

Journal of International Technology and Information Management

Volume 25 | Issue 3

Article 5


10-1-2016

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Recommended Citation

Sampat, Brinda and Krishnamoorthy, Bala (2016) "MOTIVATIONS FOR SOCIAL NETWORK SITE (SNS) GAMING: A USES AND GRATIFICATION & FLOW PERSPECTIVE," *Journal of International Technology and Information Management*: Vol. 25 : Iss. 3 , Article 5.

Available at: <https://scholarworks.lib.csusb.edu/jitim/vol25/iss3/5>

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MOTIVATIONS FOR SOCIAL NETWORK SITE (SNS) GAMING: A USES AND GRATIFICATION & FLOW PERSPECTIVE

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ABSTRACT

The penetration of the internet, smart-phones and tablets has witnessed tremendous increase in the number of people playing online games in the past few years. Social networking site (SNS) games are a subset of digital games. They are platform based, multiplayer and reveal the real identity of the player. These games are hosted on social networks such as Facebook, where in people play with many other players online. The risks associated with social network gaming are addiction, theft, fraud, loneliness, anxiety, aggression, poor academic performance, cognition distortion etc. This study aims to understand the user motivations to continue to play social networking games and spread a word of mouth for these games. To understand this phenomenon, Uses and Gratification theory (U&G) along with flow and immersion have been considered as the antecedents. A total of 242 respondents comprising of 125 participants who play social networking games and 117 participants who do not play social networking games completed the survey. This aided in understanding the participants' motivations and inhibitions towards playing social networking games. The present findings indicate that gratifications, flow and immersion are significantly related to the continuance motivation, which in turn is significantly related to word of mouth.

KEYWORDS: Social Networking Site (SNS) Games, Uses and gratifications theory (U&G), Continuance motivation, Word of mouth, Online gaming, Internet

INTRODUCTION

People have always engaged in playing games of different kinds, be it indoor or outdoor games, as they serve as a mechanism for relaxation. The gaming modality has changed in today's scenario with players of different age groups opting for the online mode over the traditional mode (Rau et al., 2006). In 2013, nearly 671 million people played online games worldwide using a desktop PC or laptop with 145 million gamers playing on a daily basis (ComScore, 2013)^[1]. In 2014, there were nearly 740 million mobile gamers in Asia Pacific (Statista, 2014) ^[2]. According to PwC, online gaming revenue in Asia Pacific will grow from 5.42 billion U.S. dollars in 2011 to 6.29 billion U.S. dollars in 2017 (Statista, 2016) ^[3]. The Mobile gaming market in India will cross 571 million U.S. dollars by 2016 (ET, 2015) ^[4]. The market's growth is due to the availability of smart-phones, tablets and improvements in the mobile infrastructure. According to a report from Norton (Norton, 2012) ^[5] an average Indian netizen spends about eight hours online and a significant amount of this is attributed to playing social games. Video and computer games are distinct from online games as they are not networked. Online games comprise of games that are played online via the LAN, Internet or even Telecommunication. Online games include Internet gaming, web gaming, social network gaming, online gambling, local LAN gaming, mobile gaming but not non networked gaming such as video games. In the recent years, online Social Network Services (SNS) have experienced dramatic increase in the number of users (Barker, 2009) which has further instigated research in this area. 26.3 % of users enjoy online games with their family or with the friends they meet in their "real" lives, and playing games has been found to bring relationships closer and provide more enjoyment (Cole & Griffith, 2007).

SOCIAL GAMING

Game companies today are using sociability to generate revenue (Yamakami, 2011). Social games are a subset of digital games. These games are hosted on social networks such as Facebook and are meant to be enjoyed with friends. What differentiates social games from other gaming modalities is the fact that they are social platform based, multiplayer and reveal the real identity of the player. Social games played on the mobile devices are known as mobile social games. Mobility, simplicity and interactivity are the characteristics that differentiate mobile social games from console games and PC games.

A social game gets its name 'social' from the fact that it is played with other people. This number can be either two or two hundred. Multiple players interact with each other online in social games (Kline & Alridge, 2002). For social games a player's social connections are an important part of the game. Social gamers do not necessarily develop a network in order to meet new people but rather communicate with people who are already a part of their existing social

networks (Boyd & Ellison, 2008). Social games enable players to interact with their online friends, old classmates, colleagues, and family members. Researchers have highlighted a relation between the user's motivation to play online and their usage pattern (Williams et al., 2008; Sherry et al., 2006). The aim of this paper is to understand the factors that motivate users to play social networking games, continued usage of the game and the role played by the players to spread a word of mouth for the same. Few studies have examined the factors related to the discontinued use of social networking games and the reasons for not playing social networking games. This study attempts to fill the gap by addressing the issue holistically, inspecting the reasons for playing and not playing social networking games.

RISKS OF SOCIAL NETWORK GAMING

Social networking sites provide a venue for people to interact with other individuals – friends, family, or solely online friends (Raacke & Bonds-Raacke, 2008). Several studies have focused on the risks and disadvantages of mobile gaming (Ng & Wiemer-Hastings, 2005; Peters & Malesky, 2008; Wang & Chu, 2007; Young, 2004). There have been studies that investigate the roles of various personality traits and their associations with online gaming addiction (Griffiths & Hunt, 1998; Griffiths, 2009). Studies also have addressed aggression (Anderson & Dill, 2000) and social maladjustment for anxiety (Colwell et al., 1995; Lo et al., 2005; Peng & Liu, 2010). According to some scholars, it is believed that Internet makes people lonelier (Sanders et al., 2000). It also is accountable for intruding on time that could otherwise be spent with near and dear ones (Kraut et al., 1998; Nie et al., 2002). Other researchers have studied how the Internet facilitates social interaction and communicative activities across time and space (Wellman et al., 2001; Boase & Wellman, 2006). Few studies highlight the advantages of mobile gaming (Griffiths, 2009; Ng & Wiemer-Hastings, 2005; Wang et al., 2008). Various studies have examined online gaming can also lead to crimes such as theft (identity thefts, virtual property), frauds (by compromising passwords, modifying data) (Jeff Yan & Choi, 2002; Chen et al., 2004).

SOCIAL NETWORK GAMING AND ADDICTION

In spite of the positive benefits of the advancements in technology, researchers have studied online addiction, in specific gaming addiction (Lopez-Fernandez et al., 2014). To some extent gaming interactions mimic real-world interactions and thus are increasingly relevant for sociologists and psychologists (Szell & Thurner, 2010). The phenomenon of online gamer's continued motivation and spread of word of mouth has emerged as an area of research. Research has emphasized flow (Kim et al., 2005; Choi & Kim, 2004), an optimal experience

for gaming, however, it is difficult for players to feel flow continuously. Therefore, this research considers flow as a factor to predict a new outcome variable, “the continuance of online gaming”, instead of “addiction”. Research has also indicated that high frequency game playing may negatively influence players’ health and behaviours, such as poor academic performance and cognitive distortion (Li & Wang, 2013). In order to assess whether, a particular behaviour exhibited by an individual is addictive, the behaviour can be compared against established clinical criteria. According to research any individual who shows a slight presence of the core components of salience, mood modification, tolerance, withdrawal symptoms, conflict and relapse can be classified as a social media gaming addict (Brown, 1993; Griffiths & Wood, 2005)

THEORETICAL BACKGROUND

In order to develop a theoretical framework for this study, various theories related to motivation, communication and media were used to address the aim of this study. Uses and Gratification theory is a need-based motivational theory which claims that individuals have certain needs for entertainment and they resort to different media in order to meet those needs. Flow describes the subjective, emotional state of mind a user experiences when playing a particular game. Researchers suggest that the most influential construct used to explain a participant’s experience while playing a game is Flow (Csikszentmihályi & Csikszentmihályi, 1992). Self Determination Theory (Ryan & Deci, 2000) is a motivation theory that concerns people’s inherent growth tendencies and innate psychological needs. It is concerned with the choices people make without external influence and interference. Another theory to describe the determinants of adoption of technology is Technology Acceptance Model (TAM) (Davis, 1989). The same can be applied to understand the adoption of online games. TAM is applied extensively in various contexts to understand the adoption rate in different contexts. To suit the context of this study U&G and Flow theory have been applied along with Immersion. U&G provides an account of more specific, media related motive for playing social networking games.

USES AND GRATIFICATION THEORY

Uses and Gratification (U&G) Theory dates back to the early 1940’s. The proposed theoretical framework has been used extensively for understanding the motives for media usage (Ruggiero, 2000) such as reading the newspaper or listening to radio (Wimmer & Dominick, 1994) computer and video games (Funk & Buchman, 1996). U&G theory assumes that individuals actively seek out particular forms of mass media to fulfil their needs and wants (Rubin, 2002). The selection and usage of media is a goal-directed, purposive, and motivated action (Rosengren, 1974). This helps individual’s reward plethora of their needs

such as relaxation, social interaction, self-identity, escapism, information and education (Katz et al., 1974; Palmgreen et al., 1985). Individuals repeat this experience, if their needs are met (Bryant & Miron, 2004). Users today are more actively engaged in using the Internet as against using any other media source (Ruggiero, 2000). The U&G theory has been regarded as better suited for the studies of Internet use (Morris & Ogan, 1996; Newhagen & Rafaeli, 1996; Ruggiero, 2000). A person's characteristics and goals dictate which media he should use to satisfy his needs (Katz et al., 1973). Motivations for using the Internet are "entertainment, fun, relaxation and status" (Starkman, 2007). The most observed motivation for playing video games is challenge (Sherry, et al., 2006). Different regions in the world show different motivations to play online games across different age groups. In Netherlands, studies have revealed that children of the age group 9-13 find challenge as the main reason to play online games followed by fantasy, arousal, social interaction, diversion, and competition (Walma van der Molen & Jongbloed, 2007). The Chinese online gamers in order of priority find diversion, competition, interaction, meeting strangers, and self-expression as the reasons to play online (Sun et al., 2006). It has been seen that gratifications to the individual's reactions to the experience of media use, influence continuance motivation for the media use (Weibull, 1985).

U&G comprises of three elements namely achievement, enjoyment and social interaction. Achievement is defined as the desire to gain power, collect virtual items and compete with the opponent. A study on data gathered from 2071 American and 645 Taiwanese participants examined the motivations for playing online games. The results revealed that three factors namely Achievement, Social and Immersion were the driving factors (Yee et al., 2012). U&G is one of the most popular theories used in examining users gaming motivations (Sherry et al., 2006; Wu et al., 2010; Yee, 2006a, 2006b). U&G theory shows that gaming motivations comprise of personal and social gratifications. According to Colwell, (Colwell, 2007) U&G theory helped identify companionship, preference of playing games to being with friends, challenge and stress relief as needs that playing games meets for adolescents.

Social element opens new channels of communication or socializing by making new friends in the online world or fostering relations with existing ones. Online games may provide an outlet to some online gamers who are low on self-esteem and feel lonely as online games offer the possibility to interact with others online instead of in real life (Charlton & Danforth, 2007; Lemmens et al., 2011; Van Rooij et al., 2011).

Enjoyment comprises of deriving pleasure from performing the task. Enjoyment plays an important role in deciding the disposition to use an information system by an individual (Eighmey & McCord, 1998) or play games (Ha et al., 2007; Hsu & Lu, 2007; Wu & Liu, 2007). Individuals continue to play a social

networking game based on their past experiences (Wu et al., 2007; Wu & Liu, 2007). Researchers suggest that users engage in mobile games as they experience a sense of perceived enjoyment and interaction with others (Wei & Lu, 2014; Kim et al., 2013). A study on the Taiwanese high school students found that using games for entertainment, seeking information, filling time and social reasons were the four most important reasons predicting the enjoyment of games for both males and females (Chou et al., 2007).

Gamers consider social aspect of a game as a means to collaborate, negotiate and build relationships. Previous experience plays an important role in determining continuance motivation for playing social networking games to gratify their needs and interests. Based on the above literature, the aim of this study is to understand the motivations of Indian users to play online games with achievement, enjoyment and social interactions as the major motivations. According to this, the following hypothesis is proposed:

H1: Gamers' initial gratifications with social networking games will positively affect their continuance motivation in playing the game.

FLOW THEORY

Flow is a concept developed in psychology, by Csikszentmihalyi (Csikszentmihalyi, 1990) to account for the pleasure found by immersion in day-to-day activities. An individual can experience flow in everyday activities such as listening to music, reading, dancing. In this state, an individual is so self-satisfied that he is intrinsically motivated to repeat the activity undertaken. Flow is described an emotional state of being completely immersed in a particular activity (Boyle et al. 2012), having a sense of enjoyment, a feeling of energized focus in the process of the activity. Flow is characterized by immense concentration, loss of self-consciousness, a sense of being in control and time distortion (Sherry et al., 2003). Flow theory has been studied extensively in Information Systems to understand individual's behaviour (Hoffman & Novak, 2009). The Internet has been observed to be an important channel for expanding friendship and seeking a sense of belonging (Lo et al., 2005). Based on the aforementioned statements and previous studies online games may offer positive and optimal experience to the players. However, an individual who experiences excessive flow may also show signs of being a prospect addict. This phenomenon needs to be investigated.

When individuals experience flow while playing social network games, time elapses rapidly for them as they feel great enjoyment as they are immersed in the game. Flow has been extended to other contexts as well such as the effect of flow on user-behaviour in the settings of mobile TV (Jung et al., 2009), sporting team websites (O'Cass & Carlson, 2010), online shopping (Hausman & Siekpe, 2009), e-learning (Ho & Kuo, 2010). Skill, challenge are the components that comprise flow. Based on this, the following hypothesis is proposed:

H2: Flow is positively related to continuance motivation.

IMMERSION

The immersion component has been adapted from Yee's scale (Yee, 2006b). The different factors that comprise an individual being in a state of immersion is escapism, discovery and loyalty. Escapism in the context of the current study stands for using the online environment to avoid thinking about real life problems or dissatisfactions. Loyalty in the current study means that an individual likes using the current social networking game and is likely to continue playing it in the near future. Researchers have studied that online gaming has played a role in maintaining an extremely high level of customer loyalty to the degree of addiction (Lewinski, 1999). On analysing other types of games besides competition other prominent factors such as excitement, challenge, social interaction, diversion and fantasy were also studied (Sherry et al., 2006). This leads us to build the following hypothesis.

H3: Immersion is positively related to continuance motivation.

CONTINUANCE MOTIVATION

In order to measure continuance motivation the scale has been borrowed and adapted from Wu, (Wu et al., 2007) to suit the context of this study. Continuance Motivation describes the individual's motivation to continue using social networking games over any other forms. Media habits are formed when an individual chooses a particular form of media over the others and pays more attention to increase or prolong their duration of using the media (Weibull, 1985). This makes an individual spread good word about the social networking game. According to U&G, users experience with a particular media of playing games can influence continued motivation to use the media which leads to using the preferred media most often. Consequently, the hypothesis is proposed as follows:

H4: Continuance Motivation is positively related to word of mouth.

MODEL UNDER STUDY

Based on the literature review, the following hypothesized model of online social networking games is proposed. Previous studies have addressed uses and gratification theory to understand the motivations to play online; however this

model aims to combine the elements of uses and gratifications theory along with flow and immersion to understand the ability of an individual to continue playing online games. This model also aims to understand whether users who continue to play a particular social networking game spread word of mouth about it. The model proposed for this study comprises of the process (gratifications, immersion and a sense of flow) which is the first stage of the emergence of the game. It has been studied that these factors promote an individual to play online social networking games. Once the desired outcome of the same is achieved and a higher satisfaction level is met, an individual is motivated to replicate his action. After sustained use of the game and a user's various levels of trial and error on certain social networking games, the user is further prompted to spread a word of mouth or send further game request to his network of friends. The more the network of friends that a user has, the higher the spread and reach of the game, which leads to the multiplier effect in the game. This is a cyclic effect as each user will tend to spread the word to more number of users.

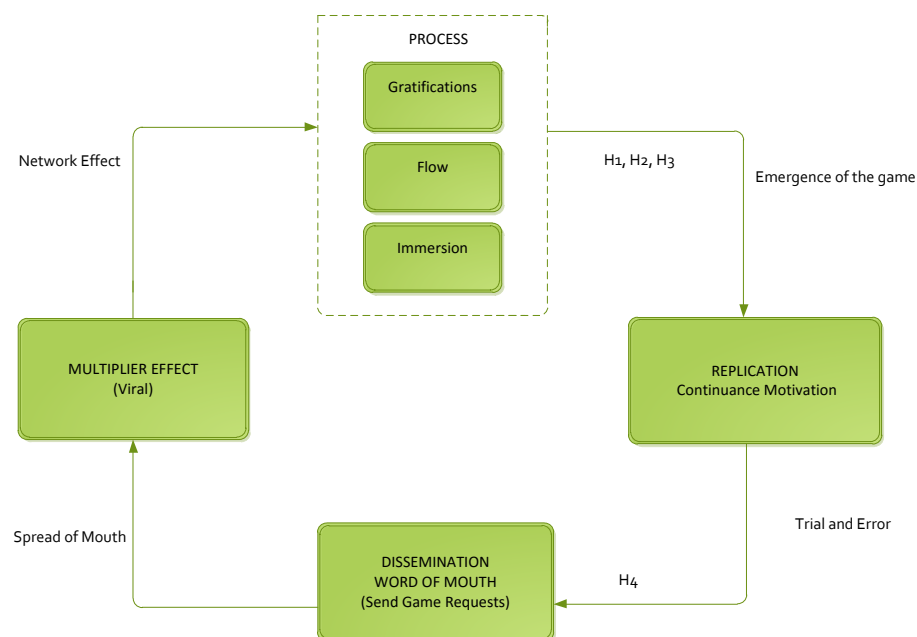


Figure 1: Model: Contribution made by the authors

METHODOLOGY

The current study is an empirical study. A survey was conducted to identify the motivations for online gaming among the participants across different games in order to study the gaming phenomenon. The questionnaire was first piloted on twenty-five students. This helped to understand whether the participants clearly understood the questions, the logical flow, and the average length of time

required for answering all the questions in the survey. Minor changes were made to the questionnaire based on the feedback received. A sample size of 242 responses were valid of the total sample under the study. It was attempted to make sure that the number of male and female respondents were balanced in this study. Data were collected through self-administered and online questionnaires. The participants for the study were selected at random. Participants were mainly students studying different management courses at undergraduate and post graduate level at different institutes. 19 respondents comprised of the teaching and non-teaching staff in the different institutes where the students were approached for this study. A total of 125 respondents satisfied the criteria as they played online social networking games. The profile of the respondents is shown below (Refer Table 1). The other 117 respondents did not play online social games and hence were administered another questionnaire to understand their motivations for not playing these games (Refer Table 2). The items from established questionnaires were used to construct the questionnaire comprising of 27 items against 5 dimensions. The constructs used for this study include Gratifications, Flow, Immersion, Continuance Motivation and Word of Mouth (Refer to Appendix A). The scale adopted for measurement of the responses is a 5 point Likert scale with 1 = “Strongly Disagree” to 5 = “Strongly Agree”

Table 1: Demographic details of the people who play online social networking games

Sex	Male	62	49.6
	Female	63	52.8
Age	15-19	22	17.6
	20-24	62	49.6
	25-29	29	23.2
	30-34	8	6.4
	35-39	2	1.6
	40-44	1	0.8
	45 and above	1	0.8
Hours of Social Network Gaming use per day	0-2	94	78.3
	3-5	21	17.5
	6 hours	5	4.2
Education Qualifications	SSC qualified	2	1.6
	HSC qualified	34	27.2
	Graduate	18	14.4

	Post Graduate	71	56.8
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Table 2: Demographic details of the people who do not play online social networking games

Sex	Male	51	43.6
	Female	66	56.4
Age	15-19	34	29.1
	20-24	44	37.6
	25-29	22	18.8
	30-34	10	8.5
	35-39	4	3.4
	40-44	3	2.6
	45 and above	0	0
Education Qualifications	SSC qualified	1	0.9
	HSC qualified	50	42.7
	Graduate	19	16.2
	Post Graduate	47	40.2

RESULTS OF THE PARTICIPANTS PLAYING SOCIAL NETWORKING GAMES

All the data were analysed using SPSS Version 19. The respondents were asked to indicate a preference of social networking game categories. Of all the respondents who played social networking games, it was observed that 25 respondents preferred Puzzle games, 9 respondents preferred Simulation games, 36 respondents favoured games that involved Strategy. 13 women and 12 men preferred Puzzle games, 3 men and 6 women preferred Simulation games, 25 men and 11 women played games that involved Strategy more as against other categories. Of the 125 respondents, 99 players played online social networking games in the range of a few minutes to 2 hours, which comprise 48 men and 51 women. 21 respondents played games for 3-5 hours in a day, which comprised of 10 men and 11 women. Only 5 male participants engage in social networking games for over 5 hours in a day. No women participate in games for over 5 hours. The respondents were asked to mention the best time of the day that they enjoy playing their games a majority of them said before bedtime (41.9%), 35.9 % of the respondents prefer playing games in the evening. 71.4 % of the participants did not consider themselves addicted to online social network gaming.

A correlation analysis was conducted to examine the relationships between the study variables to empirically validate the relationships between them (Refer Table 3). The Cronbach's alpha values for all the dimensions range from 0.62-0.80, exceeding the minimum alpha of 0.6 (Hair et al., 1998) suggesting that the construct variables are reliable. The variables Gratifications had a strong and a significant relationship with Continuance Motivation ($R=0.654$, $p<0.01$). Flow also has a strong and significant relationship with Continuance Motivation ($R=0.714$, $p<0.01$). Immersion is also strongly related to Continuance Motivation. ($R=0.608$, $p<0.01$). The order of the correlation is Flow followed by Gratifications followed by Immersion. The test to study the correlation between the continuance motivation and word of mouth revealed a significant relationship. Continuance Motivation is positively correlated with Word of Mouth ($R=0.779$, $p<0.01$). Hence the results show that the hypotheses H1, H2, H3 and H4 are confirmed. The results are consistent with the previous studies.

Table 3: Reliability Analysis for the Constructs

Item number	Item	n	M	SD	α
Gratifications (No. of items 10)					
EN1	Playing the online game is exciting	125	3.94	1.057	0.786
EN2	Playing the online game gives me a lot of pleasure	125	3.31	1.050	
AC1	I feel that it is important to beat others in the online game	125	2.84	1.247	
AC2	I like to discuss my character and make others jealous of me	125	2.37	1.175	
AC3	I have more power than other players in the online game	125	2.57	0.978	
AC4	I have items/equipment/virtual money and coins which are better than those of other players' in the online game	125	2.74	1.137	
SI1	My online friends understand me better than other people	125	2.04	0.911	
SI2	I open up more to people online than in other communication modes	125	2.10	1.058	
SI3	Going online has made it easier for me to make friends	125	2.26	1.047	
SI4	I have a network of friends made online	125	2.82	1.245	
Flow (No. of items 06)					
SK1	I am skilled at playing the online social game	125	3.23	1.093	0.806

SK2	I have better skills than others in playing the online social game	125	2.94	1.127	
SK3	I know useful tips and techniques for playing the online social game	125	3.00	1.191	
CH1	Playing the online social game challenges me to the best of my abilities	125	3.22	1.168	
CH2	Playing the online game provides a good test of my abilities	125	3.06	1.152	
CH3	Playing the online game stretches my capabilities to the limit	125	2.70	1.157	
Immersion (No. of items 04)		n	M	SD	α
IM1	I like to try out new roles and personalities with my characters	125	3.24	1.201	0.708
IM2	I like the feeling of being part of a story	125	3.12	1.067	
IM3	Playing the game lets me forget some of the real-life problems I have	125	3.38	1.256	
IM4	I would re-use this online game when I want to play online games later.	125	3.35	1.026	
Continuance Motivation (No. of items 03)		n	M	SD	α
CM1	I have the motivation to continue playing the online game	125	3.00	1.143	0.626
CM2	I have the motivation to continue playing the online game rather than play any alternative means	125	2.68	1.175	
CM4	The past experience motivates me to continue playing the online game	125	3.160	0.962	
Word-of-Mouth (No. of items 04)		n	M	SD	α
WM1	I feel like recommending this game to my friends	125	3.43	1.234	0.779
WM2	I am proud to say to others that I play this game	125	3.04	1.214	
WM3	I have spoken favourably of this game to others	125	3.30	1.057	
WM4	I have only good things to say about this game	125	3.14	1.034	

RESULTS OF THE PARTICIPANTS NOT PLAYING SOCIAL NETWORKING GAMES

In order to understand the motivations for people not playing online networking games 14 items were posed as questions (Refer Appendix B). Of the 117 respondents who do not play social networking games the most important

reason why people do not play online games is because they are annoyed with requests/ invitations sent by their friends on Social networking sites. 76 respondents of the total were of the opinion that mobile gaming it is too time consuming. The next factor that led to people not playing online games is that it starts interfering with their tasks. Female respondents were more concerned over male respondents that their data would be shared with third parties and hence refused to play online games.

DISCUSSION

The result of this study shows that Gratifications, Immersion and Flow are important factors that determine the continuance motivation of the participants to play social networking games. Moreover, the fact that users continue to play online games, they also tend to spread a word of mouth for playing social networking games. Of all the items under the study, escapism, loyalty, social interaction and a sense of achievement drew people to play social networking games. However, it would be interesting to see if people who spread a word-of-mouth continue to use the social networking games for longer periods of time. Of the 242 people who answered the survey, respondents were asked if they would pay to play social networking games. It was observed only seven agreed to pay for these games. The age of the respondents and their willingness to pay for the games is provided in the table (Refer Table 4). In our survey, results indicated that more women prefer to pay for online games than men (Refer Table 5). Age and gender play a role in deciding the number of hours an individual chooses to play online social networking games. (Refer Table 6 and 7). Only five of the respondents played social networking games for six hours approximately in a day. The rest of the respondents played for utmost two hours in a day. Educational qualifications and the number of hours of playing online social networking were observed (Refer Table 8). Most of the students pursuing their post-graduate studies expended more time playing online social networking games. Of these respondents who agreed to pay for the games, four are men and three are women. The rest of the respondents who play online social networking games refused to pay for the games. Majority of the users who answered this survey did not will to pay for any of the games. Game developers could study the patterns of the players and accordingly decide the pricing strategy for the games to drive revenues.

**Table 4: Age and willingness to pay for social networking games
(Total sample size considered)**

Age and willingness to pay for social networking games		Age and willingness to pay for social networking games		
		No	Yes	Total
Age	15-19	21	1	56
	20-24	57	5	106
	25-29	28	1	51
	30-34	8	0	18
	35-39	2	0	6
	40-44	1	0	4
	45 and above	1	0	1
Total		118	7	242

**Table 5: Gender and willingness to pay for social networking games
(Total sample size considered)**

	Gender and willingness to pay for social networking games		
	No	Yes	Total
Gender Female	59	3	128
Male	59	4	114
Total	118	7	242

Table 6: Age and the number of hours of playing social networking games

	Age and the number of hours of playing social networking games				
	0-2 hours	3-5 hours	6 hours	Total	
Age	15-19	15	7	0	22
	20-24	47	10	5	62
	25-29	25	4	0	29
	30-34	8	0	0	8
	35-39	2	0	0	2
	40-44	1	0	0	1
	45 and above	1	0	0	1
Total		99	21	5	125

Table 7: Gender and the number of hours of playing social networking games

	Gender and the number of hours of playing social networking games			
	0-2 hours	3-5 hours	6 hours	Total
Gender Female	51	11	0	62
Male	48	10	5	63
Total	99	21	5	125

Table 8: Education and the number of hours of playing social networking games

Education	Education level and the number of hours expended in playing social networking games			Total
	0-2 hours	3-5 hours	6 hours	
Graduate	16	2	0	18
HSC qualified ^a	22	12	0	34
PG ^b	57	9	5	71
SSC qualified ^c	2	0	0	2
Total	97	23	5	125

^aHSC is 12th Grade; ^bPG is Post Graduate; ^cSSC is 10th Grade;

The relatively small size of the sample limits generalization of the outcome of the study. The study is concentrated on a particular setting and may vary with the location and demography of the participants. Similar studies can be conducted in universities and the results can be compared across students opting for different courses (such as political science, liberal arts, pure sciences, humanities) and across different age groups. Another study could shed light on whether the players who spread a word of mouth are actually more prone to being addicted to social networking games.

FURTHER DIRECTIONS FOR RESEARCH

Further investigations could verify if there is a link between player's personality type and continuance usage of a specific social networking game such as Candy Crush, Farmville. Understanding the player's motivations to play social networking games gives the game developers a better understanding of the elements that need to be incorporated in their games so that players expend more time playing those games. A cross-cultural understanding of the motivations of the users to play online games will help in better marketing strategies and aid the designers to design games in the international market. Another study could

also incorporate the different preferences amongst age groups such as adolescent and senior people's age group. It would also be interesting to see the relations between different age group and different genres of games preferred by individuals and what are the motivations that lead them to play these games. The reversibility effect, indicating whether word of mouth influences the next set of Gratifications, Flow and Immersion could be examined. Relatively few studies have examined the reasons for abandoning the use of social networking games, future studies could help fill this gap. Also, qualitative studies looking at players experience in playing games would entail better understanding of these concepts.

APPENDIX

Appendix A: Questionnaire Instrument for Playing Social Networking Games

Construct	Sub Constructs		Items
Gratifications	Achievement	AC1	I feel that it is important to beat others in the online game
		AC2	I like to discuss my character and make others jealous of me
		AC3	I have more power than other players in the online game
		AC4	I have items/equipment/virtual money and coins which are better than those of other players' in the online game
	Enjoyment	EN1	Playing the online game is exciting
		EN2	Playing the online game gives me a lot of pleasure
	Social Interaction	SI1	My online friends understand me better than other people
		SI2	I open up more to people online than in other communication modes
		SI3	Going online has made it easier for me to make friends
		SI4	I have a network of friends made online
Flow	Skills	SK1	I am skilled at playing the online social game
		SK2	I have better skills than others in playing the online social game
		SK3	I know useful tips and techniques for playing the online social game

	Challenges	CH1	Playing the online social game challenges me to the best of my abilities
		CH2	Playing the online game provides a good test of my abilities
		CH3	Playing the online game stretches my capabilities to the limit
Immersion	Discovery	IM1	I like to try out new roles and personalities with my characters
		IM2	I like the feeling of being part of a story
	Escapism	IM3	Playing the game lets me forget some of the real-life problems I have
	Loyalty	IM4	I would re-use this online game when I want to play online games later.
Continuance motivation		CM1	I have the motivation to continue playing the online game
		CM2	I have the motivation to continue playing the online game rather than play any alternative means
		CM4	The past experience motivates me to continue playing the online game
Word of Mouth		WM1	I feel like recommending this game to my friends
		WM2	I am proud to say to others that I play this game
		WM3	I have spoken favourably of this game to others
		WM4	I have only good things to say about this game

Appendix B: Questionnaire Instrument for Not Playing Social Networking Games

No	Reasons for not playing online Games
1	I don't know much about using the Internet
2	I have a poor internet connection
3	I am unaware of different games available
4	Social network games starts interfering with my tasks

5	I'm bored with online gaming as I have extensively played them
6	Social Network Games are too time-consuming
7	I am annoyed with game requests/invitations
8	Certain games that I like are not free
9	I do not prefer my Online friends to be able to see my game status
10	I am concerned that my personal information may be disclosed to third parties
11	The games are not challenging enough to match my skills
12	I don't have enough friends to play the social network game
13	The social network game are of poor quality (e.g., poor graphics, poor music)
14	Because I was extremely addicted to it, so I discontinued it

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