



## The effect of gamification on brand equity and desirable consumer behaviors in online retail stores: The mediating role of brand engagement

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### ABSTRACT

The use of gamification as a means to engage and retain customers has garnered significant attention in marketing. Despite its widespread usage, little is known about its impact on consumer behavior within online contexts. This paper aims to investigate the influence of gamification on brand equity and desirable consumer behaviors by examining the mediating role of brand engagement. An analytical survey study was conducted, with the statistical population consisting of all customers of Digikala, the most prominent online retail store in Iran. The G-power software was employed to determine the sample size for the partial least square test. Standard questionnaires were employed for data collection, and structural equation modeling (SEM) using Smart PLS software was utilized for data analysis. The findings reveal that gamification significantly impacts brand equity, including brand awareness and loyalty, and desirable consumer behaviors such as word of mouth and resistance to negative information. Moreover, gamification enhanced brand engagement, which mediates its effects on brand equity and desirable consumer behaviors. The incorporation of gamification dimensions, including immersion, achievement, and social interaction, is identified as a promising marketing strategy, and online business managers and marketers should focus on enhancing these dimensions.

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## 1. Introduction

Gamification has become one of the most significant technological trends in recent decades (Huotari & Hamari, 2017). The next generation of marketing techniques can change the interaction between humans and computers by proposing impressive experiences (Hsu & Chen, 2018b). Therefore, it is unsurprising that marketing managers have recently begun searching for solutions to increase participation and involve customers with gamification elements. While brand engagement has become critical to success in online business activities (Xi & Hamari, 2020), low user participation presents a challenge that online businesses face today. However, more user engagement through gamification could be more effective than traditional ads (Hajarian et al., 2019). Gamification encourages customers to interact with the brand through entertainment and smart marketing messages (Yang et al., 2020). In other words, gaming may lead customers to aspire to achieve work that they would not usually do (Hajarian et al., 2019). Hence, practical usage of gamification in marketing activities causes customers to comprehend the benefits of a service or product, engage and interact more with the brand, and eventually improve brand equity. Although most companies are eager to use gamification to develop customer motivation toward brand engagement and invest heavily in this field, many business gamification projects have failed (Hsu & Chen, 2018a). This has led companies to gradually lose faith in the role of gamification in creating a solid relationship with their customers (Hsu & Chen, 2018b). In other words, while gamification emerged as one of the most hopeful trends in e-commerce, it is a way of affecting consumer behavior that remains obscured.

Recently, the preference for online shopping has been increasing in Iran, and online shops are developing in the country. Moreover, with the spread of the COVID-19 pandemic, people's preference to shop online has increased, leading to a competitive market in this field. Digikala shop has faced stiff competition due to this expansion. Presently, Digikala has implemented a set of gamification ideas to encourage its users to increase engagement and participation on its shop website. For example, people receive points in exchange for leaving a comment and sharing their product experience, which includes a lottery, buying some products with selling points, discounts on products, free shipping, etc. Similarly, the company has made efforts in this field by creating items such as Digiclub, which includes "*Digi Club Missions*" and games such as "*Gardooneye Shans*" (Roll of Fortune) and "*Haft Ganj*" (seven treasures).

However, the main point is the effectiveness of these activities in increasing customer engagement, brand equity, and desirable consumer behaviors. Similarly, comparing this shop with foreign online shops indicates that the gamification activities in this shop are at the beginning of their journey, and the capacities of this powerful marketing strategy in increasing brand engagement have not been utilized as much as they should. Meanwhile, the design of gamification activities requires marketing managers to be knowledgeable about how these activities work. According to Al-Zyoud (2020), current studies have scarcely researched how gamification affects consumer intentions and tangible outcomes. Most studies have examined user reactions in artificial or experimental circumstances and have not read users who were exposed to gamification. To increase knowledge of these relationships, this study aims to research the influence of gamification on brand equity and desirable consumer behaviors through the mediating role of brand engagement in the Digikala online shop.

## 2. Literature Review

### 2.1. The concept and dimensions of gamification

According to one of the most well-known definitions, gamification is using game design elements in non-game contexts and platforms (Deterding et al., 2011). In other words, gamification includes the aspects of game complexity, interaction, and game design, and so is a tool that combines game elements with a non-game program to increase user experience and interaction (Zhang et al., 2020). The following definition of gamification has introduced it as the procedure of adding game mechanics to processing, programs, and operating systems that traditionally do not use such concepts. According to this, gamification is a game that combines game mechanics used for non-entertainment objectives (Huotari & Hamari, 2012). Another definition considers gamification a kind of service packet in which a service is provided by a rule-based service system that obtains feedback and interaction mechanisms to facilitate and support the general value-creation of users (Huotari & Hamari, 2017). Thus, gamification can best describe the application of game consideration and game design in a non-game context (Szyszka, 2019).

The studies related to game design, gamification, and game typology generally distinguish between three main classifications of game mechanics and game design motivations. These dimensions include immersion, achievement, and social interaction (Xi & Hamari, 2020):

**Immersion** indicates the immediate presence in the game space. This is the most significant thing that game designers are searching for. Immersion in game design occurs when the players feel they exist in the world created by the game and are active in it (Xi & Hamari, 2020). Players who experience immersion are likely to only focus on choices that make sense in the context of the imaginary world. Immersion can enhance user interaction (Goethe, 2019).

**Achievement** is what is obtained through playing and earning points. The principal objectives that players can achieve while playing a game or a series of games in a system lead to prosperity and are considered an indication of the general ability of the game (Gothe, 2019). Achievements attempt to increase the feeling of success of the players and include game mechanics such as points, badges, challenges, missions, goals, rankings, and development criteria (Xi & Hamari, 2020). The achievement dimension, players are interested in power, status, and quick progress (Rohan, et al., 2020)

**Social interaction** is one of the main elements of gamification that separate these games from traditional media. Interactivity gives games and gamification products a unique perspective to engage the player in a customized way and propose to them the possibility of motivating sentiments and intense experiences (Goethe, 2019). Features related to social interaction are mainly used to enable the social interaction of users and include game mechanics such as teams, groups, and competitions (Xi & Hamari, 2020).

## **2.2. Brand equity**

Brand equity indicates the added value that the brand gives to the product (Lim et al., 2020). Aaker (1996) defines brand equity as a group of brand assets and debits that increase or decrease business value. Brand equity includes brand loyalty and brand awareness. Accordingly, brand loyalty refers to the propensity to be loyal to a brand, which is reflected by the intention to purchase the brand as a significant choice, and the ability of customers to distinguish a particular brand is brand awareness (Xi & Hamari, 2020). The two mentioned dimensions are those based on the consumer's perspective and the two primary and initial dimensions of brand equity research used in several research types (Xi & Hamari, 2021; Hoyer & Brown, 1990).

On the other hand, what is expected from the features of gamification is to increase the distinction and reminiscence of a brand by the consumer because the customer is likely to engage with the brand by participating in the gamification activities designed by the brand and subsequently remember it. On the other hand, because of the presence and participation in these activities, they prefer this brand as their first option. The different dimension of Aacker's model (1991) is the perceived quality, which corresponds to the brand, a common and subjective characteristic of the consumer, which is not an expected outcome of gamification in the opinion of some researchers (Xi & Hamari, 2020). Furthermore, the brand association dimension expresses the difference in the brand character from the customer's viewpoint. It is a complementary dimension that some researchers, such as Lehmann and Keller (2008), consider co-occurring with the brand awareness dimension.

## **2.3. Desirable consumer behaviors**

Desirable consumer behaviors refer to those activities performed by the customer and the brand's prosperity and objectives in society. Based on the research of Hsu and Chen (2018a), these behaviors include the two dimensions of word of mouth and resistance to negative information. Word of mouth is a reliable and influential source of information. Word-of-mouth advertising refers to interpersonal communication between consumers, which is related to evaluations and sharing of their personal experiences of a company or a product. Consumers do not take negative information into account for their general lookout of the brand, which implies resistance to negative information. Hence, it can indicate the strength of the relationship between the company and the consumer. Research outcomes demonstrate that consumers need a strong relationship with the brand to resist negative information (Hsu & Chen, 2018a).

## **2.4. Brand engagement**

Brand engagement is a quite new concept that has been developed in relationship marketing theories. The idea of engagement has been studied in fields such as psychology, sociology, and organizational behavior (Brodie et al., 2013). The brand engagement has been described with various definitions, including "customer participation," "positive work-related mindset and activity," "interaction with others," "participation in social activities," and "an adequate response to social stimulus." In one of the most comprehensive definitions, Brodie et al. (2013) define engagement as a psychological circumstance that is created by the customer's pleasant and interactive experiences with a focal factor/subject (for instance, a brand) in relationships of service and what is considering the central role in the relationship interaction trend. According to Hollebeek (2011), brand engagement deals with particular interactions between a focal customer and a specific brand. It demonstrates the level of cognitive, emotional, and behavioral investment of the customer in interactions with a particular brand.

## **2.5. Conceptual model development and research hypotheses**

Value creation through branding is central to services, especially online services. In this regard, the predominant approach to branding shows a positive relationship between supportive campaigns and brand equity (Tanouri et al., 2019). There is relevant research evidence that demonstrates that gamification activities as new strategic marketing campaigns have positive impacts on brand outlook (Salehi & Aqeli, 2019), brand value and brand satisfaction (Hsu & Chen, 2018a), and brand awareness (Mattke & Maier, 2020). In one experimental research, Fernández-Ruano et al. (2022) showed that a gamified environmental interpretation experience more significantly positively affects brand engagement more than a non-gamified environmental interpretation experience. Another research aimed to clarify the relationship between gamification and brand equity applied self-determination theory and the stimulus-organism-response model of environmental psychology. Results showed that gamification and its three dimensions positively affected brand equity (Wu et al., 2022). Although this research used different dimensions for gamification, it enriches gamification theory and its consequences. Based on these, the following relationship is suggested for testing:

**H1:** Gamification significantly affects brand equity in Digikala online shop.

Recent research showed that gamified interactions can define a variety of consumers' attitudes and behaviors (Yadav, 2022; Zhou et al., 2023a). Therefore, gamification is increasingly applied as a marketing strategy for improving various behavioral outcomes in online retail shops. Also, it is used by social network services to improve engagement and encourage customer loyalty (Jin et al., 2016). Interestingly, gamification in the higher education sector and its impact on student behaviors are being researched (Robson, 2019). Still, surprisingly the relationship between gamification and consumer behaviors has not been entirely addressed in the marketing context. Relatively similar research was done by Masum & Raftari (2020), who found word of mouth and resistance to negative information as the consequences of gamification among customers who made online purchases from tourism agencies. It seems that gamification, due to its interactive and immersive nature, leads to solid communication links with the brand, based on which consumers may want to support the brand through desirable behaviors in the future. Consequently, the following hypothesis is proposed:

**H2:** Gamification significantly affects desirable consumer behaviors in Digikala online shop.

Research shows gamification features impact players' attitudes (Kashive & Mohite, 2022). Specifically, gamification can reinforce mutual norms and trust and, therefore, creates opportunities for brand engagement by building a sense of relationship with the brand and increasing their knowledge of other members (Gil de Zúñiga et al., 2012). Thus, when there are more interactions with social gamification, customers are somehow forced to acquire brand information from others. It can increase participation and interaction with the brand and influence brand engagement. Xi & Hamari (2020) and Gatautis et al. (2016) also found that gamification can positively affect brand engagement. Syrjälä et al. (2020) believed that engagement is a psychological outcome of gamification. They showed a positive relationship between gamification and consumer brand engagement in the context of food packaging. Accordingly, the following hypothesis is proposed:

**H3:** Gamification significantly affects brand engagement in Digikala online shop.

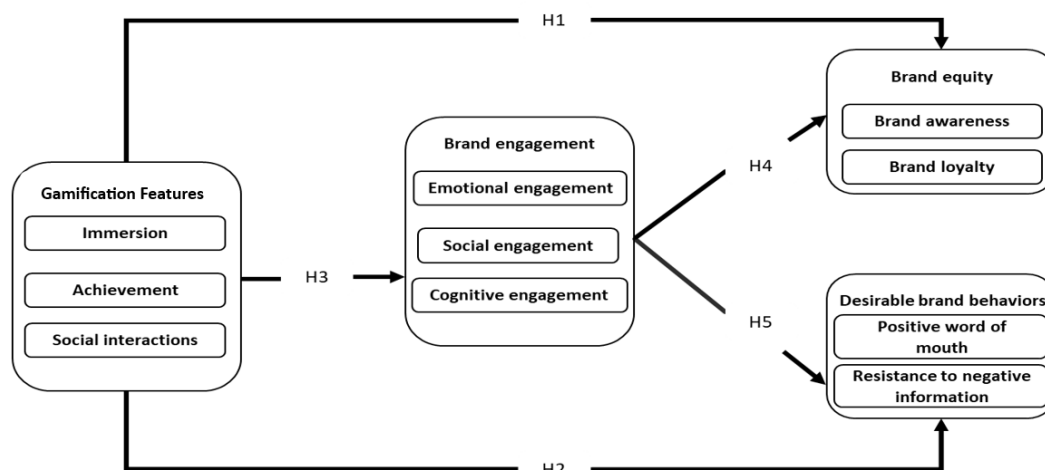
Engagement with the brand is usually one of the most important determinants of brand equity (Weiger et al., 2017). In other words, firms engage with their customers to retain or enhance their overall brand equity (Verma, 2021). Studies showed that in many contexts, such as social media, customers' interaction with the brands symbolizes their higher involvement in the brands and thus increasingly contributes to brand equity (van Doorn et al., 2010). This relation could generalize to online shopping, in such a way that when customers are willing to invest more time, energy, and money, better brand engagement positively affects brand equity. Mainly, customers who have more engagement with a brand can be more conscious of the brand and indicate higher loyalty (Weiger et al., 2017; Wirtz et al., 2013). Consequently, the following hypothesis is proposed:

**H4:** Brand engagement significantly affects brand equity in Digikala online shop.

A customer with higher brand engagement is expected to enhance desirable after-consumption behaviors. When customers actively interact with a brand in a social media context, they review some information about the brand, recommend it to others, and intend to purchase more (Hutter et al., 2013). Moreover, when a brand is popular with customers, people naturally resist negative information about the brand (Hsu & Chen, 2018a). Consequently, the following hypothesis is proposed:

**H5:** Brand engagement significantly affects desirable consumer behaviors in Digikala online shop.

Some relevant studies partially test some relations of the above hypotheses. For example, Xi and Hamari (2020) studied the relationships between gamification, engagement, and brand equity, although their research did not focus on desirable consumer behaviors. Al-Zyoud (2020) explores how gamification affects loyalty, word of mouth, and purchase intention, but does not consider brand engagement. Hsu and Chen (2018a) studied the relationships between the experience of gamification marketing activities, value, satisfaction, brand love, and desirable consumer behaviors. Still, they did not include brand engagement in their model. Hsu and Chen (2018b) explored the antecedents and consequences of the user experience of gamification in online markets. In their research, the role of brand engagement was not studied. Commonly, no research has comprehensively examined the relationships in the current research. Therefore, the current research model (Figure 1) still needs to be reviewed to clarify the obscurities and anonymous aspects of the subject.



**Fig. 1.** Conceptual model (Xi & Hamari, 2020; Hsu & Chen 2018a, with modification)

### 3. Methodology

This study employs a practical analytical survey design to examine the gamification activities of the Digikala online shop. The statistical population for this research consists of all customers of this shop. This population is deemed suitable due to its sufficient size and diversity in age range and tastes among Iranian consumers. The sampling procedure was conducted using G-power software. Using Leaner multiple regression, the effect size is considered 0.15, and with the power ( $1 - \beta$  err prob) of 0.95, the sample size of 280 was deemed necessary. To reach this number, about 400 questionnaires were distributed using online surveys on the Porsline website and Instagram social network. A screening question was used to identify respondents who have participated in Digikala shop games. An image of available games was presented to the respondents at the beginning of the questionnaire to facilitate comprehension. The data collection instrument used in this study was a standard questionnaire with Likert scale adjustments (ranging from entirely agree = 5 to completely disagree = 1). A total of 357 complete questionnaires were obtained. Also, the structural equation modeling techniques with the partial least squares approach and SmartPLS software were used for data analysis.

### 4. Analysis and results

Among the respondents, 58.5% were male and 63% were married. 17.9% were between 20 and 25 years old, 37.8% were between 26 and 30 years old, 30% were between 30 and 40 years old, and 14.3% were over 40 years old. The number of items and the source of questions for each variable is demonstrated in Table 1.

**Table 1.** Measurement scales for the variables

Source	Sample	Questions	Dimensions	Variable
Yan et al (2018), Zhang et al. (2020), Lu & Ho (2020)	I can't control myself against the temptation to continue playing these games.	1-5	Immersion	Gamification
	Success in Digikala games gives me the feeling of surpassing my competitors.	6-10	Achievement	
	I spend a lot of time interacting with other members in Digikala games.	11-13	Social interaction	
Xi & Hamari (2020)	I am passionate about Digikala.	14-16	Emotional engagement	Brand engagement
	I am interested in events related to Digikala.	17-20	Cognitive engagement	
	I empathize with other people using the services of this online shop.	21-23	Social engagement	
Xi & Hamari (2020)	I can recognize the brand of this shop among other competing brands.	24-26	Brand awareness	Brand equity
	This is the only online shop that I purchase from.	27-30	Brand loyalty	
Hsu & Chen (2018a)	I have recommended this online shop to many people.	31-33	Word-of-mouth advertising	Desirable behaviors
	The negative information about this online shop does not change my opinion of the company.	34-36	Resistance to negative information	

#### 4.1. Construct Validity and reliability

Composite Reliability, convergent, and divergent validity criteria were used to check the measurement models' fitness. The Composite Reliability (CR) cut-point was considered 0.7 as an acceptable value. Also, the fair value for the average extracted variances (AVE) as the criteria of convergent validity was viewed more than 0.5. composite reliability, and convergent validity (AVE) and their values are presented in Table 2.

According to the results of Table 2, AVE values are between 0.585 and 0.875 and are more than the acceptable value of 0.5. Eventually, the composite reliability is between 0.809 and 0.955, higher than 0.7. A divergent validity test was performed with the Fornell-Larcker method. According to this criterion, a latent variable should have a more excellent dispersion between its observations than other latent variables. The results are shown in Table 3.

**Table 2.** Factor loadings, convergent validity, and composite reliability of research constructs

CR	AVE	Factor loading	Symbol	Variable	CR	AVE	Factor loading	Symbol	Variable
0/955	0/875	0.929	BA1	Brand awareness	0/937	0/748	0.842	IMM1	Immersion
		0.945	BA2				0.875	IMM2	
		0.93	BA3				0.874	IMM3	
0/932	0/775	0.868	BL1	Brand loyalty	0/945	0/776	0.869	IMM4	Achievements
		0.884	BL2				0.866	IMM5	
		0.858	BL3				0.873	ACH1	
		0.910	BL4				0.881	ACH2	
0/843	0/642	0.746	EE1	Emotional engagement	0/856	0/664	0.887	ACH3	Social interaction
		0.843	EE2				0.898	ACH4	
		0.811	EE3				0.865	ACH5	
0/902	0/698	0.728	CE1	Cognitive engagement	0/885	0/721	0.806	SI1	Word-of-mouth advertising
		0.876	CE2				0.849	SI2	
		0.866	CE3				0.789	SI3	
		0.862	CE4				0.771	WOM1	
0/809	0/585	0.756	SE1	Social engagement	0/898	0/747	0.870	WOM2	Negative information resistance
		0.767	SE2				0.901	WOM3	
		0.772	SE3				0.864	RES1	
							0.916	RES2	
							0.809	RES3	

**Table 3.** Divergent validity of constructs

Variables	IMM	ACH	SI	EE	CE	SE	BA	BL	WOM	RES
IMM	0.881									
ACH	0.623	0.936								
SI	0.549	0.622	0.880							
EE	0.597	0.724	0.660	0.835						
CE	0.472	0.557	0.506	0.551	0.801					
SE	0.670	0.640	0.559	0.592	0.639	0.865				
BA	0.653	0.675	0.620	0.596	0.456	0.639	0.864			
BL	0.548	0.655	0.646	0.698	0.687	0.579	0.591	0.765		
WOM	0.788	0.606	0.639	0.616	0.396	0.698	0.685	0.520	0.815	
RES	0.587	0.650	0.705	0.639	0.405	0.587	0.698	0.581	0.627	0.848

### 4.2. Testing hypotheses

The structural model's fitness was measured using T coefficients, considering that the coefficients should be greater than 1.96 to confirm their implication at the 95% confidence level. Figures 2 and 3 demonstrate the standardized coefficients and structural model.

According to the T values and route coefficients obtained in Figures 2 and 3, the results of the research hypothesis test are presented in Table 4.

Based on the results of Figures 2 and 3 as well as Table 4, the impact of gamification on brand engagement is significant (T-value=19.851;  $\beta=0.462$ ). In addition, the effect of gamification on brand equity is significant (T-value=6.765;  $\beta=0.298$ ). Similarly, the effect of gamification on desirable brand behavior is significant (T-value=10.288;  $\beta=0.462$ ). Respecting the mediating route, the coefficient of the indirect gamification route on brand equity through the mediating role of brand engagement is 0.382. In other words, brand engagement adds 38.2% to the variance of this relationship. The coefficient of the indirect route of gamification on desirable consumer behaviors through the mediating role of brand engagement is 0.269, meaning brand engagement adds 26.9% to this relationship. Therefore, the term partial mediation role is used for these relationships.

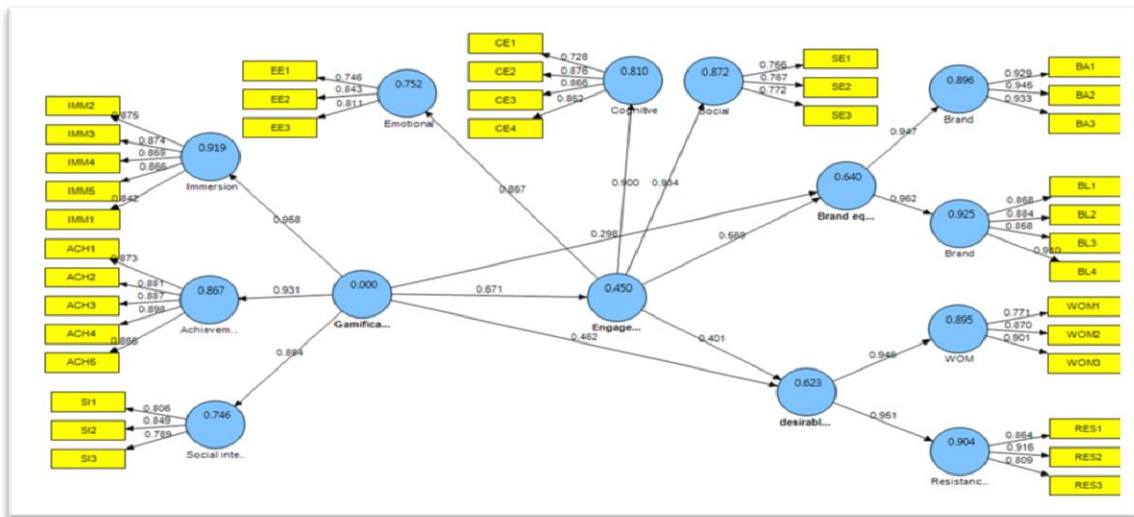


Fig. 2. Standardized coefficients of the factor loadings

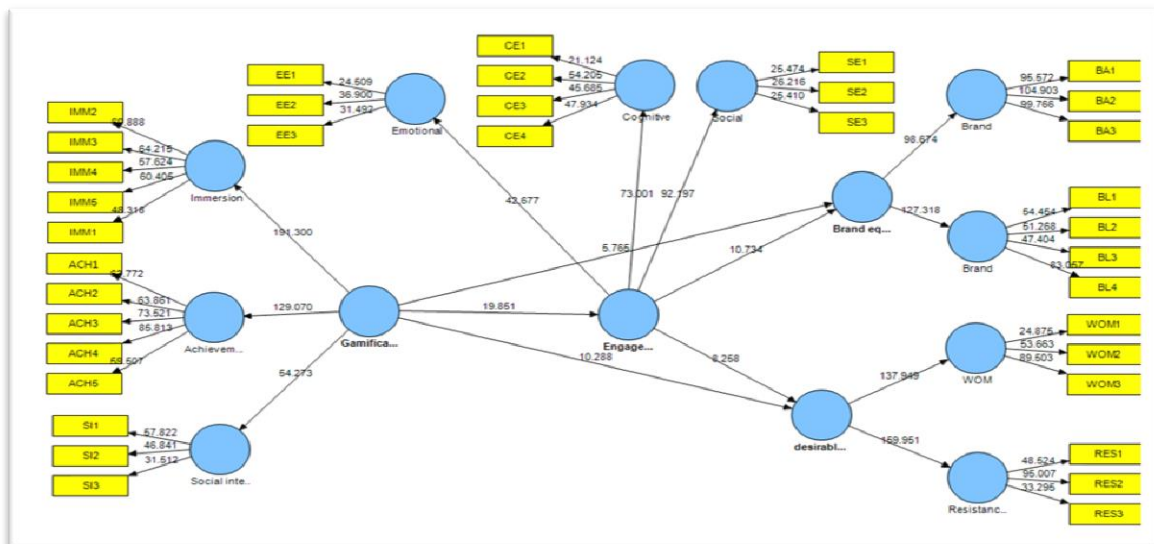


Fig. 3. The structural model

Table 4. Structural model results

Route	Direct impact	Indirect effect	T value	Hypothesis result
Gamification → Brand equity	0.298		6/765	Confirmed
Gamification → Desirable consumer behaviors	0/462		10/288	Confirmed
Gamification → Brand engagement	0/671		19/851	Confirmed
Brand equity → Brand engagement	0/569		10/736	Confirmed
Brand engagement → Desirable consumer behaviors	0/401		8/258	Confirmed
Gamification → Brand engagement → Brand equity		0/382		Partial mediation
Gamification → Brand engagement → Desirable consumer behaviors		0269		Partial mediation

### 5. Discussion

In light of the significance of gamification in online shopping, implementing effective strategies to stimulate desirable customer behavior is a vital component of successful online marketing. Notwithstanding, there exists a dearth of empirical evidence regarding this phenomenon. The present study



aims to investigate the impact of gamification on equity and desirable customer behaviors, emphasizing the mediating role of brand engagement within the context of the Digikala online retail store.

The study revealed that gamification features have a significant impact on brand equity. Through providing cognitive benefits, skill development, information acquisition, and learning, as well as expanding users' knowledge and expertise about the brand, gamification leads to an increase in customers' comprehension of the brand. By fostering mutual interactions with others, gamification creates an atmosphere of camaraderie and social bonding, facilitating future interactions with both the brand and other consumers. Customers become immersed in gamification activities, achieving accomplishments in the game and increasing their social interactions. As a result, they identify themselves as loyal customers and perceive higher brand equity for the brand. However, the direct effect of gamification on brand equity was found to be relatively weak. This may be due to Digikala's emphasis on achievement and immersion over social interactions, which can be more attractive to users. Combining achievements and social interaction through group competition can lead to both winning status and social experience outcomes, including social reliability. One of the advantages of using gamification in business is that it creates enjoyable value for customers. This indicates that gamification can give customers a sense of pleasure, happiness, and excitement when interacting with a company's activities, such as shopping or browsing its website. Consequently, when customers associate gamification with positive emotions, loyalty towards the brand will likely be formed, which becomes internalized in their identity and is harmonious with other aspects of their lives. Al-Zyoud's research (2020) supports this argument by showing that gamification can predict increased consumer loyalty, which is consistent with the present study's findings. However, Xi and Hamari's study (2020) did not confirm the effect of gamification on brand equity, which may be due to factors identified in the current study. Moreover, the relationship between gamification and customer loyalty was further reinforced by introducing brand engagement as a mediator variable.

The research results also demonstrated that gamification can significantly increase the desirable behaviors of the brand. Gamification activities create a unique experience by increasing the consumer's pleasure of interacting with the website, and the customer is encouraged to recommend this shop to friends and acquaintances. During the gamification procedures, customers receive more information about the brand, so by increasing this knowledge and comprehension of the brand, they will be more resistant to negative information. Furthermore, to appreciate the pleasure created by gamification activities and related to the appreciation of the brand, customers try to compensate for it with desirable behaviors. In this context, Wang et al. (2020) found that gamification elements such as points and badges, which are awarded to participants for various reasons, affect customers' word-of-mouth advertising intentions, which demonstrates the result related to the outcomes of current research. Hsu and Chen (2018a) have also confirmed the indirect relationships between gamification marketing activities and resistance to negative information.

Based on the study results, gamification can significantly increase brand engagement. These games are designed to engage customers constantly. For instance, in the Digiplay game, the more dice the user throws, the more luck they have, and using the words dice, key, star, and prison, the game space is moved to nostalgic games that bring immersion to the users. Earning more luck by increasing the score leads to realizing the feature of achievement in gamification. This continuity of the brand leads to an increase in passion and curiosity for the brand among users. Gatautis et al. (2016) and Xi and Hamari (2020) have reached similar results in this context.

The study demonstrated that brand engagement can significantly increase brand equity. Digikala users enjoy talking about this shop with other people, and it is the first shop they remember when choosing an online shop. Therefore, the users engaged in Digikala perceive higher brand equity. In this context, Hutter et al. (2013), Kwon et al. (2014) and Xi and Hamari (2020) reached similar results. Eventually, based on the research results, it was found that brand engagement can significantly increase brand-desirable behaviors. Indeed, the customers engaged in the brand and have more commitment to the brand, are willing to pay a higher price, demonstrate higher emotional satisfaction, are not ready to leave the brand with the efforts of competitors and expecting negative information, and are eager to enthusiastically reveal their interest in the brand by recommending it to friends and acquaintances. Hutter et al. (2013) and Hsu and Chen (2018a) reached similar results.

Regarding mediation routes, it can be said that gamification leads to increased brand engagement among customers, and brand engagement itself increases brand equity and desirable behaviors. The results of Eisingerich et al.'s research (2019) demonstrate that gamification reinforces hope in customers and, thus, increases customer engagement and digital sales. Hsu and Chen (2018a) confirmed the indirect relationships between the experience of gamification marketing activities and desirable consumer behaviors through value, satisfaction, and love for the brand. Also, In the current study, Digikala games make purchasing and communicating with the brand frustrating for customers, and mixing their wishing activities with game-like processes creates pleasure and entertainment for customers.

## 6. Conclusion and future studies

Marketing professionals utilize gamification techniques to elicit positive emotions from their clientele, thereby inducing sales of products or services. This approach leverages the natural human inclination to share positive experiences with others, potentially leading to increased exposure and sales. Gamification strategies are designed to captivate users and promote extended engagement periods with the brand, resulting in amplified product sales. To succeed in such games, customers require access to additional information about the brand, fostering a deeper sense of customer-brand interactivity. Brand engagement is characterized by curiosity and the desire to learn more about the brand. In the context of Digikala, a popular e-commerce platform in Iran, gamification has been utilized to enhance customer engagement and loyalty. For example, the "Nahal Omid" game incentivizes users to regularly check their user accounts and irrigate their virtual sapling to earn points. By incorporating concepts of hope and gift into the game mechanics, users become immersed in the experience of achieving more points while feeling brand loyalty through daily reminders to engage with the platform. Another example is found in the "*Haft Ganj*" mission, where users receive points for completing their user account on Digikala's platform. Through these gamification strategies, social interaction among users is encouraged as they compete for points, although this aspect was found to have the lowest score among the three features evaluated. As such, further efforts are needed to improve the social aspects of Digikala's gamification activities and promote increased interaction and social relations among users.

Based on the research findings, it is suggested that marketing managers consider that while some individuals may find individual games entertaining, many users are attracted to the competitive aspect of gaming. Therefore, gamification strategies should be designed to inspire social competition among users. Personal profiles should display leaderboards of game activities visible to other users, reinforcing the game's competitive nature and encouraging users to continue playing until they achieve the "Best User" status. Avatar/virtual identity/profile ranking should be based on the user's comprehension of the brand, and levels of brand recognition can be tested through a series of intelligence questions related to the brand's logo, design, shape, and color. Points in the user account should be awarded for correct answers. Additionally, users should be given opportunities to join teams, participate in group competitions, and interact socially with others through various features of social networks such as messages, blogs, and chats. It is also recommended to incorporate the brand story into the gamification strategy to engage users and encourage them to learn more about the brand's success and failure stories and details that are not publicly available. However, it should be noted that gamification has its risks and should not be implemented solely because it is trendy. Gamification is a tool that can be used to engage users, but its pitfalls must be considered as poor implementation can result in negative consequences.

As a theoretical suggestion for future research, it is recommended that this study be extended to other statistical populations and online retailers. Other sectors, such as public services, education, and tourism, could also be explored. Limitations of the study stem from the chosen population, and Digikala, a well-known online retailer, may flaw in generalizing the results to other populations. In addition, the questionnaire tool utilized in the study can only gather respondents' opinions within the framework of the questionnaire. Therefore, researchers are encouraged to explore gamification and its impact on customer experience through alternative quantitative or qualitative methods such as experimental studies, neuromarketing techniques, or phenomenological approaches. Such methods and approaches could provide a more comprehensive understanding of how gamification improves

customer experience. Also, it is essential to acknowledge that the utilization of gamification, akin to other interventions in marketing, may have adverse effects in addition to advantageous outcomes. Recent research has brought attention to the negative implications of gamification on areas such as trust, mental and emotional well-being (Srivastava et al., 2022), psychological resistance, and emotional exhaustion (Zhou et al., 2023b), as well as perceived cost, social anxiety, and ambiguity confusion (Lu et al., 2022). As a result, it is recommended that future research considers the dark sides of implementing gamification in online brand stores like Digicala. The potential of gamification as a strategy within internal marketing activities, particularly in the context of training and development, has been recognized in the literature (Yang & Oh, 2022). Research findings indicate that immersive virtual reality can enhance employee knowledge and abilities, such as problem-solving, self-confidence, and learning motivation. Against this backdrop, it is recommended that future research explore the impact of gamified internal marketing analysis on external marketing activities, thereby generating theoretical insights.

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