



Article Title: Video/Computer Games: Differences in Gender Preferences, Participation and Perception

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Abstract

This paper investigated gender differences in video/computer gamers on five aspects: (i) favourite categories of games, (ii) frequency of playing games, (iii) time spent on playing games, (iv) average amount of money spent on playing games, and (v) perception on games. Results show that female gamers have a marked preference to puzzle type games whereas in most other categories male gamers are more positive with racing game as their favourite category. Male gamers play more often and longer as well as spend more on video/computer games than female gamers. Playing video/computer games is regarded as an important aspect of life for male gamers and both genders disagree that playing video/computer games affected them negatively.

Keywords: video/computer games, gender differences, favourite games, playing frequency, social/academic aspects of gaming.

Introduction

Video/computer games, which emerged in the 1970s, have become an important part of contemporary culture and society and initially (sometimes still do) these games received negative reaction due to their perceived as well as reported effects of violence, addictive and sexist characteristics (Aguilera & Mendiz, 2003). The popularity of video/computer games is widely reported in literature. Some literature (cited in Squire's 2002 essay on the cultural framework of video/computer game) even speak of a distinctive "videogame generation" which grew up playing video/computer games. The mass appeal of video/computer games is so long-lasting that many first generation players are still holding on to their beloved pastime

(Aguilera & Mendiz, 2003) and quite recent data shows that 43% of video/computer gamers in the United States are in the 18-49 years age group and 19% of gamers are over the age of 50 (Entertainment Software Association, 2005). The sustained commercial success of video/computer games is attributed to the fact that they are designed specifically to maximise player engagement as reported by Dickey (2005).

In the gaming industry, technological applications constantly and rapidly evolve over time as gamers become more conscious and demanding on the quality of the games produced, for example, in terms of high definition graphics, appropriate sound effects, well-developed characters, attractive game play, and interesting game plots, to name just a few. Therefore, it is not surprising and totally expected that gamers' preferred type of games also vary (perhaps vastly) as times change.

The distinctive nature of the female video/computer games market is recognised by the game industry and there has been a growing demand for the design of video/computer games according to female preferences and tendencies (e.g. Gorriz & Medina, 2000; Graner Ray, 2004; Dickey, 2006) to increase the intensity of female participation and thus expanding market returns for game producers. The market for female video/computer gamers is largely untapped although the number is definitely growing. From a survey of 1500 households in the United States in 2005, the Entertainment Software Association reported that 43% of gamers are female.

The Gender Effect

The gender effect in particular is interesting and deeply rooted in video/computer games. Whether the subjects are children, young adolescents or college-age groups, various research (e.g. Barnett *et al.*, 1997; Gorriz & Medina, 2000; Woodard & Gridina, 2000; Wright *et al.*, 2001; Subrahmanyam *et al.*, 2001; Bickham *et al.*, 2003; Chu *et al.*, 2004; Ogletree & Drake, 2007; Wood & Griffiths, 2007) consistently report one or more of these:

- (i) more males play video/computer games compared to females
- (ii) males spend significantly more time playing video/computer games compared to females
- (iii) the content of most video/computer games is male oriented
- (iv) the market for video/computer games is heavily skewed to the male market

The current literature clearly asserts that females and males have different preferences when it comes to selecting the type of games played (on the Yahoo! games site, video/computer games are classified into these categories: action, racing, sports, fighting, shooter, adventure, simulation, puzzle, strategy and role-play) and game playing behaviours (e.g. time spent on playing, frequency of playing).

Although most gamers are male, playing games can no more be assumed as the leisure time activity for males only as females do play games but with different types of games. Male gamers favour action, sports and war strategy titles (Smith, 2004). In a study on the frequency of use (which can be interpreted as having a preference) of different categories of games, Hartmann and Klimmt (2006) found that significant gender differences occur for five categories of games (i.e. shooter, action adventure, real-time strategy, sport and simulation) with male gamers reporting a more frequent use than female gamers. Chu *et al.* (2004) mentioned the results of

previous researches (Roberts *et al.*, 1999; Sherry *et al.*, 2001) which found that across age groups, males generally like shooters, fighters, sports, racing/speed, fantasy/role-playing, action-adventure, strategy and simulations more than females whereas females prefer traditional games such as classic board games, arcade, card/dice, quiz/trivia, puzzle and kids' games.

Female gamers were however less likely to enjoy game-play situations that involved three-dimensional rotation (Lucas & Sherry, 2004). The preference of female gamers for 2D game representations (68.4%) and male gamers for 3D representations (66.7%) is empirically reported in Ziemek (2006). Ziemek also concluded that games should be fun, easy to understand and have dreamlike graphics to appeal to females and that games should be fun, challenging and have realistic graphics to appeal to males.

Violent content, lack of meaningful social interaction, as well as competitive elements in video/computer games were empirically reported by Hartmann and Klimmt (2006) to cause females to dislike the games. Barenthin & Van Puymbroeck (2006) cited the work of Messerly (2004) where 90 percent of college students reported that the social or academic lives of their friends or they themselves were affected by playing video games in their rooms for long durations and they did not respond to human interaction while playing. Meanwhile, Ogletree and Drake (2007) cited the work of Gentile *et al.* (2004), Lieberman *et al.* (1998), and Harris & Williams (1985) who found a link between time spent in playing video games and poorer school performance.

Methodology

As noted by Aguilera & Mendiz (2003), most of the literature on video/computer games is based on research in English-speaking countries. The survey in this paper is an attempt to present some results on video/computer games from a fast developing South East Asian country, Malaysia. It should be noted that the differences in culture (country-specific and/or ethnic-specific) may possibly influence the results.

A total of 54 gamers (34 male and 20 female) participated in this mini survey. The majority were aged 19-20 (35.2%) and 21-22 (44.4%). Participants were Chinese (74.1%), Malay (5.6%) and Indian (5.6%).

Data were collected through questionnaire which was distributed randomly to gamers in cyber cafes, gaming outlets and some games exhibition. The questionnaire covered the following items:

(i) *Favourite categories of games.*

Items in this part included 10 categories of games and six to nine examples of games were listed under each category: Simulation (e.g. The Sims), Racing (e.g. Need for Speed: Most Wanted), Sports (e.g. FIFA Soccer 06), Role-playing (e.g. World of WarCraft), Action (e.g. Half Life: Counter Strike), Strategy (e.g. Age of Empires III), Fighting (e.g. Tekken 5), Puzzle (e.g. Zuma Deluxe), Shooter (e.g. Halo 3), and Adventure (e.g. Resident Evil: Deadly Silence). The items were measured with Likert-type scale ranging from 1-“I

hate it” to 5-“I love it very much”. Male and female gamers were also asked to name their favourite games.

- (ii) *Frequency of playing games*, with selections ranging from “Less than once a month” to “More than once a day”.
- (iii) *Time spent on playing games*, with selections ranging from “< 1 hour a week” to “> 20 hours a week”.
- (iv) *Average amount of money spent on playing games*, with selections ranging from “None” to “>RM60”.
- (v) *Perception on games*. There were 12 items in this part, with the items focusing on the effects of games on their lives. The items were measured with Likert-type scale ranging from 1-“Strongly disagree” to 5-“Strongly agree”.

The data were then analysed using SPSS® and t-test was used to see whether there were significant mean differences between male and female gamers in their favourite categories of games and perception on games. For the other items, percentage comparisons were employed.

Results and Discussion

Table 1: Favourite Categories of Games

Categories of Games	Mean for Male	Mean for Female	Sig. (2-tailed)
Simulation	3.21	3.35	0.589
Racing	4.15	3.65	0.115
Sport	3.59	2.65	0.003*
Role Play	3.82	2.50	0.000*
Action	3.76	2.55	0.000*
Strategy	3.79	2.60	0.000*
Fight	3.38	2.95	0.195
Puzzle	3.00	4.30	0.000*
Shooter	3.53	2.95	0.040*
Adventure	3.50	2.90	0.046*

* significant at 0.05

Table 1 shows that there were significant differences between male and female gamers’ preference in seven (out of 10) types of games: sport, role play, action, strategy, puzzle, shooter and adventure. Of these, male gamers prefer to play six types of games: sport, role play, action, strategy, shooter and adventure compared to female gamers who showed a marked preference to puzzle type games. The results concur with the results of Roberts *et al.* (1999) and Sherry *et al.* (2001) (both cited in Chu *et al.*, 2004). It is also consistent with the assertion made by Smith (2004) that male gamers favour action, sports and war strategy titles.

Male gamers’ favourite type of game is racing game and they named *Need for Speed: Most Wanted* as the game they like most. This result is different from

Hartmann and Klimmt (2006) where it was reported that shooter games are more frequently played by males. Female gamers' favourite type of game is puzzle game and they listed games like *Tetris*, *Bejeweled 2 Deluxe* and *Solitaire* among their favourites.

There were no significant differences between male and female gamers in these types of games: simulation, racing and fight. For both simulation and racing, both male and female gamers show a positive liking to the games. In particular, the positive response to racing games by both genders supports the results of Sherry *et al.* (2001) which Chu *et al.* (2004) mentioned to be an inconsistency among available literature. Female gamers were slightly negative on fight type games compared to male gamers who were positive towards it.

On the frequency of playing games, 63.6% of male gamers play video/computer games about once a day or more than once a day compared to only 25% of female gamers who do so. In contrast, 40% of female gamers play games less than once a month compared to 9.1% for male gamers. On the time spent in playing games, 48.5% of male gamers play for less than 1 hour a week or 1-5 hours a week compared to 95% for female gamers. 21.2% of male gamers spend more than 20 hours a week playing games compared to only 5% for female gamers. The results for these two aspects concur with current literature (e.g. Ogletree & Drake, 2007) i.e. male gamers play more often and longer than female gamers.

In terms of expenditure on games, the differences are clear between the genders. Only 15% of female gamers spent money in the range of RM1-RM20 per month with the rest not spending at all. Compare this to male gamers where 5.9% spent more than RM60 per month with 26.5% spending more than RM20 per month on games. Males evidently are more willing and tend to spend more on playing games. This aspect is particularly interesting and warrants more attention, which current literature on gaming rarely emphasizes (it can be found e.g. in Harris & Williams, 1985 and Ogletree & Drake, 2007).

Table 2: Perception on games

No.	Perception	Mean for Male	Mean for Female	Sig. (2-tailed)
1	Playing games is important in my life.	3.85	2.60	.000*
2	Playing games can release stress.	4.68	4.10	.001*
3	Playing games improve my critical thinking skills.	4.06	3.60	.105
4	I feel happy and excited while playing games.	4.50	3.80	.000*
5	I like the challenging experience while playing games.	4.38	3.95	.052
6	I often fail to get enough sleep because of playing games.	3.29	2.30	.006*
7	I always miss my meals because of playing games.	2.61	1.85	.043*
8	I neglect my study because of playing games.	2.50	1.80	.020*
9	I skip my classes because of playing games.	1.97	1.30	.003*
10	I neglect my social activities because of	2.24	1.65	.052

	playing games.			
11	I neglect my family because of playing games.	1.94	1.40	.072
12	I think that I am addicted to games.	2.68	1.95	.048*

* significant at 0.05

Table 2 shows that in four items (items 3, 5, 10, 11) the difference in gender was insignificant. Both male gamers and female gamers agree that they like the challenge in playing games and playing games improves their critical thinking skills. Both male gamers and female gamers disagree that they neglect their social activities and their family because of playing games. This suggests that both genders value their social and family life and do not let playing video/computer games affect those aspects (e.g. the Entertainment Software Association (2005) reported that gamers also allocated a large amount of time for other activities: 79 percent exercise or play sports, 45 percent volunteer, 93 percent read books or daily newspapers regularly, 62 percent consistently attend cultural events).

It is worth to note that both genders agree that playing games releases stress and that they feel happy and excited while playing games (items 2 and 4). Significantly important is the fact that male gamers view playing games as an important part in their life (item 1) unlike female gamers who do not and male gamers go to the extent of not having enough sleep because of playing games (item 6) unlike female gamers who disagree. Perhaps it is the competitive nature of male gamers which causes this type of scenario (see e.g. Hartmann and Klimmt, 2006).

However, even though male gamers spend a lot of time playing games until affecting their sleep time, they disagree that they neglect their studies (item 8), skip classes (item 9) or miss their meals (item 7) because of playing games and neither do they agree that they are addicted to games (item 12). For all these four items, female gamers reported a stronger disagreement compared to male gamers. The results for these items may be attributed to the fact that only 21.2% of male gamers and 5% of female gamers were playing video/computer games for more than 20 hours a week.

Conclusion

The present study confirmed previous studies that showed that male gamers play more often and longer than female gamers. In addition, the present study explored a rarely emphasised aspect of game playing i.e. spending on playing games. Male gamers were found to spend more on playing games compared to female gamers and this aspect is worth to be investigated further in the future to determine what factors influenced their amount of spending. An interesting result in the present study was the finding that male and female gamers both like racing games, as reported previously by Sherry *et al.* (2001), unlike many other studies which report shooter games as male gamers' favourite. Female gamers were found to like playing puzzle type games which concur with other previous studies. The importance of game playing was significantly reported by male gamers and this result agrees with previous studies that show male gamers treated games as serious play.

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