.1.1 Hypothesis Building

Fun can be defined as a hedonic value, which could bring in aesthetic pleasure from sensory elements of the individual (Fiore, 2005). Fun has been considered an element of the game here as the same is concerned with designing a content where the game contains the fun factor for the player. This is contrast to games which have a serious content with no fun element inbuilt in them. Fun is a crucial element of gamification and can be considered to be one of the enablers of behaviour of the user towards the adoption of new technology (Joe *et al.*, 2020). This element of fun (content wise) which has been inculcated in the game could lead to reaction from the consumer which is the perceived enjoyment. Perceived enjoyment has been defined by Davis et al. (1992) as an intrinsic motivation which motivates the performance of an activity and is not related to any reason apart from the process of performing the activity. Furthermore, it is found that consumers tend to use new technologies which consist of fun elements when in a state of perceived enjoyment. Therefore, this tendency further leads to the continuous and enhanced use of gaming platforms and deriving satisfaction through brand apps (Collier and Barnes, 2015). Mitchell *et al.*, (2017) have explained that to build a sustainable and efficient workplace, gamification content features like fun linked with the final outcome, perceived enjoyment play a key role. Pe-Than et al. (2014) suggested in their study of Human Computation Games (HCG), that in case the everyday boring tasks in a game, could be made more fun this could influence the users' perceptions of enjoyment (Pe Than et al. 2014). Enjoyment is also seen as a crucial factor in the entertainment media (here games) as the users' consume the same for pleasure and to get the perceived enjoyment from the brand app. Thus perceived enjoyment is a construct which is large an intrinsic motivation which is to enjoy have some form of entertainment, and playfulness when it comes to using the Brand apps. Hedonic value is another construct which explains the benefits which

Figure 1. A Game based approach: McDonald's Kineo app case study (Kineo, 2022)



consumer derives from new products sold by the company or in this case the gamification with the Brand app (Sarkar, 2011). This benefit is holistic and not limited to the one element of enjoyment exclusively. It will also entail in it the Consumption experience which leads to a satisfaction to the senses in an activity. The Fun elements in the game(content) has been found to be a major element, which could bring out the experiential and sensory phenomenon (hedonic) value for the consumer (Petkus, 2004; Smilansky, 2009). As per Asli and Yong (2015), Fun elements in the game could help enhance the perception of the user emotionally through the experience of a game which is more of a hedonic value than a functional value for the consumer. Past literature has proved that fun or joy as an element of the game could bring out hedonic or experiential value for the user (Chen et al., 2017; Ozturk et al., 2016). Thus there is a need to consider elements like narratives and fun as elements of gamification while undertaking gamification studies (Johnson *et al.*, 2018; Lu and Ho, 2020). Gabe Zichermann (2010) argued that the introduction of fun gaming elements into the customer experience will enhance a good branding experience and the hedonic value.

Social interaction can be defined as the social interaction or an exchange between two or more individuals. Social interaction is studied among individual and small and large social groups (Siitonen, 2007). Pe-Than et al. (2014) reported that if the game was perceived to enhance the social interaction, the player enjoyed playing it more. Thus, the element of fun was related to the social interaction in a game. Social interaction among players was a crucial parameter for gamers as it gave them a feeling of social connectivity. Hsieh and Feng (2018) studies the gamification in fitness apps and suggested that fun and social interaction game elements could be crucial in increasing the activity of the users. Emmerich and Masuch (2017) explains fun as a category of social interaction events that could be used in a videotaped gaming sessions. Thus studies have suggested that meaningful social interactions could enhance the fun for a user in a game (Jegers, 2007).

Therefore, it can be hypothesised as follows:

**H1:** Fun is positively impacting perceived enjoyment, hedonic value and social interaction.

Storytelling is defined as conveying events in images, words, video and sounds through improvisation or embellishment (Lugmayr *et al.*, 2017). Blinka & Mikuška, (2014) stated that storytelling is an integral part of games that act as an intrinsic motivation for the player. Perceived Enjoyment is one of these intrinsic motivators (Chang and Chin, 2011). During playing games, players indulge in games to experience reciprocation, relaxation, and enjoyment in the game.

The storytelling interactive feature affects the hedonic benefits of enjoyment where the player feels to be a part of the story in the game (Fiore et al. 2005). From gamification perspective, storytelling is considered one of the important aspects in hedonic experience with mobile games (Alofs et al. 2015; Chen et al. 2016).

The users want to interact with their game association members and keep up a social connection through the games. Interesting Storyline attracts the players (Lundqvist *et al.*, 2013) which motivates them to play mobile games and pass them into social media accounts (Chen et al. 2016). Therefore, we propose that storytelling characteristics of gamification facilitate Perceived Behaviour, Hedonic Value, and Social Interaction, which enhances purchase intention of gamers.

Therefore, it can be hypothesized as follows:

**H2:** Story telling is positively impacting perceived enjoyment, hedonic value and social interaction.

Mechanics can be defined as the components of the games, which involve the data representation and algorithms of the game. Mechanics create the artifact of the game like rules, processes and methods which the designers design in the game (Hunicke et al. 2004; Walk et al. 2017).

Game mechanics is an expected element for consumers which could give them enjoyable experiences and thus change their buying behaviour when it comes to the wide range of products and services of a company. Gamification uses game mechanics in a non-game context too to motivate the users (Deterding et al. 2011; Zichermann and Cunningham, 2011). As per Hong and Tam (2006), excellent technological advances which are reflected in the mechanics of the game can lead to a higher experience of perceived enjoyment of experiencing as they lead to enhance the functional benefits (Hong and Tam, 2006). The mechanics design of the game like creating a fantasy environment, audio-visual effects, plotting scripts, etc. engages customers and makes it enjoyable.

Past research shows that gamification applications have inherited high hedonic value of game mechanics (Yoo et al. 2017). Yoo et al. (2017) explains that the gamified smart tourism applications contain some gaming elements, one of which is mechanics which has been used to explain the use of hedonic content in games. The results of the study prove that game mechanics could positively influence the hedonic value for a user. Bowman et al. (2017) has shown a direct relation between the mechanics of the game and the hedonic value of the user through the emotional connect that users form with the game.

The various aspects of gamification, such as likes, interacting with friends, sharing, competing, etc. create fun and prompts for positive feedback as well (Lu and Ho, 2020; Jayawardena et al., 2022). This process to engage people and promote loyalty could be enhanced with the mechanics of the game. The mechanics of the game could make social interaction easier for a group of users and thus change the behaviour of the consumers (Koivisto and Hamari, 2019). Therefore, it can be hypothesised as follows:

**H3:** Mechanism is positively impacting perceived enjoyment, hedonic value and social interaction.

Apart from the dynamism, aesthetics is also important to understand the overall feelings and emotions of the players (Lu and Ho, 2020). Aesthetics can be described as the desirable emotional responses which are evoked in the player when they use the gamification app of a brand. Game aesthetics also refer to the sensory phenomena of a player while in the game (Hunicke et al. 2004). This could be visual, aural, haptic and embodied. At the same time Game aesthetics could also digital games which could relate to many art forms and the beauty of the same. Aesthetics can be replaced with Experience of the user which is not directly received by the player, but an experience which is subjective and perceived by the user in unique way (Winn, 2008). Ma. et al. (2019) and Yang and Han (2020) have also studied the relation of Aesthetics in the gamification on the perceived enjoyment of the user and found a positive and direct relation among the two constructs.

Sheng and Teo (2012) have measured hedonic value with the help of aesthetics in gamification. Yang and Han (2020) have suggested that the aesthetics in virtual reality games could impact the hedonic value of the user. Wang et al. (2011) has also verified the direct influence between aesthetics in a game and the hedonic values.

Garda and Karhulahti (2019) have explained the impact of aesthetics through Tinder's kinaesthetic gameplay and shown how the same can impact the social interaction among the digital users of the game. The attractiveness of the video games was found to attract individuals to mechanical play in which social interaction could be seen in terms of bets, and rewards in the game.

Therefore, it may be hypothesised as:

**H4:** Aesthetics is positively impacting perceived enjoyment, hedonic value and social interaction.

Dynamics of the game describes the run-time behavior of the mechanics which is acting on player inputs and the of each other over a period of time. Thus dynamics links the two elements of gamification which is mechanics and aesthetics showing the different parts of the game interacting

with each other and with the player when the user is playing the game (Walk et al. 2017). Lu and Ho (2020) highlighted that dynamism of the game determines the behaviour of the players. There exist many challenges during the game; however, a detailed study is required in this context to understand the mediating effects that exists impact purchase intention (Haziri et al. 2019; Högberg *et al.*, 2019).

Ibanez et al. (2014) and Schell (2008) discuss the role of dynamics of the game in triggering the emotions of enjoyment in the user. They have described the action point of the game in terms of students given a laboratory time to finish the game. This fast paced work environment leads to a sense of enjoyment when the user finishes the game. Thus there is a direct relation of dynamics of the game and perceived enjoyment of the user (Wang et al. 2017).

Game dynamics has been defined by Ibanez et al. (2014) into components of the narrative, action points, progression, assessment, and emotions. The emotional component here impacted the hedonic value of the user in gamification. Wang et al. (2017) has shown in the study done on users playing computer games that the users express their emotions while playing the game and the system does not demotivate them to redo their structures in the game. This leads to an increase in the hedonic value of the user.

Dynamics in games also impact the social interaction as per past studies done by Siitonen (2007). Social interaction in multiple players relates to the game dynamics interest. The task-related communication dynamics of the game namely the negotiations and messages concerning the goals of the group are communicated to each other in a multi-player game, thus enhancing the social interaction (Siitonen, 2007).

Therefore, it can hypothesize as follows:

**H5:** Dynamics is positively impacting perceived enjoyment, hedonic value and social interaction.

Rewards is defined as the benefits given to the users while they play games like points, badges, or levels can further boost customer engagement as per the expectancy-value theory. Goh *et al.*, (2017) discussed that rewards actually promote perceived enjoyment and hedonic value. It is also found that badges and track lead to perceived enjoyment not only emotionally but also behaviourally. This further enhances the quality of the output. Moreover, with the new gamification system, the expectation of rewards increases and thereby improving the social interaction (Johnson *et al.*, 2018) that also has a positive impact on the psychological emotions of the consumer (Suh et al. 2018).

Therefore, it can be hypothesized as follows:

**H6:** Reward is positively impacting perceived enjoyment, hedonic value and social interaction.

## 2.2 Factors Affecting the Behaviour Intention

Behaviour intention (BI) may be defined as “a measure of the strength of one’s intention to perform a specific behaviour” (Fishbein and Ajzen, 1975). A number of researchers have reported regarding purchase intention through a number of theories like Theory of Planned Behaviour (TPB) (Ajzen, 1991); Technology Acceptance Model (TAM) (Davis, 1989; Shankar *et al.*, 2010; Glover, 2013); Theory of Reasoned Action (TRA) (Fishbein and Ajzen, 1975); Perceived Characteristics of Innovating (Moore and Benbasat, 1991); Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al. 2016). The vast and extensive use of BI in many situations and its occurrences in many literatures shows its importance.

Yang *et al.*, (2017) have identified that perceived enjoyment is one of the important predictor pertaining to gamification which is in line with the studies done by Kim *et al.* (2002), Huang (2015), and Haziri and Chovancov (2018). Furthermore, perceived enjoyment tends to establish willingness among the consumers and establishing a good experience. This factor also tries to find out the involvement of consumers in the gamification process and measure the BI (Jakobs, 2016;



Aydin, 2018). Armstrong *et al.* (2016) has defined smart technologies as technologies that provide a particular environment for users which thereby enable the use of sensors, databases and wireless access. Moreover, with the rapid immersion of information communication technologies (ICT), new business models have come up and the value chain has shifted from traditional retailing to smart retailing.

The three moderators Perceived enjoyment, hedonic value and social interaction have been chosen on the basis of the theories which have been taken as a conceptual base for the study. These three constructs are a crucial outcome of the experience of gamification when it come to the brand apps under study. Thus, the mediation of the same will lead to some new outcomes for managers trying to increase brand engagement and finally purchase intention from Brand apps through gamification.

Perceived enjoyment (PE) can be defined as the degree to which the activity of using technology can be perceived to be enjoyable apart from the performance consequences which are anticipated from the technology. Perceived enjoyment in a way is a part of hedonic motivation which further determines customer's intention of using the technology (Chang and Chen, 2021; Jahn *et al.*, 2021). With the advent of smart technologies and Industry 4.0 enablers, it is found that perceived enjoyment has a direct influence on purchase intention from a marketing perspective (Chung *et al.* 2017; Roy *et al.*, 2018; Quach *et al.*, 2020; Kaur *et al.*, 2022). When the customer or consumers enjoys the gamification platform, the intent to shop increases thereby leading towards the behaviour intention. Perceived enjoyment of the customers, while engaged in a gamification environment, helps in identifying the purchase intention of the customers (Aydin, 2018; Raman, 2020; Trang and Weiger, 2021). It has also been researched in the past that there are many enablers of perceived enjoyment that activate purchase intention among the consumers. It further enables and boosts cognitive and emotional attachment (Al-Zyoud, 2020). Generally, many of the firms believe that gamification also improves customer loyalty along with positive word-of-mouth (Hammedi *et al.*, 2017). Therefore, it can be hypothesised as:

**H7:** Perceived enjoyment mediates the relationship of elements of games and purchase intention.

Apart from this, gamification features also rely on the hedonic value. The hedonic perception value increases along with the gamification features and thereby helps to have a positive impact on BI (Chang and Chen, 2015; Hassan and Hamari, 2019). When a consumer is engaged with the gaming app, the behaviour of the consumer is not only driven by utilitarian motivation but also driven by hedonic motivation. This thereby determines the behaviour intention of the consumer. There is a critical need to address this issue and no such work has been presented in the literature yet that focussed on the role and impact of gaming technologies and their acceptance of shopping behaviour (Haziri and Chovancov, 2018). Therefore, it can be hypothesised as:

**H8:** Hedonic value mediates the relationship of elements of games and purchase intention.

Hwang and Choi (2020) highlighted that gamification plays a vital role in customer relationship management (CRM) that further enhances consumer responses with rewards. Hwang and Choi (2020) also have discussed self-oriented and altruistic reward; when consumers receive rewards, they are more likely to have positive emotions. This ultimately influences consumer behaviour and intention (Gatautis *et al.*, 2016; Hofacker *et al.*, 2016). Therefore, there is a critical need to understand how rewards from a gamification perspective would help in building customer relationship management. Mitchell *et al.* (2020) have examined the impact of user-centric elements like points, feedback, characters, etc. on user's enjoyment and behaviour. Aksoy *et al.* (2015), Kaya *et al.* (2019), Al-Zyoud (2020) have pointed out that customer's purchase intention is influenced by social interactions that may occur via social media. Therefore, social interaction enhances brand image, decision making and thereby enhances loyalty and generates more authentic information about the customer's reviews and ratings (Raman, 2020). In this regard, the following hypothesis is formulated.

Table 1. Operational definition of Constructs

Construct	Operational Definition
Fun	Fun can be defined as a hedonic value, which could bring in aesthetic pleasure from sensory elements of the individual (Fiore, 2005).
Storytelling	Storytelling is defined as conveying events in images, words, video and sounds through improvisation or embellishment(Lugmayr <i>et al.</i> , 2017).
Mechanics	Mechanics can be defined as the components of the games, which involve the data representation and algorithms of the game. Mechanics create the artifact of the game like rules, processes and methods which the designers design in the game (Hunicke <i>et al.</i> 2004; Walk <i>et.al.</i> 2017).
Aesthetics	Aesthetics can be described as the desirable emotional responses which are evoked in the player when they use the gamification app of a brand. Game aesthetics also refer to the sensory phenomena of a player while in the game (Hunicke <i>et al.</i> 2004).
Game dynamics	Game dynamics has been defined by Ibanez <i>et al.</i> (2014) into components of the narrative, action points, progression, assessment, and emotions.
Reward	Rewards is defined as the benefits given to the users while they play games like points, badges, or levels can further boost customer engagement as per the expectancy-value theory(Goh, <i>et al.</i> , (2017).
Perceived enjoyment	Perceived enjoyment (PE) can be defined as the degree to which the activity of using technology can be perceived to be enjoyable apart from the performance consequences which are anticipated from the technology (Chang and Chen, 2021).
Social interaction	Social interaction is <i>an event which changes the behaviour and attitude of the interacting persons</i> (Venkatesh <i>et al.</i> 2016).
Hedonic value	Hedonic value is defined as that value a customer receives based on the subject experience of fun and playfulness (Chang and Chen, 2015)
Purchase intention	Purchase intention (BI) may be defined as “a measure of the strength of one’s intention to perform a specific behaviour” (Fishbein and Ajzen, 1975).

**H9:** Social interaction mediates the relationship of elements of games and purchase intention.

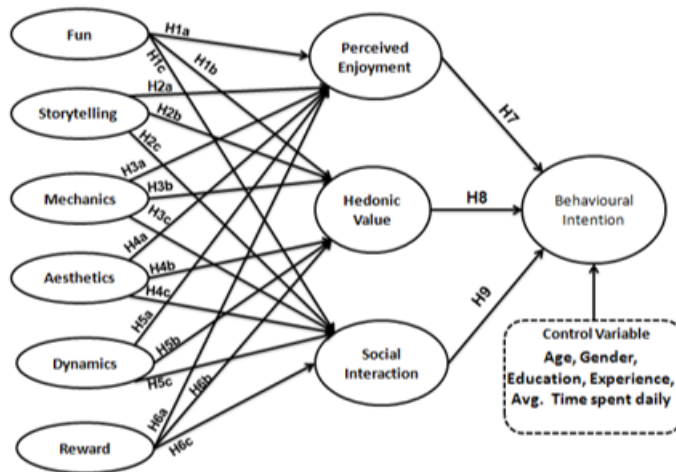
Thus, our conceptual model is presented in Figure 2.

### 3. METHODOLOGY

#### 3.1 Research Context and Data Procedure

We used a gamified brand to verify the research hypotheses. This study used a primarily quantitative approach, supplemented with a qualitative research methodology. A review of the literature revealed a plethora of scales developed, tested. It validated to assess the components central to this research,

Figure 2. Conceptual model



including fun, storytelling, mechanics, aesthetics, dynamics, rewards, perceived enjoyment, hedonic value, and social interaction concerning purchase intention. This research aims to determine the effect that gamification features in brand applications have on customers’ purchase intentions. We selected the sample using purposive sampling, which is effective in previous studies (Talwar et al., 2020; Brown & Leong, 2022), and data collection began in the first week of March 2021 and will continue until the second week of June 2021.

To test the anticipated relationship in this research, we utilised an online and offline survey technique to collect primary data from 515 participants in a gamification platform. We received a total of 587 questions and eliminated 72 owing to inaccuracies and inconsistencies; therefore, 515 questionnaires were deemed acceptable for research. Participants were chosen based on the following criteria: (1) they must be aware of the gamification concept; (2) they must be an active player who has bought gaming goods from play stores/websites. The socioeconomic profile of respondents is depicted in Table 2.

### 3.2 Questionnaire Design

To test the proposed hypothesis, we utilised pre-validated items to construct a closed-ended structured questionnaire with the assistance of two professors having expertise of consumer behaviour. We conducted a pilot study with 97 participants to evaluate a questionnaire. Following a pre-test, the questionnaire was completed with minor changes to ensure that sample group problems were minimised. The questionnaire was split into three sections based on three different themes. The first section included questions on sociodemographic information. The second section of the research included six variables: Fun, Storytelling, Mechanics, Aesthetics, Dynamics, and Reward, with 18 items regarding gamification concepts requested to include appropriate individuals. Similarly, the final section included 19 items divided into four variables: perceived enjoyment, hedonic value, social interaction, and purchase intention. All of the constructs stated in this study (table 1) are based on a literature review of the proposed study. A 3-item scale for enjoyment, rewards, and storytelling adapted from Lee & Jin (2019) study. Similarly, the 3-items scale for Perceived Enjoyment adapted from Kim et al. (2007) and Raman (2020); the 4-items scale for Social Interaction was adapted from Chiu et al. (2006) and Raman (2020). We modified Haziri and Chovancov’s (2018) items scale to assess Aesthetics (5-items) and Mechanics (2-items); we adapted the 2-items of dynamics scale from Priebatsch (2010) and Kuo and Chuang (2016); we adapted the 7-items scale for hedonic value

**Table 2. Respondents demographic characteristics (n=515)**

Characteristics	F	%
Age (in years)		
< 20 years	137	26.6
21-40 years	203	39.4
41-60 years	163	31.7
>60 years	12	2.3
Gender		
Male	268	52.03
Female	247	47.97
Education		
High School	67	13.01
Intermediate	94	18.25
Graduation	179	34.76
Post-Graduation	162	31.46
Others	13	2.52
Experience		
<1 year	81	15.73
1-3 years	337	65.44
More than 3 years	97	18.83
Avg. Time spent daily		
<1 hour	136	26.41
1-2 hours	267	51.84
>2 hours	112	21.75

adapted Foroughi et al., (2013) and Rezaei et al., (2016); and the 5-items scale for purchase intention adapted (Raman, 2020). The constructs were quantified using items drawn from a variety of research, as shown in the Appendix. To assess respondents' intentions, we utilised a seven-point Likert scale ranging from 1 ("Strongly Disagree") to 7 ("Strongly Agree").

We utilized the SEM (Structural Equation Model) method to analyze research data to determine the maximum likelihood of the suggested hypotheses (Hair et al., 2015). We evaluated the proposed research model using SPSS and AMOS 23 version software.

### **3.3 Mediating Role of Perceived Enjoyment, Hedonic Value, Social Interaction**

Gamification methods have proven beneficial for large businesses since the game can substantially impact and alter consumer behavior and views of corporate brands. Thus, Gamification may influence a brand's marketing performance, and interest in Gamification research is growing among academics and practitioners since it is a powerful marketing and promotional strategy. This research utilized Perceived Enjoyment, Hedonic Value, and Social Interaction as mediating constructs to examine the relationship (positive or negative) between the Fun, Storytelling, Mechanics, Aesthetics, Dynamics, and Reward components and purchase intention.

### 3.4 Control Variables: Socio-Economic Factors

Prior research established that socioeconomic characteristics such as age, education, profession, gender, and marital status significantly influenced determining an individual's behavior intention (Feil et al., 2020). When comparing high and low-income levels, the high level had a significant effect on purchase intention, followed by the low-income level; similarly, age groups also differed in behavior because younger and older generations have distinct tastes (Nacke & Deterding, 2017; Hwang, 2016; Larson, 2018). In this gamification setting, we use age, gender, education, income level, experience, and average—daily time spent on the game as control variables to examine how these socioeconomic characteristics affect (Control/uncontrol) purchase intention.

## 4. METHODOLOGY

### 4.1 Common Method Bias (CMB)

The Harman single-factor test was used for data screening to measure the common bias of the technique. The test result showed that a single component explained 25.314 per cent of the total variance; this did not imply common bias problems in the data set. The difference is under 50% (Talwar et al., 2020). In order to verify normality, we performed kurtosis and skewness tests, and the findings were within the suggestions of  $\pm 1$ . We calculate the variance inflation factor (VIF) (Talwar et al., 2020). The results of the predictor variables show that the VIF levels were below three, so that the investigator has determined that the data set is not a multi-linear problem.

### 4.2 Reliability and Validity

The results of CFA first indicated excellent fit:  $X^2/df = 1.799$ ; RMSEA=.051; GFI=0.913; AGFI=0.899; CFI=0.938; TLI=0.928 and IFI = 0.939 (Bentler 1990; Brown & Cudeck, 1992; Lin et al., 2021) for verification by the use of software AMOS 23 (See table 2). Due to low factors, certain items such as Reward (1 item), Dynamics (2 item), and Mechanics (2 items) were eliminated, which led to an increase in the loading of the factor above 0.70, and findings reveal that FL (>0.70), CA (>0.70), AVE (>0.5) and CR (>0.6) values were over the threshold value (Hair et al., 2015). It has been shown that, in all instances, discrimination shows validity is higher than interrelation values, and the values revealed in the bracket (See table 3).

### 4.3 Hypotheses Testing

The suggested research hypotheses were verified using structural equation modelling, which yielded a satisfactory model fit:  $X^2/df = 1.621$ ; RMSEA = 0.045; GFI = 0.923; AGFI = 0.917; NFI = 0.901; CFI = 0.935; TLI = 0.928 and IFI = 0.936 (Hair et al. 2015). The hypothesis findings showed that H<sub>a1</sub> to H<sub>6</sub> were supported; except for H<sub>3a</sub>, i.e. SNs ----> PBC (H<sub>3c</sub>:  $\beta = .181$ ;  $p > 0.001$ ) and PBC---->GPI ( $\beta = .659$ ;  $p > 0.001$ ). Concerning PE, the study results reported that STO (H<sub>2a</sub>) ( $\beta = .103$ ,  $p < 0.001$ ), AES (H<sub>4a</sub>) ( $\beta = -.173$ ,  $p < 0.05$ ), DY (H<sub>5a</sub>) ( $\beta = .596$ ,  $p < 0.05$ ), REW (H<sub>6a</sub>) ( $\beta = .257$ ,  $p < 0.001$ ) had a positive impact on the respondents PE. At the same time, FUN (H<sub>1a</sub>) ( $\beta = -.056$ ,  $p > 0.001$ ) and MEC (H<sub>3a</sub>) ( $\beta = .207$ ,  $p > 0.001$ ) had no significant impact on the PE. Likewise regards HV, only two study contracts had a statistical significant impact on the respondents HV, such as MEC (H<sub>3b</sub>) ( $\beta = .813$ ,  $p < 0.05$ ) and DY (H<sub>6b</sub>) ( $\beta = .337$ ,  $p < 0.001$ ), whereas constructs like FUN (H<sub>1b</sub>) ( $\beta = -.027$ ,  $p > 0.001$ ), STO (H<sub>2b</sub>) ( $\beta = .087$ ,  $p > 0.001$ ), AES (H<sub>4b</sub>) ( $\beta = -.048$ ,  $p > 0.001$ ) and DY (H<sub>5b</sub>) ( $\beta = -.381$ ,  $p > 0.001$ ) had no significant impact on the HV of the respondents. Pertaining to SI, constructs like FUN (H<sub>1c</sub>) ( $\beta = .080$ ,  $p < 0.05$ ), AES (H<sub>4c</sub>) ( $\beta = .095$ ,  $p < 0.05$ ) and REW (H<sub>6c</sub>) ( $\beta = .235$ ,  $p < 0.001$ ) had a statistical positive impact on the respondents SI, but the study contracts like STO (H<sub>2c</sub>) ( $\beta = .082$ ,  $p > 0.001$ ), MEC (H<sub>3c</sub>) ( $\beta = .320$ ,  $p > 0.001$ ) and DY (H<sub>6c</sub>) ( $\beta = .096$ ,  $p > 0.001$ ) had no significant impact on SI. The following are the explications for the variance in the dependent variables: 56% for PE, 33.7% for HV, 36.7% for SI, and 37.9% for BI (figure 3 and Table 4).

Table 3. Reliability and Validity of the study

Contracts	FL	CR (>0.6)	AVE (>0.5)	CA (>0.7)
Fun				
Fun1	0.757	0.869	0.691	.864
Fun2	0.943			
Fun3	0.783			
Storytelling				
STO1	0.685	0.853	0.662	.841
STO2	0.897			
STO3	0.845			
Mechanics				
MEC1	0.696	0.722	0.567	.718
MEC2	0.806			
Aesthetics				
AES1	0.676	0.883	0.604	.880
AES2	0.772			
AES3	0.864			
AES4	0.8			
AES5	0.762			
Dynamics				
DY1	0.761	0.742	0.589	.741
DY2	0.775			
Reward				
REW1	0.831	0.864	0.682	.862
REW2	0.896			
REW3	0.744			
Perceived Enjoyment				
PE1	0.574	0.802	0.583	.780
PE2	0.889			
PE3	0.794			
Hedonic Value				
HV1	0.825	0.944	0.708	.944
HV2	0.863			
HV3	0.907			
HV4	0.914			
HV5	0.795			
HV6	0.798			
HV7	0.778			

*continued on following page*

Table 3. Continued

Contracts	FL	CR (>0.6)	AVE (>0.5)	CA (>0.7)
Social Interaction				
SI1	0.55	0.814	0.528	.809
SI2	0.767			
SI3	0.816			
SI4	0.747			
Purchase intention				
BI1	0.92	0.940	0.760	.938
BI2	0.886			
BI3	0.844			
BI4	0.918			
BI5	0.786			

Note: Average variance extracted (AVE), factor loading (FL), Cronbach alpha (CA) and Composite reliability (CR).

Table 4. Convergent and Discriminant Validity (n=515)

Contracts	FUN	STO	MEC	AES	DY	REW	PE	HV	SI	BI
FUN	<i>(0.831)</i>									
STO	0.064	<i>(0.814)</i>								
MEC	0.361	0.234	<i>(0.753)</i>							
AES	0.309	0.135	0.683	<i>(0.777)</i>						
DY	0.305	0.051	0.773	0.6	<i>(0.768)</i>					
REW	0.269	0.157	0.351	0.255	0.405	<i>(0.826)</i>				
PE	0.152	0.121	0.315	-0.168	0.208	0.365	<i>(0.763)</i>			
HV	0.286	0.132	0.452	0.355	-0.407	0.543	0.41	<i>(0.841)</i>		
SI	0.293	0.034	0.333	0.211	0.37	0.531	0.322	0.396	<i>(0.727)</i>	
BI	0.223	0.026	0.013	0.087	0.098	0.106	0.167	0.113	0.071	<i>(0.872)</i>

Note: \* p<0.05; \*\* p<0.01.

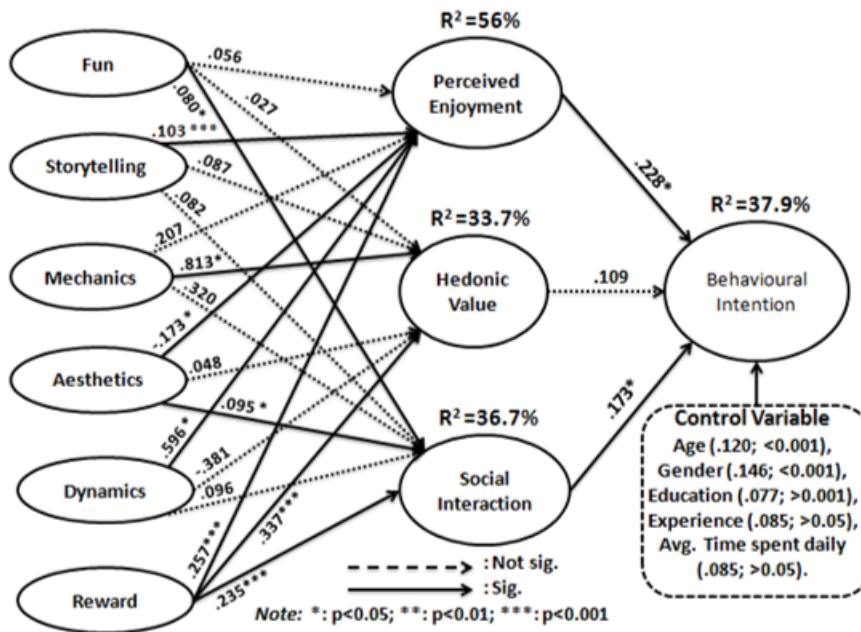
#### 4.4 Mediating Role of PE, HV and SI

We examine the mediating effects of PE, HV, and SI on the association between the FUN, STO, MEC, AES, DY, and RE constructs and BI. The findings showed that PE (H7a) ( $\beta = .228$ ,  $p < 0.05$ ) exhibited a beneficial connection between the FUN, STO, MEC, AES, DY, and RE constructs and BI. Similarly, SI (H9a) ( $\beta = .173$ ,  $p < 0.05$ ) was shown to have an enormously positive relation. At the same time, it was discovered that HV (H8a) ( $\beta = .109$ ,  $p > 0.001$ ) showed non - a significant connection between the FUN, STO, MEC, AES, DY, and RE constructs and BI, as shown in Figure 3 and Table 4.

#### 4.5 Control Variable: Socio-Economic Factors

We consider participants Socio-economic Factors as a control variable, because these profiles play a significant role in behavioral intention. The results demonstrated that age ( $\beta = .120$ ,  $p < 0.001$ ) and gender ( $\beta = .146$ ,  $p < 0.001$ ) had a significantly controlling respondents behavioral intention. Whereas,

Figure 3. Hypotheses results



education ( $\beta = .077, p > 0.001$ ), experience ( $\beta = .085, p > 0.05$ ); and Avg. Time spent daily ( $\beta = .062, p > 0.05$ ) has no controlling respondents purchase intention towards gamification (Figure 3 and Table 5).

## 5. DISCUSSION

The current research looked at the gamification-related cues that influence customer purchase intention. Prior research has looked at the effect of gamification in terms of customer purchase intent (Johnson et al., 2018; Raman, 2020). However, there have been few studies on the effect of gamification on purchase intention in the context of mobile gamification (Yang et al., 2017), where more research is needed (Al-Zyoud, 2020); additionally, despite the practical importance of gamification, few studies have explored how gamification in mobile apps affects the consumer’s purchase intention (van Esch et al., 2020; Xu et al., 2020). As a result, our research focuses on gamification sub-elements such as Fun, Storytelling, Mechanics, Aesthetics, Dynamics, and Rewards as they relate to Purchase Intention. The research considers the effects of Hedonic Value, Perceived Enjoyment, and Social Interaction on Purchase Intention (Huotari and Hamari, 2017; Raman, 2020).

The research discovered that fun, as a component of mobile gamification, had a substantial impact on SI (H1c). Players who like the game are more likely to engage with the social community (Johnson et al., 2018), which is consistent with the study of Lu and Ho (2020) and (Kim, 2021). However, the study shows that fun did not affect HV (H1b) or PE (H1c), which contradicts with the previous research (Jang et al., 2018). Furthermore, hedonic value is basically related to fantasy and emotive of the players which does not necessarily result in fun. Similarly, players might not be fully engaged in the application of this new technology that might result in dissatisfaction (Akdim et al., 2022). Therefore, it is required to reinforce new techniques of using the technologies.

Second, storytelling has a substantial effect on PE (H2a). The results are similar to those of Lee and Jin (2019) and Haziri and Chovancov (2018). The critical equation and the thrilling storytelling plays an essential part in making the experience pleasant (Kuo and Chuang, 2016). Furthermore,



Table 5. Hypotheses results

Hypotheses	Path	$\beta$	$p$	Supported
H1a	FUN ----> PE	.056	>0.001	No
H1b	FUN ----> HV	.027	>0.001	No
H1c	FUN ----> SI	.080	<0.05	Yes
H2a	STO ----> PE	.103	<0.001	Yes
H2b	STO ----> HV	.087	>0.001	No
H2c	STO ----> SI	.082	>0.001	No
H3a	MEC ----> PE	.207	>0.001	No
H3b	MEC ----> HV	.813	<0.05	Yes
H3c	MEC ----> SI	.320	>0.001	No
H4a	AES ----> PE	-.173	<0.05	Yes
H4b	AES ----> HV	.048	>0.001	No
H4c	AES ----> SI	.095	<0.05	Yes
H5a	DY ----> PE	.596	<0.05	Yes
H5b	DY ----> HV	-.381	>0.001	No
H5c	DY ----> SI	.096	>0.001	No
H6a	REW ----> PE	.257	<0.001	Yes
<b>H6b</b>	REW ----> HV	.337	<0.001	Yes
H6c	REW ----> SI	.235	<0.001	Yes
<b>Mediating Role</b>				
H7a	FUN, STO, MEC, AES, DY, REW----> <b>PE</b> ---->BI	.228	<0.05	Yes
H8a	FUN, STO, MEC, AES, DY, REW----> <b>HV</b> ---->BI	.109	>0.001	No
H9a	FUN, STO, MEC, AES, DY, REW----> <b>SI</b> ---->BI	.173	<0.05	Yes

Note: \*, p<0.05; \*\*, p<0.01; \*\*\*, p<0.001

unlike previous research (Jang et al., 2018), storytelling does not play a significant role in HV(H2b) since players prefer to bypass the narrative and focus on completing game levels and even storytelling may vary from time-to-time (Jun et al., 2020). It was also discovered that narrative has no significant function in social Interaction (H2c). It contradicted the results of Lee and Jin (2019). Gamers often talk about group prizes, technical and difficulties, and the game they are playing, rather than tales about the game.

Third, Mechanics has no discernible effect on Perceived Enjoyment. The findings contradicted previous research by Koivisto and Hamari (2019). Mechanics was discovered to have a beneficial influence on hedonic value. Furthermore, Mechanics has no significant effect on Social Interaction (H3c). The findings contradict Haziri and Chovancov (2018). One of the causes may be the impression that a person is critically exposed to a gamified environment. Gamers often play instinctively and do not discuss the intricacies of the game’s operation (Hunicke, Leblanc, and Zubek, 2004).

Fourth, our research discovered that Aesthetics have a significant impact on Social Interaction (H4c) and this helps Lu and Ho (2020), as well as Koivisto and Hamari (2019). While interacting with the community tab or groups, the gamers typically debate audio-visual effects, scripts, and fantasy landscapes. Perceived Enjoyment was discovered to be influenced by Aesthetics (H4a). However, Aesthetics has no substantial influence on and Hedonic Value (H4b) and this result was in contrast

to the works of Koivisto and Hamari (2019). It may be because perceived Enjoyment is mainly determined by how players are drawn to completing activities and the difficulty level of the game. Because of greater expectations, creators must satisfy the essential aspects of a sense of success and a connection to the game character (Elson, Breuer, and Quandt, 2014).

The findings reveal that Dynamics has a substantial effect on Perceived Enjoyment (H5a), but not on Hedonic Value (H5b) or Social Interaction (H5c). The results contradict Priebatsch's (2010) & Kuo and Chuang (2016) study. It was shown that Rewards had a substantial influence on Perceived Enjoyment (H6a), and it is consistent with the findings of Lee and Jin (2019). Rewards had a substantial effect on Hedonic Value as well (H6b), and it was examined in a study of literature, where it was discovered that badges, prizes, and tokens contribute to the experience and that emotions connected with the game are critical to completing the job at a certain level (Xi and Hamari, 2020). Social Interaction is also strongly influenced by rewards (H6c). The game's rating and points are used to improve users. For example, the top eleven game users get tokens and prizes after a season in which players engage in the gaming community. These findings are consistent with Goh et al. (2017) and Lee and Jin (2017). (2019).

We discover that Perceived Enjoyment mediates the connection between game components and a player's purchase intention. The results are consistent with Zheng et al. (2019) and Raman et al. (2020).

The research demonstrates that Hedonic Value does not moderate the connection between game features and purchase intent, and it is in contrast to previous literature in which writers emphasize the mediation role of Hedonic Value in influencing Purchase Intention (Xi and Hamari, 2020). When a consumer/player engages in a gaming application, it is driven by Hedonic Value, which influences the consumer's Purchase Intention. One potential explanation is that a robust kind of Hedonic experience in our study setting does not need consumers spending much time influencing Purchase intention.

We discovered that social interactions moderate the connection between game features and consumer purchase intent. These results are consistent with those of Kaya et al. (2019) and Raman (2020), who found that user-centric elements such as points, tokens, and feedback motivate players to express their thoughts, reviews, and ratings on a social network. Prior research has shown that social contact has a substantial impact on purchase intention; our study recommends establishing forums and servers to encourage more excellent social interactions. According to the research findings, two of the three suggested mediations had a favourable effect on customers' purchase intention. These results are consistent with Xi and Hamari's (2020) and Jang et al. (2018).

## 6. IMPLICATIONS OF THE STUDY

### 6.1 Theoretical Implications

This study adds to the knowledge in the existing literature on gamification and marketing on Purchase intention (BI). The model identifies Mechanics, Dynamics, and Aesthetics (MDA) as important indicators for gamification. This is in accordance with to study carried out by Lu & Ho, (2020). In this research, it was found Fun and Storytelling is most important factors that engage during gamification as it motivates users. This is supported by Yang et al., (2017). The Rewards are also the source of motivation to be an important part of the gamification construct. After passing a level of the game, a task or challenge enhances the experiences of the game. The current research work establishes that gamification has an impact on the BI of consumers. The study identifies PE as an important antecedent of consumer intention to involve in gamification. This is in consonance to work of (Kim, et al., 2002). The gamified environment leads to engagement through Hedonic Value (HV). In other words, enhancing customer experience and influences Purchase intentions (Calleja, 2007; Mitchell et al., 2017). Social Interaction (SI) helps in developing interaction with other consumers, thus experiencing pleasure both psychologically and physically. Gamers can connect, collaborate and coordinate which results in improved BI (Cohen and Wills, 1985). The influence if Social Interaction and its impact on BI have been approved in this research. These findings are in conformity with few earlier works of Prensky (2001).

## 6.2 Managerial Implications

The findings from the study also provide important implications for developers and business operators of online platforms. The results present that HV could create enjoyable experiences that tend to engage the customers and also have a positive effect on BI. It is supported by a study by Haziri et al., (2019). The management and developers should focus on dynamics, mechanics, and proper feedback systems. Since the new technologies are emerging and growing at a rapid pace, good mechanics and dynamics are needed for a smooth experience. The importance of rewards, badges also act as motivating factors stimulating the BI. Rewards through watching ads, completing tasks, filling surveys allow a consumer to remain connected with the game and also stimulates impulse purchases (Koivisto and Hamari, 2019). The finding also confirms Chiu et al., (2011) that Fun along with storytelling is one of the crucial elements of the games which hold customer interests in the game as well allow them to indulge in the activities. Further, Perceived Enjoyment is an affective reaction to BI, hence gaming interface and appealing websites along with easy navigation can induce Purchase intention of a consumer to purchase (Kuo & Chuang, 2016; Ha & Stoel, 2009).

Company and developers need to focus on Social Interaction as the consumers are more socially engaged on a gaming platform and they like to share their opinions, discussions become an important feature to attract the consumers on game platforms. It is recommended to introduce community and forums for high user engagement which in turn significantly affect BI of consumer (Moon and Kim, 2001).

## 7. CONCLUSION AND LIMITATIONS

### 7.1 Conclusion

Gamification provides useful information regarding the BI of the consumer in virtue of engagement. The study establishes gamification as a vital role in explaining Social Interaction, Hedonic Values, and Perceived Enjoyment which impacts Purchase intention. Gamification while introduced deepens the engagement and fun attracts more gamers to the brand. This is in line with the studies of (Haziri et al. 2019). The mechanics and dynamics should be creative, along with story features to attract the interest of the audience (Lu and Ho, 2020). The feedback system allows the users to share their views and suggestion about the features that make them stick to the game (Hamari, 2013). Further, the research offers insights into the role of Social Interest in BI. The users interacting with friends or make their team functions work together to solve tasks and challenges, a greater sense of satisfaction is created which induces BI (Hamari and Koivisto, 2013). Perceived Enjoyment motivates many players to visit the apps and website which helps in creating loyalty with the brand and its positive word of mouth. It is therefore concluded that gamification influences the BI of consumers, gamers to use, purchase, and visit products from gaming websites/stores.

### 7.2 Limitations and Future Scope for Study

Although the study provides theoretical knowledge and practical contributions, it has a certain limitations that may serve as future directions for study. The study is conducted in the Indian consumer context. Future studies can be carried out in other cultures and countries to generalize the findings of the study. The study can be done based on market segmentation for promoting their game into various age groups, gender, and income level. The study is cross-sectional and quantitative. While the behaviour of consumer may vary over time, therefore a longitudinal and qualitative study may offer further additional insights into BI. It is recommended that further studies should consider effect of feedback, rewards, interaction as variables in BI, which can provide robustness to this research model. Lastly, the study established that gamification influences BI, Future studies can explore the role of Artificial Intelligence, Communication Interfaces, and Personality Traits in influencing BI and in creating consumer brand loyalty.

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## APPENDIX

Table 6.

Construct	Items	Source
Fun (3 items)	“The brand app game provides me with various visual treats” (F1)	Lee & Jin, (2019)
	“The brand app game is interesting” (F2)	
	“The brand app game entertains me” (F3)	
Reward (3 items)	“I can upgrade my ranking by playing a game on this brand app” (FEW1)	Lee & Jin, (2019)
	“The brand app provides me with various rewards e.g. presents for a game character” (FEW2)	
	“I can receive a new identity by going to the highest ranking.” (FEW3)	
Storytelling (3 items)	“The story of this brand is interesting” (STO1)	Lee & Jin, (2019)
	“The story of this brand is likable” (STO2)	
	“The story of this brand is easy to understand” (STO3)	
Perceived enjoyment (3 items)	“I find the brand app game enjoyable” (PE1)	J. Kim et al., (2007); Raman, (2020)
	“I find the brand app game exciting” (PE2)	
	“I find the brand app interesting” (PE3)	
Social Interaction (4 items)	“I maintain close social relationships with some members of the brand app games” (SI1)	Chiu et al., (2006); Raman, (2020)
	“I spend a lot of time interacting with some members of the brand app games” (SI2)	
	“I know some members of the brand app game community on a personal level” (SI3)	
	“I have frequent communication with some members of the brand app games.” (SI4)	
Aesthetics (5 items)	“I get very emotional regarding the way I interact with everything while using the brand app games” (AES1)	Haziri & Chovancov, (2018)
	“I felt like I was discovering a totally new world while using the brand app game” (AES2)	
	“Satisfaction and delight are the words to describe my experience when shopping online” (AES3)	
	“Playing with the brand app games stimulates my fantasy” (AES4)	
	“The bond I feel with the products/items/goods presented in the brand app games is strong” (AES5)	
Dynamics (2 items)	“I have to return at a predefined time to take a predetermined action (such as “happy hour”) to succeed in a brand app game” (DY1)	Kuo & Chuang, (2016); Priebatsch, (2010)
	“I improve my brand app game according to the completion of granular tasks in a game to be successful in a game.” (DY2)	
Mechanics (2 items)	“By accessing a brand app game, I am able to obtain points, badges, and leaderboards” (MEC1)	Haziri & Chovancov, (2018)
	“I felt motivated by the rewards, points and badges offered by the brand app games.” (MEC2)	

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Table 6. Continued

Construct	Items	Source
Hedonic value (7 items)	“Finding unique things in the brand app games makes me excited” (HV1)	Foroughi et al., (2013); Rezaei et al., (2016)
	“It seems that I explore a new world when I play the brand app game.” (HV2)	
	“Compared to others, spending time on the brand app games is so enjoyable” (HV3)	
	“During playing a game on the brand app, I feel excited.” (HV4)	
	“While playing a game on the brand app, I am able to forget my problems.” (HV5)	
	“During playing a game on the brand app, I feel relaxed.” (HV6)	
	“I enjoy playing the brand app game enough to forget a time out.” (HV7)	
Purchase intention (5 items)	“I intend to play brand app games in the future” (BI1)	Moon & Kim, (2001); Raman, (2020)
	“I intend to increase my time of playing on the brand app in the future” (BI2)	
	“I intent to continue playing the brand app games in the future” (BI3)	
	“I will recommend the brand app game to others” (BI4)	
	“I will encourage my friends and family to play the brand app games.” (BI5)	

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