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# Gamification Implementation in Service Marketing: A Literature Review

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## Abstract

In recent years, technology has been increasingly harnessed for motivating, engaging and supporting people towards different individually and collectively beneficial behaviours. Globalisation has increased the stiff competition for companies; especially it's a challenge for marketers to attract new customers and engaged existing customers toward their products and services. Innovation and creativity concept through digital marketing is very popular among marketers. Gamification is one of the most popular developments in this field. Gamification main goal is to engage customers towards different activities in non-game context. There is a growing interest in this term as well as its implementation in the field of service marketing. However despite of increasing interest, successful implementation and sustainability in service marketing is a big gap present in literature. The present systematic review aimed to review the trends and gaps found in the literature related to implementation and sustainability of gamification through motivation in service marketing. Moreover discussion about how game designs elements and game thinking can be applied to changing behaviour and attitude for engagement of customers in service areas. Furthermore which platform is considered best for service gamified system? For this purpose total 302 articles found on gamification and 27 are chosen for this research. Main findings emerged: behaviour/attitude change achieves by motivation that is related to gamification and success of gamification is depend designing, and sustainability. Moreover trend of gamification research seem to have increased since 2017.

**Keywords:** Gamification, implementation, sustainability, customer engagement, service marketing.

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## 1. Introduction

With the rapid development of technology, marketers have adopted new strategies which are unconventional in global business and turned away from the traditional marketing strategies. Gamification is one such strategy that is pointed out by researchers (Dexter and Yazdanifard, 2015). Gamification is defined as the use of game mechanics in non-game environments (Nah *et al.*, 2014). However, this technology based concept has certain issues like infancy stage (Agnieszka, 2014), definition controversy (Hamari, 2015), poor designing (Wen *et al.*, 2014), successful implementation and sustainability (Kim, 2015; Pratap *et al.*, 2016). The review showed that organizations can get positive effects through gamification, however these effects are depend on its implementation and user engagement (Hamari, Koivisto and Sarsa, 2014). Furthermore, gamification has drawn the attention of academic, practitioners and business professionals in domains as education, information studies, human computer interaction and health.

Implementation and sustainability of gamification are least explored topics in service marketing. Previous literature has pointed out the dearth of empirical evidences related to gamification implementation and sustainability. Moreover, immature theoretical foundations and lack of uniform guidelines for applications are also the issues related to gamification (Hamari and Koivisto, 2015; Russell-Bennett and Baron, 2015). However based on the literature, more problematic areas of Gamification actually lie in the difficulty in successful implementation of gamification and difficulty in designing a Gamification mechanics to attract new customers and encourage existing customers to continually engaged in appropriate outcomes (Butler, 2014; Russell-Bennett and Baron, 2015). The research company argued that eighty per cent of gamified application failed to implement because of the poor designing (Hill, Goel and Yang, 2015). (Lauto and Valentin, 2016) discussed that a key task in open innovation processes is the selection of the best ideas and designs. One challenge that gamified experience faced is the issue of player attraction and long lasting engagement that move them towards loyalty (Freudmann and Bakamitsos, 2014). Previous studies pointed out the platform for gamification implementation but which platform is best to attract customers and for sustainability are till questionable. This systematic review aim is to find out the trend and guideline how the gap can in service marketing. Review of literature from past studies have produced trends, benefits and designing in different domains like human computer, health and education (Koivisto and Hamari, 2014; Dexter and Yazdanifard, 2015), but no systematic research has been directed on successful implementation and sustainability with most appropriate platform in service marketing. This review is to initiate an evidence-based discussion on gamification in service marketing.

## **2. Literature Review**

### **2.1 Gamification Industry**

In modern technological based business world, it is considered in marketing that non transactional customer engagement is very important that able customers to contribute a broad range of resources that directly and indirectly affect the company and other consumers (Brodie *et al.*, 2013; Freudmann and Bakamitsos, 2014; Harwood and Garry, 2015). Therefore many authors indicated that the industries can positively customer engagement through motivation and by using engagement platform (Seixas, Sandro and Jos, 2016; Yang, Asaad and Dwivedi, 2017). Consequently for customer engagement, gamification has seen extensive adoption by service industry in recent years, with an estimated 70 per cent of global 2000 service markets having at least one gamified application (Gartner, 2011). Moreover, it is reported by Deloitte in its report of Tech Trends that gamification can motivate customers towards engagement and competition to overwhelmed challenges and also be rewarded ("GAMIFICATION," 2013). Additionally, the organizations currently implementing this innovative concept are Microsoft, Alfa Romeo, Nike, Foursquare, Deloitte, Treehouse, Nissan, Recyclebank, Kaplan University and Samsung. According to Gartner, gamification may have achieved the level of maturity where it is declining and because of this approximately 80% of gamification application failed to meeting required objectives by 2014, particularly due to poor planning & designing and ignored intrinsic motivation (Hamari, Koivisto and Sarsa, 2014; Ioană and Stoica, 2014). However, gamification implementation is carried lot of expenditures estimated \$938 million on gamification software and in marketing activities per year (Palmer *et al.*, 2012).

### **2.2 Gamification Theoretical Background**

Gamification is a new concept in digital marketing, is also a future trend which can applied in service marketing to change the motivation and behaviour of customers. However because of its impact on customer loyalty, this technology base concept is seen as a revolutionary change in business( Ng 2011 and Agnieszka, 2014). (Gartner, 2011) argued that in coming 10 years, approximately 70% of the world organizations looking for creativity and innovative approaches will be using gamification. Gamification has already been successfully used in marketing, business, health and education. Research has found that the user engagement in an online experience is significantly increased by gamification (Hamari, 2015; Suh and Wagner, 2017). However, experiential insights into the effects of game design elements in service market place are still scarce, leading to research gap for marketers and researchers. However research diversity on gamification has made it complicated to create single definition, so there is definition controversy, robust theories and lack of research framework is founded in

literature (Conaway and Garay, 2014; Pellikka, 2014; Hamari and Koivisto, 2015; Deterding and Deterding, 2016).

Furthermore it is important to know the benefits of game design thinking and elements of game in different context. However there are different options to apply gamification in businesses. Psychology, motivation and behavioural outcomes are three main application areas of gamification (Hamari and Koivisto, 2013). Therefore gamification is applied especially to increase the motivation and engagement of consumers in different service domains like healthcare, education, business and environment (McCallum, 2012). Additionally, sustainability area has also recently experienced a large number of examples to motivate consumers changing their behaviour towards sustainable lifestyle. Gamification applications are also important in business and project management to make quick decision making process. However in business, the intension use of gamification basically encouraged collective decisions and communication (<http://enterprise-gamification.com>).

Therefore most of gamification researches have focused on concepts, definition and poor designing recently marketers and researchers have started to discover the potentials of gamification sustainability, platform and successful implementation among service industries. By combining the literature on gamification and service industry, this research intended to address the mechanics of gamification to achieve sustainability and observed gaps in order to evaluate current implementation practices through suitable platform.

### **2.3 Gamification Theories**

Gamification is closely related to motivation, it changes the behaviour by creating motivation for individuals (Wen *et al.*, 2014; Hamari and Koivisto, 2015; Xu *et al.*, 2016). Therefore many theories are focused on motivation like behaviourism, cognativism, self-determination, reasoned action theory, social proof theory, flow theory and positive psychology. Behaviourism theory is presented by Watson in 1913. This theory explains that how rewards are affected on individuals when they found link between task and reward. So to achieve the rewards they will start to perform the activity and this will change the behaviour. Behaviourism in gamification can change the behaviour of users through motivation and reward (Surugiu, 2014). However, this theory is only focused on reward earning strategy, participants may not know other reasons why they are engaged (Ne Gagné and Deci, 2005; Dexter and Yazdanifard, 2015). Moreover behaviourism ignores what is happening in an individual mind. This theory is also ignored the intrinsic motivation. However for Gamification both intrinsic and extrinsic motivations are important. As (R. M. Ryan and Deci, 2000) mentioned that only extrinsic rewards are not enough for motivation. The use of extrinsic motivation will decrease motivation to use company products and services once they remove that reward.

Self-determination theory given by Deci and Ryan in 1985 is a macro theory of human motivation concerning people's inherent growth tendencies and their innate psychological needs. Therefore this is most influential motivational theory and is divided into intrinsic and extrinsic motivation (Deci *et al.*, 2001; Baard, Deci and Ryan, 2004). Autonomy, competence and relatedness are three psychological needs which are related to intrinsic motivation. On the other hand reward is concern about extrinsic motivation According to (Deci *et al.*, 2001) intrinsic motivation gives autonomy to an individual who provides them opportunity to choose, using feedback and not controlling the instructions given to people. He further argued that when autonomy is decreased it can decrease the creativity, performance and can also diminish the further desirability of the given sustainable activity (Gagne & Deci 2005). However psychology presents the concept of motivation related to Gamification in two ways that is intrinsic and extrinsic (Wen *et al.*, 2014; Berger and Schrader, 2016). Combination of extrinsic and intrinsic motivations is important for gamification success. In gamification, extrinsic motivation is linked with game elements like points and badges. Enjoyment, recognition, social acceptance, self-actualization are related with intrinsic (R. Ryan and Deci, 2000; Ne Gagné and Deci, 2005; Niemiec *et al.*, 2006).

Positive psychology is a branch of psychology, which has been given by Seligman and Csikszentmihalyi. This theory is further divided into two parts, PERMA and FLOW theory. What makes people happy is studied by Seligman. This concept is based on five core aspects that are important to flourishing individual. PERMA means Positive emotions, Engagement, Relationship, Meaning and Achievement. Second concept is FLOW that is proposed by Csikszentmihalyi in 1975. Flow is occurred when the activity is not very challenging or very easy. Flow will occur in following conditions: when goals are clear, there is balanced between perceived challenge,

skill and immediate outcome. Flow is important in gamified designing process. It will start to reflect the cognitive side of Gamification and focus on how people feel about what they do (Seligman and Csikszentmihalyi, 2000).

Theory of reasoned action is presented by Fishbein and Ajzen in 1975, is focused on the use of technology system influence directly or indirectly on users behaviour intention, perceived ease of use, perceived usefulness, strategic value and attitude. This theory is important for the sustainability of gamified services.

## 2.4 Research Methodology

Literature on gamification concludes that many empirical studies have lack of methodology background (Hamari, et al, 2014b). For illustration, lack of quantitative studies, small sample size, lacked control group in experiment and theories for defending the results. In this research, previous literature findings and discussion is combined to elaborate the result. Given the methodological diversity of gamification research in service marketing, this review is included qualitative as well as quantitative researches. Furthermore different phases are involved in this review study: first phase is related to search and inclusion in which different keywords were used like game design, gamification in service marketing, gamification theories, elements of gamification, gamification definition, gamification implementation, gamification sustainability and mobile gamification, so for this purpose distinct search engine were used including science direct, Google scholar, research gate, Springer and Emerald Insight. In this search researcher found total of 301 results. However articles were found from different journals including Computers in Human Behaviour, Springer Open Journal, Science Direct, Journal of Services Marketing, European Journal of Training and Development, Journal of Biomedical Informatics, Journal of Advertising, International Journal of Educational Technology in Higher Education, Int. J. Human-Computer Studies, AIS Electronic Library (AISeL), Energy Research & Social Science, International journal of information management, Computers & Education, Conference papers, Tourism Management, Industrial Marketing Management, Australasian Marketing Journal, Technological Forecasting & Social Change, Journal of Travel & Tourism Marketing, Journal of Consumer Marketing, Journal of interactive marketing, Internet Interventions and Human Resource Management International Digest. Moreover the articles were organized and coded according to the type and context. So total of 25 most relevant articles were selected for this review. In next part analysis of 27 articles is included; the articles were studied and then inserted in an analytic review table including the categories of source, subject, type, method, data source, platform, theories and country context (Table 1). Furthermore in next step, identical categories studies were compared then further data was investigated. Furthermore trend, design, implementation, engagement, benefits & challenges, usage of platform, and sustainability in context of service marketing was discussed in detail.

**Table 1: An analysis of studies on Gamification in service marketing (n =25)**

Source	Discipline	Type	Method	Data Source	Platform	Theory/ Model	Country context
Koivisto and Hamari, (2014)	Computer in Human Behaviour	Survey	Survey	Online survey of users of Fitocracy	Social media	-	Finland
Rodrigues, Oliveira and Costa, (2016a)	Computer in Human behaviour	Implementation	Quantitative	Online bank customers invite to rate the variables.	Website	Technology acceptance theory, Theory of Reasoned Action, (TRA)	Portugal
Ming <i>et al.</i> ,(2014)	Marketing	Implementation	Survey	Online observations of likes and shares	Social media	Motivation model from the aspect of psychology	Taiwan

Xu <i>et al.</i> , (2016)	Tourism management	Survey	Qualitative	Focus groups emphasize on group discussion and interaction, as well as share and compare participant's experiences.	website	MDA model	Cross Country (China&UK)
Partners <i>et al.</i> , (2012)	Consumer marketing	Implementation	Qualitative	19 in depth interviews with individuals who are frequent online shoppers	Social media	-	UK
Conaway and Garay, (2014)	Service Marketing	Survey	Survey	Exciting published literature, trade publications and newsletters	website	Design theory	Mexico
Harwood and Garry, (2015)	Service Marketing	Implementation	Mixed method	Netnography and participants observation	Website	Flow and social cognitive theory	Cross study (UK & New Zealand)
Wen, Chang and Lin, (2015)	Service marketing for customer purchase intention	Implementation	Quantitative	Questionnaire	Mobile applications	Behaviourism theory	Greece
Ching, Hsieh and Hwang, (2017)	Online marketing	Survey	Case description	-	Social media	-	Taiwan
Seixas, Sandro and Jos, (2016)	Marketing in education services	Implementation	Field base research	Observations, semi structured interviews and questionnaires	Social media	-	Brazil
Mitchell, Schuster and Drennan, (2017)	Social marketing behaviour	Implementation	Experimental	Self-administrated online survey, observation	Mobile apps		Australia
Hamari and Koivisto, (2015)	Information Management	Survey	Survey method	Online questionnaire	Social media, Website	Self determination	Finland
Guang <i>et al.</i> , (2017)	Industrial marketing management	Implementation	Systematic review/ qualitative	Publication formats including	-	Advance service transformatio	UK

				books, peer reviewed journal articles		n business model	
Butler, (2014)	Marketing in IT	Survey	Survey	Meyers-Briggs Type Indicator tool is used to judge the personality types	-	-	Norway
Agnieszka, (2014)	Relationship marketing	Implementation	Qualitative descriptive research	Journals and articles		Relationship marketing theory	Poland
Nakashima and Maruyama, (2017)	e-Marketing in service business	Survey	Case study	Survey, observations, interview and questionnaire	Website	-	Japan
Sailer <i>et al.</i> , (2017)	Computer in human behaviour	Survey	Experimental study	Online survey, observation	Mobile application	Self-determination theory, psychological need satisfaction	Germany
Morganti <i>et al.</i> , (2017)	Electronic Marketing	Implementation	Systematic review study	Relevant publications	-	-	Italy
Hamari and Koivisto, (2013)	Electronic marketing	Implementation	Qualitative survey	Survey through gamification application called Fitocracy	Social media	Theory of planned behaviour	Finland
Matallaoui et al, (2017)	Computer in human behaviour	Implementation	Systematic review, quantitative and qualitative	Reports, publications	-	MDA model	Cross study (Germany & Finland)
Lucassen and Jansen, (2014)	Consumer marketing	Implementation	Qualitative	Semi structured Interview, discussion	Social media	Unified Theory of Acceptance and Use of Technology (UTAUT) model	The Netherlands
Yang, Asaad and Dwivedi, (2017)	Marketing context	implementation	Quantitative	Past literature based on qualitative approach	Website, mobile app	Desire theory & theory of reasoned action and MDA model	UK
Goncalo Baptist and Tiago Oliveira,	Marketing in service designing	Implementation	Quantitative	Questionnaire	Mobile	unified theory of acceptance, UTAUT2	Portugal

(2016)							
Seaborn and Fels, (2015)	Human computer studies	Survey	Qualitative	Survey method	-	Self-determination theory	Canada
Bittner and Shipper, (2014)	Consumer marketing	Research	Quantitative	Questionnaire	Social media	Planned behaviour theory	Cross study (Germany &Netherland)
Helena Nobre and Andre, (2017)	Consumer Marketing	Implementation	Exploratory	Focus group, semi structured interviews	Social media	Congnativism and behaviourism	Portugal
Brodie <i>et al.</i> ,(2013)	Business research	Survey	Qualitative	Observations	websites	-	New Zealand

Numerous key findings found as a result of the research review of the particular 27 articles on gamification in service domain. These findings described below in terms of gamification trend, customer engagement, implementation, designing, platform and sustainability.

### 2.5 Trends and Gap

Number of Publications

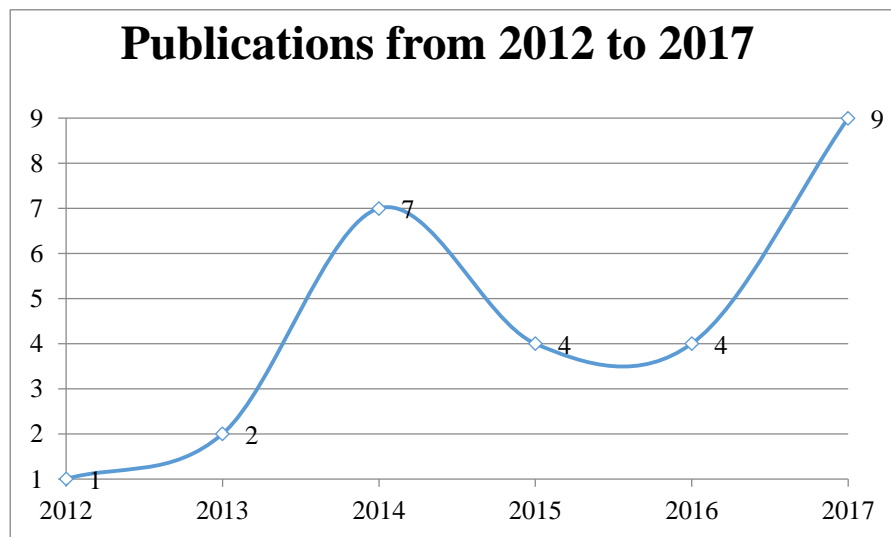


Figure 1: Years

The articles examined from the time between 2012 and the 2017 first half, when research on gamification trend in service domain is increasing. As presented in Figure 1, in the third year trend is increased the next year it decreased but in last year there is tremendous change is occur in gamification researches and increased dramatically. From the period of 2014-2017 approximately 70% articles have been published. However approximately 70% studies conducted in developed countries. In case of emerging, developing and cross country, very limited studies was conducted estimated 20%, 5% and 5% respectively as shown in table 1. Moreover qualitative and survey approach is used in mostly studies. While in theories part, self-determination, behaviourism, reasoned action, flow and unified theory of acceptance are frequently used. In context of platform, approximately above 50% studies discussed websites.



Therefore Gamification in the research field has expressively increased in the past five years. The initial phase of research has consisted of definitions, concepts, game design and framework for gamification, while mostly conference papers, technical papers describing game design elements, user technology adoption, user effects, network exposure, social motivation towards attitude and study about benefits of gamified system (Partners *et al.*, 2012; Hamari and Koivisto, 2013; Koivisto and Hamari, 2014; Conaway and Garay, 2014; Seaborn and Fels, 2015). However publications of initial stage are related to information technology, game studies, psychology, and human computer interaction. In second phase, mostly researches are conducted on consumer motivation (Sailer *et al.*, 2017), online marketing, use of smart technologies, adoption of gamification in service industries (Yang, Asaad and Dwivedi, 2017), gamification as a brand co creation and gamification in service marketing (Andre, 2017).

However mostly studies are on conducted in developed countries with qualitative and survey methodology adoption. In developing and emerging countries very limited studies are conducted. While literature showed that the past studies have lack of experimental designs, theoretical supports for motivation and engagement and evidences of suitable platform for sustainability (Partners *et al.*, 2012; Koivisto and Hamari, 2014; Seaborn and Fels, 2015; Deterding and Deterding, 2016). So to fill the gap, It is important to conduct the study on effective design that is attractive for different age groups, customer engagement and sustainability by supporting theories including self-determination theory, social proof theory, flow theory and reasoned action theory.

## **2.6 Implementation and Gamification**

Implementation of gamification is very important to achieve the goal of customer attraction. Full consideration is required for successful implementation of gamification in services to achieve the desired outcomes like behaviour change, relationship development, loyalty, repeat visits and the intrinsic and extrinsic rewards (Harwood and Garry, 2015; Sigala, 2015). Intrinsic and extrinsic rewards / motivation are crucial for gamification success. Effective designing of Game and gamification mechanic is very important for successful implementation. It is argued that in previous literature that the Gamification use is strongly determined by both utilitarian and hedonic benefits. So both utilitarian and hedonic aspects are strong determinants for Gamification acceptance. Moreover game design effect on need satisfaction also depends on quality and aesthetics of the design implementation. In other words, the whole process of implementing gamification plays a crucial role, However in literature ( Nicholson, 2012; Hamari and Koivisto, 2013; Agnieszka, 2014; Deterding et al, 2016; Rodrigues, Oliveira and Costa, 2016b) mentioned that there is need to attach more rewards in gamified system to encourage the customers. Therefore intrinsic motivation need to be dressed because individuals want emotionally and mentally affection. As (Ryan and Deci, 2000) defined intrinsic motivation that it is an activity/ task doing for getting enjoyment rewards rather than achieved rewarding values or pressure. Furthermore (Koivisto and Hamari, 2014; Hamari, 2015; Sailer *et al.*, 2017) discussed that gamification main purpose is to motivate psychological and behavioural results. Furthermore services are serving for utilitarian purpose and hedonic elements like feedback, progress, encouragement, achievement and fun implementation is core service of gamification applications to increase user motivation and supporting them to increase engagement. Likewise self-determination that is presented by Ryan and Deci in 1985 also pointed out that motivation is increased by intrinsic and extrinsic rewards but intinsic rewards like recognition, fun and enjoyment is more fruitfull to achieve the goals. However ( Hamari, 2013; Hamari and Koivisto, 2013; Mitchell, Schuster and Drennan, 2017) pointed out that many service industries also use to implement the social features in gamification exercise to motivate the intrinsic satisfaction in customers. While use of social factors in gamified service design shows the effectiveness of gamification service among customers. Community size is also influence positively to perceived benefits from social recognition and influence. It is also noted that social factor are strong predictors for attitude/ behavioural modification and intention use in gamified services. Furthermore ( Butler, 2014; Wen, Chang and Lin, 2015; Hamari, 2015) indicate the negative impact of time with social influence, peer opinion and social pressure become reduce the use of service because individuals achieved enough experience from service use so they depend on their opinion rather than adopted from society. Additionally social proof theory that is presented by (Cialdini, 2001) predicts that individuals are more likely engaged with experience which they perceived from others and give social validity proof that they are also engaged in same behaviour. However it is also questionable that which platform is best for gamification implementation? In literature different authors pointed

out different platform like social media (Hamari and Koivisto, 2013; Lucassen and Jansen, 2014), websites (Conaway and Garay, 2014; Hamari and Koivisto, 2015; Xu *et al.*, 2016) and mobile applications (Wen *et al.*, 2014; Mitchell, Schuster and Drennan, 2017; Yang, Asaad and Dwivedi, 2017) to implement the gamification service. Therefore gamification can be a powerful solution tool to address motivational problems if it will design and implement well established models.

Social capital network is a key for the innovation and knowledge spill over among industry players (Pellikka, 2014). Social media's presence in our lives is becoming inescapable. Communicating through social media may be one of the most popular methods of electronic communication (Koivisto and Hamari, 2014; Hamari and Koivisto, 2015; Abel, Buff and Burr, 2016). (Kim, 2015; Abel, Buff and Burr, 2016; Yang, Asaad and Dwivedi, 2017) argued that mobile and social media are best for gamification implementation because of three reasons: Rapid adoption of the smartphone, the tremendous growth of the mobile web, the increased use of the social media. The combination of these three elements can make possible the popularity of gamification. The GPS features of a smartphone allowed people to easily share their locations (Wen, Chang and Lin, 2015). The mobile web made the real time information sharing on such gamification apps a reality. In literature it is found that gamification is not long lasting and durable process (Yang, Asaad and Dwivedi, 2017). Moreover high speed wireless internet and cloud computing technology availability has been increasing the mobile usage. To fulfil the current needs of business, traditional web user services are become switching or redesigning their application to the mobile technological platform to increase and maintain the user engagement and productivity (Harwood and Garry, 2015). Moreover according to reasoned action theory that is presented by (Fishbein and Ajzen, 1975) one actual use of technology is influenced by perceived ease of use. So mobiles are more convenient and easy to access base technology. Particularly it's a basic need in this modern era and pocket carry technology so gamified organizations can easily convey their message through this platform.

## **2.7 Customer engagement and Gamification**

Many survey studies conducted on role of customer engagement in gamification (Harwood and Garry, 2015; Robson *et al.*, 2015; Seixas, Sandro and Jos, 2016) pointed out the importance of customer engagement, they gave the evidence that the achievement of engagement is linked with the level of motivation, behavioural, performance, completion of task and reward collection. (Dexter and Yazdanifard, 2015; Robson *et al.*, 2015) discussed that Gamification is a tool of behaviour change, while it can increase customer engagement if it implemented properly. Furthermore they discussed two types of individuals in psychological context who engaged toward gamified experience, players (customers) and designers. Designer are marketers and play an important role to attract players. Moreover they argued the challenges that faced gamified designers to engage customers. One challenge is to understand: how different age group customers would be motivate. Likewise in (Rodrigues, Oliveira and Costa, 2016) study It is found that customer sense of social interaction is improved by gamification which strongly effected on customer intention use of application and this increased customer engagement that is beneficial for businesses. Furthermore ( Helena Nobre and Andre, 2017) found that through entertainment, brand involvement, challenges, and repeat experiences, gamification can leads businesses toward success. Additionally, consumers engaged gamified systems when it gives intrinsic and extrinsic reward, fun & enjoyment, competition, social interaction and recognition. (Hamari and Koivisto, 2013; Wen, Chang and Lin, 2015) in utilitarian, hedonic and social interaction; hedonic and social interaction are strong predictor of attitude and intention to use or customer engagement. For how gamification is perceived and intent to continue use, social factors are strong predictors. (Koivisto and Hamari, 2014) discussed that the recognition of users received might not directly effect on their behaviour and attitudes towards gamification. The results indicate that attitude toward a Gamification service is a strong determinant of one's intentions to continue using the service as well as of intentions to recommend the service to others. Furthermore (Koivisto and Hamari, 2014; Lucassen and Jansen, 2014) results show that perceived enjoyment and perceived usefulness of the gamification decline with use. They argued that users become bore or fed-up with the experience of service use. Moreover ease of use of gamification service is reduced with the passage of time and age. (Partners *et al.*, 2012; Harwood and Garry, 2015; Deterding and Deterding, 2016) argued that norms become diffuse by social activities of sharing and recognizing in challenge completion. Particularly, the results pointed out that the user engagement in

gamification is essential part into value chains, user led innovation and word of mouth advertisement. So marketers should motivate customers toward loyalty and continues use.

However motivation and flow is very important for user engagement as (R. Ryan and Deci, 2000; Seligman and Csikszentmihalyi, 2000) argued in self-determination and flow theory that intrinsic and extrinsic rewards both are essential to motivate the customers and flow mean challenge should not be difficult nor so easy because so difficult task can fed-up the players and so easy task can bore them. So for continues engagement intrinsic and extrinsic reward as well as flow is important for sustainability. Clear goals are also one of the main dimensions of flow theory (Csikszentmihalyi, 1990) which predicts that having clear goals and immediate feedback supports the emergence of a 'flow state', where the user's skills and the challenge of the task are optimally balanced.

## **2.8 Sustainability and Gamification**

In literature it is pointed out that Gamification is not a long lasting process(Hamari, 2015; Berger and Schrader, 2016) so sustainability is a big problem that is associated with this innovative concept. (Hamari, 2015; Rodrigues, Oliveira and Costa, 2016) pointed out that the intrinsic reward is referred to internal benefits that are derived from the use of technology or enjoyment from website by motivators and this enjoyment increased or sustainable the use. They further argued that enjoyment and ease of use are correlated that influence on services use. Furthermore behaviour change maintenance or sustainability is very important in marketing instead of one off behavioural event. Marketers should concentrated on sustainability building and long lasting positive exchange(Hamari and Koivisto, 2015; Harwood and Garry, 2015; Deterding and Deterding, 2016; Nakashima and Maruyama, 2017). Perceived ease of use and perceived usefulness can lead customers towards sustainability as Fishbein and Ajzen, 1975), pointed out in the theory of reasoned action that use of technology system is influence directly or indirectly on user behavioural intention, attitude, perceived ease of use, strategic value and perceived usefulness. (Davis et al. 1989; Berger and Schrader, 2016) further argued that perceived usefulness is stronger predictor of an individual intention to use technology system. (Brunello and Accademico, 2014; Yang, Asaad and Dwivedi, 2017) discussed that integration of a user-centred design (UCD) can positively change the user attitude towards services; can support individuals to perceived benefits or usefulness and also working to change the behaviour. However sustainability in gamification is still a big problem for marketers, practitioners and researchers.

## **2.9 Conclusion**

Trend of gamification in research area is increasing from past five years. Gamification is become more popular concept among researchers and marketers. Literature suggests that this is very useful technology for advance business world. Gamification is basically linked with motivation. Additionally a person with intrinsic rewards can be more powerful motivators of gamification because it leads customers towards engagement. Moreover meaningful and effective gamified design can make customer happy and long lasting user. Furthermore gaming mechanics with well designing mechanics enhance both intrinsic and extrinsic motivation through game elements. Perceived usefulness, perceived ease of use and attitude can lead users towards sustainability. However well designing in implementation process and sustainability are the problems that are linked with gamification.

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