Differences on the Level of Social Skills between Freshman Computer Gamers and Non-Gamers

Joseph B. Campit, MAEd
Pangasinan State University, Bayambang Campus, Philippines
rcpambid0422@yahoo.com

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Abstract - *Computer games play a large role in socialization and the consequences of playing them have been a topic of debates. This observation led the researcher to conduct the study about the influence of computer games on the social skills of the BSIT first year students of Pangasinan State University, Bayambang Campus, during school year 2012-2013. This study determined the profile of the 115 BSIT first year students according to: preferred computer games and frequency of playing. It investigated the level of social skills among playing and non-playing gamers. This study used the descriptive-comparative method of research. It was found out that crossfire was the most preferred computer game played at least once a week. Computer gamers had lower social skills than non-computer gamers. Gamers have more negative social behaviors compared to non-gamers and there is a negative effect of playing computer games on the level of social skills among first year students. There is a significant difference in the level of social skills of the students when grouped according to frequency of playing computer games. Students who play computer games everyday had significantly lower social skills than who play once a week. Thus, parents and teachers should give proper guidance in the limitation of playing computer games and the choice of games. Teachers should organize seminars on the awareness of the influence and negative effects of violent computer games on social skills. And students should choose educational over violent games to enhance their knowledge and social skills.*

Keywords: *games, socialization, computer gamers, computer non-gamers, behavior*

INTRODUCTION

Game is one of the common learning and socialization tool among children. It is an activity which enables children to develop themselves not only their mental and physical skills but also their social skills (Pepe, 2011). In earlier times, children were involved playing with other children, but today, most children are playing computer games. With the advancement of technologies, computer games are played in many devices such as desktop computers, cellular phones, iPods, and game consoles which encourage children to spend more of their time playing and this causes children's social skills to be affected.

Good social skills are critical to successful functioning in life. These skills enable us to know what to say, how to make good choices, and how to behave in diverse situations. The extent to which adolescents possess good social skills can influence their academic performance, behavior, social and family relationships, and involvement in extracurricular activities. However, increased societal influences have an impact on students in attaining good social skills. There are arguments about computer gaming as one of these influences, since computer gaming is widespread among adolescents (Social Skills, n.d.).

Computer games play a large role in popular culture today and the consequences of playing them have been a topic of debates. On one hand, playing computer games is considered a waste of time and a promoter of violent, aggressive and antisocial behavior. On the other, computer games are seen as valuable tools, permitting the acquisition of a vast amount of skill and knowledge, vital to healthy development and future success (Matthews, 2012).

Playing computer games have been fairly pervasive since the early 1980's and have been one of the most popular leisure activities for adolescents and young adults. Moreover, the progress of technology has led to the production of increasingly more lifelike and interactive games. There has been much concern

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as to potential negative effects that computer games could have on youth such as 'video game addiction' (Griffiths & Meredith, 2009) and 'increased aggressiveness' (Anderson & Bushman, 2001). Aggression which is a barrier in the development of good social skills is somehow being linked with violent computer games.

Being glued to a computer habitually is expected to result into isolation that will prevent an individual to exercise face-to-face social interaction. However, the study of Williams et al. (2006) stated that due to the replication of real social networks in virtual worlds, virtual interaction is just as effective as practicing real social skills. Numerous researchers have proposed potential positive effects of video games on aspects of social and cognitive development and psychological well-being. It has been shown that action video game players have better hand-eye coordination and visual-motor skills, such as their resistance to distraction, their sensitivity to information in the peripheral vision and their ability to count briefly presented objects, than non-players. Video games also develop the individual's intelligence and in social games develop the social capabilities of the individual.

Stress and aggression are some of the hindrances that prevent an individual to develop socially. In this way, the usage of video games might provide a benefit in the relief of stress. As reported by Hanson (2008), a study was conducted by Dr. Cheryl Olson and her team at Massachusetts General Hospital's (MGH) Centre for Mental Health and Media in Harvard to prove that violent games help students deal with stress and aggression. Dr. Olson has come to the conclusion that violent games affect students positively and not negatively because the violent crime rate is going down while the popularity of M-rated video games has increased. She suggests that instead of stopping children from playing M-rated games completely, parents should just monitor how much time their children spend playing games; parents should take responsibility. Regardless of the unceasing debates over the positives and negatives of computer games, there is still little experientially known about the long-term outcomes of this modern-day occurrence.

These observations led the researcher to conduct his own study about the influence of computer games on the social skills among students. The study aimed to determine the level of social skills among the BSIT first year students of Pangasinan State University, Bayambang Campus, school year 2012-2013. This study determined the profile of the BSIT first year students with respect to: preferred computer games and frequency of playing computer games. The study also investigated the level of social skills of the first year BSIT students who are playing and not playing computer games. It also tested the hypotheses if, there is a significant difference between gamers and non-gamers in terms of the level of social skills and if there is a significant difference in the level of social skills of students across the frequency of playing computer games.

METHOD

Research Design

This study used the descriptive-comparative method of research. According to Calmorin (2010), descriptive-comparative research is a research in which the researcher attempts to answer questions with regard to the differences between two or more groups. The design of comparative research contains specific characteristics that hold true across most forms of comparative research. These characteristics allow researchers to employ their research in an objective and statistically valid way. The objective of the study is to determine the effects of computer games on the levels of the social skills of first year BSIT students. It also establishes the differences in the level of social skills across the frequency of playing computer games among the first year BSIT students.

Subjects of the Study

In this study, there were 115 first year students enrolled in Bachelor Science in Information Technology during the second semester of school year 2012-2013 who served as subjects. The first year students are vulnerable to change since they are new entrants and tend to meet new friends in college. These were the 99 day class students and 26 evening class students. They were grouped into two: the gamers and non-gamers. Table 1 presents the distribution of the respondents.

Table 1. Distribution of Respondents

Students	Frequency	Percentage
Gamers	37	32.2
Non-gamers	78	67.8
TOTAL	**115**	**100.0**

Data Gathering Instrument

The primary data gathering instrument used in the study was the questionnaire. The questionnaire was composed of two parts. The first part (Part I) of the

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questionnaire gathered the profile of the respondents concerning type of games played, and the number of hours spent in playing computer games. The second part (Part II) was the three-point Likert type Social Skills Rating System (SSRS) questionnaire adopted from Gresham et al. (1991) and Zamani et al. (2010). The SSRS is a standardized questionnaire used to evaluate social behavior.

Procedure

The researcher asked permission from the program Dean of Institute of Arts, Sciences and Technology (IAST) of Pangasinan State University Bayambang Campus to administer the questionnaire. After the approval of the program Dean, the researcher administered the questionnaires to all first year BSIT students.

Data Analysis

To obtain the validity and reliability of results of the study, appropriate statistical tools were used.

The following statistical tools were used in the study. Frequency counts and percentages were used in determining the profile of first year BSIT students. To determine the level of social skills of the BSIT freshmen students, weighted mean was used. For negative statements the reverse of assigning values was made.

The following scale was used to describe the level of social skills of the BSIT freshmen students.

Scale value	Interpretation	Description	
		Positive Behaviors	Negative Behaviors
2.34-3.00	High Social Skills (HSS)	Always	Never
1.67-2.33	Moderate Social Skills (MSS)	Sometimes	Sometimes
1.00-1.66	Low Social Skills (LSS)	Never	Always

T-test for independent samples was used in determining if there is a significant effect of computer games in the level of social skills of the first year BSIT students. To determine if there is a significant difference in the level of social skills of the first year BSIT students across the frequency in playing computer games, Analysis of Variance (ANOVA) was used.

RESULTS AND DISCUSSIONS

Table 1A presents the frequency and the percentage distribution of the respondents in terms of computer games played by the students and frequency of playing computer games.

As reflected in Table 1A, Crossfire (47.8%), D.O.T.A. (45.2%), Plant vs. Zombies (38.3%), Tetris (36.5%), and Angry Birds (34.8%) were the top five most played games among the BSIT students. It can be said that Crossfire was the most popular computer game played by the freshmen BSIT students. The other games mentioned on the table were seldom played.

Table 1A. Profile of the First Year BSIT Students

Profile Variables	f	%
Preferred Computer Games		
1. Crossfire	56	47.8
2. D.O.T.A.	52	45.2
3. Plants vs. Zombies	44	38.3
4. Tetris	42	36.5
5. Angry birds	40	34.8
6. Point Blank	15	13
7. Cabal	8	7
8. Garena	5	4.3
9. Genghis Khan	5	4.3
10. League of Legends	4	3.5
11. RAN	3	2.6
12. Battle of Immortals	3	2.6
13. Man Hunt	2	1.7
14. God of War	2	1.7
Frequency of Playing Computer Games		
once a week	35	45%
2-3 times a week	26	33%
5-6 times a week	10	13%
Everyday	7	9%
Total	78	100%

It can be gleaned from Table 1A that almost one half (45%) of the gamers play computer games "once a week". A little more than thirty percent play "2-3 times per week" (33%). Thirteen percent (13%) are the gamers who play "5-6 times a week" and the rest who are playing "everyday" are nine per cent (9%) of the total population of the respondents. Computer game addiction (Griffiths, 2010 & Loton, 2006) is the excessive or habitual use of computer games that interferes with daily life. Considering this statement, it can also be said that majority of the first year BSIT students who are playing once a week and two to three times a week were not yet addicted to computer games.

Table 2 presents the social skills of first year BSIT students who play and do not play computer games. The first year BSIT students who are playing computer games have "moderate level of social skills" which is indicated by an overall mean of 2.28 while

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the students who do not play computer games have "high level of social skills" (2.41).

Eight out of thirteen negative behaviors were rated with "moderate social skills". This means that majority of the negative behaviors were sometimes practiced by the gamers: "They ignore others when they tell them to stop doing things" (2.14), "They don't apologize when they know they hurt someone's feelings", (2.21), "They laugh at other students when they make mistakes",(2.14), "They ignore others when they're not interested in what they are talking about"(2.19), "They ignore others when they give compliments"(2.21), "They hit someone when they makes them mad" (2.32), "They don't listen when someone wants to talk about his or her problem" (2.24), "They don't tell the truth when they've done something wrong & someone is being blamed for it" (2.29).

The remaining five negative behaviors were rated with "high social skills". This means that these five negative behaviors were never practice by the gamers "They push someone they don't like" (2.66)". "They ignore other students when they are with their best friends" (2.44), "They throw things when they get angry" (2.43), "They lie to get out of trouble" (2.43), "They call their classmates bad names to their faces when they get angry" (2.42). None of the 13 negative social behaviors were always done by the gamers who are rated with "low social skills".

Table 2. Social Skills of First Year BSIT Students

SOCIAL SKILLS	Non-gamer		Gamer	
	WM	VI	WM	VI
1. I ignore others when they tell me to stop doing things . *	2.35	High	2.14	Moderate
2. I don't apologize when I know I hurt someone's feelings. *	2.64	High	2.21	Moderate
3. I laugh at other students when they make mistakes. *	2.27	Moderate	2.14	Moderate
4. I ignore others when I'm not interested in what are they talking about. *	2.05	Moderate	2.19	Moderate
5. I call my classmates bad names to their faces when I'm angry. *	2.54	High	2.42	High
6. I lie to get out of trouble. *	2.37	High	2.43	High
7. I ignore classmates who are clowning around in class.	1.76	Moderate	1.72	Moderate
8. I push someone I don't like. *	2.78	High	2.66	High
9. I ignore others when they give compliments. *	2.43	High	2.21	Moderate
10. I ignore other students when I'm with my best friends. *	2.62	High	2.44	High
11. I hit someone when he/she makes me mad. *	2.51	High	2.32	Moderate
12. I throw things when I get angry. *	2.67	High	2.43	High
13. I don't listen when someone wants to talk about his/her problem. *	2.67	High	2.24	Moderate
14. I don't tell the truth when I've done something wrong and someone is being blamed for it. *	2.40	High	2.29	Moderate
15. I ignore other children when they tease me or call me names.	1.86	Moderate	1.72	Moderate
16. I am active in school activities such as sports or clubs.	2.11	Moderate	1.86	Moderate
17. I make friends easily.	2.38	High	2.32	Moderate
18. I say nice things to others when they have done something well.	2.46	High	2.27	Moderate
19. I cooperate with my peers without prompting.	2.84	High	2.58	High
20. I give compliments to members of the opposite sex.	2.05	Moderate	1.90	Moderate
21. I smile, wave, or nod at others	2.38	High	2.32	Moderate
22. I try to understand how my friends feel when they are angry, upset, or sad.	2.59	High	2.33	Moderate
23. I listen to adults when they are talking with me	2.73	High	2.57	High
24. I let friends know I like them by telling or showing them.	2.54	High	2.53	High
25. I stand up for my friends when they have been unfairly criticized.	2.22	Moderate	2.24	Moderate
26. I invite others to join in social activities.	2.11	Moderate	2.10	Moderate
27. I ask friends for help with my problems.	2.30	Moderate	2.33	Moderate
28. I control my temper when people are angry with me.	2.38	High	2.22	Moderate
29. I ask before using other people's things.	2.62	High	2.55	High
30. I talk things over with classmates when there is a problem	2.14	Moderate	2.14	Moderate
Overall Mean	**2.41**	**High Social Skills**	**2.28**	**Moderate Social Skills**

**Negative Social Behavior*

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On the other hand, majority of the negative social behaviors were rated with "high social skills" by the non-gamers. This means that 11 out of 13 negative behaviors were never practiced by the non-gamers: "They ignore others when they tell them to stop doing things" (2.25), "They don't apologize when they know they hurt someone's feelings" (2.64), "They call their classmates bad names to their faces when they are angry" (2.54), "They lie to get out of trouble" (2.37), "They ignore others when they give compliments" (2.43), "They ignore other students when they are with their best friends" (2.62), "They hit someone when they make them mad" (2.51), "They throw things when they get angry" (2.67), "They don't listen when someone wants to talk about his/her problem" (2.67), "They don't tell the truth when they've done something wrong and someone is being blamed for it" (2.40) and "They push someone they don't like" (2.78). The remaining 2 negative social behaviors were sometimes practiced by the non-gamers which were rated with "moderate social skills" by the gamers: "They laugh at other students when they make mistakes" (2.27) and "They ignore others when they are not interested in what they are talking about" (2.05).

In terms of the positive social behaviors practiced by gamers 13 out of 17 positive behaviors were rated with "moderate social skills" by the gamers. This means that majority of the positive behaviors were "sometimes" practiced by the gamers. "They ignore classmates who are clowning around in class" (1.72), "They ignore other children when they tease them or call them names." (1.72) "They are active in school activities such as sports or clubs"(1.86), "They make friends easily" (2.32), "They say nice things to others when they have done something well" (2.27), "They give compliments to members of the opposite sex" (1.90), "They talk things over with classmates when there is a problem" (2.14), They stand up for their friends when they have been unfairly criticized" (2.24), "They invite others to join in social activities" (2.10), "They ask friends for help with their problems" (2.33),"They control their temper when people are angry with them" (2.22).

However, more than half of the positive social behaviors were rated with "high social skills" by non-gamers. This means that 9 out 17 positive social behaviors were always practiced by the non-gamers: "They make friends easily" (2.38), "They say nice things to others when they have done something well" (2.46), "They smile, wave, or nod at others" (2.38), "They ask before using other people's things" (2.62), "They let friends know they like them by telling or showing them" (2.54), "They control their temper when people are angry with them" (2.38) and "They listen to adults when they are talking with them" (2.73).

Therefore, it can be concluded that gamers have more negative behaviors and less positive behaviors practiced while the non-gamers performed more positive behaviors and less negative behaviors. This may be attributed to types of game played by the students presented in table 1A, which clearly shows that Crossfire, a violent computer game ranks number 1 and was the most preferred game by the students.

To determine whether the differences in the levels of social skills among BSIT students stated above are attributed to the effects of playing computer games, the T-test result is presented in Table 3.

Table 3. T-test of Significance in the Social Skills of BSIT Students

Social Skills	Mean	Mean Difference	t	Sig.
Non-gamer	2.406	.1308	2.952	.004
Gamer	2.275			

df=113

Table 3 shows that the computed t-value of 2.952 has a significance of .004 which is less than .05 level. This means that the null hypothesis is rejected. That is, computer games have a significant effect in the levels of social skills among BSIT students. Students who play computer games had lower social skills than students who are not playing computer games. It implies that playing computer games had negative effects on the social skills of gamers particularly on the area of self-control, empathy and cooperation. This study suggest that gamers have lower social skills in dealing with conflict situations, showing concern and respect for others feelings, and other social behaviors such as apologizing and listening to others compared to non-gamers. The result of the study is supported by Cainglet's (2002) study which states that playing computer games has many negative effects on the students and the negative effects outweigh the positive results. These negative effects are "isolationism", (Yoder, 2011) "increased aggressiveness", (Anderson & Bushman, 2001) and "lack of self-confidence" (Rufus, 2000).

However, the present study's results together with the findings of the above mentioned study are in contrast with Loton's (2007) study which states that the magnitude of relationships found indicates that

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social skills and computer game playing are largely unrelated constructs.

The study also compared the level of social skills of the students in terms of frequency of playing computer games. Table 4 presents the ANOVA test of significance in the mean differences of their social skills.

Table 4. ANOVA Test of Significance in the Social Skills of BSIT Students when grouped according to Frequency of Playing Computer Games

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.128	3	.043	.759	.041
Within Groups	4.155	74	.056		
Total	4.282	77			

Table 4 shows that the computed F-value is .759 and has a significance of .041. Since the F-value generates a significance of less than .05 level, then the null hypothesis is rejected. This implies that the level of social skills of BSIT students who are playing computer games differed significantly across frequency of playing computer games. Since the F-value is significant, the Scheffe test was used to determine which pair is significantly different from each other.

Table 5. Pairwise Comparison in the Social Skills of BSIT Students When Grouped according to Frequency of Playing Computer Games

(I) Frequency	(J) Frequency	Mean Difference (I-J)	Sig.
once a week	2-3 times a week	-.06524	.714
	5-6 times a week	.03413	.998
	Everyday	.17554*	.040
2-3 times a week	once a week	.06524	.714
	5-6 times a week	.09938	.954
	Everyday	-.11030	.938
5-6 times a week	once a week	-.03413	.998
	2-3 times a week	-.09938	.954
	Everyday	-.20968	.853
Everyday	once a week	-.17554*	.040
	2-3 times a week	.11030	.938
	5-6 times a week	.20968	.853

Table 5 presents the pairwise comparison of the level of social skills of BSIT students when grouped according to frequency of playing computer games. It is evident from the table that the computed significance value of playing "once a week" versus playing "everyday" is less than .05 level. This means that the difference lies between students playing once a week and playing every day. It implies that students who are playing computer games "everyday" had significantly lower social skills than students who are playing "once a week". The result of the study is supported by the findings of Zamani's (2010) research which are: 1) Addiction to computer games may affect the quality and quantity of social skills and; 2) The higher the addiction to computer games, the less are the social skills.

Likewise, the conclusion of Griffith's (2010) study declared that high frequency computer game players exhibited more social anxiety than low frequency game players.

Summary of the Findings

The following are the significant findings of the study:

Crossfire (47.8%) was the most preferred computer game played by the students followed by D.O.T.A. (45.2%), Plants vs. Zombie (38.3%), Tetris (36.5%) and Angry Birds with (34.8 %). Majority of the respondents are playing "once a week (45%), and (33%) were "2-3 times a week",(13 %) were playing 5-6 times a week and 9 % are playing" every day".

In terms of the level of social skills among the BSIT first year students playing computer games and not playing computer games, had moderate social skills with overall mean of (2.27) while the non-gamer had high social skills with the overall mean of (2.40). Eight out of thirteen negative social behaviors were "sometimes" practiced by the students; the remaining 5 negative social behaviors were "never" practiced. In terms of the positive social behaviors practiced by gamers, 4 out of 17 positive social behaviors were "always" practiced and 13 positive social behaviors were "sometimes" practiced. With regards to the non-gamers, 9 out of 17 positive social behaviors were "always" practiced by them and they "sometimes" practice the remaining 6 positive social behaviors. Moreover, gamers have more negative social behaviors compared to those who are non-gamers.

There is a significant effect of computer games in the level of social skills of first year BSIT students. Gamers have significantly lower level of social skills than non-gamers.

There is also a significant difference in the level of social skills of the first year BSIT students when grouped according to the frequency of playing computer games. Students who are playing computer games everyday had significantly lower social skills than who are playing once a week.

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CONCLUSIONS

Based from the significant findings of the study, the following conclusions were generated:

Crossfire was the most preferred computer game played at least once a week by the first year BSIT students. BSIT students playing computer games had lower social skills than those who do not play computer games. Gamers have more negative social behaviors compared to those who are non-gamers. There is a negative effect of playing computer games in the level of social skills of the first year BSIT students. There is a significant difference in the level of social skills of the first year BSIT students when grouped according to the frequency of playing computer games. Students who play computer games everyday had significantly lower social skills than who play once a week.

RECOMMENDATIONS

Parents may have proper guidance for their children particularly in the limitation of playing computer games and should guide their children on their choice of games being played.

Teachers may organize seminars on the awareness of the violent content of computer games and its negative effects among teenagers. Gamers should be made aware of the negative effect of violent games to their social behavior

Students may choose educational games over games of violence to further enhance their knowledge that could possibly help them in their studies.

The inclusion of the negative effects of computer games in the course syllabus of subjects that contain topics which are related to computer games. The guidance office should plan interventions to remedy the problem of students being hooked with violent computer games.

Further study should be conducted on the negative effects on computer games dealing with other variables such as communication skills and academic performance of the students.

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