Social Interactions and Games

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Abstract

Digital games have become popular due to great technological improvements in recent years. They have been increasingly transformed from co-located experiences into multi-played, socially oriented platforms (Herodotou, 2009).Multi-User Online Games provide the opportunity to create a social environment for friendships and strengthen the relationships. However, several researchers supported the idea that gamers seeking meaningful relationships within a game environment might have problems in forming meaningful relationships in the real environment (as cited in Redmond, 2010). This study was conducted with the sample of 168 university students to explore the social interactions in and out of game environment in terms of personality type, gender and game preferences. As a result of the study, it was found that participants mostly prefer playing multi-player games with their real life friends and family members. While they tend to make friends in game environments, they do not prefer sharing sensitive issues with their gaming friends. Moreover; students who reported themselves more extraverted, spend more hours in games. This paper contributes to the debates on the impact of games on social interactions of players in and out of the game environment.

Keywords

Games, Extraversion, Social interaction, Multi-player games.

I. Introduction

Computer games which range from simple text-based games to complex 3D graphics and virtual worlds have been strongly widespread over the past decade. In the large range of games, there are many variations: First-person shooter games, strategy games, massively multiplayer online games and so on. The technological developments of the past 25 years, in particularly the internet, have revolutionized gaming. Due to greater technological improvements, digital games have been increasingly transformed from single, co-located experiences into socially oriented, multi-played platforms (Herodotou, 2009). Multiplayer online games have become popular, especially as many players spend most of their time by interacting with other online players.

Massively Multi-User Online Games (MMOGs) give opportunities for users to interact and form relationships through avatars. In these environments, there are multiple tasks or quests that need to be accomplished by different characters with various skills (Cole et al., 2007).   Examples of such games are World of Warcraft, Final Fantasy, Xbox Live.

MMOG gamers interact socially in the game environment with other gamers and spend huge amounts of time while forming relationships and some of these relationships may carry on the real life relationships (Cole & Griffiths, 2007). On the other hand, several researchers claim that gamers forming relationships within a gaming environment might have problems in forming relationships in the real environment, because they may find the relationships in online environments much safer (Peters and Malesky, 2008). Some of the previous studies claim that MMOG players are introverted and lack social interaction; however, some believe that forming relationships in these environments can be accepted as the same as face-to-face relationships (Stiles, 2010). Jeng and Teng (2008) applied Five-factor model of Personality to online game play to investigate relationship between personality type and motivation for playing online games. Extraversion which is one of these five factors was identified as the strongest motivation predictor for playing online games (Park et al., 2011). This study wants to investigate experiences and social interactions of gamers in gaming environment and compare them with their real lives by taking into account gender difference. In addition, it is aimed to explore which correlations exist between personality type and gaming characteristics of gamers.

II. Literature Review

MMOGs have become popular during recent years. According to gender studies, these games are generally preferred by male gamers. Jansz and Martens (2005) noted that 96.5% of the participants in an online game study were male. However, recent studies showed that female gamers are on the rise. Interestingly, Lenhart et al. (2008) did a study by national survey of U.S. participants and found that the number of female MMOG gamers were nearly the same as the number of male gamers.

MMOGs gamers prefer spending time in game environment instead of socializing in the real environment which can be labeled as "anti-social" or "introverted" (Cole & Griffiths, 2007). Yee (2006) did a research on MMOGs and stated that they allowed new forms of social interaction and identity. According to Krotoski (2004), MMOGs encouraged group interaction and involvement which results in personal empowerment and good relationships. It is labeled as social interaction

because gamers collaborate and accomplish common tasks (Cole and Griffiths, 2007). MMOGs also have multiple quests that gamers need to accomplish them collaboratively.

Online gamers can form meaningful relationships with other gamers and alter these relationships (Jansz & Martens, 2005). Cole and Griffiths (2007) made a study with 912 gamers and found that 76.2% of the males and 74.7% of the females made good friends within the game environment. Digital games can lead to a social environment in which gamers interact and form meaningful relationships (Krotoski, 2004: Weibel et al., 2007). Females and males differ in digital worlds in terms of forming relationship. Cole and Griffiths (2007) found that male gamers tended to make friends in a game environment. On the other hand, female gamers were more likely to form relationships in real environment.

On the other hand, according to a qualitative study, it was found that gamers preferred playing for hours in isolation, putting their social relations with friends and family members in game environment (Jansz & Martens, 2005). Cole and Griffiths (2007) also reported that 80% of the 912 gamers preferred playing games with their friends and family members, however in the same study it was demonstrated that only one quarter (26.3%) of 912 gamers played MMOGs with family and real-life friends. Playing games with family members may result in more cooperation and relatedness.

On the other hand, in the study of Peters and Malesky (2008) it was found that gamers who look for social connections within a game environment might have problems in forming social connections in the real environment, thus they might avoid face to face connections. In their study among players of World of Warcraft, it was found out that some gamers might have problems with rejection in the real world, thus they tend to seek social connection in a safer environment.

Several researchers claimed that personal traits play important role in game preferences and social interactions (Sheeks and Birchmeier, 2007; Park et al., 2011; Stiles, 2010). Sheeks and Birchmeier (2007) supported the idea that individuals, who showed higher levels of shyness, might demonstrate online friends "better quality friendships". On the other hand, according to Park et al. (2011), "agreeableness" and "extraversion" were identified as "strong motivation predictors" for playing online games. Extraversion which is one of the five core traits is characterized by "sociability", "talkativeness" (Jeng and Teng, 2008). Fang and Zhu (2011) also supported that digital gamers who had high extraversion score would like to play a game that requires many social interactions. If people support the idea that the game they played provides opportunities for social interactions and if they highly value these, then they will be motivated to play this type of game (Park et al., 2010).

Based on these previous studies, one of the reasons some gamers spend more time playing the game can be to avoid face-to-face relationships or interactions .On the other hand, gamers seeking social connections within a game environment might have problems forming relationships in the real world, and MMOGs may encourage group interaction and involvement resulting in good friendships. Besides, teenagers who feel close to their family members would like to play games with their family members or friends more frequently in order to share the experience with real world relationships. Extraversion as a personal trait can play role in game preference, thus the satisfaction of extraverted people obtained from playing MMOGs can motivate them to play and spend many hours in these digital environments.

The purpose of this research is to explore the social interactions that occur both within and outside of games. The development of virtual friendships can be very enjoyable for gamers, and they sometimes lead to serious real-life relationships. Another purpose of this research is to explore which correlations exist between personality type and gaming characteristics of gamers.

III. Method

a. Participants

The sample consisted of 168 university students from two state universities in Turkey. 70% were male (*n*=118) and 30% were female (*n* = 50). The first part of results explores general game preferences of all participants. In the following part, analyses were carried out with 114 participants (68%) who play computer games. The participants have age between 18 and 26 years, with the mean age of 21.8 years. Of the participants, 74% (*n* =124) were from Computer Education and Instructional Technology Department, whereas 26% (*n* =44) were from Civil Engineering Department.

b. Materials

i. Questionnaire of Social Interactions in MMOGs

The questionnaire is adopted version of Social Interactions in MMOGs developed by Cole and Griffiths (2007). The items were translated into Turkish and the questionnaire was sent to three different scientific experts in order to be evaluated and the last revisions were made using the responses and comments of the experts. The questionnaire consists of three sections which ask questions about demographic information, friendships and social interactions in game and playing games with real life friends. The items in the questionnaire are Yes/No questions.

Survey of Computer game playing characteristics and preferences

The questionnaire of "Computer game playing characteristics and preferences" developed for Turkish participants by Durdu, Hotamaroğlu and Cagiltay (2004) was used to explore the game preferences of the participants. The survey consists of 12 items which ask game preferences and characteristics of players with Yes/No questions and numerical values. Cronbach alpha reliability coefficient was calculated to measure internal consistency of the survey and was found .80.

Eyenck Personality Questionnaire (EPQR-S)

The questionnaire is developed by Karancı, Dirik and Yorulmaz (2007) which is short version of Eysenck and Eysenck (1975) and translated into Turkish by Bayar (1983) for use among adults. High internal consistency scores (cronbach alpha=.78) and acceptable test-retest reliability (r=.84), the Turkish version of the questionnaire is reliable. This form consists of three indices of extraversion, neuroticism, psychoticism and each contains 6 items. In this study, only the indice of extraversion was used, because previous studies demonstrated that extraversion as a personal trait was the strongest predictor for multiplayer online games (Jeng & Teng, 2008; Stiles, 2010; Park et al., 2011). Participants answered the items as "yes (1)" and "no (0)". The score for extraversion was between 0 and 6. Extraversion is characterized by "being outgoing, talkative,

high on positive affect (feeling good), and in need of external stimulation" (Karancı, Dirik and Yorulmaz , 2007).

IV. Results

a. Hours played per week

While 32 % (*n*= 54) of the participants did not play any computer games, 68% (n=114) of the participants reported that they play computer games. The mean average time spent playing per week was 9 hours (*SD* = 9.18).

Independent-samples t-test was conducted to compare hours played per week for males and females. Significant difference was found between male and female participants in terms of hours played per week, *t* (434) =1.62, *p*=.02, <.05, $\eta^{2=}$ .07. Males (M=7.44, SD=9.5) played significantly more hours than females (M=2.98, SD=4.79) as seen in Table 1.

	Gender	N	M	SD	Std. Error Mean
Hours played per week	Female	50	2.9800	4.79579	.67823
	Male	118	7.4407	9.55286	.87941

Table 1. Hours played per week

b. Game Types Preference

Games were categorized in three types which are single-player, multiplayer and both of them. Game type preferences of the players are shown in Table 2.

Game Type	Frequency	Percent
Single Player	38	33
Multi Player	24	21
Both of them	52	46
Total	114	100

Table 2. Game type preference

In terms of gender, 82% (n=21) of the male gamers preferred multiplayer games, however only 26% (n=3) of the female gamers preferred multi-player games as seen in Table 3.

Game Type	Gender		Total
	Male	Female	
Single Player	15	23	38
Multi Player	21	3	24
Both	47	5	52
Total	83	31	114

Table 3. Game type preference and gender

c. Feeling more yourself within the game

While 18 % (*n*=21) of the players felt more themselves within the game than they could in real life, 82 % (*n*=93) of the players stated that they did not feel themselves within the game as it is shown in Table 4.

	Frequency	Percent
Yes	21	18
No	93	82
Total	114	100

Table 4. Feeling more yourself in the game

Chi-square analysis was conducted to reveal difference between "feeling more yourself in game" and gender. Significant difference was found between male and female players in terms of feeling more yourself in games (X^2=3.87, *p*=.03, *p*<.05). Male players felt more themselves in games than female players (see Table 5).

		Feeling more yourself in game		Total
		Yes	No	
Gender	Male	14	64	78
	Female	1	29	30
Total		15	93	108

Table 5. Feeling more yourself in the game and Gender

In addition, the relationship between "hours played per week" and "feeling more yourself in the game" was investigated using Pearson product-moment correlation coefficient. There was no significant relationship between the two variables (*p*=.11, *p*>.05).

d. Friendships within Multiplayer Games

According Table 6, 57 % (*n*=43) of the multiplayer gamers (*n*=76) made friends within the game. While 62% (*n*=42) of the male gamers reported that they made friend in the game, only one female gamer reported that she made friend in the game.

		Gender		Total
		Male	Female	
Make Friend	Yes	42	1	43
	No	26	7	33
Total		68	8	76

Table 6. Make friend and gender

In addition, 51% (*n*=22) of the players who made friends in the games met in real life, and that 49% (n=21) of them did not meet in real life. Whereas 14% (*n*=6) of the gamers who made friends within the game discussed sensitive issues with their online gaming friends, 86 % (*n*=37) of the gamers did not discuss sensitive issues with their online friends.

Correlation analysis was conducted to display the relationship between number of hours played per week and number of friends within the game. The results showed that there was no correlation between the number of hours played per week and the number of friends within the game (*p*=.70, p>.05).

e. Playing multi-player games with real-life friends and family members

The results showed that 85% (*n*=65) of the multiplayer gamers played with their friends or family members. In terms of gender, 88% (*n*=60) of the male multi-player gamers played with real life friends and family members as it is shown in Table 7.

Table 7. Gender and playing with real life friends-family members

		Gender		Total
		Male	Female	
Play with real life friends-family	Yes	60	5	65
	No	8	3	11
Total		68	8	76

f. Personality Type and Games

The results of correlation analysis showed that there was a significant correlation between extraversion scores (EPQR) and hours played per week (*p*=.01, *p*<.05). The people who played

more hours in a week had higher extraversion scores. There correlation between tow variables was positive but weak (r=.19).

The one-way between groups ANOVA was conducted to explore the impact of game preference on EPQR scores. Game types were single-player, multi-player and both. There was no significant difference at the p<.05 level in EPQR scores for the three game groups: F (2,112) =1.09, p=.33, η^2 = .01 as it is shown in Table 8.

EPQR	SS	df	MS	F	p
Between Groups	8.197	2	4.098	1.093	.339
Within Groups	416.268	112	3.750		
Total	424.465	114			

Table 8. ANOVA table of game type preference and EPQR scores

Finally, One way between groups ANOVA was conducted to explore significant differences among reason for game preference (competing, social communication, fantasy, challenge, relax) in terms of EPQR scores. There was no significant difference at the p<.05 level in EPQR scores for the five groups: F (4,100) =.66, p=.61, η^2 = .03 as it is shown in Table 9.

	SS	df	MS	F	p
Between Groups	10.737	4	2.684	.669	.616
Within Groups	293.058	110	4.014		
Total	303.795	114			

Table 9. ANOVA Table of reason for game preference and EPQR scores

V. Conclusion

Male gamers spend more hours in games according to female gamers and they mostly prefer multiplayer games (Jansz and Martens, 2005; Yee, 2006). However, recent studies demonstrated that the number of female multi player game players is on the rise (Lenthart et al., 2008; Cole & Griffiths, 2007). In this study, it was found that male gamers spend significantly more hours in games according to female gamers and they mostly prefer to play multiplayer games or both of game types (single player and multiplayer). On the other hand, females mostly prefer to play single player games. This study is conducted in 2013 and game preferences according to gender still have the same tendency.

Although mean average time spent playing per week is 9; 82 % (n=93) of the players stated that they did not feel themselves within the game. Interestingly; this result varies by gender, thus male gamers felt themselves in the game more according to female gamers. This finding might be because of game preferences of male gamers. Multiplayer games have multiple tasks to complete

and require large number of players study together to accomplish these goals which make them engage in game world and feel themselves in the games.

Multiplayer gamers can be labeled as anti-social; those players prefer to spend their most of the time in game rather than socializing in real life with real friends. However, according to Yee, 2006; Krotoski, 2004, Jansz & Martens, 2005; these games encourage group interaction and leads to for new forms of social interaction by giving opportunity to create meaningful relationships with other players. In this study, while 57 % of the multiplayer gamers made friends in the game, 51% of them met these friends in real life. On the other hand, 86 % of them did not prefer to discuss sensitive issues with their online friends. Although nearly half of the gamers made friends in the game, they did not prefer to discuss sensitive issues with their online friends. It is not possible to claim that playing multiplayer games always result in meaningful relationships.

Gaming environment may allow family numbers to come closer to each other in a different format that foster "togetherness" and "teamwork" (Kubey & Larson, 1990; Jansz & Martens, 2005). In this study, 85% of the gamers demonstrated that they play games with real life friends and family members. In another study by Cole and Griffiths (2007), while 80% of the gamers prefer playing with real life friends and family members, only 26.3% of them play with them. Inconsistency of the results can be because of the discrepancies between the study groups.

Peters and Malesky (2008) supported the idea that gamers who look for social connections within a game envrionment might have problems in forming relationships in the real environment. Individuals can avoid face to face interactions, relationships or rejections and they tend to form online relationships which are much more safer (Sheeks and Birchmeier, 2007). On the other hand, several researchers demonstrated that extraversion as a personal trait is the strongest motivation predictor for playing multiplayer games (Park et al., 2011; Stiles, 2010). In this study, it was found that the people who played more hours in a week had higher extraversion scores. In other words, player who reported them extraverted spend more hours in games. This result supports the findings of Sheeks and Birchmeier, 2007; Park et al., 2011; Stiles, 2010. On the other hand, no significant difference was found between extraversion scores of gamers based on their reason for game preference (competing, social communication, fantasy, challenge, relax, refreshing effect) and also their game preference (single player, multiplayer or both of them).

To sum up, male gamers spend significantly more hours in games according to female gamers. On the other hand, while nearly half of the gamers prefer to meet their game friends in real life, they mostly do not tend to talk sensitive issues with them. In terms of personal trait; extraverted people tends to spend more hours in games however there is no correlation between game preference and extraversion. The idea that "individuals, who demonstrated higher levels of shyness, might demonstrate online friends "better quality friendships"" is disregarded in this study. In conclusion, gamers tend to play online multi-player games and they mostly prefer playing with their real life friends and family members. It cannot be claimed that multiplayer games are the environments for shy or introverted people who cannot make social relationships in real life. Game environment is the space for gamers to interact and collaborate with their real life friends and family members, thus they mostly prefer to play with them.

In future studies, the relationships of the players can be explored elaborately. Qualitative research design can be conducted to examine the meaningfulness of the relationships. Social interactions in

games and out of games can be explored in terms of different variables such as educational background, social status, relationships with family members, age and so on.

One limitation of this research is the possible defensiveness of the participants. Defensiveness is one of the problems in self-report studies. In the present study, participants might want to be seen extraverted, so that they may have pointed out fewer problems than that they really have. The other limitation of the study is the participants are from only two departments which are Computer Education and Instructional Technology and Civil Engineering. Convenient sampling was used and in the future studies the study can be replicated with students from various majors.   The last limitation of the study is the number of female participants. Analyses run comparing female and male participants are of very limited validity, given the extremely low number of females.

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