IMPACT OF ONLINE GAMIFICATION PREFERENCES ON BRAND ENGAGEMENT AND BRAND ATTITUDES: A CASE OF MILLENNIAL CUSTOMERS IN SRI LANKAN MOBILE SERVICE INDUSTRY.

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Abstract

This study aims to identify the impact of online gamification preferences on brand engagement and brand attitude among Millennial customers of Sri Lankan mobile service providers. The study uses quantitative methodology and supports empirical studies of gamification, brand engagement and brand attitude. The target population of the study considered the millennial customers of the Sri Lankan mobile service industry who have experienced and prefer online gaming and live in the Colombo district. Data was collected online using a predetermined questionnaire distributed to a convenience sample of 384 respondents. Data were analyzed using both descriptive and inferential analysis. The findings of the study indicated that there is a relationship between online gamification and brand engagement in terms of improving brand attitude. At the same time, the study identified brand engagement as a perfect mediating effect between online gamification and brand attitudes. This would result in gamification combined with AI technology can lead to effective customer attraction. Furthermore, developing a brand-related application for mobile users with gamification factors and 4R elements can increase customer brand experience. Therefore, findings of this study will help Sri Lankan mobile service providers to attract and retain customers.

Keywords: Gamification, Brand Engagement, Brand Attitude, Mobile Service industry.

Introduction

Online gaming has been popular among young millennials since the early 2000s, with the growth of the internet and advances in technology. Initially, simple games like Centipede, Space Invaders, Pac Man and Donkey Kong were popular, but with the introduction of massively multiplayer online games (MMOGs) such as World of Warcraft and Runescape, the popularity of online gaming skyrocketed (Cole & Griffiths, 2007; Young, 2009). These games provided a platform for players to interact with each other in real-time, building social connections and engaging in cooperative gameplay (Snodgrass, 2016). The development of technology also led to the development of mobile gaming. As a result, mobile gaming has become increasingly popular, allowing gamers to play anywhere, anytime. Today, online gaming continues to be a major pastime for young millennials, with the rise of esports and the competitive gaming scene adding to its appeal. Meanwhile, the concept of gamification has become a popular topic in online gaming as it involves game mechanics that are designed to enhance user engagement.

The rise of online gamification has revolutionized the way businesses engage with their customers. The concept of gamification, which involves incorporating game mechanics into non-game contexts, has been found to be an effective tool in increasing customer engagement and loyalty (Yang et al., 2017). Moreover, the combination of marketing concepts and the technology acceptance module (TAM) create a relationship between brand engagement, brand attitude and gamification. Therefore, gamification has become one of the trending marketing techniques used by world organizations to adopt game techniques and game styles for customer engagement and affect customer attitudes toward the brands. When consumers engage with a brand, they develop a relationship with it, and their attitude towards the brand can be influenced by their level of engagement. For instance, if a consumer frequently engages with a brand's social media content, they may develop a positive attitude towards the brand and become more loyal to it. On the other hand, if a consumer has a negative experience with a brand, it can lead to disengagement and a negative attitude towards the brand. Therefore, marketing strategies should focus on fostering positive brand engagement to improve brand attitude and strengthen the relationship between consumers and the brand (Kotler, 2004).

In recent years, the Sri Lankan mobile service industry has seen a significant increase of 149.9% of the total population owning mobile phone connections (Mauroner, 2020) in the use of different traditional and digital marketing strategies to attract and retain customers' intention of the brand. While the Sri Lankan mobile telecommunication market has evolved significantly in recent years, with the expansion of existing operators. As a result, the market has become more competitive, and companies need to use marketing tools to attract and retain customers. With a mature market, mobile service providers are essential to differentiate themselves from competitors by offering unique value propositions and providing excellent customer service. Marketing tools such as social media advertising, loyalty programs, and targeted promotions are crucial to attracting and retaining customers. With the right marketing tools telecommunication providers in Sri Lanka can remain competitive in a rapidly evolving market and attract and retain customers. However, little is known about the impact of online gamification on brand engagement and brand attitudes among millennial customers in this industry.

Millennials are a crucial demographic for businesses in Sri Lanka, as they represent 31% of the population (Lanka, 2020) and are known for their tech-savvy nature (Economic and Social Statistics of Sri Lanka, 2019). They comfortably use a wide range of digital devices and platforms and tend to rely heavily on technology to communicate, socialize, work, and entertain themselves. Additionally, the convenience and accessibility of modern technology have also contributed to this generation's desire for instant gratification. The behaviour of millennials with technology reflects their desire to remain connected and informed in a constantly evolving digital environment (Zickuhr, 2011). Therefore, mobile service providers in Sri Lanka need to understand the preferences of millennial customers towards online gamification and its impact on brand engagement and brand attitudes. This research aims to fill this gap in the literature by examining the relationship between online gamification preferences, brand engagement, and brand attitudes among millennial customers in the Sri Lankan mobile service.

In addition, Previous research found that the intention to engage positively impacts brand attitude in gamification marketing. However, the mediating effect of brand engagement in this relationship has not been extensively explored (Yang et al., 2017; Xi & Hamari, 2019). Therefore, this study is to investigate the mediating role of brand engagement on the relationship between online gamification preferences and brand attitude and to determine the extent to which brand engagement influences the effectiveness of gamification in promoting brand attitude among millennial customers in the Sri Lankan mobile service industry.

This study is justified as it aims to investigate the impact of online gamification on brand engagement and brand attitudes among millennial customers in the Sri Lankan mobile service industry, which has not been extensively explored. The study will also examine the mediating role of brand engagement in the relationship between online gamification preferences and brand attitude, filling a gap in the literature. This is important for

mobile service providers in Sri Lanka to remain competitive and attract and retain customers in a rapidly evolving market.

The remaining paper has organized as follows. First, it presents the literature relevant to the theories and relationships among the variables, then presents the methodology of the study. Next, it shows the results of the data analysis followed by a discussion. Finally, it shows the conclusion, implications, limitations, and future research.

Literature Review

This section present the theories and the hypotheses of the study.

In addition to other adoption models, the Technology Acceptance Model (TAM) has been used for several studies in mobile service adoption. It focuses primarily on explaining the intention to use a specific technology or service, which is widely applicable to user acceptance and usage. Furthermore, the model explains two important factors perceived usefulness and perceived ease of use influence when users decide on new technology (Davies,1989).

Therefore, the application of TAM for new technology or system for the gamification process as marketing perception may usefully attract customer attitude. For example, people's attitude toward advertising has a significant influence to change their brand attitude (Sallam & Algammash, 2016). And customer satisfaction positively and significantly has a relationship with brand attitude (Ghorban, 2012). Social influence on customer attitudes toward a new system or technology influences customer brand attitudes in the framework of gamified marketing (Yang et al., 2017). Compare with online shopping with gaming, gamified marketing is more enjoyable and experience oriented. Therefore, user attitude towards the new system positive effect and that is possible to affect the brand embedded in the system. Yang et al (2017) found that perceived enjoyment is also another important factor to influence brand attitude from a gamified marketing perspective. Therefore, the first hypothesize of the study is,

H1. Online gamification preference positively influences customer brand attitudes.

According to the marketing perspective non-transactional, customer engagement customer provides different types of direct and indirect contributions to the firm or organization (Jaakkola & Alexander, 2014). Therefore, facilitate an effective customer engagement platform positively affect customer engagement (Ramaswamy, 2009). The use of game-based approaches or gamification platform becomes a trending customer engagement point of service marketing (Conaway & Garay, 2014). The concept of gamification became a trending tool for influencing customer behaviour under the use of new technologies in any industry (Deterding et al., 2011) The combination of the unified theory of acceptance and use of technology (UTAUT) (Venkatesh et al., 2012) and gamification impact provide clear guidance on the way to the adoption of new technology in a successful way. Through that, it has identified the gamified customer experience environment model to explain the main areas of gaming, like engagement mechanism, engagement behaviour, engagement emotions and engagement outcomes. Therefore, the second hypothesis of the study is,

H2. Online gamification preference positively influences customers' intention to engage with brands.

Previous research has suggested that there exists a connection between attitude and behavioral intention. Some empirical studies identify that corporate reputation significantly influences the brand attitude and purchase intentions of users. Kotler (2004) defines attitude as favourable or unfavourable evaluation, intention and attitudes toward a certain idea or object. Thereby identifying a close connection between user behaviour intention and brand attitude (Kotler et al., 2019). Therefore, the third hypothesis of the study is,

H3. Customer's intention to engage in brands positively influences customer brand attitudes.

Online gamification is expected to increase brand engagement, which, in turn, will lead to a more positive attitude towards brands among individuals who prefer online gamification. At the same time, the growing popularity of online gamification as a marketing strategy also highlights the important role engagement plays in influencing consumers' brand attitudes. TAM and TRA explain that the adoption of technology directly or indirectly influences behaviour intention, attitude, perceived usefulness, and perceived ease of technology. Further, examine from a marketing perspective how gamification mechanisms use for enhancing customer brand attitudes and engagement by an apply combination of the TAM model and other identified game motivation factors (Davis, 1989; Hsu & Lu, 2007).

The past research results indicate that perceived usefulness and perceived enjoyment positively affect brand engagement, but perceived ease of use and perceived social influence have no significant impact on brand engagement. However, perceived usefulness and perceived social influence have a positive impact on brand attitude. But perceived ease of use does not have a significant influence on brand attitude. Based on the above combination of factors has a positive effect on the intention of engagement towards brand attitude in the context of gamification marketing (Yang et al., 2017). In another way brand attitude positively influence purchase intention behaviour among customers (Ghorban, 2012).

However, this study finds the relationship intention to engage brand dimension (Hollebeek et al., 2014) as a mediator between online gamification features (Yee et al., 2012) and brand attitude. Therefore, the fourth hypothesis of the study is,

H4. Brand Engagement in brands mediates the relationship between Online Gamification Preference and brand attitudes.

Conceptual Framework and Research Methodology

Conceptual Framework

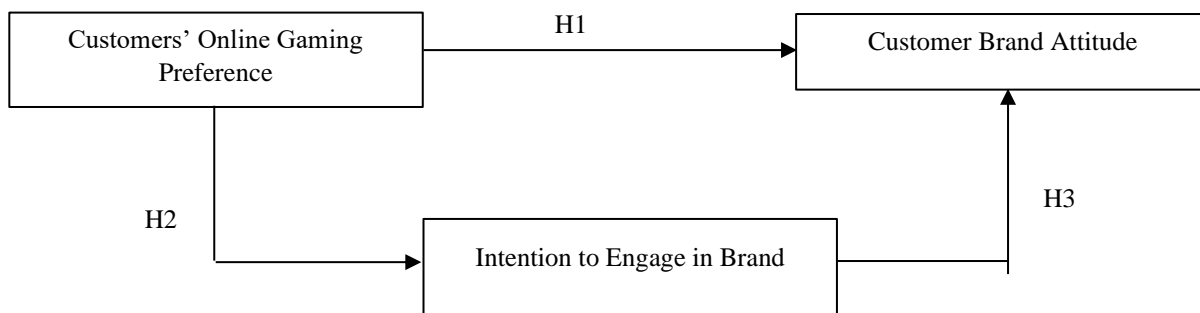Thus, the conceptual model presented below has been developed based on the proposed hypotheses.

Figure 1: Proposed Research Model

Figure 1 is a conceptual model developed based on prior research into gamification, brand engagement, and brand attitudes. Through the review, the independent variable of customer brand attitude, the dependent variable of customers' online gamification preference and intention to engage in the brand, and mediating variable of intention to engage in the brand were identified and used to create hypotheses that address theoretical gaps. Yang et al. (2017) identified customers' online gaming preferences as the independent variable that impacts millennials' brand attitudes as the dependent variable. The intention to engage with the brand is a mediating variable that mediates the relationship between online gamification preferences and brand attitude dimensions, as suggested by Hollebeek et al. (2014) and Yee et al. (2012).

Operationalization

All the indicators of the variables measure using the Five-Points Likert tool. The dependent variable of online gamification preference was measured through three indicators of gamification features, gamification mechanism and motivation factor (Yee et al., 2012; Harwood & Garry, 2015; Denny, 2018). The dependent variable of intention to brand engagement was measured through four indicators of emotional engagement, cognitive engagement, social engagement, and engagement behavior (Hollebeek et al., 2014; Harwood & Garry, 2015). The independent variable of brand attitude was measured through two indicators of attitude components and internal and external attitudes (Solomon et al., 2019; Banyte et al., 2007).

Methodology

The study's methodology was aligned with its research objectives and proposed conceptual framework based on a positive philosophy. As a result, empirical testing of the conceptual model was conducted using the following methods.

The study adopts a quantitative approach and is designed as a self-determined and semi-structured questionnaire for millennial customers of Sri Lankan mobile service providers. The population of the study is millennial customers of the mobile service provider in Sri Lanka based in the western province, Colombo district. The total Sri Lankan population was 20.4 million in 2012, and 11.2% of the population is in the Colombo district. 31% of the population represents millennials who are aged between 18 and 34. The target population of the study approximately is about 1.1 million mobile subscribers in March 2020 (Lanka, 2020). In Sri Lanka, there have four main mobile service providers, and their main customer base locates within the Colombo district. Therefore, the study sample has selected 400 (Krejcie & Morgan, 1970) mobile subscribers who have experienced or prefer online gaming. The sample base is selected by a convenient method representing each mobile operator.

Data collection was carried out via an online survey questionnaire distributed via email and social media platforms to ensure convenient accessibility. Respondents were asked to rate their answers on a Likert scale ranging from one to five (ranging from "strongly disagreed" to "strongly agreed"), except for demographic profile data. The survey received 219 responses, resulting in a 54% response rate compared to the selected sample size.

The collected data were analyzed using both descriptive statistics and inferential statistics to measure the variables and test hypotheses. Descriptive statistics were used to determine the central position and spread of the collected data using various measures. Inferential analysis was conducted through a multiple linear regression procedure using SPSS 23 (R) software to test significant relationships between the variables.

Data Analysis and Discussion

In this section, the study's findings are analyzed and discussed.

Characteristics of Sample

The respondents selected for the study were individuals who lived in the Colombo district, aged between 18 to 48 years, with experience and a preference for online gaming, regardless of their gender or educational level. The sample included all mobile service providers in Sri Lanka.

The respondents' age range is divided into four categories: 20 to 31-40 years old, with the majority (62.96%) falling between 21 to 30 years of age. The highest percentage (80.06%) of the sample surveyed holds a bachelor's, postgraduate, or master's degree. In terms of occupation, 51.85% of respondents work in the private sector, while the remaining are employed in government, self-employed or unemployed.

Out of the four main mobile service providers, 40.26% of respondents use a single mobile service provider. Additionally, 50.46% of the total respondents have been using their mobile connection for more than five years. Furthermore, 57.9% of the respondents are open to exploring alternative mobile service providers. Among the respondents, 59.3% expressed satisfaction with their current service providers, whereas 16.7% were mostly satisfied. Additionally, 49.1% of respondents search for new products and updates of mobile services, while 57.6% are interested in using value-added services (VAS) provided by their mobile service provider.

Reliability and Validity

According to Sekaran (2008, p. 311), the reliability and validity of data can be assessed using Cronbach's Alpha and factor analysis. Table 1 shows Cronbach's Alpha tests whether all variable values are above 0.6, indicating that the data collected from the questionnaire is reliable. The factor analysis of principal component factor analysis and exact new components with direct oblimin rotation that measures the validity of the questioner, and the items of the variables identified as a valid factor that is greater than 0.5-factor value. Therefore, all the items are considered valid for further analysis.

Table 1: Reliability Statistics

Variable	Cronbach's Alpha	Number of Item
Online Gamification Preference	**0.971**	**22**
Gamification Features	0.941	12
Gamification Mechanism	0.945	6
Motivation Factor	0.875	4
Intention to Brand Engagement	**0.984**	**23**
Emotional Engagement	0.942	6
Cognitive Engagement	0.910	5
Social Engagement	0.945	4
Engagement Behavior	0.900	4
Engagement Outcome	0.942	4

Brand Attitude	**0.959**	**9**
Attitude Component	0.945	6
Internal and External Attitude	0.902	3

Descriptive Statistical Analysis

According to the established Likert scale, Table 2 displays the descriptive statistics of the independent variables and the range of responses for the dependent variable.

Table 2: Summary of the statistics of variables

Variables	Mean	Std. Deviation
Gamification Features	3.6285	0.79183
Gamification Mechanism	3.7623	0.83888
Motivation Factors	3.6690	0.84277
Online Gamification Preference	**3.6866**	**0.78592**
Emotional Engagement	3.3187	1.03275
Cognitive Engagement	3.3509	0.92932
Social Engagement	3.3111	1.09233
Engagement Behaviors	3.4039	0.99987
Engagement Outcomes	3.3750	1.06749
Intention to Brand Engagement	**3.3519**	**0.96551**
Brand Attitude	**3.2049**	**0.97212**

The dependent variable of online gamification preference sub-variables of gamification features shows a mean of 3.63 and the lowest standard deviation of 0.792 (4.42-2.84 on the Likert scale). Gamification Mechanism has the highest mean value of 3.76 and 0.84 of standard deviation (4.60-2.92 on the Likert scale). The motivation Factor of sub variable mean value indicates 3.67 and 0.84 of standard deviation 84 (4.51-2.83 of scale).

The sub-variable of intention to brand engagement, emotional engagement has a 3.32 mean value and 1.03 standard deviation (4.35-2.29 on the Likert scale). It denotes, data are distributed over a relatively large scale. The cognitive engagement has a mean value of 3.35 and a 0.93 standard deviation (4.28-2.42 on the Likert scale). The social engagement variable has a mean value of 3.31 and a 1.09 standard deviation (4.40-2.22 of the Likert scale). Engagement behaviour has a 3.40 mean and 0.99 standard deviations (4.40-2.40 on the Likert scale). The engagement outcome variable has a 3.37 mean value and the second-largest standard deviation value of 1.067 (4.44-2.31 on the Likert scale).

According to the descriptive statistics, the online gamification preference dependent variable is within the Neither Disagree nor Agree on level of the Likert scale. That means gamification features, gamification mechanism and motivation factors are at an acceptable level. Furthermost of the customers are prefers the online gaming experience. But the dependent variable of the intention to brand engagement variable is within disagreement to agree on the scale. That can further derive emotional engagement, cognitive engagement, social engagement, engagement behaviour and engagement outcomes are not at an acceptable level. However, customers like online gaming, but engagement is low due to customers not being ready to allocate their time to play games.

The lowest mean value of the independent variable of brand attitude is 3.20 and the standard deviation is 0.97, this implies that most of the responses are within the 4.18 to 2.23 Likert scale. Then the independent variable is also within agree to disagree range.

Correlation Analysis

Table 3 displays the relationship between the independent and dependent variables in the study, measured through bivariate correlation using two-tailed statistical significance at a p-value of less than 0.01, indicating a high level of significance.

Table 3: Correlation Matrix

Variable	Mean		Person Correlation									
		SD	GPF_T	GPM_T	GPA_T	BE	BEE_T	BEC_T	BES_T	BEB_T	BEO_T	BA

	Mean	SD										
Online Gamification Preference	3.69	0.79	0.953	0.959	0.947	0.842	0.785	0.837	0.758	0.804	0.953	0.792
Gamification Features	3.63	0.79		0.884	0.847	0.796	0.745	0.789	0.720	0.759	0.743	0.750
Gamification Mechanism	3.76	0.84			0.858	0.775	0.702	0.766	0.709	0.755	0.727	0.715
Motivation Factors	3.67	0.84				0.837	0.796	0.838	0.738	0.785	0.794	0.801
Intention to Brand Engagement	3.35	0.97					0.947	0.942	0.921	0.949	0.954	0.919
Emotional Engagement	3.32	1.03						0.902	0.816	0.860	0.888	0.886
Cognitive Engagement	3.35	0.92							0.825	0.853	0.873	0.868
Social Engagement	3.31	1.09								0.859	0.830	0.823
Engagement Behavior	3.40	0.99									0.904	0.858
Engagement Outcome	3.37	1.07										0.899
Brand Attitude	3.20	0.97										

The independent variables in the study are correlated with the dependent variable at a significant level of 0.01. The strongest correlation is observed between online gamification preference and gamification mechanisms.

Simple Regression Analysis and Hypothesis testing

-The relationship between online gamification preference and brand attitude

Table 4 below, shows an R-value of 0.792 which denoted the relationship between the independent variable of online gamification preference and the dependent variable of brand attitude. R^2 explained a variance of 0.628 which means 62.8% of the variance in brand attitude can be explained by online gamification. Furthermore, Table 5 shows, the ANOVA model was significant at a level of 0.000 which rejects the null hypothesis and accepts the alternative hypothesis of online gamification preference positively influencing customer brand attitude. Moreover, as per the coefficient Table 6 the positive correlation (beta value of 0.792) suggests that increasing online gamification preference is likely to increase brand attitude. As a result, hypothesis 1 Online gamification preference has positive influences on customer brand attitudes.

Table 4: Model summary of the relationship between Online Gamification Preference and Brand Attitude

Model	R	R Square	Adjusted R Square	Std, Error of the Estimate
1	.792[a]	0.628	0.626	0.59442

a. Predictors: (Constant), GP

Table 5: ANOVA for relationship between Online Gamification Preference and Brand Attitude

Model	Sum Squares	Df	Mean Squares	F	Sig
1	127.566	1	127.566	361.036	.000ᵇ
Regression	75.613	214	0.353		
Residual	203.179	215			
Total					

a. Dependent Variable: BA
b. Predictors: (Constant), GP

Table 6: Coefficients for the relationship between Online Gamification Preference and Brand Attitude

Model	Unstandardized Coefficients		Standardized Coefficients	't	Sig	Collinearity Statistics	VIF
	B	Std, Error	Beta			Tolerance	
1 (Constant)	-0.408	0.194		-2.100	0.037		
GP	0.980	0.052	0.792	19.001	0.000	1.000	1.000

a Dependent Variable: BA

-The relationship between online gamification preference and brand engagement

Table 7 below shows an R-value of 0.842, indicating the relationship between online gamification preference as the independent variable and intention to brand engagement as the dependent variable. R^2 explains the 0.709 variances meaning that 71% of the variance in intention to brand engagement can be explained by online gamification. ANOVA Table 8 shows the model overall at a significant level of 0.000 which means rejecting the null hypothesis and accepting the alternative hypothesis of online gamification preference positively influencing the intention of brand engagement. Table 9 of coefficients shows a beta value of 0.842 which indicates the positive correlation between online gamification preference and intention to brand engagement. Therefore, increasing online gamification preference is necessary to increase the percentage of brand engagement. This indicate that hypothesis 2, Online gamification preference has positive influences on customers' intention to engage in brands.

Table 7: Model Summary of relationship between Online Gamification Preference and Intention to Brand Engagement

Model	R	R Square	Adjusted R Square	Std, Error of the Estimate
1	.842ᵃ	0.709	0.708	0.52188

a. Predictors: (Constant), GP

Table 8: ANOVA for the relationship between Online Gamification Preference and Intention to Brand Engagement

Model	Sum Squares	Df	Mean Squares	F	Sig
1 Regression	142.139	1	142.139	521.876	.000ᵇ
Residual	58.285	214	0.272		
Total	200.424	215			

a Dependent Variable: BE
b Predictors: (Constant), GP

Table 9: Coefficients for the relationship between Online Gamification Preference and Brand Engagement

Model	Unstandardized Coefficients	Standardized Coefficients	't	Sig	Collinearity Statistics	VIF

	B	Std, Error	Beta			Tolerance	
1 (Constant)	-0.462	0.171		-2.707	0.007		
GP	1.035	0.045	0.842	22.845	0.000	1.000	1.000

a Dependent Variable: BE

-The relationship between intention to brand engagement and brand attitude.

The relationship between the independent variable of intention to brand engagement and the dependent variable of brand attitude is indicated by an R-value of 0.919 which is strong, as shown in Table 10. In addition, R^2 explains the 0.845 variance which means 84.5% of the variance is affecting brand attitude by intention to brand engagement. The ANOVA Table 11 shows an overall significant level of 0.000 which reject the null hypothesis and accepts the alternative hypothesis of intention to brand engagement positively influence customer brand attitude. Table 12 of coefficients show a beta value of 0.919 and it denotes a positive relationship between intention to brand engagement and brand attitude. This indicates it is necessary to increase intention to brand engagement to increase brand attitude percentage. As result, hypothesis 3, customers' intention to engage in brands has positive influences on customer brand attitudes.

Table 10: Model Summary for the relationship between Intention to Brand Engagement and Brand Attitude

Model	R	R Square	Adjusted R Square	Std, Error of the Estimate
1	.919[a]	0.845	0.844	0.38340

a. Predictors: (Constant), BE

Table 11: ANOVA for relationship between Intention to Brand Engagement and Brand Attitude

Model	Sum Squares	Df	Mean Squares	F	Sig
1 Regression	171.722	1	171.722	1168.216	.000[b]
Residual	31.457	214	0.147		
Total	203.179	215			

a. Dependent Variable: BA
b. Predictors: (Constant), BE

Table 12: Coefficients for the relationship between Brand Engagement and Brand Attitude

Model	Unstandardized Coefficients		Standardized Coefficients	't	Sig	Collinearity Statistics	VIF
	B	Std, Error	Beta			Tolerance	
1 (Constant)	0.102	0.094		1.082	0.28		
BE	0.926	0.027	0.919	34.179	0.000	1.000	1.000

a Dependent Variable: BA

Multiple Regression Analysis and Hypothesis Testing

-Mediating effect of intention to brand engagement between online gamification preference and brand attitude.

Table 13 presents a summary of the regression model between the two independent variables of online gamification preference and intention to brand engagement, and the dependent variable of brand attitude. The R-value of 0.92 indicates a strong correlation between the two types of variables, and the adjusted R^2 explains that 84.5% of the variance in brand attitude is affected by intention to brand engagement and online gamification preference. The ANOVA model in Table 14 is significant at a level of 0.000, which reject the null hypothesis and accepts the alternative hypothesis of brand engagement in mediating the relationship between online gamification preference and their brand attitudes. Table 15 indicates that the two independent variables of online gamification preference and intention to brand engagement have a positive relationship with the dependent variable of brand attitude, with the highest and strongest dependent variable having a beta value of 0.867. The study of multiple regression models has identified that 86.7% of the variance has a significant relationship with two independent variables. The VIF value indicates that both independent variables are 3.439, which is less than 5, indicating that there is no multicollinearity in brand attitude with online gamification preference and brand engagement. Table

15 shows a beta value of 0.062, indicating a positive relationship between online gamification preference and intention to brand engagement. However, the significant value of 0.211 indicates that the coefficient is insignificant. There appears to be a moderate level of effect of intention to brand engagement between online gamification preference and brand attitude, but it is not statistically significant. While the intention to brand engagement positively affects online gamification preference based on hypothesis 02 with a higher beta value (0.842), which is significant, brand attitude also positively affects online gamification preference (hypothesis 01). Additionally, the impact of gamification preference (as indicated by the Beta value of 0.792 in Table 6) on brand attitude has now reduced to 0.062 and has been insignificant in the Table 15 multiple regression model when both gamification preference and brand engagement are together predicting brand attitude. This explains the condition of perfect mediation of brand engagement in the model in predicting brand attitude. According to Baron and Kenny (1986), this is perfect mediation, and hence, brand engagement has a mediating effect that develops a relationship between online gamification preference and brand attitude.

Table 13: Model Summary of moderating effect of intention to brand engagement between online gamification preference and brand attitude

Model	R	R Square	Adjusted R Square	Std, Error of the Estimate
1	.920[a]	0.846	0.845	0.38289

a. Predictors: (Constant), BE, GP

Table 14: ANOVA for moderating effect of intention to brand engagement between online gamification preference and brand attitude

Model		Sum Squares	Df	Mean Squares	F	Sig
1	Regression	171.952	2	85.976	586.458	0.000[b]
	Residual	31.226	213	0.147		
	Total	203.179	215			

a Dependent Variable: BA
b Predictors: (Constant), BE, GP

Table 15: Coefficient for moderating effect of intention to brand engagement between online gamification preference and brand attitude

Model	Unstandardized Coefficients		Standardized Coefficients	't	Sig	Collinearity Statistics	VIF
	B	Std, Error	Beta			Tolerance	
1 (Constant)	-0.005	0.127		-0.040	0.968		
GP	0.077	0.062	0.062	1.254	0.211	0.291	3.439
BE	0.873	0.050	0.867	17.400	0.000	0.291	3.439

a. Dependent Variable: BA

Discussion

As per the findings, there is a certain level of online gamification preferences in the mobile service industry. This indicates that millennial customers in this industry consider the about satisfactory level of gamification features and motivation factors when taking online gaming. Furthermore, operators in this industry have a lower level of brand engagement in online gaming. However, it indicates that customers like online gaming, but brand engagement is at a low level due to customers not being ready to allocate their time to play games (Mathieson, 1991). Hence, the first objective of the present level of millennial customers for online gaming was satisfied.

The findings show a strong positive linear relationship and a significant correlation. Therefore, it is necessary to enhance online gaming preferences to improve brand attitudes. This is supported by Yang, Yousra, and Yogesh (2017), who found a significant relationship between gamified marketing and brand attitude through the Technology Acceptance Model's dimensions of perceived usefulness, perceived ease of use, and perceived enjoyment. This study further elaborates on the concept of gamification preference, encompassing gamification features, mechanisms, and motivation factors.

While investigating the impact of online gaming preferences on customer engagement with brands in the Sri Lankan mobile service industry. Results show a strong and significant positive relationship, leading to the conclusion that increasing online gaming preferences can enhance brand engagement. Gamification has been proven to be an effective tool for brand management by Xi and Hamari (2019) and has a positive relationship with emotional, cognitive, and social engagements, except for immersion. The positive relationship between perceived usefulness and perceived enjoyment in brand engagement has been established because of gamification being a technologically adaptable concept (Yang et al., 2017). However, Harwood and Garry (2015) found that gamified customer engagement remains unrealized in many environments. The brand engagement in this study is divided into five sub-factors, including social, cognitive, and emotional engagements (Hollebeek et al., 2014) engagement behavior and outcome (Harwood & Garry, 2015).

To explore the relationship between customer brand engagement and their brand attitudes in the Sri Lankan mobile service Industry. The results indicate a strong and positive linear relationship between the variables, and therefore, increasing brand engagement intention is necessary to improve brand attitudes. Yang, Yousra and Yogesh (2017) have demonstrated that there is a positive relationship between brand engagement intention and brand attitude in the context of social factors.

To explain the role of customer intention to engage in brands on the relationship between online gaming preference and brand attitudes in the Sri Lankan mobile service industry. A perfect mediator effect of brand engagement on the relationship between online gamification and brand attitude. Therefore, it is necessary to increase intention to brand engagement using online gamification techniques. The study by Yang, Yousra and Yogesh (2017) supports the findings that the brand engagement factor of perceived enjoyment significantly influences brand attitude in the gamification process. Same as Hamari and Koivisto (2013) indicated that the brand engagement factor of social factors influences to contribute brand attitude and intention to engage toward gamification services. The study also proves that there has a perfect mediator effect based on Baron & Kenny's (1986) three mediator testing conditions.

Conclusion, Implication, Limitation and Future Research

The mobile telecommunication industry shows significant development during the past two decades. With the highly saturated market, there is high competition among mobile service providers. Since all the providers are providing the same service, they have introduced different and innovative services. To retain their customers, they practice different brand management strategies. With the technological advancements of the online mobile gaming industry, and by using the theoretical knowledge of marketing concepts, online gamification concepts emerged. It improves the marketing aspect of customer behaviours with non-gaming applications.

Research findings indicate that the users have a favourable response to current services and moderate motivation to adopt or search for innovative services or value-added services of mobile service providers. This research proposed that the adoption of online gamification impacts brand engagement and brand attitude to retain existing mobile users and attracts new subscribers. Thereby the customer brand attitude may increase with the use of online gamification preference and brand engagement. Based on the research study, regression results derive that brand attitude has more impact on brand engagement than online gamification preference. Brand engagement identifies as a perfect mediating variable between brand attitude and online gamification preference. Therefore, brand engagement has been identified as the key factor to increase brand attitude. As a result, mobile service providers should focus on the brand engagement element when utilizing gamification marketing concepts. The elements can be defined as emotional engagement, social engagement, cognitive engagement, engagement behaviour and engagement outcome. The mobile operator should improve the brand attitude of the customer by adopting attractive non-gaming marketing concepts focused more on brand engagement activities.

The research can conclude that Sri Lankan mobile service industry lacks the use of online gamification in the form of a marketing perspective. So, the industry players have opportunities to use this trending technique to interact with their customers. If the industry players plan creative marketing campaigns for brand engagement and brand attitude, they can develop an online non-gaming context platform. It will be an effective and efficient technique to capture potential customers and retain customers with high satisfaction.

Implications

The study implications have been divided into two categories as managerial implication and theoretical implication. The managerial implications describe the industrial-specific practices to improve the research objectives. The theoretical implications provide more theoretical practices implies to improve the study objectives.

Managerial implications

The proposed study suggests that gamification can be a powerful tool for building customer relationships in a virtual environment. However, the study finds, currently, mobile service providers provide perceived customer service. It has been proved that there is a relationship between service quality and perceived trust in technology (Almarashdeh, 2018). Therefore, mobile service providers need to improve service quality to retain customers. Before introducing gamification to customers, employees should be educated about it. The study focuses on millennials as early adopters of new technology and suggests using gamification techniques in promotion campaigns for this demographic. Companies should consider their specific branding when creating gamification techniques and use technology like the Hachi projector and touch screen to attract customers in public places. Combining gamification, virtual reality, and augmented reality technologies can be effective in attracting millennial customers.

Theoretical implications

Since brand engagement is a perfect mediator of brand attitude and online gamification, the research further investigates brand engagement sub-factors of emotional engagement, cognitive engagement, social engagement, engagement behaviour and engagement outcomes indicators. The researchers can initiate other brand management strategies like brand equity, brand awareness, brand recognition, brand loyalty, brand image and brand identity. Gamification applicability and its effective results in improving customer experience and customer satisfaction (Aparicio, Vela, Sánchez, & Montes, 2012). Therefore, developing a brand-related application for mobile users will be able to increase customer brand experience. It can use gamification factors (fun, rewards, competition, and storytelling) and 4R (reflex, reality, real place, and real communication) (Lee & Jin, 2019). Therefore, researchers can investigate how it can use new devices and applications to combine gamification and customer brand engagement. Gamification can be used as a catalyst in marketing. The researcher identifies a potential impact of gamification on customer satisfaction, self-determination, social exchange, frequency of participation and other rewards. The researcher also identifies the interest in gamification adoption, brand engagement and brand attitude among the old generation and different gender. However, the researcher further investigates game techniques for traditional marketing for Sri Lankan mobile service industry. Since there have several success stories about gamification adoption, the researcher can investigate the failure stories and identify the reason for failure as the lesson learned.

Under social implications, the demographic factor of gender becomes important to consider in technology adoption. Gender is an important demographic factor to consider in technology adoption, as women are motivated to use online platforms, and a strong social network among women is important for gamification marketing (Venkatesh & Morris, 2000). The target audience of millennials who are willing to adopt the technology. Therefore, the use of gamification techniques could be used to improve their soft skills like self-determination, self-motivation, critical thinking, problem-solving, etc. (Denny, 2018). Although adoption of online gamification features and techniques useful to increase engagement in educational purpose and improve computer literacy (Browne et al., 2014).

Limitations and Future Research Areas

The research has some limitations. First, the biases of the responses are high due to the research sample method using a convenient sampling method. Second, the findings of the study should be interpreted within the developed conceptual model, but there have other brand environments and social impacts. The third limitation is the sample size of the study. And increasing the sample size of the study could generate a more feasible result. Due to time, resources and capacity limitations, the study was only conducted for the Colombo district and age limited to Millennials (aged 18 to 38 years). So, the study can be open to the world and all ages. There can be information misleads due to respondent misunderstanding questions and misinterpretation. This study mainly focuses on the mobile service-providing industry, but this can be conducted for other industries in Sri Lanka as well.

Gamification can identify as a new area for a further research study. Based on the research findings, brand engagement has a perfect mediating relationship with online gamification and brand attitude. Thereby the research further focuses on sub-factors of emotional engagement, cognitive engagement, social engagement, engagement behaviour and engagement outcomes indicators. Based on that, the existing model could be elaborated. In addition, the application of gamification for different marketing perspectives can be used to improve customer attitudes and behaviours.

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