

Turkish Female Students' Attitudes toward Internet, Computers and Game Play from the View of Cultural Perspectives

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Abstract : The purpose of this study was to determine the current status of computer usage, Internet usage and game preferences among 252 Turkish primary school female students. Data were collected by giving to the participants a questionnaire and conducting brief interview with 71 girls selected randomly. The quantitative results revealed that many of the participants had negative attitudes toward new technologies such as computers, Internet and computer game plays. Also, interview results showed some unexpected and interesting findings. For instance, it was determined some of the female students gave misleading answers for some questionnaire items, such as "Do you have computer at home?". When we examined this issue, we realized these female students couldn't access to computers, which are at their home. Having brother in the family is one of the main factors of girls' negative attitudes, because computers are seen as boys' toys among some families.

Introduction

The development of technology implemented within the educational environment lead to students being immersed in technology rich situations much earlier than before. Moreover, students' characteristics while a technology is implementing within a classroom are vital for educators. One of the main factors related to this issue is gender difference among the students. Researches about the gender differences in educational settings have been conducted many researches since last two decades (Young, 2000). Many studies have been conducted which focus on gender differences regarding computer usage, Internet usage and students' game preferences. Gender differences among the students in response to computers have been widely explained and identified by various experts in the educational field. There are some different opinions and studies concluded different results in the literature related to these gender differences.

In the literature, many of the studies focusing on gender differences about the technology were revealed that girls don't like using technological activities and they are less involved in these events than boys (e.g. Vasil, Hesketh & Podd, 1987). Internet usage has also shown differences among people regarding with their gender differences, like computer usage. Shashaani (1997) has conducted many studies related to gender differences in computer and Internet usage. One of his studies focused on this issue concluded that boys tend to be more interested in computers than girls, contributing to gender differences in Internet usage. Also, Internet usage is becoming widespread among not only males but also females. Computer games have been gaining much more importance than before in terms of being main source of enjoyment among people, especially young ones (Griffiths & Hunt, 1995). Some of the studies show that gender differences among computer game players may depend on the game content and related to different attitudes toward computers.

Researches related to gender differences in computer games showed that boys were being as more successful about playing computer games than girls. Sanger et al. (1997) stated that boys perform tasks that require much more visual skills better than girls. According to their results, boys seem to enjoy competition and gain high scores while girls like cooperation and competition. Inal and Cagiltay (2005) also confirmed these findings. They reported that whereas boys' most favorite games were "Fighting Games", girls' most favorite ones was "Atari Games", and "Quiz/Trivia Games". There has been conducted very little cross-cultural educational research focused on Internet's use, computer use and game preferences in the literature. Cross-cultural comparisons are needed to give a better understanding of students' use of the Internet, computer and computer games under different cultural background. Gender differences in the use of computers have been studied since decades by the researchers. People's beliefs and opinions on computer usage in terms of cultural perspectives may change drastically from one person to other who is from different cultures of countries (Brosnan & Lee, 1998). In other words, people's attitudes toward computers usage may be related to certain cultural and background characteristics.

Significance of the Study

Computer usage, especially Internet usage, is one of the most widely dealings in today's people. They use these technologies almost everyday in their daily works. However, there are some problematic situations to use computers or Internet in the world. Cultural norms and beliefs causing pressure on people are one of the main ones. Also, there has been conducted a few cross-cultural educational research conducted on Internet's usage, computer usage and game preferences in the literature. How national cultures influence students' use of the Internet, use of the computers and their game preferences needs to be explained theoretically and investigated systematically. National cultures affect people's attitudes toward the technology. People cannot be thought without culture they belong to. Therefore, the purpose of this study was to determine computer usage, Internet usage and game play preferences from the cultural perspectives among the Turkish elementary school female students. Moreover, the norms of the Turkish cultures by investigating the family members attitudes toward these issues were analyzed in the study.

Methodology

This study is based on descriptive data analysis in examining the research questions, which are being investigated. Totally 252 female students 6th, 7th, and 8th grade levels from a public primary school were participated in the study. Students were given a questionnaire in order to analyze and determine their attitudes towards the Internet, computers and computer games. The questionnaire was firstly used to determine Turkish university students' game preferences by Onay, Tufekci and Cagiltay (2005). There were 11 items within the questionnaire that was modified for this study. Besides, 71 female students who stated not having computers in their homes selected randomly among the participants were interviewed so as to determine deeply their attitudes, beliefs and expectations from the internet, computers and computer games.

Results

Students' answers given in the questionnaire and interview of the study were analyzed in terms of "Students' attitudes toward computer usage", "Students' attitudes toward internet usage", and "Students' attitudes toward computer games". Before analyzing these issues, defining the basis characteristics and demographic structures of the participants were identified separately. In the study, students age characteristics were, 30 out of 252 female students were 11 years old, 71 out of 252 female students were 12 years old, 85 out of 252 female students were 13 years old, 57 out of 252 students were 14 years old and rest of the female students (9) were 15 years old (See Table 1).

Age	Number of the Students
11	30 (11,9 %)
12	71 (28,2 %)
13	85 (85 %)
14	57 (22,6 %)
15	9 (3,6)

Table 1: Female Students' Age Characteristics

It is seen that students were between 11 and 15 years old and their grade levels were 6th, 7th, and 8th. Moreover, frequency of the female students' grades was that 84 out of 252 were 6th graders, 80 out of 252 were 7th graders and rest of the female students (88) was 8th graders. Also, students' families' socioeconomic status were determined less than average.

Students' Attitudes toward Computer Usage

Because of the students' low socioeconomic status, their having computer at home was found too low. Whereas only 52 of the female students stated they have computer at home, 200 out of 252 females do not have computer. After the interview part of the study conducted by 71 female students who stated not to have computers at home among the whole group, these results have changed drastically. It was determined that 17 out of 71 students admitted that they have computer at their home normally. However, because they are not allowed to use these too much by their family members such as their fathers, their mothers, or their brothers, they declared not having any computer at home. One of the female students stated in interview part that;

"...My father bought us computer at home last year. It was bought in order to do homework and searching information from the Internet for us. My father told us that he bought it for all of us, my two brothers and me. However, during a year, I have used it only a few times. My brothers do not allow me use I too much. They are playing games all times but I cannot use computers. Although I complained them about their behavior to my father, this situation didn't change for me. I want to use computers but I have no chance instead of school ..."

There is a relationship between the cultural perspectives of the families behaving like these and their attitudes toward new technologies. Although there have been changes for last decades, families living low socioeconomic regions may not consider their female children's ideas, expectations, and requests too much than males. Some females cannot have chance as males in terms of reaching technology and educational possibilities because of the economic and social reasons.

After the interview, we realized that some female students have negative beliefs and ideas related to the computers and computer games. According to a girl;

"...We have a computer at home. I said that I do not have computer at home in the questionnaire. That is true because I do not have too much chance to use it because of my father. He thinks that girls must not use computers too much like boys. He bought computers, and after that day, it has been used a few times. He said that if I went to study in university, I could use it whenever I want. According to my father, using computer can be harmful for me now. I do not believe the benefits of the computer. What can I do in order to take advantage of it about my lessons?..."

It was seen that some female students have negative attitudes toward the computers and benefits of them because they don't find too much chance to use them. They believe when they use computers for their lessons; this will not help them improve or increase their knowledge about those lessons.

Computer Usage		Places They Use	
<i>Do not use computers</i>	111 students	<i>"Internet Café"</i>	82 students
<i>Less than 1 hour</i>	72 students	<i>"School"</i>	76 students
<i>1 to 5 hours</i>	67 students	<i>"Home"</i>	52 students
<i>5 to 10 hours</i>	2 students		

Table 2: Participants' computer usage and places they use computers

Moreover, female students were asked their computer usage hours per day. 111 of them do not use computers any time. In addition, while 72 out of 252 female students stated that they use computers less than 1 hour, 67 out of the 252 female students stated that they use computers from 1 to 5 hours per day. Only 2 of the participants in this study use computers from 5 to 10 hours per day. According to these findings, we can say that students' computer usage is not satisfactory in today's world. Almost half of the female students do not use computers any time, and this issue may affect their cognitive development negatively. They cannot take the advantage of the computer usage. Besides, places where they use computers were investigated. The results indicated that *"Internet Café"* was one of the main places for female students in order to use computers. 82 out of the 141 students using computers go to the *"Internet Café"*. *"School"* was other main chance for female students to use computers as well. 76 out of the 141 students stated that they use computers in their schools. The last places for students to use computers were *"Home"*, and 52 female students stated to use computers at their homes (*See Table 2*). It was seen that majority of the female students prefer using computer in Internet Cafés and schools because they don't have

computers or chance to use them at home. Therefore, these places have becoming important for females who want to use computers and Internet easily.

Students' Attitudes toward Internet Usage

In this study, female students' Internet usage habits were found too high if this issue was compared to the literature. However, they reach Internet via "Internet Café". In questionnaire part of the study, 52 out of 252 female students stated that they have computers at their home. On the other hand, majority of the participants have no chance in order to reach Internet by using their computers at home. It was determined that they have no chance too much in their school also to reach Internet too. This issue leads to go "Internet Café" to reach Internet for females. Because of these reasons, questionnaire results revealed that 82 out of the 252 female students go to the "Internet Café" use computers and reach Internet. Moreover, because of their low socioeconomic status, they stated reaching Internet via "Internet Café" was too luxury for them. Also, they admitted that they go there without taking any permission from their parents. One of the female students' opinions was;

"...I go to the "Internet Café" when I have money. I do not have any chance in order to use computers and reach Internet in other places. However, my parent does not allow me to go there. They do not want me to use computers too much and reach Internet. My friends and I go "Internet Café" after school. If I had computer and possibility to reach Internet, I would not go there..."

Since the female students showed "Internet Café" as a chance to use computers and Internet, this may lead to increase the usage of these places directly. If the benefits of these places were considered, this should be argued whether these habits are beneficial for female students or not. Moreover, there are some problematic situations again due to the role of the Internet Cafés in Turkey. Majority of the people see these places as an area, which offer themselves to play computer games and reach unlimited Internet sources. Therefore, many parents do not want their female children to go these places as well. However, some female students in this study stated that they prefer going Internet cafés without taking any permission from their parents.

Students' Attitudes toward Computer Games

Female students were asked some questions both in interview and questionnaire in order to determine their attitudes toward computer games and analyze their computer game play habits. 121 out of 252 female students stated that they play computer games from time to time. Also, 20 female students stated that they play computer games a few days per week. However, 111 female students stated that they never play computer games. These results are similar to computer usage as well. We can say that all female students who have possibilities to use computers stated to play computer games. We can conclude that female students in this study want to play more computer games rather than researches conducted on their counterparts. Almost all participants having chance to use computers and reach Internet stated to play computer games as well. We also asked female students who do not want to play computer games their reasons why they do not play them. 89 out of 111 females stated that they do not have any access in order to use computers, thus they cannot play computer games. 16 out of 111 female students do not interested playing computer games, and rest of the females (6) stated not to know playing computer games so they can not play them. These results were showed that the main problem among the participants was accessing the computers (*see Table 3*).

Game Genre	Number of the Students
Action/Arcade	39 (15,5 %)
Atari Games	32 (12,7 %)
Playing Cards	1 (0,4 %)
Classic Game Tables	10 (4,0 %)
Fighting	15 (6,0 %)
Puzzle/Crossword	47 (18,7 %)

Quiz/Trivia	22 (8,7 %)
Race	14 (5,6 %)
Simulation	6 (2,4 %)
Sports	5 (2 %)
Strategy	2 (0,8 %)
Don't choose	59 (23,4 %)

Table 3: Participants' computer game preferences

Moreover, female students were asked their game preferences such as which game genders do you want to play the most? According to their answers given in the questionnaire, "Puzzle/Crossword Games" was the most favorite game among the participants. Their other favorite games were respectively "Action/Arcade Games" with 39 out of 252 female students, "Atari Games" with 32 out of 252 female students, "Quiz/Trivia" with 22 out of 252 female students.

Conclusion and Discussion

Computer usage especially Internet usage is one of the most widely dealings in today's people. They use these technologies almost everyday in their daily works. Almost every work needs to use computers and internet as well. However, in some regions, because of the some reasons such as socioeconomic and cultural issues, these usages of the technologies are lower than other parts of the world. Socioeconomic and cultural facts influence extremely the proportion of the computer and Internet usage. Besides, gender differences are one of the main factors having effects contributing the technology usage. Norris (2001) emphasizes the Internet access and usage by stating that gender differences in Internet access and usages are vital.

Cultural aspects and norms should be considered while the technological perspectives of the peoples are examined. Every culture has its own beliefs and norms, and people living and having their cultures behave according to the culture's truths. In this study, it was clearly seen that female students' behaviors to the computer usage, Internet usage, and computer game play preferences were influenced directly from their cultures. One of the most interesting and unexpected situations of the study is determined while interview was conducted to the female students. 17 out of the 71 participants, who stated not having computers at their home in questionnaire part initially, admitted that they have computer actually. When we examined this issue, we realized that some female students can not access to computers and computer games even if they have computer at their home. Having brother in the family is one of the factors of girls' negative attitudes, because for some families computers are seen as boys' toy, or some parents do not allow girls play computer games.

When students' computer usage was analyzed we concluded that students' computer usage is not satisfactory. While educators tend to integrate and implement computer games having educational characteristics within educational settings, approximately half of the female students in this study stated that they do not have any chance in order to use computers. This situation may affect their cognitive development negatively to the participants in this study. In other words, the earliest students meet technologies such as computers, the more their cognitive levels develop. Furthermore, we can conclude that because of these reasons, the participants of the study have no possibilities to use computers, thus their cognitions will be under their counterparts having opportunities to use them. Therefore, some precautions should be taken immediately for female students who do not have any opportunities to use computers or Internet.

Parents should care their children's beliefs, expectations, opinions both males and females equally. Also, educators and experts in educational fields should consider these socioeconomic and cultural facts while implementing a program or curriculum to classrooms. Cultural studies of people's perceptions of computers and Internet. Thus, our results in the study were confirmed by the previous research's findings (Brosnan & Lee, 1998) in the literature. We concluded that some of Turkish female students attitudes toward the computer and Internet usage are influenced by the socioeconomic and cultural truths and norms negatively. On the other hand, Internet usage of the female students in the study showed differences when it is compared to previous researches. Inal and Cagiltay (2005) concluded that Turkish elementary school female students Internet café habits were lower than male ones, and females Internet usage was less than researches conducted on females Internet usage in the literature. However, according to our results, female students' Internet café habits were satisfactory when their living conditions are

considered. In order to use computers and reach Internet, they go these places without taking any permission from their parents. Although they have computer at their home, their family members do not allow them to use it too much. Thus, the female students may see the "Internet Café" as only unique chance to use computers and Internet. When students' attitudes toward the computer games and game preferences were investigated, the results contributing the game preferences were found similarly in the literature. Previous researches (e.g. Inal & Cagiltay, 2005) conducted in Turkey found that "Atari Games" and "Quiz/Trivia Games" were most favorites among female students. Also, this study, we concluded that female students' most favorite games was "Quiz/Trivia Games" similarly the previous findings.

At the end of the study, we concluded that;

"Socioeconomic and cultural norms for each country have affected their people's attitudes toward the technology and technological facts."

"When female students were pressured by their families related to technologies such as computer usage, internet usage, their attitudes may change from positive side to negative one in terms of the benefits of technology"

"One of the most interesting points of the study was that after the interview conducted with 71 participants who stated not to have computer at their home, we determined that 17 out of 71 female students admitted having computers at home. Since they do not have too much chance to use computers at their home, they do not think that there is a computer at their home. Because they are not allowed to use these by their family members, they thought as they do not have any computer at their home."

References

- Brosnan, M. & Lee, W. (1998). A cross-cultural comparison of gender differences in computer attitudes and anxieties: the United Kingdom and Hong Kong. *Computers in Human Behavior*, 14(4), 559-577.
- Griffiths, M. D. & Hunt, N. (1995). Computer game playing in adolescence: prevalence and demographic indicators. *Journal of Community and Applied Social Psychology*, 5, 189-193.
- Inal, Y. & Cagiltay, K. (2005). Turkish Elementary School Students' Computer Game Play Characteristics. *BILTEK 2005 International Cognition Congress*, Eskişehir, Turkey.
- Norris, P. (2001). *Digital Divide: Civic Engagement, Information Poverty and the Internet in Democratic Societies*. New York: Cambridge University Press.
- Onay, P., Tüfekci, A. & Cagiltay, K. (2005). Türkiye'deki öğrencilerin bilgisayar oyunu oynama alışkanlıkları ve oyun tercihleri: ODTU ve Gazi üniversitesi öğrencileri arası karşılaştırmalı bir çalışma. *Bilisim Teknolojileri Isiginda Egitim Konferansi*, Ankara, Turkey.
- Sanger, J., Willson, J., Davies, B. & Whittaker, R. (1997). *Young children, videos and computer games*. London: Falmer Press.
- Shashaani, L. (1997). Gender differences in computer attitudes and use among collage students. *Journal of Educational Computing Research*, 16, 37-51.
- Vasil, L., Hesketh, B. & Podd, J. (1987). Sex differences in computing behavior among secondary school pupils. *New Zealand Journal of Educational Studies*, 22, 201-214.
- Young, B. (2000). Gender differences in student attitudes toward computers. *Journal of Research in Computing in Education*, 33, 204-217.