

The Effects of Hedonic and Utilitarian Motivations on Consumer Engagement in Gamification

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ABSTRACT. The relationship between customers and brands is undergoing a radical change due to the effects of technology. As a result of this change, especially gamification and consumer engagement are the two fundamental issues guiding the consumer relations of the brands. The most important feature of gamification is balancing a rational purpose with an enjoyable experience; therefore, it has a dual effect of being both hedonic and utilitarian. Results show that almost all utilitarian/hedonic motivations affect consumer engagement positively. Where consumer engagement and brand outcomes were found to be partially related, results indicated that the brand relationship with consumers had been approached from a different perspective. Consumers can engage in the activities of brands while also showing commitment to them. However, this may not necessarily result in either brand loyalty or dissemination of the brand's positive messages.

KEYWORDS. Consumer Engagement, Gamification, Hedonic Motivations, Utilitarian Motivations

INTRODUCTION

The relationship between brands and consumers has changed significantly in the digital era with the spread of digital technologies and the Internet (Gambetti & Graffigna, 2010). Firstly, contemporary consumers expect to be approached on the basis of a personalized experience or relationship, rather than as a faceless group en masse (Firat et al., 1995). Perhaps as a result of this change, their loyalty to brands has been weakened, and consumers are

now looking for an experience in which they can participate, rather than simply remaining loyal to a brand (Cova, 1996; Firat et al., 1995; Havas, 2017). Thus, the meaning they impose on brands has also changed. Beyond simply associating brands with purchasing activities, contemporary consumers pursue a medium that allows them to express themselves, socialize, and have pleasant experiences (Gambetti & Graffigna, 2010). The consumer and brand relationship today is beyond mere purchasing activities: It encompasses a composite experience

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process in which the effects of a wide range of activities with the brand are experienced by the customer in either the digital or physical field. All of these developments have generated interest in consumer engagement (CE) studies, in which the experiential marketing approach (Schmitt, 1999) is also effective.

Secondly, technology has reached a point that it now affects the lives of consumers in all aspects of life. In this process, games have reached a wide target audience through technology (Santhanam & Liu, 2015; Zichermann & Linder, 2010). It can be said that a large group of players has emerged in a way that has never been seen before in history (WePC, 2020). This has revealed an audience of “player consumers” who think like players, and thus they perceive brand communication through the eyes of a player. As a result of this development, many practical applications and academic studies in the field of marketing have adopted the gamification approach in recent years. Games, by their very nature, contain features that motivate people, and as people play games, they willingly continue their activities in such a way as to lose themselves in the flow of time. The activity they do is fun for them, and so they are willing to pursue it further (Agarwal & Karahanna, 2000; Csikszentmihalyi, 1990; Przybylski et al., 2010). In this respect, both game and game-like systems offer a favorable environment for consumer engagement (CE).

The most important aspect of playing games is that the activity has a purpose in itself, one in which the players engage while enjoying the activity. The gamification approach integrates these features of games into more instrumental or utilitarian structures; in this way, it transforms non-game contexts into a game-like system while aiming to create entertainment and engagement with these games (Deterding et al., 2011; Koivisto & Hamari, 2019; Santhanam & Liu, 2015; van Waart et al., 2011; Werbach & Hunter, 2012). In this sense, gamified applications provide a two-way structure: They

contain the hedonic aspect of games (entertainment, competition, etc.) as well as the utilitarian aspect that mediates the achievement of a goal according to its applied fields (e.g., efficiency in education, achievement of a goal in sports, etc.). The main purpose of gamification is to enrich the activity with gamefulness in order to keep user engagement high while supporting individuals to reach their instrumental goals.

Although engagement studies in different disciplines have long received a great deal of interest, research in the field of marketing, in particular, has increased in recent years. Specifically, there has been a great deal of effort to establish the definition and theoretical context of customer engagement (R. J. Brodie et al., 2011; Gambetti & Graffigna, 2010; L. Hollebeek, 2011; Vivek et al., 2012). A number of studies have attempted to explain consumer activities with regard to gamification. Most research has focused on the general characteristics of game elements to examine their influence on consumer attitudes, experiences, or behaviors (Hamari, 2017; Högberg et al., 2019; Nobre & Ferreira, 2017), while additional research has integrated gamification experiences with satisfaction (Hsu & Chen, 2018), intrinsic motivations (Harwood & Garry, 2015; K. Kim & Ahn, 2017) and co-creation (Leclercq et al., 2018). Despite the growing interest in gamification, particularly among practitioners (Statista, 2021), scant attention has been paid to CE in gamification (Harwood & Garry, 2015; Nobre & Ferreira, 2017). In spite of these works, to date, no study has looked specifically at the effects of hedonic and utilitarian components on CE in gamification.

Further to this point, the purpose of this study is to answer the following research question: “How do hedonic and utilitarian motivations of gamification affect CE?” More specifically, this research has three objectives:

1. To attempt to establish the connection between hedonic/utilitarian motivation variables of gamification and CE

2. To examine the impact of CE on brand loyalty, brand commitment and word-of-mouth (WOM)
3. To explore the link between brand loyalty, brand commitment and WOM.

Information generated from this research should provide managers and academics with a greater understanding of how to use gamification techniques to enhance CE.

The remainder of this article is structured as follows: Firstly, the extant literature on CE and gamification is reviewed, after which the research methods and procedures used in the study are explained, and the results of this study are then presented. Finally, the implications, limitations, and potential directions for future research are discussed and elaborated upon.

GAMIFICATION

The spread of games in a wide variety of ways, such as on mobile or computer platforms (Newzoo, 2020), has made games a popular and important activity for individual leisure time (Gosling & Crawford, 2011, p. 150). This has created an enormous community of players; such a proliferation of individuals familiar with games has established an audience that thinks like players, who in turn have grown to expect game-like design from their daily activities and even conduct business like players, both of which are reflected in their consumption habits (Herger, 2014). These developments have naturally brought into existence many companies interested in games and shaped many of their activities into featuring a game-based design. In this context, although gamification is a novel and new approach, it has been widely used in the development of a wide variety of programs in recent years.

Gaming is an activity which involves problem-solving through the lens of personal entertainment, with its playful aspects focused on creating an enjoyable experience (Herger, 2014). As such, games always offer such an experience to players (Koster, 2013), and players play

these games to be amused by these pleasant situations. The main purpose of a game-like (gamification) system is to increase user engagement by using the motivating features of such games (Zichermann & Cunningham, 2011): The basic design principle of gamification is to combine the hedonic motivating features of games with the utilitarian goals of a non-game area. Thus, gamification can be defined as the addition of a gameful design into a non-game context, and thus the creation of a new high-engagement, game-like structure.

Deterding et al. (2011, p. 10) define gamification as the use of game elements in non-game contexts, a definition of which is the most widely referred to in the existing literature. However, many authors claim that defining gamification as simply integrating game elements into a non-game context reduces the concept to an aimless system that merely distributes points or badges (Nicholson, 2012; Santhanam & Liu, 2015). Houtari and Hamari (2017) argue that game-based gamification definitions that focus solely on game mechanics are incomplete. They contend that if a system using any element of game mechanics is to be defined as gamification, then more serious “games” such as loyalty programs or advergames in marketing would also fall under such a definition as well. Thus, the authors consider gamification not only as game elements or design but also as any arrangement or design which will bring users to a gameful experience. In this sense, Huotari and Hamari (2012) have approached gamification in the context of “relational marketing,” an approach that has been adopted in marketing literature for many years, with the purpose of increasing consumer relations. Accordingly, they define gamification as “a process of enhancing a service with affordances for gameful experiences in order to support user’s overall value creation.”

Beyond the use of game techniques, gamification is the creation of new systems with gameful thinking. Any gaming effort should meet the goals, interests, and needs of its target

audience while providing its users with the information they need to improve their performance (Nicholson, 2012); on this basis, we can reason that the main purposes of gamification are to achieve utilitarian goals supported by gameful behaviors (Zichermann & Cunningham, 2011), to experience deep concentration or a flow state (Hamari et al., 2016), and to increase user engagement (Werbach & Hunter, 2012). When gamification features meet the goals of consumers within a gaming context, it is expected that consumer loyalty to the brand/company will increase (Hofacker et al., 2016).

CONSUMER ENGAGEMENT

As organizations shifted from a product-oriented management approach to a customer and service-oriented approach, their main interests and efforts have shifted towards building and strengthening customer relationships rather than sales transactions (Bijmolt et al., 2017, p. 119). The CE approach plays an important role in this new customer-oriented marketing approach, which is designed to cope with the ever-evolving individual and social dynamics of postmodern consumer behavior (Gambetti & Graffigna, 2010). However, although CE continues to have a strong emphasis on marketing and digital technology, there remain discussions on the theoretical structure of the concept itself (Gambetti & Graffigna, 2010; L. Hollebeek, 2011; Pansari & Kumar, 2017; van Doorn et al., 2010; Vivek et al., 2012).

It is possible to say that the CE definitions broadly include three main perspectives in relevant literature: (1) attitudinal and multidimensional, (2) experiential, (3) behavioral and one-dimensional. Firstly, group studies generally indicate that CE is a process experienced as a result of consumer participation which is based around object interaction and is defined as a multidimensional phenomenon that includes cognitive, emotional, and behavioral components (Bowden, 2009; R. J. Brodie et al., 2011;

L. Hollebeek, 2011; Vivek et al., 2012). The authors in this group consider engagement to be a psychological situation whose consequences are a result of the consumer's interaction with the company or brand.

The second approach treats CE as a behavioral activity. According to the authors in this group, consumer behavior is a source of motivation that goes beyond consumer-firm activities and creates a wide area of interaction between consumer and firm (Bowden, 2009; Graffigna & Gambetti, 2015). Authors in this group who care about the behavioral dimension of CE generally evaluate CE according to its more observable and objectively perceived behavioral signs (Jaakkola & Alexander, 2014; van Doorn et al., 2010). This trend is stronger in the digital field of studies; for example, data such as how many individuals like a website, how much time they spend on it, and how much they share the pages can be considered as basic indicators of engagement.

Finally, there are authors who consider engagement to be an experiential process which includes motivational and attitudinal elements (R. J. Brodie et al., 2011; Calder et al., 2009; Mollen & Wilson, 2010). According to this approach, the main aspect for consumers is not to interact or obtain the engagement object itself, but rather the experience they have during the engagement. As a result of the experience, a positive change in their attitude and behavior towards the engagement object (the brand or firm, in this case) is expected.

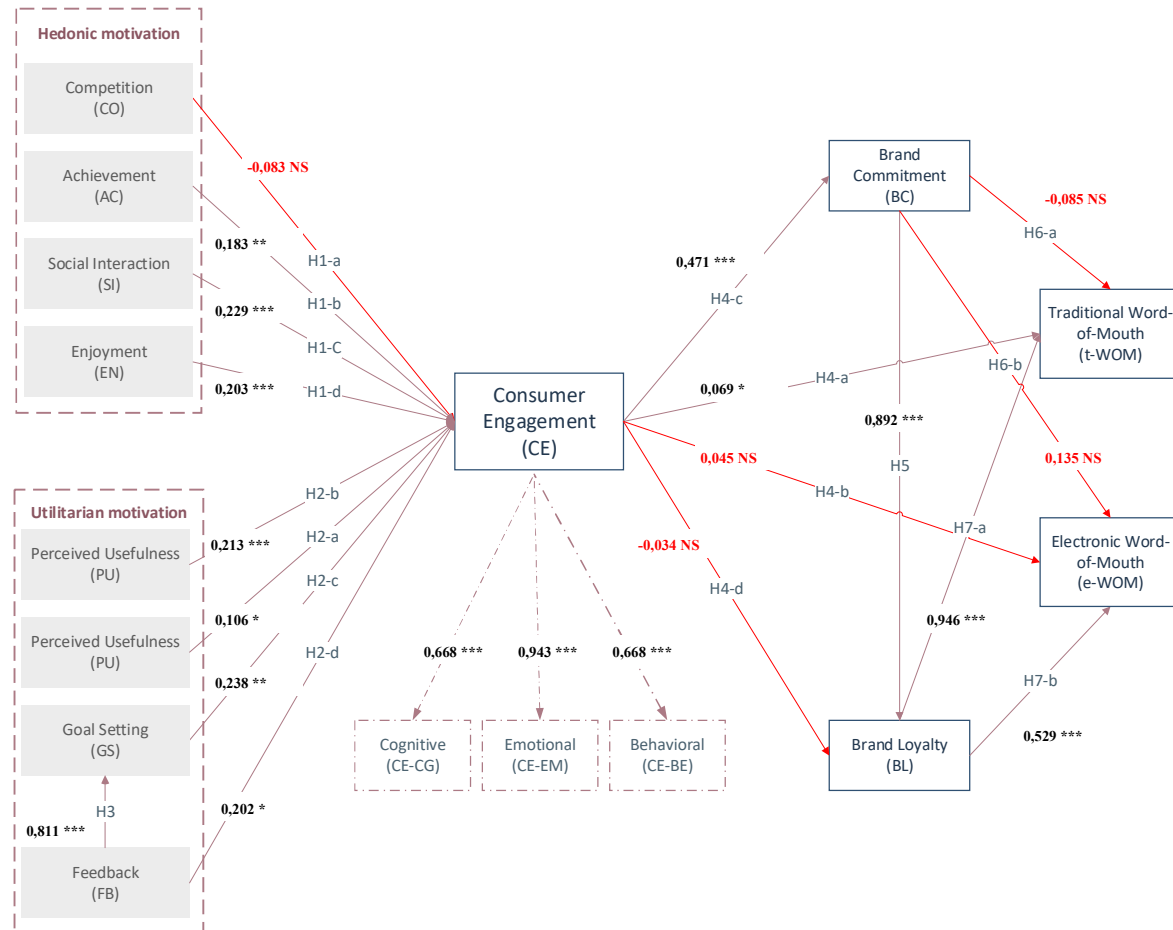
ANTECEDENTS OF CONSUMER ENGAGEMENT IN GAMIFICATION

Fundamentally, this study focuses on two key areas. The first area is the relationship of consumers' hedonic and utilitarian motivations towards gamification apps that focus on consumer engagement; secondly, it discusses the impact of gamification on brands through consumer engagement. Considering the hedonic experience characteristics of games and the functional aspects of gamification, the study

identified hedonic (success, competition, pleasure, social interaction) and utilitarian (feedback, purpose-oriented, perceived ease of use, perceived benefit) motivations as antecedents of our research model. The results of CE were determined to be brand loyalty and WOM. In

addition, consumer engagement sub-components are shown in the model based on the literature and within the scope of the scale used (see Figure 1). Below are a brief literature review and the hypotheses of the study, as mentioned in the study research framework.

Figure 1. Research Model and Hypotheses



n.s: Not Significant, * p < 0.050, ** p < 0.010, *** p < 0.001

HEDONIC MOTIVATION SOURCES

Competition

Competition can be defined as the beginning of a challenge to overcome a particular task (Richter et al., 2015). Individuals compete to achieve a specific goal, regardless of the type of game, whether it is a multiplayer or single-

player game. Challenges in multiplayer designs include competition or collaboration between individuals playing the game. Competition encourages people to challenge and establish superiority over each other to achieve the highest score in an activity. Research shows that games trigger competition, and this situation encourages players to continue using the relevant systems (Mulcahy et al., 2018, p. 33).

For example, the presence of a leaderboard can trigger competition among players of a game, because it allows everyone to see the summation of their activities as well as those of others (Suh et al., 2015, p. 676).

H1-a: Competition positively affects consumer engagement.

Achievement

Games are generally systems with dense symbols that show the success and progress of their players. These systems are intended to monitor player performance as well as encourage them to continue playing the game. The structure of success in games promises rewards as a result of achieving goals ranging from easy to difficult, in order to keep player participation high during the gaming experience. Different success categories aim for different benefits: Educational achievements seek to motivate players to learn the game, while game-specific achievement symbols, on the other hand, can provide new ways of experiencing the game; in turn, both approaches serve to increase playtime and player engagement (Montola et al., 2009; Richter et al., 2015; Werbach & Hunter, 2012).

H1-b: Achievement positively affects consumer engagement.

Social Interaction

Players want to communicate both with society and other peers to share their success as well as receive recognition for their achievements. This situation is also explained as “social contact,” and such interaction with others causes the formation of memories through common experience, which increases strong participation and commitment (McGonigal, 2011). Many authors consider social interaction a prerequisite for individuals to use gamification (Hamari, 2013; Yee, 2006), especially as players tend to enjoy the gaming experience when they share it with one or more people (Rigby & Ryan, 2011, p. 66). In other words, in the context of gamification, engagement can

be increased when users are offered the possibility to interact with other people.

H1-c: Social interaction positively affects consumer engagement.

Enjoyment

In the literature on the use of technology, hedonic user experiences are often explained by perceived enjoyment experiences. Perceived enjoyment is related to how playful individuals perceive a system to be on their own without receiving any external reward when they use it (Moon & Kim, 2001, p. 220), whereas games are defined as systems for entertainment purposes in which individuals tend to have an enjoyable experience (Hassenzahl, 2003). According to a wealth of research results, perceived enjoyment in games and game-like systems has a significant effect on a user’s intention to use the relevant systems (Moon & Kim, 2001; van der Heijden, 2004).

H1-d: Enjoyment positively affects consumer engagement.

UTILITARIAN MOTIVATION SOURCES

Perceived usefulness and perceived ease of use.

In the literature on the use of technology, individual perceptions of the benefits of a particular system are explained by the “perceived usefulness (PU)” variable, which is the basis of the Technology Acceptance Model (TAM) (Davis, 1989, p. 320). PU can be defined as “the degree to which a person believes using that particular system would enhance his or her job performance.” Early research has considered PU, especially in utilitarian systems, as an important variable to measure use intentions (Davis, 1989; Venkatesh & Davis, 2000). The other important antecedent of TAM is that of individual perception regarding the difficulty of the system. Perceived ease of use (PEU) is defined as the degree to which individuals perceive the need for physical and mental effort in their interactions with a particular system (Davis, 1989, p. 320).

According to TAM, users will be more willing to use a system when they think the system that they are interacting with is easy to use (Venkatesh & Davis, 2000). PEU and PU can be effective in explaining individual perceptions, attitudes, and use intentions, particularly in utilitarian systems rather than hedonic systems, as it gives stronger, more reliable results in such systems (Hess et al., 2014, 21). This is because both variables measure utilitarian motivation rather than hedonic motivation (Childers et al., 2001).

H2-a: PU positively affects consumer engagement.

H2-b: PEU positively affects consumer engagement.

Goal setting and Feedback

In order for CE to take place and to be beneficial for the company, the goals of the customer must be compatible with the goals of the company (van Doorn et al., 2010). Goals are key for CE, as goals are effective in motivating and directing individuals to their activities and ensuring continuity (Locke & Latham, 2002, p. 706). By establishing goals, individuals create a reference point with which they can measure their performance. The key to a goal is that it provides a focus on precise actions and behaviors in order to follow the process leading to the results, thus allowing one to learn throughout the progression stages. Individuals may change their behavior based on consistencies (or inconsistencies) between their purpose and their performance. At this stage, a feedback mechanism is an indicator with which we may compare the performances and purposes of individuals (Bagozzi & Dholakia, 1999; Duda, 2004; Locke & Latham, 2002).

According to the Goal Setting Theory (GST), goals must have three basic characteristics in order to be effective: (1) goal commitment, (2) feedback, and (3) task complexity (Locke & Latham, 2002). Games and game-like structures contain all of these features. Most of the

mechanics in gamification function as a feedback mechanism in addition to their basic functions. While tools such as progress bars provide users with instant information about their activities, mechanics such as badges and leaderboards are indicators that inform individuals of their accrued achievements (Landers et al., 2017). Feedback informs users on how well they have achieved their goals and what they should do to reach them, while at the same time encouraging users to engage with content (Huang et al., 2018; Huotari & Hamari, 2017). H2-c: Goal setting positively affects consumer engagement.

H2-d: Feedback positively affects consumer engagement.

H3: Feedback positively affects Goal setting.

CONSEQUENCES OF CONSUMER ENGAGEMENT IN GAMIFICATION

In the literature, the concept of CE is generally considered to be the experience of consumers as a result of their interaction with the brand/organization. The intense interaction and experiential relationship between brands and consumers induce consumers to behave in manners beyond mere purchasing, as detailed in purchasing behavior literature (van Doorn et al., 2010). Accordingly, most studies define CE as a multidimensional structure that includes cognitive, emotional, and behavioral dimensions (Bowden, 2009; R. J. Brodie et al., 2011; L. Hollebeek, 2011; Vivek et al., 2012). Therefore, the consequences of CE are also expected to be multidimensional. In the context of this approach, Dessart et al. (2017) considered the consequences of CE to be commitment, trust, and loyalty through these variables. In the theoretical study of Brodie et al. (2011), CE's consequences are explained as satisfaction, commitment, trust, and loyalty, while Ahn and Back (2018) defined the consequences of CE as a behavioral intention variable in the general sense, and they refer to WOM and loyalty as behavioral intentions.

H4-a Consumer engagement positively affects traditional word of mouth.

H4-b Consumer engagement positively affects electronic word of mouth.

H4-c Consumer engagement positively affects brand commitment.

H4-d Consumer engagement positively affects brand loyalty.

H5 Brand commitment positively affects brand loyalty.

H6-a Brand commitment positively affects traditional word of mouth.

H6-b Brand commitment positively affects electronic word of mouth.

H7-a Brand loyalty positively affects traditional word of mouth.

H7-b Brand loyalty positively affects electronic word of mouth.

were also sent to approximately 5,000 users in the friends list of the researcher, with a request to complete the questionnaire. Approximately 10% of users (473) participated in the survey, and for analysis, as Hair et al. (2019) suggest, all incomplete online questionnaires and outliers in the data were deleted according to their Mahalanobis distance. The final sample comprised 441 cases and was therefore appropriate for SEM analysis. Detailed demographics, as well as app usage distribution of the participants, are shown in Table 1. The sample largely consisted of male respondents (69.4%), and the vast majority of respondents were between 19 and 49 years of age (90%). Half of the respondents had used the apps for one or two years, with 80% having used the apps at least several times a week.

METHODOLOGY

Sampling and Data collection

Data was gathered from active users of Adidas Running and Training apps aged over 18 years old. According to Cohen et al. (2007, p. 110), there are basically two types of sampling methods: random and non-random. When the size of the population is unknown, the sample selection can only be made using a non-random method. Since we cannot precisely determine the size of the user base of apps, the non-random convenience sampling method was preferred.

It is stated that for structural equation modeling (SEM) analysis, a sample size of at least 100-200 is required, though it should still be noted that the general opinion is that the sample should not be less than 200. Many authors state that the larger the sample is, the better the result will be when applying it to the SEM model (Hair et al., 2019; Kline, 2016). Thus, our primary goal is to reach the required sample size for appropriate use of SEM. Adidas Running & Training Apps only allow messaging with friends, so about 12,000 friend invitations were sent to users, after which invitation messages

MEASUREMENT

An online questionnaire was used to collect the data. All variables were measured using multi-item scales adapted from previous studies (see Appendix A). In order to first validate the research model and the questionnaire, we performed a pilot test with 124 users of the apps to verify the feasibility of the questionnaire and ensure that it was clearly understandable in its entirety. As a result of the pilot test analysis, slight changes were made in the items of the scale: For example, the WOM variable was modified into two separate structures in the model, namely traditional WOM and electronic WOM.

Moreover, for the SEM analysis, one more item was added the e-WOM variable.

RESULTS

In the analysis of the data, we followed the SEM analysis process suggested by Hair et al. (2019, p. 625). After our data set met the SEM's requirements (Linearity, Covariance, Multiple Linearity and Normal Distribution),

we followed a two-step procedure of first assessing the measurement model, and then the structural model. Firstly, we performed a CFA analysis. Factor loadings are normally desired to be 0.60 and above, however factor loads of 0.50 are also considered significant in

practice (Hair et al. 2019). Here, only one item of the PEU (PEU1-0.47) is lower than 0.60, though it is very close to the 0.50 level. The relevant item has not been excluded, since it consists of 3 items in total. Other items generally have a value of 0.70 and above.

Table 1. Descriptive Statistics of the Sample (n = 441)

	Attribute(s)	N	%
Age	19-29	104	24%
	30-39	174	39%
	40-49	121	27%
	50-59	38	9%
	≥ 65	4	1%
Gender	Male	306	69.4%
	Female	134	30.4%
	Not prefer to say	1	0.2%
Duration of Adidas Run & Training Usage			
	1	151	34%
	2	73	17%
	3	66	15%
	4	38	9%
	5	46	10%
	6	67	15%
The Apps Using Frequency			
	Everyday	82	19%
	Several times a week	267	61%
	Once a week	37	8%
	Several times a month	45	10%
	About once a month	4	1%
	Less than once a month	6	1%
Those who use other fitness apps along with Adidas Run & Training			
	Runkeeper	22	5%
	Endomondo	18	4.1%
	Fitbit	34	7.7%
	Nike	94	21.3%
	Strava	140	31.7%
	Others	175	39.7%
	I only use Adidas	90	20.60%

Table 2. Cronbach Alpha, AVE, CR, Intervariate Correlation and Square Root Values of AVE

Ver.	No. of items	CR	Cronb. Alfa (a)	AVE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
1	FB	4	0,81	0.888	0,53	0,73														
2	GS	5	0,87	0.802	0,57	0,699 ***	0,76													
3	PU	3	0,89	0.898	0,72	0,459 ***	0,731 ***	0,85												
4	PEU	3	0,76	0.842	0,52	0,511 ***	0,469 ***	0,427 ***	0,72											
5	SI	4	0,84	0.724	0,58	0,268 ***	0,354 ***	0,309 ***	0,220 ***	0,76										
6	AC	3	0,91	0.879	0,77	0,254 ***	0,256 ***	0,156 **	0,03	0,346 ***	0,88									
7	CO	3	0,77	0.865	0,53	0,205 ***	0,274 ***	0,168 **	0,197 **	0,253 ***	0,567 ***	0,73								
8	EN	3	0,89	0.802	0,73	0,527 ***	0,569 ***	0,424 ***	0,492 ***	0,314 ***	0,157 **	0,271 ***	0,85							
9	BC	6	0,97	0.854	0,85	0,206 ***	0,304 ***	0,296 ***	0,106 *	0,368 ***	0,372 ***	0,171 **	0,242 ***	0,92						
10	BL	3	0,92	0.882	0,8	0,163 **	0,196 ***	0,186 ***	0,06(n .s)	0,395 ***	0,348 ***	0,150 **	0,197 ***	0,847 ***	0,9					
11	e-WOM	3	0,93	0.834	0,82	0,131 *	0,147 **	0,128 *	0,02(n .s)	0,373 ***	0,431 ***	0,166 **	0,118 *	0,614 ***	0,647 ***	0,91				
12	t-WOM	3	0,94	0.971	0,85	0,133 *	0,180 ***	0,206 ***	0,095 †	0,432 ***	0,317 ***	0,131 *	0,183 ***	0,753 ***	0,892 ***	0,642 ***	0,92			
13	CE-CG	3	0,84	0.921	0,64	0,566 ***	0,614 ***	0,445 ***	0,490 ***	0,269 ***	0,175 **	0,153 *	0,585 ***	0,237 ***	0,199 ***	0,114 *	0,182 ***	0,8		
14	CE-EM	4	0,9	0.939	0,69	0,573 ***	0,700 ***	0,662 ***	0,520 ***	0,438 ***	0,236 ***	0,245 ***	0,562 ***	0,297 ***	0,193 ***	0,182 ***	0,205 ***	0,564 ***	0,83	
15	CE-BE	3	0,86	0.925	0,67	0,529 ***	0,532 ***	0,412 ***	0,251 ***	0,516 ***	0,398 ***	0,318 ***	0,390 ***	0,432 ***	0,397 ***	0,322 ***	0,375 ***	0,399 ***	0,562 ***	0,82

Note: The diagonal values shown in dark color in the correlation matrix are the square root of the AVE.

n.s: Not Significant, † p < 0.100, * p < 0.050, ** p < 0.010, *** p < 0.001

Therefore, it can be accepted that all observed variables represent the latent variables. For the reliability of the scales, the Cronbach alpha was first examined. The Cronbach Alpha value should be at least 0.70 for acceptable reliability of the scale (Hair et al. 2019, p.775). Here, only one variable is at the level of 0.724 (See Table 2), while all other items have values above 0.8. The higher the number of items in the scale, the higher the probability that the Cronbach Alpha value will be higher, so researchers recommend tests that are less sensitive to the number of scale items (Hair et al. 2019, p.162). In this context, Composite Reliability (CR) values of each scale were examined at the same time. Similar to the Cronbach Alpha results, only one item is at the level of 0.7, while other scales range from 0.814 to 0.942. These results mean that the internal consistency of the scales is high (See Table 2). Convergent validity explains how correlated indicators represent the same structure, and factor loadings help find evidence as to whether the indicators within a single factor are related.

Standardized factor loadings (β) should be higher than 0.5 or ideally 0.7. Additionally, a number of other tests are also used to test the level of convergent validity. With regards to minimum threshold values for convergent validity in the literature, values of $CR > 0.7$, $CR > AVE$ and $AVE > 0.5$ are recommended (Hair et al. 2019). On the other hand, in terms of discriminative validity, cross factor loadings and Fornell-Larcker's criterion were taken as a basis. According to this criterion, the Average Variance Extracted (AVE) square root of a variable must be greater than its correlation with all other structures (Henseler et al., 2015). Each construct's AVE was higher than the recommended appropriate amount of 0.50, with the exception of the scale of Competition. When an item of competition variable (CO3) was removed from the Competition scale, the AVE value increased (0.526), and both convergent and discriminant validity criteria were met (See Table 1 & 2).

Table 3. Standardized Regression Weights and t-Values

	β	T	p		β	t	p
Feedback				Social Interaction			
FB1	0,751			SI1	0,819		
FB2	0,832	16,774	***	SI2	0,844	18,779	***
FB3	0,749	14,845	***	SI3	0,729	15,648	***
FB4	0,542	10,377	***	SI4	0,629	13,075	***
Goal Setting				Achievement			
GS1	0,745			AC1	0,719		AC1
GS2	0,79	16,491	***	AC2	0,95	19,346	AC2
GS3	0,825	17,307	***	AC3	0,938	19,107	AC3
GS4	0,723	14,723	***	Competition			
GS5	0,691	14	***	CO1	0,604		
Perceived Usefulness				CO2	0,599	14,932	***
PU1	0,855			CO4	0,773	9,762	***
PU2	0,936	25,253	***	Enjoyment			
PU3	0,748	18,202	***	EN1	0,825		
Perceived Ease of Use				EN2	0,886	21,315	***
PEU1	0,470			EN3	0,85	20,329	***
PEU2	0,871	9,472	***	Brand Loyalty			
PEU3	0,766	8,846	***	BL1	0,916		
Brand Commitment				BL2	0,943	34,87	***
BC1	0,877			BL3	0,826	24,716	***
BC2	0,916	29,575	***	Word-of-Mouth (electronic)			
BC3	0,891	27,609	***	e-WOM1	0,948		

BC4	0,975	34,035	***
BC5	0,899	28,07	***
BC6	0,963	32,942	***
Consumer Engagement (Behavioral)			
CE-BE1	0,686		
CE-BE2	0,857	15,492	***
CE-BE3	0,852	14,588	***
Consumer Engagement (Cognitive)			
CE-CG1	0,725		
CE-CG2	0,873	17,006	***
CE-CG3	0,853	16,393	***

*** $p < 0,001$

Overall, the fitness of the measurement model is: $\chi^2 = 2496.807$, $\chi^2/sd = 1220$, $p < .001$, CFI = .933, TLI:925, GFI: .82, RMSEA = .049, SRMR: .058, which is considered to be a very good measurement of fitness (Hair et al., 2019, pp. 635–643; Ullman, 2015, pp. 721–727).

STRUCTURAL MODEL

Following CFA, we used AMOS 24.0 to analyze the proposed model and hypotheses (Figure 1). The results show that the data fits the model. The goodness-of-fit statistics for the model are as follows: $X^2: 2507,567$, $X^2/sd: 1,959$, $p < .001$, CFI = .941, TLI:937, GFI: .822, RMSEA = .047, SRMR: .078.

As can be seen in Figure 2, a generally positive relationship is observed between the variables. Among hedonic sources of motivation, Enjoyment ($\beta = .203$, $p = .001$), Achievement ($\beta = .183$, $p < .01$) and Social Interaction ($\beta = .229$, $p < .001$) positively affect CE, while between Competition and CE there is no significant relationship ($\beta = .083$, $p > .05$). On the other hand, all utilitarian motivations, although not very strong, positively affect consumer participation, nonetheless. Goal Setting ($\beta = .238$, $p < .01$), Feedback ($\beta = .202$, $p < .05$), PEU ($\beta = .106$, $p < .05$), and PU ($\beta = .213$, $p < .001$) were found to be statistically significant in explaining CE; moreover, as expected, Feedback strongly positively affects Goal Setting ($\beta = .811$, $p < .001$). The data shows that as feedback features increase in gamification, the strength

e-WOM2	0,966	42,538	***
e-WOM3	0,791	23,974	***
Word-of-Mouth (traditional)			
t-WOM1	0,866		
t-WOM2	0,955	30,632	***
t-WOM2	0,934	28,9	***
Consumer Engagement (Emotional)			
CE-EM1	0,797		
CE-EM2	0,905	21,38	***
CE-EM3	0,905	21,484	***
CE-EM4	0,692	15,561	***

of belief the users have in reaching their goals will also increase.

The brand relationship between the engagement of consumers and gamification has been identified through four hypotheses. As shown in Figure 1, CE positively affects brand commitment ($\beta = .471$, $p > .001$), while brand loyalty and WOM effects of both types were not found to be statistically significant. Results for other variables can be seen in Figure 1.

CONCLUSION AND DISCUSSION

This study mainly focuses on two questions: Firstly, “Do hedonic and utilitarian motivations in gamification have an impact on consumer engagement?”; secondly, “Is there a relationship between consumer engagement in gamification and their attitude and behavior towards the brand (Adidas)?”.

Firstly, the relationship between the hedonic and utilitarian sources of motivation of gamification and CE was found to be positive, with the exception of Competition. Therefore, the empirical results support the hedonic and utilitarian aspects of gamification that we emphasized at the beginning of the study. The previous studies and the results of this research largely overlap: For example, Li et al. (2015) and Eisingerich et al. (2019) each found that social interaction increases CE and one’s intention to continue their activities. However, as in our research, the positive effect of competition had not been discovered in these studies; that is, even though competition in gaming culture

is considered to be an important motivator for playing a game in the first place (Lucas & Sherry, 2004; Yee, 2006), both the results of this study, as well as previous empirical research (Leclercq et al. 2018) show that competition in gamification has no effect on CE.

Another important conclusion of the study is that it supports the arguments that enjoyable experience increases CE (Roderick J. Brodie et al., 2013; H. O'Brien, 2010). Studies on games have shown that enjoyment factors positively affect user attitudes (Malone, 1980; Przybylski et al., 2010). Similarly, studies on engagement in gamification have identified positive relationships between enjoyment and engagement as well as consumer attitudes towards relevant content (Koivisto & Hamari, 2019; Tu et al., 2018).

Moreover, according to the results, gamification encourages engagement of consumers not only with their hedonic aspects but also with their utilitarian features. A positive relationship was found between all utilitarian motivation variables and CE. In particular, we believe that setting goals activate consumer engagement: By setting a goal, we reason that users must struggle to achieve this goal and, consequently, they actively participate in the gamification application. Therefore, it can be said that individuals use gamification to achieve their instrumental goals (utilitarian goals), as well as to achieve hedonic experiences (sense of achievement).

If goal setting encourages CE (Medlin & Green, 2009; H. L. O'Brien & Toms, 2008), it follows that engagement of consumers can also be encouraged by supporting goals. The literature shows feedback as the main variable that will support goal setting (Locke & Latham, 2002); strong results were obtained in this study as well as in other research to support this argument. As individuals move towards their goals in a gamification context, the feedback mechanism encourages them to focus their efforts in a certain direction, while showing them how far they have come and how far they have

left to go to achieve their goals. Badges, points, and levels are the most commonly used mechanics for such feedback in gamification, as these elements add a playful experience to any content and represent a hedonic motivator (Deci, 1975, p. 77) in the form of either a reward or self-realization of the user.

On the other hand, gamification is not an approach applied solely to digital systems. The rich presence of game elements in digital technologies facilitates the design of gamification in these structures. From this point of view, we used TAM (Davis, 1989) to understand CE in digital systems. Research findings show that both PU and PEU have a positive effect on consumer engagement, supporting previous similar studies (Fang, 2017; Koufaris, 2002).

Our second question was regarding the attitude and behavioral intention of CE in gamification towards the brand. As Figure 1 shows, CE is very weak in traditional WOM, while affecting brand commitment strongly and positively. In particular, participation and commitment are closely related concepts. Therefore, the positive support of CE to brand commitment expresses an expected result in the context of studies in relational marketing and CE literature (Bowden, 2009; Roderick J. Brodie et al., 2013; Dessart, 2017; Vivek et al., 2012). Moreover, studies in the literature exist which demonstrate how hedonic experiences encourage consumers to become emotionally attached to the brand (Aksoy et al., 2013; Bowden, 2009; Dessart, 2017). Considering the emotional dimension of brand commitment, it can be said that hedonic sources in gamification reinforce the commitment of consumers to the brand.

When consumers are satisfied with a brand, they are expected to recommend the brand's products and services as well as to be loyal consumers of the brand. Many studies indicate that there is a positive relationship between satisfaction, a positive attitude and brand loyalty (Bowden, 2009; Roderick J. Brodie et al., 2013; Dwivedi, 2015; L. D. Hollebeek, 2011;

Hsu & Chen, 2018). However, in this study, no significant relationship has been observed between consumer engagement in Adidas applications and brand loyalty. In fact, the relationship between them was actually found to be negative. The main reasons for this change in the consumer and brand relationship may be effectively general, rather than a special situation or exception for this study. A potential explanation could be that today's consumer, rather than identifying itself with a specific structure (brand), prefers maintaining an anonymous identity (Kotler et al., 2017). As shown in Table 1, users have been using the Adidas app for years. However, they also use competing or similar applications. In this context, we are faced with an audience that easily switches between brands and carries many identities at the same time, rather than being loyal consumers expressing themselves through a single brand. As our results regarding hedonic/utilitarian motivations show, consumers can use and repurchase a product or service that they consider useful. However, these behaviors do not necessarily lead to brand loyalty. In parallel with the results of this study, a survey of brands by Havas (2017) found that if 74% of brands had disappeared, consumers would not have felt any concern about it. To summarize, despite a great deal of marketing effort, it seems very difficult to create loyal consumers in this day and age.

Moreover, the likely explanation of these results is related to changing social relations, including marketing. According to Bauman (2017), individuals cannot remain temporally and spatially stable in an environment where society is constantly changing. Therefore, their relationship is fluid and aimed at continuous change within this context. This is one of the most prominent features of the postmodern period, a period which is explained by perhaps highly superficial relationships. Loyalty and long-term commitments while following in the footsteps of the past, as well as flexibility and mobility, are cited as the most important skills

for today's world (Sennett, 2002). At a time when the concept of social loyalty is changing, it seems difficult for brands to build a relationship on the basis of loyalty. In this sense, although the H4-d (CE \square BL) hypothesis has been rejected, it is important in this context to note that the research results reflect the direction of the change in marketing.

This study contributes to existing research in a variety of ways. Firstly, the study proposes a conceptual model of gamification in the form of hedonic/utilitarian motivations, CE, and brand-oriented outputs. Various theories and approaches such as TAM (Davis, 1989), hedonic/utilitarian motivation, relational marketing, GST (Locke & Latham, 2002), CE, and gamification have been reviewed for the creation of the research model. In this context, these structures are important in part because though they are used in different manners and in other areas, including marketing, in this case they are used in conjunction as primary focuses.

Secondly, according to the results, there is no significant relationship between CE in gamification, brand loyalty, and WOM. These results do not match the traditional marketing approach (Bowden, 2009; Roderick J. Brodie et al., 2013; Dwivedi, 2015). However, they provide important clues about the way consumers view brands. The data shows that despite a brand's positive activities and services, consumer loyalty to a particular brand remains tenuous.

Thirdly, to our knowledge, we believe that GST (Latham & Locke, 1979) was used primarily as a variable for the utilitarian motivations of consumers. That is, although there are studies that measure the goals of consumers (Bridges & Florsheim, 2008; Ratneshwar & Mick, 2013), we find that this study is the first work to measure the effects of feedback-goal relationship in the field of marketing and the effects of CE. In this respect, especially with regards to mobile and digital technologies, the feedback-goal binary structure of GSE can be

considered as an important antecedent to understanding the utilitarian motivations of consumers.

Fourthly, the first form of CE scales was designed and tested as a one-dimensional structure (L. D. Hollebeek et al., 2014). In some studies, it has been measured as a second-order factor structure, featuring cognitive, emotional, and behavioral aspects (Algharabat et al., 2018; Dwivedi, 2015). In this study, the CE scale was similarly measured as a second-order factor. The results show that the data fits the model, with all sub-factors representing the structure of consumer engagement significantly (see Figure 1).

According to Price et al. (1995), an alternative way to improve customer-brand relationships is to provide “extras” that create a playful experience for consumers. In this sense, gamification allows consumers to experience a brand beyond simple purchasing activities. As in the example given within this study, a sports brand (Adidas) helps consumers by providing a gamified app for playing sports, a service which is not directly related to sales. However, as the results of the research show, such a service has positive effects on the brand in many respects.

Finally, design work on gamification is usually reduced to a form of integrating game elements into a system. The reason for using game elements is to give users a hedonic experience in a non-game space, as with normal games. However, as the findings of this research show, gamification can be used as a means to respond to user goals as well as to include utilitarian benefits, beyond merely providing a hedonic experience through the contribution of game elements.

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APPENDIX

Measurement Scales

Construct	Author(s)
Competition CO1: I like to compete with others. CO2: I like to compare my performance with that of others. CO3: I like to train to prove to others that I am the best. CO4: It is important to me to be the fastest and most skilled person when I train with (X)	(Y. Kim & Ross, 2006; Suh et al., 2017)
Achievement AC1: I use (X) to achieve a higher level in leaderboard. AC2: I use (X) to have more points and badges than others. AC3: I use (X) to have points and badges which give me a higher status than other users of the application.	(Li et al., 2015)
Social Interaction SI1: Using (X) gives me possibility to make friends SI2: I enjoy meeting the friends I made while using (X) SI3: Communicating with others is useful for using (X) SI4: Cooperating with others makes (X) more enjoyable	(Chang, 2013)
Enjoyment EN1: (X) Uninterested . . . Interested EN2: (X) Not fun . . . Fun EN3: (X) Dull . . . Exciting	(Li et al., 2015)
Perceived Usefulness PU1: Using (X) improves my quality of life. PU2: Using (X) makes my life better. PU3: Using (X) is useful for my life.	(Liu & Li, 2011)
Perceived Ease of Use PEU1: Using (X)'s features do not require a lot of mental effort. PEU2: I find (X) easy to use. PEU3: I find it easy to access and use (X) when and where I want.	(E. Park et al., 2014)
Goal Setting GS1: I reach my personal goals with (X) GS2: I show clear personal improvement with (X) GS3: I perform to the best of my ability with (X) GS4: I overcome difficulties with (X) GS5: I master something I could not do before with (X)	(Roberts et al., 1998)
Feedback FB1: (X) gives me enough feedback about my actual performance compared to training goals. FB2: (X) lets me know how well I am doing in terms of achieving my training goals.	(Langevin & Mendoza, 2014; Tuckey et al., 2002)

FB3: The feedback I received from (X) helps me to improve my skills.	
FB5: Obtaining useful feedback information via (X) is very important to me.	
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Consumer Engagement (Cognitive)	
CE-CG1: When I use (X) I often think about (X)'s features.	(L. D. Hollebeek et al., 2014)
CE-CG2: Using (X) arouses my curiosity about (X)'s features	
CE-CG3: Using (X) stimulates my interest to learn more about (X)	
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Consumer Engagement (Emotional)	
CE-EM1: I feel very positive when I use (X)	(L. D. Hollebeek et al., 2014)
CE-EM2: Using (X) makes me happy	
CE-EM3: I feel good when I use (X)	
CE-EM4: I'm proud to use (X)	
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Consumer Engagement (Behavioral)	
CE-BE1: I spend a lot of time using (X), compared to other fitness applications	(L. D. Hollebeek et al., 2014)
CE-BE2: Whenever I'm using a fitness application, I usually use (X)	
CE-BE3: (X) is one of the brand apps I usually use when I use fitness application	
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Brand Commitment	
(The relationship that I have with X)	
BC1: ...is something I am very committed to.	(Adjei et al., 2010)
BC2: ...is very important to me.	
BC3: ...is something I intend to maintain indefinitely.	
BC4: ...is very much like being family.	
BC5: ...is something I really care about.	
BC6: ...deserves my maximum effort to maintain.	
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Brand Loyalty	
BL1: I consider myself to be loyal to (X).	(Yoo & Donthu, 2001)
BL2: (X) would be my first choice.	
BL3: I will not buy other brands if (X) is available at the store.	
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Word-of-Mouth (traditional)	
t-WOM1: I say positive things about (X)'s product/services to other people.	(Zeithaml et al., 1996)
t-WOM2: I often recommend (X)'s product/services to others.	
t-WOM3: I encourage friends to use (X)'s product/services.	
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Word-of-Mouth (electronic)	
e-WOM1: I try to share or post positive comments about (X) on my personal social networks (Facebook, Twitter, Instagram etc.).	(Cheung & Lee, 2012; M.-S. Park et al., 2017; Wen et al., 2018)
e-WOM2: I try to positive post reviews, recommendations or feelings about (X)'s product/services on the Internet.	
e-WOM3: When I see questions about (X) from strangers online, I will say good things about (X).	
