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Oyunlaştırma Özelliklerinin Marka Sadakati Üzerine Etkisi

Gamification Characteristics' Effects On Brand Loyalty

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Öz: Oyunlaştırma eğitim, işletme yönetimi, pazarlama, halkla ilişkiler, sağlık, sürdürülebilirlik, bilgisayar bilimleri ve turizm alanlarında son dönemde ortaya çıkan bir araştırma konusudur. Oyunlaştırma uygulamaları marka yönetimi bağlamında, özellikle marka sadakati bağlamında araştırmalara konu olmuştur. Ancak, yazında oyunlaştırma ve marka sadakati arasındaki ilişki eksiktir. Bu çalışmada, oyunlaştırma özellikleri ve marka bağlılığına yatkınlık incelenerek ilişki aydınlatılmaya çalışılmıştır. Araştırma modelinde bu ilişkiyi test etmek için 376 üniversite öğrencisinin tutumsal algıları yapısal eşitlik modellemesi kullanılarak araştırılmıştır. Sonuçlar, tüm oyunlaştırma özelliklerinin marka sadakati üzerinde etkisi olmadığını, yalnızca bir tanesinin etkili olduğunu göstermektedir. Marka yöneticileri, istatistiksel olarak anlamlı olmayan oyunlaştırma özellikleri ve marka sadakati ilişkisinden ve aynı zamanda anlamlı bulunan ilişkilerden faydalanabilir. Bu çalışmanın bulguları, oyunlaştırma ve marka sadakati arasındaki kayıp bağlantıyı araştıran gelecekteki çalışmalara yol göstermektedir.

Anahtar Sözcükler: Oyunlaştırma, Marka Sadakati, Marka Yönetimi, Yapısal Eşitlik Modellemesi
JEL Sınıflandırması: C43, M31, M37

Abstract: Gamification is a research subject emerging in the areas of education, business management, marketing, public relations, health, sustainability, computer science, and tourism. Gamification practices are researched within brand management context, especially in brand loyalty context. However, literature is missing the link between gamification and brand loyalty. In this study, gamification characteristics and proneness to brand loyalty are researched to enlighten the relationship. To test this relationship in the research model, attitudinal perceptions of a sample of 376 university students are researched using structural equation modeling. Results suggest that not all gamification characteristics effects brand loyalty, but only one. Brand managers can benefit from the statistically significant gamification characteristics and brand loyalty relationship, as well as not significant relationships. The findings of this study can permit future studies researching the link between gamification and brand loyalty.

Keywords: Gamification, Brand Loyalty, Brand Management, Structural Equation Modeling
JEL Classification: C43, M31, M37

1. Introduction

As an industry, gamification has attracted a remarkable interest all over the world, and companies have combined some gamification practices as part of their internal or external operations. In a trends and forecast report on gamification, the global gamification market was valued as 5.5 billion dollars in 2018, and it is estimated to witness a CAGR of 30.31% over the forecast period of 2019-2024 (MordorIntelligence, 2019), and in another market trends and forecast report global gamification market was valued at $ 6.8 billion dollars in 2018 and is projected to grow at 32% to reach $ 40 billion dollars by 2024 (TechSciResearch, 2019). The driver of this forecast relies on the exponential growth in the number of smartphones, mobile devices, wearable technologies etc. which supports a base for the gamification practices. Gamification characteristics has been used in a wide range of areas ranging from health, education, employee motivation to promoting sustainable green life. The internet has brought great challenges for e-commerce players as well as important opportunities. Lack of trust and information over-load are some of the main obstacles to creating customer e-loyalty. Although its use in online trade is currently limited, many websites use gamification characteristics to increase loyalty. However, when it comes to online retail sales, customer loyalty has been a source of concern. The internet has resulted in a decrease in consumer loyalty because of the price transparency and the ease of switching from one online store to another. The price of customer retention, and the cost of acquiring new customers have risen. With the successful design and implementation of game mechanics in online e-commerce, it becomes possible to develop their participation and the existing low loyalty problem.

The aim of this research is to reveal the marketing potential of gamification to rethink the marketing strategies for the next generation of consumers. Gamification makes technology more engaging, motivating users to engage in preferred behavior, showing a path to mastery and self-sufficiency, and taking advantage of the psychological tendency of people to participate in the game. Research will investigate how the gamification characteristics can be used to address brand loyalty. In the purest sense, the purpose of consumer marketing is to attract consumers' attention and put them into action. With the vast experience of gaming and gaming culture, the game can be used for different purposes, especially as an answer to the ever-increasing brand loyalty issue. This study aims to answer whether gamification characteristics can be used to evoke a sense of loyalty among consumers, specifically which gamification characteristics can prompt loyalty,

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which is missing in the current literature. If proven, the gamification characteristics will help establishing attitudinal brand loyalty. Efforts to create and maintain an online presence on e-commerce platforms allow users' activities and interests to online retailers, and therefore opens opportunities to behavioral loyalty.

2. Gamification

Gamification has become an integral part of the marketing communications plans of the companies. Gamification is the use of game design techniques, as well as problem-solving methods for attracting users. In general, gamification applies to non-game apps and processes, not for game apps to encourage people to practice. Since September 2010, gamification is used for the customer's involvement and is largely performed by web sites and product marketing managers, through sites built on social networking services to achieve the desired website usage. Gamification is also used to increase the web site recycles by creating new registrations and visitors, reward systems, and encouraging word-to-mouth vocabulary efforts (Klein, 2009). This technique is useful because it encourages people to do things they often think are boring. Companies of various sizes can use games to improve interacting with consumers, transforming, competing, and becoming more profitable (Edery & Mollick, 2008). According to Edery and Mollick (2008), the games and more specifically video games create the difference between failure and success, and games and marketing are a powerful combination that, the games are effective and can be a very important means of communication for advertising and learning. Consumers can be encouraged to spend long hours of time willingly to learn the features of a product through games. Games can also produce large virtual services and commodity economies that may be worth billions of dollars in physical space.

The term "gamification" was first appeared in 2008 but was not widely used until the second half of 2010. Since 2010, many terms have been used to define gamification: behavioral games, fun-ware, productivity games, playful designs, and surveillance entertainment. Gamification explores how best practices from game dynamics, game elements, game mechanics and game design can be transferred to contexts outside the gaming world. Gamification is the use of game mechanics to solve the problems and change behaviors in non-game contexts (Deterding, Sicart, Nacke, O'Hara, & Dixon, 2011).

The rationale of using game mechanics in non-game contexts, such as brand management is the natural human need to play. Gamification is applied for various purposes such as user participation, motivation, training of consumers and employees, innovation management and personal development (Vitkauskaitė & Gatautis, 2018). Companies use game-like designs as a simulation of real life, allowing learning, motivating and encouraging participation by triggering the natural need to play a game supported by a reward. The aim of gamification is to change behavior while motivating and engaging (Iacovides, 2011).

Game is defines as “a system in which players engage in an artificial conflict, which is defined by rules, that results in a quantifiable outcome” (Salen, Tekinbaş, & Zimmerman, 2004), or as “a rule-based formal system with a variable and quantifiable outcome, where different outcomes are assigned different values, where the player exerts effort in order to influence the outcome and feels attached to the outcome, and where the consequences of the activity are optional and negotiable” (Juul, 2018, p. 23). Gamification, adapted from online games and social media platforms, is to use game elements in a business environment (Piligrimienė, Dovalienė, & Virvilaitė, 2015, p. 458),) is a process of developing a service by supporting the user's gaming experience. general value creation (Huotari & Hamari, 2012), the process of making more play-like activities (Werbach, 2014), whereas other authors emphasize the use of game mechanics and elements (Deterding et al., 2011; Zichermann & Cunningham, 2011; Zichermann & Linder, 2010). The definitions of gamification indicate that game design elements are used in non-game contexts (Nacke, Khaled, Dixon, & Deterding, 2011).

Fogg (2009) has developed a behavioral model that defines the motivation, ability, and trigger, the three elements necessary for the realization of behavioral change. Basically, the higher the user's motivation, the more difficult capabilities to perform. Similarly, if the motivation for the user is very low, the ability demanded to fulfill the task must also be very small, so it is easy to do. Even if both motivation and skill are high enough to reach the threshold, a trigger is required to change the user behavior. The Model is designed to help designers identify what is preventing people from performing their intended behavior. Gamifications elements can be used to change user behavior by giving positive feedback in the form of points, badges, progress, social status, etc. that help improve user motivation, and change user behavior by placing triggers for the motivated users.

Despite the popularity in the use of gamified apps, there were many poor game design examples that focused solely on points, badges and rewards. An important issue is that the user can reduce internal motivation for the event because it is replaced by external motivation in the internal activity. However, if the game design elements can be made meaningful to the user through information, internal motivation may be improved because there is less need to emphasize external rewards. This is often referred to as user-centric or meaningful gamification. The term "pointsification" has been proposed as a label for gamification systems that do not add anything other than a scoring system to a non-game activity (Robertson, 2010). Bogost (2013) recommends changing the term to "exploitationware " because there is a better explanation of what actually happened. In short, meaningful gamification should focus on introducing game elements instead of scoring elements. According to McGonigal (2011), people are most happy when working at boundaries of their skill levels. Gamifications applications succeed, only if people are constantly challenged by their skill levels and constantly receive

feedback about their efforts, they are otherwise bored. People feel the best in their skills when they are neither challenging nor non-challenging, but at the right level. And as people learn by time and repetition, challenges need to be increased to keep pace with the growing skills. So, for gamification to achieve the desired attitudinal and behavioral change, gamification elements should be tailored according to the player/consumer. The same activities will not make sense for all users, so designers can create various game-based events to appeal to different users or must provide a customizable gamification system. Resulting user-centric meaningful gamification will result in longer and deeper participation among participants, non-game activities, and supporting organizations.

3. Frequent User Programs as Gamification Practices

Although game mechanics are widely used in marketing such as frequent user programs, loyalty cards, stamp books, competition, and reward membership (Seaborn & Fels, 2015; Xu, Buhalis, & Weber, 2017) gamification is a new concept in marketing communications which has emerged in 2010 (Meloni & Gruener, 2012). Loyalty programs traditionally focus on using point systems and offering gifts or discounts after making a purchase. At that time, marketers assumed that customers would spend everything they had gained and that they would be satisfied with the prize, so that they would come back to get more information. Today, marketers are aware that their brands should go beyond this idea because most loyalty campaigns today are less competitive. With the use of gamification, loyalty programs can be more effective because of motivating factors to earn points in the loyalty experience. The key concepts borrowed are customer loyalty programs, game design, behavioral economics and community management. This gamification mechanic adds actions that fulfill basic humanitarian desires and create an addictive experience that motivates users to engage in specific actions. As the potential synergy of gamification on marketing is significant, it has rapidly become a trend in the field (Yang, Asaad, & Dwivedi, 2017). The findings revealed that the main objectives that companies are trying to achieve through gamification are revenue (profit) increase, increased brand awareness, information about customers that enable customer databases to be created and / or expanded, attracting new customers, retaining customers, and increasing customer loyalty (Piligrimienė et al., 2015). The expected market for gamification is stated as $5.5 billion by the year 2018 (Raj & Gupta, 2018). Gamification's potential in marketing is its ability to persuade, motivate and manipulate consumers . Although gamification is used to improve customer loyalty, brand engagement, and brand relationship (Hamari, Koivisto, & Sarsa, 2014; Lucassen & Jansen, 2014; Nobre & Ferreira, 2017), it differs from loyalty programs as they heavily based on economic benefits from the continuous use of products and services. Although, gamification does not provide economic benefits, but add value through added motivational and social benefits via user engagement rather than expenditures (Hsu & Chen, 2018b), gamification supports "loyalty programs by adding fun and relatedness, bringing dynamic interactions between different players through team working, sharing and between the player and the game itself through challenge and achievement. By using a game mechanism such as points, rewards, leader board, sharing and competition, gamification can respond to both behavior and psychological needs of the customer, link to both behavior and attitudinal loyalty, stimulate a more dynamic and fun process towards building behavior loyalty, attitudinal loyalty, and composite loyalty" (Xu et al., 2017, p. 250).

Gamification seems to be a useful tool in promoting consumer engagement, motivation, activating customer behavior, customer loyalty (Deterding et al., 2011; Zichermann & Cunningham, 2011), and brand/product identification (Nobre & Ferreira, 2017; Rauch, 2013). The main purpose of marketing gamification is to facilitate consumer motivation and participation to engage the consumer experience with the brand (Berger, Schlager, Sprott, & Herrmann, 2017; Hamari et al., 2014; Jennett et al., 2008; Vorderer, Hartmann, & Klimmt, 2003) to enhance the perceived value of a company's offering (Piligrimienė et al., 2015), to get consumers to buy (Raj & Gupta, 2018; Thorpe & Roper, 2019). It is suggested that gamification can increase marketing effectiveness in consumer markets by increasing consumer engagement (cognitive, emotional, and behavioral); brand loyalty (attitudinal, and behavioral) (Baldinger & Rubinson, 1996; Dick & Basu, 1994); and brand awareness (Hsu & Chen, 2018b; Lucassen & Jansen, 2014; Xi & Hamari, 2019; Xu et al., 2017). Gamification can also be used for capturing data about the consumers, understanding consumer preferences, as well as building brand loyalty (Çeltek, 2010). Brand managers are increasingly using game elements such as avatars, profiles, privacy control, notification control, storytelling, narrative structures, role-play mechanics, etc., as a feature of involvement, first, they try to participate the player in a self-directed curious activity and experience the brand using the game mechanics. Gamification practices offer entertainment, challenges, and brand involvement for consumer engagement and self-brand connection may occur (Nobre & Ferreira, 2017). Consumer engagement with the brand improves brand loyalty and positive attitudes towards the brand (So, King, Sparks, & Wang, 2016; Vivek, Beatty, & Morgan, 2012).

Marketing is used to get the most out of the lifetime value of consumers, depending on the frequency of purchase and sales price. The purchase funnel is the traditional method that marketers use as a process that defines potential consumer travel, from the moment they contact the brand to product purchases and ultimately to product purchases. Gamification gives marketers tools to increase brand awareness, loyalty and purchasing intent by encouraging users to spend more time on brand websites or social media and increase their revisits. The more people are in interaction with the brand, the more brand loyal prone they are, and the less the risk of switching to another brand.

4. Research Hypothesis

"Gamified" experiences may include: points or scoring mechanisms that allow users to measure their progress in fulfilling a particular task which also allow users to measure their progress or skill levels against other users. In games with high-score or progress bar mechanisms, users can measure their progress against the progress of others. Virtual rewards-known as achievements- can be "unlocked" by fulfilling tasks that are secondary to the primary goal or story. For example, a shooting-based game can offer a success if the player has a certain level of accuracy while completing a level. Until tasks are fulfilled, achievements can be concealed to provide a surprise or pleasure from the user. Alternatively, rewards can be presented as difficulties to the user levels can be used to present a narrative to the user and allow the user to define and perform goals, such as levels-points and achievements. Each gaming mechanism has its unique characteristic to achieve brand loyalty.

The achievement-related features basically try to stimulate the sense of success to obtain the loyalty of the players (Xi & Hamari, 2019) and include such game mechanics as *Progress* [popularity/status (40.28%), competition (13.86%), scores (47.25%), badges (63.64%), leaderboards (27.77%), achievements (44.45%), levels (31.94%)], *Rewards* [prizes (30.55%), effort rewards (11.09%), fixed rewards (27.27%), monetary rewards (27.27%), non-monetary rewards (34.85%), variable rewards (36.11%), free goods (40.91%), virtual rewards (50.00%)]. *Social-related* game characteristics try to make the social interaction of the players possible (Xi & Hamari, 2019) as gifts (40.91%), altruism (30.00%), cooperate with friends (9.68%), rate community submissions (39.40%), help a friend (22.73%), feel part of a group (37.50%), differentiate from peers (40.91%), control over peers (36.36%). Gamification can also be used as restrictions for customer loyalty such as punishment for not participating (44.44%), expiration (30.00%), scarcity (33.33%), a time constraint (16.67%), limited resources (25.00%), turn-based (18.18%), access restrictions (73.37%). Other gamification mechanisms used for loyalty are challenges (26.38%), collections (50.00%), promotions (18.03%), goals (27.77%), lottery (25.75%) (Lucassen & Jansen, 2014, pp. 198-199).

Gamification applications support a platform for consumers to experience a relationship with the brand in a more tangible way. Gamification applications set goals for the users and users looking for ways to reach it in a safe simulated environment lives an experience with the brand, motivating brand loyalty (Sotirakou & Mourlas, 2015; Yang et al., 2017), as game mechanics promote participation, persistence and achievements consumers are motivated to use more often and derive fun experience with the brand (Deterding et al., 2011; Fontijn & Hoonhout, 2007; Hamari et al., 2014; Huotari & Hamari, 2012; Venkatesh, 2000; Werbach, 2014; Zichermann & Cunningham, 2011).

Although gamification has been proposed as a marketing and business strategy to increase customer engagement and loyalty (Dubois & Tamburrelli, 2013) by rewarding consumer seeking behavior that could lead to brand loyalty, there is no direct evidence that game mechanics triggers behavioral commitment to the brand (Harwood & Garry, 2015). Companies have adopted the practices of gamification in order to gain loyalty, but they have not succeeded (Sotirakou & Mourlas, 2015). Hsu and Chen (2018b) suggested that gamification effects hedonic value and utilitarian value, which effects satisfaction and brand love, and brand loyalty in the end. Huotari and Hamari (2012) suggested that gamification has an effect on loyalty, but the customers should first be engaged in gameful experiences. Hsu and Chen (2018a) found out that Product Features (Perceived mobility, Utilitarian features, Hedonic features), effects Brand Equity elements including Brand Loyalty over User Experience. Raj and Gupta (2018) studied Web Site Interface, Awards, Social Impact, Customer Engagement, and Purchasing Behavior as pioneers of brand loyalty and found no significant impact on the effect of different gamification elements on the brand loyalty. However, they also suggested more gamification elements should be included in the future studies in order to understand the gamification-brand loyalty relationship, as they included only three elements in their study. Hamari et al. (2014) stated that while gamification positively affects motivation, participation and loyalty, little is done in the brand context. Nobre and Ferreira (2017), with a focus group study, tried to establish a link between the experiences of gamification and the co-creation activities in order to understand the conditions under which gamification could have a direct effect on brand loyalty. Lucassen and Jansen (2014) studied with marketing executives, stating that gamification has the potential to improve loyalty by rewarding action-response mechanisms or long-term customers, and there is no tangible results for gamification and loyalty. Xi and Hamari (2019) proposed that gamification features (immersive, achievement, social) effects brand engagement (emotional, cognitive, social), resulting in brand equity (brand awareness and brand loyalty). Xi and Hamari (2019) point out that there is a positive relationship between gamification, brand participation and brand loyalty, although brand loyalty is excluded from their research model. Berger et al. (2017) shows that highly interactive and optimally challenged gamified interactions facilitate brand loyalty because such games lead to emotional and cognitive brand engagement, suggesting when and how this optimal gamified interactions with consumers should be investigated for loyalty.

Firms share the belief that creating compelling experiences is the key to achieving successful branding and competitive advantage. Firms use more and more games to create such experiences with their customers, a phenomenon we call interactivity (Berger et al., 2017). Despite previous research efforts examining the commercial applications of games in marketing, there is no conclusive evidence that gamified interactions increase brand responses. The current gamification literature is on game studies, advertising in games and human-computer interaction (Huotari & Hamari, 2017). In the current marketing literature, the relationship between brand attitude, brand recall, brand engagement, brand involvement, brand equity, service usage, continuous use and purchasing intentions are discussed (Xi & Hamari, 2019). Despite the potential of gamification in marketing, a gap still exists in consumer behavior especially the brand management literature lacks models that explain gamification and brand loyalty relationship (Raj & Gupta, 2018). This

study contributes to the growing body of gamification literature by investigating the unfulfilled relationship between gamification and brand loyalty (Harwood & Garry, 2015) suggested. The objective of this study is to investigate the gamification characteristics and the brand loyalty proneness relationship. The conceptual model of this study is outlined in Figure 1. The independent variables included are Unpredictability, Social Influence, Avoidance, Purpose, Development, and Ownership gamification characteristics, and the dependent variable is conceptualized as proneness to brand loyalty.

Gamification characteristics aim to support the idea of ‘‘sticky content’’. Stickiness is measured by the time spent and the number of revisits. Thus, stickiness is considered as loyalty (Zichermann & Linder, 2010). Based on the Octalysis framework suggested by (Chou, 2013), da Silva Brito, Contreras Pinochet, Luiz Lopes, and de Oliveira (2018) studied gamification characteristics, under six dimensions:

Unpredictability dimension includes techniques that flirt with users' desire to discover what will happen. It works if people don't know what is going to happen next. When something does not fall into your regular pattern recognition cycles, brain kicks into high gear and pays attention to the unexpected. Examples of unpredictability are glowing choice, mini quests, visual storytelling, easter eggs, random rewards, obvious wonder, rolling rewards, mischief, sudden rewards and oracle effect. Unpredictability dimension is obviously the primary core drive behind gambling addictions, but it is also present in every sweepstake or lottery program (Chou, 2015, p. 5). Thus,

H_1 – Loyal prone consumers are positively affected by Unpredictability gamification characteristic.

Social Influence includes all the social elements that motivate consumers; mentorship, social acceptance, social feedback, competition, envy, and companionship. Examples of social influence include social invite/friending, social treasure/gifting, see/saw bump, group quest, touting, bragging, water cooler, thank-you economy, mentorship and social prod. When a person sees a friend that is amazing at some skill or owns something extraordinary, the person is supposed to attain the same (Chou, 2015, p. 5; Zichermann & Linder, 2010). Thus,

H_2 – Loyal prone consumers are positively affected by Social Influence gamification characteristic.

Avoidance dimension suggests that, if there is a small chance of people losing something rather than winning it, they will try to avoid the loss, it's the motivation to avoid something negative from happening. It could be to avoid losing previous work or changing one's behavior, or it could be to avoid admitting that everything you did up to this point was useless because you are now quitting. Also, opportunities that are fading away have a strong utilization because people feel if they didn't act immediately, they would lose the opportunity to act forever. Examples of avoidance examples are sunk-cost tragedy, progress loss, FOMO, evanescence opportunity, status quo sloth, scarlet letter, visual grave and weep tune. Avoidance principle works because people try to avoid losing previous work and people continue to use the service otherwise quitting means admitting that everything done up to this point was useless (Chou, 2015, p. 6). Thus,

H_3 – Loyal prone consumers are positively affected by Avoidance gamification characteristic.

Purpose dimension is associated with the implementation of the significant goal in which people can believe they are contributing to something bigger than they are, or that they were chosen to do something. An example of this is when a person devotes a lot of their time to achieve something. Examples of purpose dimension are beginner's luck – an effect where people believe they have some type of gift that others don't or believe they are lucky, free lunch, destiny child or co-creator (Chou, 2015, p. 3). Purpose gamification characteristics are designed to be part of an ongoing project in order to keep the person continue using the service. Thus;

H_4 – Loyal prone consumers are positively affected by Purpose gamification characteristic.

Development dimension, the most commonly used driver in gamification projects such as points, badges, progress bars, and leader boards, is related to the sensation of progress, development of skills and achieving complex goals followed by a reward or feeling of great accomplishment. Development dimension is an internal drive for making progress, developing skills, achieving mastery, and eventually overcoming challenges. The word "challenge" here is very important, as a badge or trophy without a challenge is not meaningful at all. This is also the core drive that is the easiest to design for and, coincidently, is where the majority of the gamification applications are such as points, badges (achievement symbols), fixed action rewards, leaderboard, progress bar, quest list, win prize, high-five, crowning, level up symphony, aura effect, step-by-step tutorial and boss fights (Chou, 2015, p. 3). The achievement-related features basically try to stimulate the sense of success to obtain the loyalty of the players (Xi & Hamari, 2019; Zichermann & Linder, 2010). Thus,

H_5 – Loyal prone consumers are positively affected by Development gamification characteristic.

Ownership dimension is associated with motivating people who are directly related to so-called "virtual goods" or "virtual currency", the use or trade of which has become extremely popular among online services, social networks or massive multiplayer online games. Ownership dimensions motivates people because they feel like they own or control something. When a person feels ownership over something, they innately want to increase and improve what they own. Besides being the major core drive for the desire to accumulate wealth, it deals with many virtual goods within systems such as virtual currencies, build from scratch, collection set, avatar, earned lunch, learning curve, protection, recruitment, and monitoring. When a person feels ownership over something, they innately want to increase and improve what they own. (Chou, 2015, p. 4). Thus,

H_6 - Loyal prone consumers are positively affected by Ownership gamification characteristic.

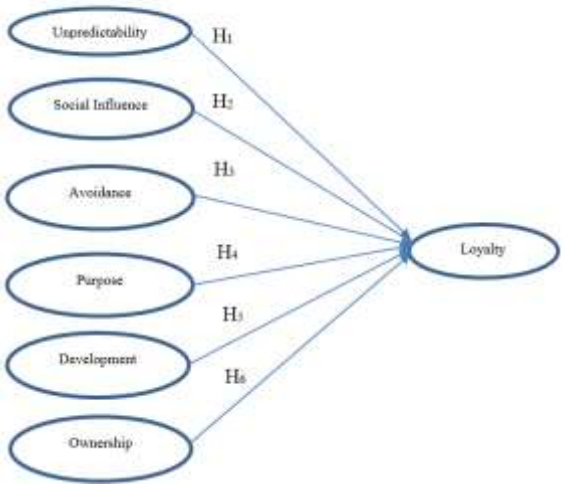

Figure 1. Conceptual Model

5. Method

The aim of this study is to investigate the relationship between the elements of gamification and brand loyalty. University students were selected as the target group because consumers in this age group are more prone to gamification applications than older people. Also, they are the target group in brand management and advertising in gamification/game context. Therefore, to test the proposed relationships, data from university students were collected using a face to face survey using convenience sampling method in Antalya, Turkey. Literature suggests that gamification mechanisms can be used for building and maintaining brand loyalty. However, which gamification characteristics lead to brand loyalty is missing. Thus, this study operationalizes gamification characteristics (da Silva Brito et al., 2018) and attitudinal loyalty captured by proneness to brand loyalty (Lam, 2007). The items were measured with a 7 point Likert type scale, 1 suggesting strongly disagree and 7 suggesting strongly agree.

6. Data Analysis and Findings

*6.1. **Demographics***

The sample consisted of 376 respondents, 52,9 % were female and 42,6% were male (17 respondents, %4,5 missing). Participants were between 17 and 47 years of age, the mean age was 20,86 years (13 respondents, %3,5 missing). Minimum household for 307 valid respondents is reported as 400TL and maximum 40.000TL, and mean 3462,96TL (69 respondents, %18,4 missing).

*6.2. **Validity and Reliability Tests***

Data analysis begins with exploratory factor analysis (EFA), with Promax rotation. EFA results suggest removal of Unpredictability and Ownership dimensions, and one reverse coded brand loyalty item no 3 and one social influence item no 2 (see Appendix). Cronbach's Alpha coefficients calculated for each dimension are Development (0,829), Social Influence (0,813), Purpose (0,732) and Loyalty (0,708) are above threshold value except for Avoidance (0,654) dimension, however, the avoidance dimension is continued in the confirmatory factor analysis (CFA), which is conducted based on factor structure suggested by EFA (Figure 2). CFA standardized factor weights calculated are between 0,491 and 0,838 and all the relationships are significant (Table 1).

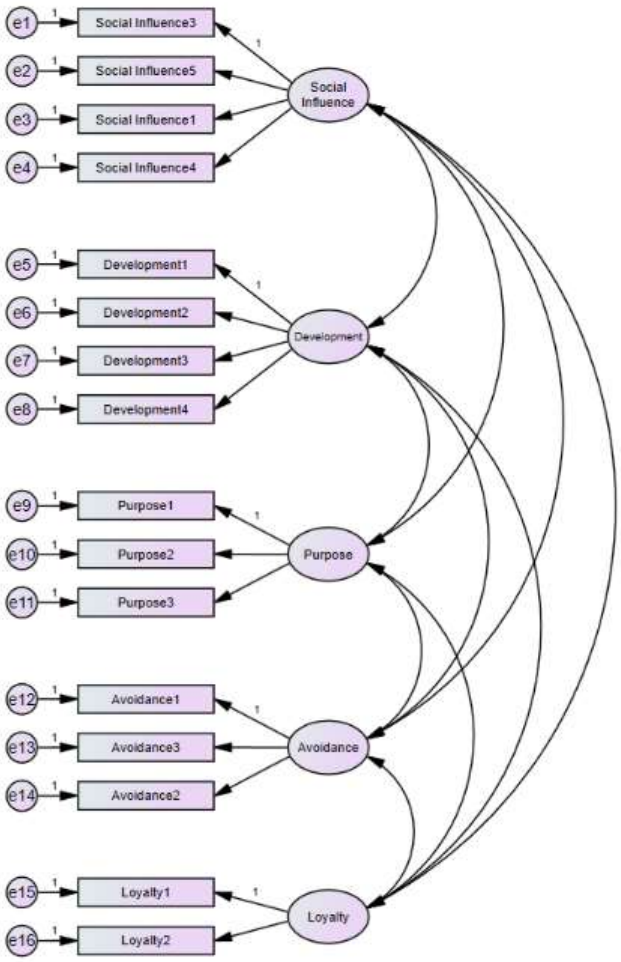

Figure 2. CFA Tested Model

In order to detect common method bias (CMB) which is the noise when variations in responses are caused by the instrument rather than the actual predispositions of the respondents Harman's single factor test is conducted. All observed variables of the latent variables (social influence, development, purpose, avoidance and loyalty) are loaded into one common factor. The total variance explained is calculated to be 34,357 which is 50%. Harman's single factor test results suggests that CMB is not an issue in the data set.

Table 1. CFA standardized regression weights

Observed variable		*Latent variable*	*Std. Estimate*	*p*
Soinf3	<---	Social Influence	,764	
Soinf5	<---	Social Influence	,771	0,000**
Soinf1	<---	Social Influence	,667	0,000**
Soinf4	<---	Social Influence	,692	0,000**
Deve1	<---	Development	,728	
Deve2	<---	Development	,765	0,000**
Deve3	<---	Development	,770	0,000**
Deve4	<---	Development	,706	0,000**
Purp1	<---	Purpose	,815	
Purp2	<---	Purpose	,838	0,000**
Purp3	<---	Purpose	,491	0,000**
Avoid1	<---	Avoidance	,540	
Avoid3	<---	Avoidance	,548	0,000**
Avoid2	<---	Avoidance	,760	0,000**
Loyalty1	<---	Loyalty	,664	
Loyalty2	<---	Loyalty	,825	0,000**

**: p<0,001

Composite reliability (CR), Average Variance Extracted (AVE), MSV, MaxR(H) and square root of AVE is calculated for reliability and validity tests (Gaskin & Lim, 2016a) (Table 2). CFA reliability and validity results suggest poor validity and reliability for avoidance dimension as CR<0,70 and AVE<0,50, thus, the avoidance dimension is dismissed from the analysis (Table 2). The reliability and validity measures calculated suggest a solid dimension structure for the other dimensions. Path analysis is conducted based on the confirmed factor structure.

Table 2. CFA Reliability and validity results for the suggested model

	CR	*AVE*	*MSV*	*MaxR(H)*	*Social Influence*	*Development*	*Purpose*	*Avoidance*	*Loyalty*
Social Influence	0,815	0,525	0,366	0,821	0,725				
Development	0,831	0,552	0,524	0,833	0,561***	0,743			
Purpose	0,767	0,536	0,322	0,823	0,496***	0,567***	0,732		
Avoidance	0,651	0,390	0,524	0,689	0,605***	0,724***	0,510***	0,625	
Loyalty	0,716	0,561	0,076	0,745	0,079	0,163*	0,151*	0,276**	0,749

*p<0,05; **p<0,01; ***p<0,001

GOF calculated for CFA model suggest an acceptable model fit (Table 3). CMIN/DF value is 2,509 which is below suggested value 3, CFI value is 0,933 below ideal value 0,95 but higher than acceptable value, SRMR is 0,061 and RMSEA value is 0,063 and PClose value is significant (p=0,015) and they are also acceptable values (Gaskin & Lim, 2016c).

Table 3. GOF values for CFA

Measure	*Estimate*	*Threshold*	*Interpretation*
CMIN	235,812	--	--
DF	94,000	--	--
CMIN/DF	2,509	Between 1 and 3	Excellent
CFI	0,933	>0.95	Acceptable
SRMR	0,061	<0.08	Excellent
RMSEA	0,063	<0.06	Acceptable
PClose	0,015	>0.05	Acceptable

6.3. ***Hypothesis Tests***

In the path analysis (Figure 3), Social Influence, Development and Purpose gamification characteristics dimensions are modelled as exogenous latent variables and Loyalty as endogenous latent variable. Every single headed arrow represents a hypothesis, and double headed arrows represent covariances between endogenous latent variables.

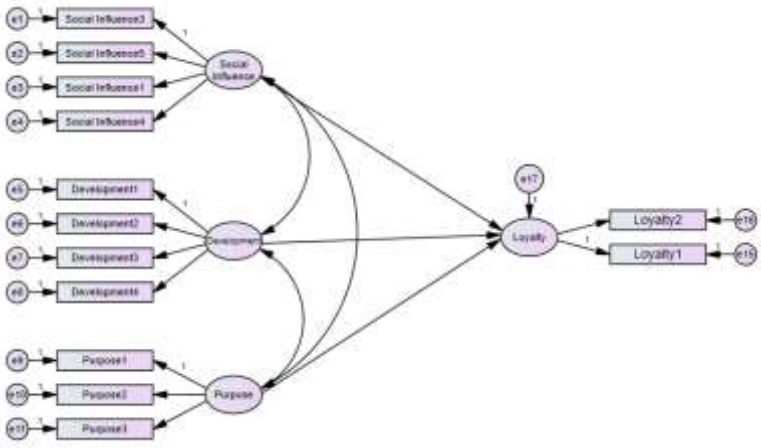

Figure 3: Tested Model

The goodness of fit indices (GOF) calculated (Gaskin & Lim, 2016c) for the path analysis (Figure 3) as; CMIN/DF=2,674, CFI=0,944, SRMR=0,061, RMSEA=0,067 and PClose is significant (p=0,015), all suggest an acceptable model fit (Table 4).

Table 4. GOF indices for path analysis

Measure	*Estimate*	*Threshold*	*Interpretation*
CMIN	157,780	--	--
DF	59,000	--	--
CMIN/DF	2,674	Between 1 and 3	Excellent
CFI	0,944	>0.95	Acceptable
SRMR	0,061	<0.08	Excellent
RMSEA	0,067	<0.06	Acceptable
PClose	0,015	>0.05	Acceptable

For hypothesis testing, significance of regression weights is calculated (Gaskin & Lim, 2016b). Standardized regression weights suggest a statistically significant relationship between Purpose and Loyalty dimensions (std β= 0,184; p<0,05). Social influence (std β= (-0,050); p>0,05) and development (std β= 0,040; p>0,05) dimensions are found to have no effect on loyalty. All other paths are statistically significant (Table 5). According to path analysis results, findings suggest that purpose dimension has statistically significant effect on brand loyalty. However, there is no statistically significant relationship is found between Social Influence and Development dimensions and Brand Loyalty. Thus, H_4 is accepted, H_2 and H_5 are declined. H_1, H_3, and H_6 are could not hypothesize tested because these dimensions did not pass reliability and validity tests.

Table 5. Standardized regression weights for path analysis

Predictor	*Outcome*	*Std Beta*	*p*
Social Influence	Loyalty	-,050	0,554
Development	Loyalty	,040	0,650
Purpose	*Loyalty*	*,184*	*0,030*
Social Influence	Soinf3	,761	
Social Influence	Soinf5	,774	0,000**
Social Influence	Soinf1	,667	0,000**
Social Influence	Soinf4	,692	0,000**
Development	Deve1	,737	
Development	Deve2	,787	0,000**
Development	Deve3	,754	0,000**
Development	Deve4	,694	0,000**
Purpose	Purp1	,822	
Purpose	Purp2	,833	0,000**
Purpose	Purp3	,487	0,000**
Loyalty	Loyalty1	,893	
Loyalty	Loyalty2	,614	0,018

**: p<0,001

The R-squared for Loyalty calculated states that the predictors of Loyalty explain 3,5 percent of its variance, and the error variance of Loyalty is approximately 96,5 percent of the variance of Loyalty itself (Table 6). In other words, although statistically significant, a small part of the variance is explained by the factors that are actually present in the proposed model.

Table 6: Squared Multiple Correlations

	Estimate
Loyalty	,035
Loyalty2	,377
Loyalty1	,797
Purpose3	,237
Purpose2	,694
Purpose1	,676
Development4	,482
Development3	,568
Development2	,620
Development1	,543
Social Influence4	,478
Social Influence1	,444
Social Influence5	,599
Social Influence3	,579

Table 7. Hypothesis test results

H_1: Loyal prone consumers are positively affected by Unpredictability gamification characteristic.	Not tested
H_2: Loyal prone consumers are positively affected by Social Influence gamification characteristic.	Not approved
H_3: Loyal prone consumers are positively affected by Avoidance gamification characteristic.	Not tested
H_4: Loyal prone consumers are positively affected by Purpose gamification characteristic.	Approved
H_5: Loyal prone consumers are positively affected by Development gamification characteristic.	Not approved
H_6: Loyal prone consumers are positively affected by Ownership gamification characteristic.	Not tested

7. Controlling the Effects of Demographic Vaiables

In order to test the effects of age and gender on the proposed model, AMOS path analysis is conducted. In AMOS analysis properties, estimate means and intercepts method is operationalized as demographic varibles have missing values.

7.1. ***Controlling for Gender***

To control whether gender has an effect, gender is entered the model as an exogenous variable having effect on brand loyalty proneness and covariates are drawn to other exogenous variables and gender (Figure 4).

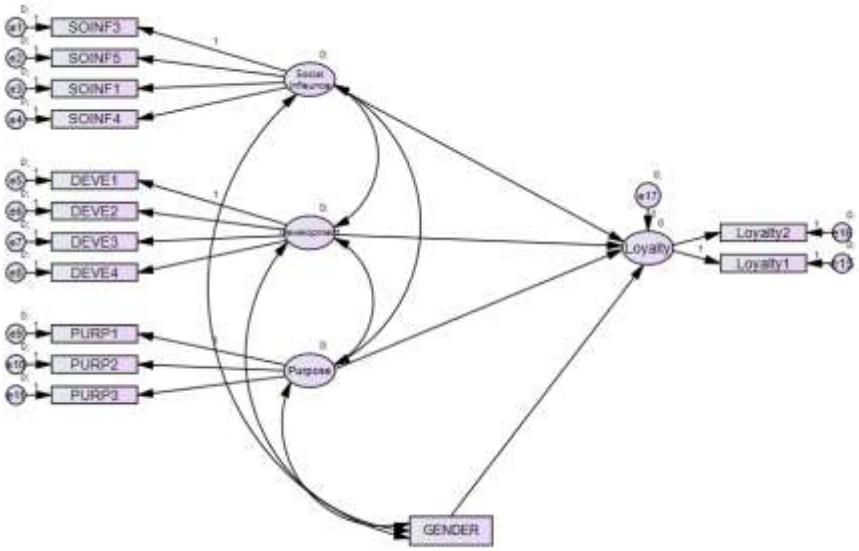

Figure 4. Effect of gender on brand loyalty proneness.

Standardized regression weights when gender is the controlled variables suggest a statistically insignificant effect of gender on brand loyalty proneness. Results of path analysis when gender is controlled suggests that, regardless of the gender, purpose dimension effects brand loyalty (Gaskin & Lim, 2016b) (Table 8). Goodness of fit indices suggest an acceptable fit when gender is controlled (Gaskin & Lim, 2016c) (Table 9).

Table 8. Regression weights calculated when gender is controlled

Predictor	*Outcome*	*Std Beta*	*p*
Social Influence	Loyalty	-,020	0,696
Development	Loyalty	,011	0,916
Purpose	Loyalty	,169	0,041
GENDER	Loyalty	,091	0,122
Social Influence	Soinf3	,756	
Social Influence	Soinf5	,780	0,000**
Social Influence	Soinf1	,663	0,000**
Social Influence	Soinf4	,693	0,000**
Development	Deve1	,738	
Development	Deve2	,787	0,000**
Development	Deve3	,752	0,000**
Development	Deve4	,695	0,000**
Purpose	Purp1	,827	
Purpose	Purp2	,830	0,000**
Purpose	Purp3	,481	0,000**
Loyalty	Loyalty1	,944	

Loyalty	Loyalty2	,581	0,016

**: *p<0,001*

Table 9. GOF indices calculated when gender is controlled

Measure	*Estimate*	*Threshold*	*Interpretation*
CMIN	177,909	--	--
DF	68	--	--
CMIN/DF	2,616	Between 1 and 3	Excellent
CFI	0,939	>0.95	Acceptable
RMSEA	0,066	<0.06	Acceptable
PClose	0,015	>0.05	Acceptable

*7.2. **Controlling for Age***

To control whether gender has an effect, gender is entered into the model as an exogenous variable having effect on brand loyalty proneness and covariates are drawn to other exogenous variables and gender (Figure 5).

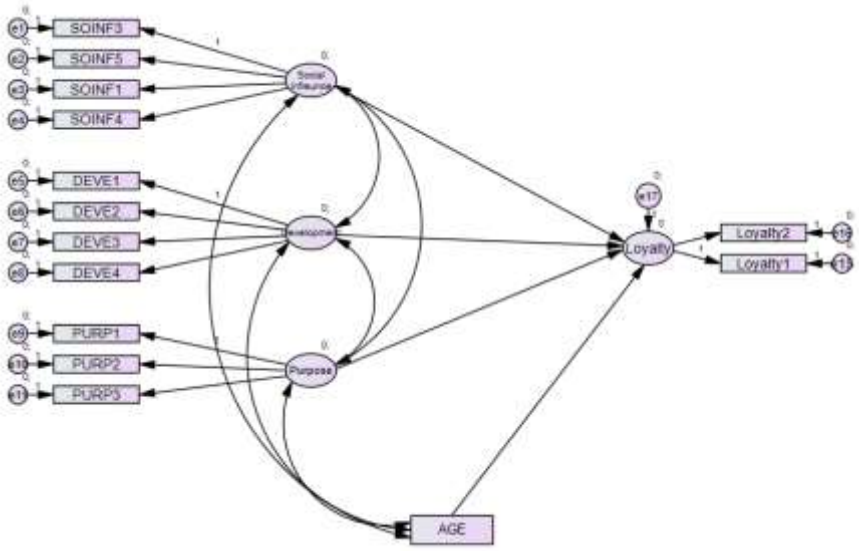

Figure 5. Effect of age on brand loyalty proneness.

Standardized regression weights when gender is the controlled variables suggest a statistically significant effect of gender on brand loyalty proneness. Results of path analysis show that when age is controlled it effects brand loyalty (Gaskin & Lim, 2016b) (Table 10). However, the standardized beta coefficient of purpose dimension is reduced to 0,167 from 0,184 value, and the relationship between purpose dimension and brand loyalty became insignificant, which is known as Simpson's Paradox (Kock, 2015). Controlling for age attenuated the relationship between purpose and loyalty dimensions, and the small difference in the relationship suggests that the association is casual (Dietz & Gortmaker, 1985). Goodness of fit indices suggest an acceptable fit when gender is controlled (Gaskin & Lim, 2016c) (Table 11).

Table 10. Regression weights calculated when age is controlled

Predictor	*Outcome*	*Std Beta*	*p*
Social Influence	Loyalty	-,070	0,433
Development	Loyalty	,066	0,489
Purpose	Loyalty	,170	0,64
AGE	Loyalty	,125	0,044
Social Influence	Soinf3	,763	
Social Influence	Soinf5	,781	0,000**
Social Influence	Soinf1	,660	0,000**
Social Influence	Soinf4	,697	0,000**
Development	Deve1	,743	
Development	Deve2	,802	0,000**
Development	Deve3	,761	0,000**
Development	Deve4	,695	0,000**
Purpose	Purp1	,822	
Purpose	Purp2	,826	0,000**
Purpose	Purp3	,493	0,000**

Loyalty	Loyalty1	,814	
Loyalty	Loyalty2	,678	0,002

***: p<0,001*

Table 11. GOF indices calculated when age is controlled

Measure	*Estimate*	*Threshold*	*Interpretation*
CMIN	162,648	--	--
DF	68	--	--
CMIN/DF	2,392	Between 1 and 3	Excellent
CFI	0,946	>0.95	Acceptable
RMSEA	0,061	<0.06	Acceptable
PClose	0,066	>0.05	Excellent

8. **Discussion**

There is a growing research on gamification in education, business management, marketing, public relations, health, sustainability, computer science and tourism (Xu et al., 2017), although it is not a new in concept marketing practices as it has its roots in loyalty membership programs. The online community is what makes gamification concept exciting in brand management. Gamification practices are suggested as a part of economic value creation through customer loyalty (Piligrimienė et al., 2015). Although some of the techniques are borrowed from pre-existing marketing practices, gamification helps marketers with new tools to influence consumer decision making.

In this study, gamification characteristics effects on brand loyalty are researched with attitudinal measures. A decent number of researchers have tried to reveal the gamification-brand loyalty link (Harwood & Garry, 2015; Hsu & Chen, 2018a, 2018b; Raj & Gupta, 2018), in other words, to answer whether gamification is useful in building and maintaining brand loyalty. However, the literature supports little evidence for the missing link between gamification characteristics-brand loyalty relationship.

The study operationalized gamification characteristics supported by (da Silva Brito et al., 2018), and proneness to brand loyalty. The findings suggest a significant relationship between purpose gamification characteristic and brand loyalty proneness. When gender is controlled, the results remains the same suggesting that gender does not influence purpose game characteristic and brand loyalty relationship. However, when age is controlled, the significant relationship become insignificant followed by a slight drop in standardized regression weight, suggesting the age influence is casual. Social influence and development dimension are found to have no statistically significant effects on brand loyalty proneness. Unpredictability and ownership dimensions did not pass validity and reliability checks.

Although points, badges, progress bars, leader boards, etc. are the most commonly used driver in gamification, sensation of progress, development of skills and achieving complex goals followed by a reward is found to have no effect on brand loyalty. It may be the reason that brand loyalty is a long term relationship with the brand (Fournier, 1998), but the feeling of accomplishment is short termed. As suggested by the authors, since there is no method of measuring the direct effects of gamification, brand managers are reluctant to use the game mechanics, although they believe they will benefit from the gamification practices (Lucassen & Jansen, 2014). Thus, time orientation may be a problem in studying the long-term effects of gamification and brand management.

Meanwhile, social influence has no effect on brand loyalty. As suggested by the authors, social influence mechanisms are primarily used for consumer engagement, building and maintaining brand loyalty is the second priority for the brand managers (Lucassen & Jansen, 2014). It may be because social gamification mechanisms used (such as gifts, altruism, cooperate with friends, rate community submissions, help a friend, feel part of a group, differentiate from peers, and control over peers) may not be considered as socialization, as much as we consider. Consumers do not necessarily need to consult others or even ask other consumers for advice when using gamified websites (Raj & Gupta, 2018). In an online setting, every individual consumer is experiencing with the brand in a gamified setting, and the only socialization with other consumers is an emoji or a sentence from a person they may not have known personally. Social influence may affect brand loyalty on socially visible products and services context, but no effect on not visible products and services by other consumers.

Statistical analysis suggests that purpose dimension effects brand loyalty, which captures consumers feeling like a part of a challenge to contribute to a better world, and to a greater cause, within the gamification characteristic context. If the brand managers aim to build and maintain brand loyalty, gamification mechanisms should be designed to convey a narrative, elitism, humanity hero, and higher meaning messages (Chou, 2013). This dimension can be related to the ethical aspect of the brand. It can be inferred that consumers tend to interact with more socially responsible brands.

The findings of this study suggest interesting applications for brand managers in building and maintaining brand loyalty. First, results suggest that not all gamification characteristics effect brand loyalty, but purpose dimension. Brand loyalty is a long run relationship between the consumer and the brand, thus short-lived experiences do not influence brand loyalty. Literature needs research on the long term effects of gamification. Another problem is that the time a person is exposed to gamification practice and the repurchase time are different; thus researchers should find a better way to link the variables in the exposure to gamification period and repurchase decision period. Although the relationship is weak, gamification has a future in brand loyalty context. Gamification mechanisms support a variety of tools for practitioners,

and every tool should be used according to the marketing goals. For example, findings of this study suggest that development tools such as levels, progression bars, points, etc. and social influence elements such as avatars, blogs, sharing, etc. do not support brand loyalty. However, there are different goals in brand management context as attitudinal loyalty, wom recommendations, intention to revisit, reinforcing existing loyalty, brand trust, brand commitment, other than behavioral loyalty. In future studies, more gamification characteristics and different loyalty contexts and brand engagement can be researched with different samples.

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APPENDIX 1

Gamification Characteristics Scale

Item	Assertion
Development1	I feel motivated and perform actions that give me points in a GApp*.
Development2	I feel motivated to continue using a GApp when my progress bar is almost complete.
Development3	I often use a GApp if there is a chance I can win prizes with it.
Development4	I prefer GApps that give me a sense of achievement when I win a complex challenge.
Avoidance1	I continue using a GApp even after I get tired of it to avoid losing my progress.
Avoidance2	I am motivated to perform an action quicker in order not to miss a unique opportunity in the GApp.
Avoidance3	I feel motivated to continue progressing when other people can see I am falling behind in the GApp.
Unpredictability1	I am motivated to perform actions that give me a surprise reward in the GApp.
Unpredictability2	I am motivated to use GApps that give me a different vision of the environment around me.
Unpredictability3	It motivates me to know I can win a reward at any time when I use the GApp.
Unpredictability4	I am motivated to use GApps when I can try to predict what will happen or have hunches.
Social Influence1	I prefer GApps where I can add people on a list of friends.
Social Influence2	I prefer GApps that let me show or share my achievements implicitly.
Social Influence3	I am motivated to use GApps with locations to share ideas and talk with other people.
Social Influence4	I prefer GApps that allow me to orient or be oriented by other people.
Social Influence5	I prefer GApps that let me interact with other people in a few easy steps.
Ownership1	I prefer GApps that allow me to collect virtual items or resources.
Ownership2	I am driven to finish tasks in a GApp to complete a collection of rewards I have begun to collect.
Ownership3	I prefer GApps that give me benefits or rewards for my efforts.
Ownership4	I prefer GApps that link me to items, attributes or characters to the point that I care about them.
Purpose1	I feel motivated to use a GApp that helps me contribute to a better world.
Purpose2	I feel motivated to use a GApp through which I can contribute to a greater cause.
Purpose3	I feel motivated to use a GApp when it makes me feel as if I am the only person that can win a challenge.

*GApp=Gamified application

APPENDIX 2

Proneness to Brand Loyalty Scale

Item	Assertion
Loyalty1	I have favorite brands that I buy over and over
Loyalty2	Once I find a brand I like, I stick with it
Loyalty3	I change brands that I buy regularly