

TURKISH ELEMENTARY SCHOOL STUDENTS' COMPUTER GAME PLAY CHARACTERISTICS

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Özet. Bu bildirinin amacı, Türkiye'deki ilköğretim düzeyindeki öğrencilerin bilgisayar kullanımları ile, bilgisayar oyunlarına ve bilgisayar oyunu oynamalarına karşı şu anki durumlarının tespit edilmesidir. Bilgisayar kullanım durumları, bilgisayar oyun özellikleri ve oyun tercihleri ve bunları etkileyen faktörler araştırılmıştır. Bu çalışmada, iki farklı bölgedeki ilköğretim okullarından toplam 740 öğrenci yer almıştır. Çalışmadaki katılımcılar, dördüncü sınıf ile sekizinci sınıf arası öğrencilerden seçilmiştir. Okullar önce ayrı olarak incelenmiş daha sonra da birbirleri ile karşılaştırılarak veriler yorumlanmıştır. Çalışmanın sonucunda, ilköğretim öğrencilerinin bilgisayar oyunu seçimleri ve oyunlara karşı olan tutumlarının literatur ile benzer özellikler taşıdıkları görülmüştür. Oyun seçimleri konusunda kız ve erkek öğrenciler arasında farklılık olduğu gözlemlenmiştir. Erkeklerin kızlara oranla daha fazla oyun oynadıkları tespit edilmiştir. Ayrıca, öğrencilerin sosyal ve ekonomik durumlarının onların oyunlara ve oyun oynamaya karşı olan tutumlarını etkileyen faktörlerden birisi olduğu belirlenmiştir.

Abstract. The purpose of this study was to determine the current status of computer usage, game play characteristics and preferences among the Turkish elementary school students. The issues of computer usage, game-play characteristics, game choices influenced by some effects and game preferences were investigated. In this study, 740 students of two public elementary schools from two different regions in Turkey were included. The participants of the study were selected among the 4th to 8th grade level. Two schools were first examined as separately and then compared with each other. The results of the study showed that the mean time for game play among the Turkish elementary school students are similar to the findings of the current literature. Gender differences on game-play, game genre and theme preferences showed differences between males and females. Males play games more than females. Moreover, it was determined that students' social and economic status affects their attitude toward the games and game-play. The details of our findings are reported in our paper.

1. INTRODUCTION

This study was conducted to determine the current status of computer usage and game play and preferences among the Turkish elementary school students. Also, in this study, these questions were explored by the researcher: What are the preferences of Turkish elementary school students, do the students' social positions and economic status have an effect on games and game-play, has gender differences any effect to game play and game preferences, do the class level differences have an effect on games and game-play.

2. THEORETICAL FRAMEWORK

Computers are the most effective tools in human life as we think today's world. They have entered almost every part of the life. Despite their benefits of daily life, there may be some detrimental effects of computer usage especially children. There are many researches which are focus on positive and negative effects of computers.

Besides computer technology develops, many new aspects and technologies have appeared with this technology at the same time. One of them is game technology which is the most well-known and popular products all over the world. Game has been described as an activity that is voluntary and enjoyable, separate from the real world, uncertain, unproductive in that the activity does not produce any goods of external value and governed by rules. (Garris, Ahlers & Driskell, 2002). The games are played on personal computers. The general distinction between a computer game and a video game, that the computer game is played on personal computers; in that time the video game is played on the computer that is specialized for game playing, called a video game console. However, the phrases "video games" and "computer games" are usually used interchangeably because in both the game is viewed thorough a screen and an input device such as a joystick; keyboard or a keypad is used to play (Kirriemuir, 2002).

After the production of first commercial video game in 1970s, concept of the game has changed strongly. Moreover, computer games are part of the real life and reflection of the real world to the imaginary world. Because of fantastic aspects, game addiction has inclined and millions of people has spent their most of time in this imaginary world. Furthermore, games are not only used in entertainment sector, but they also used in business sector to train staff, military sector to simulation, and health sector (Kirriemuir, 2002). Games have many benefits on children development. Critical thinking and scenario-based learning which are very important elements of children's mental abilities.

On the other hand, it is mentioned that computer and video games have some damages in the literature. There are many researches focusing these aspects of games' damages: Whether games including violence components cause aggressive behaviors on children, whether games cause addiction and whether children playing more and more games and spending more and more time on games can have health problems.

The reason why human-beings need to play computer or video games is another important subject focused by researchers such as Malone (1981), Johnston(1993), Baranauskas(1999), Tuzun (2004), Sherry and Lucas(2001). Sherry and Lucas' (2001) study shows that these reasons are to fill time, relax and escape from stress. They study game characteristics pulling people's attention. This point is center of the game researches. According to Malone (1981), there are four main elements of computer games. These are fantasy including the scenario and the 'virtual' world in which the activity is embedded, curiosity sustained by the continual introduction of new information, challenge provided within each appropriate level of difficulty and control offering to users who have to solve different tasks and is confronted with problems. According to Johnston (1993), the dynamic visuals, rules, goal and interaction are the essential features. Moreover, Baranauskas (1999) stated that the essence of playing is challenge and risk. Sherry and Lucas (2001) found six dimension for game play, which include "competition, challenge, social interaction, diversion, arousal and fantasy".

As we think about the gender differences on game play, there are some differences between males and females on amount of game play, game genre and attitude of games in the

literature. In the literature, boys prefer playing games or programming with computers whereas girls prefer using computers as a tool. Also, boys spent more time on computer and playing games than girls in the literature. Girls do not prefer games which include violence. However, boys prefer action games which include violence very much (Subrahmanyam and Greenfield, 1997). Also, according to Fromme's (2003) study, the differences in game preferences among girls and boys that the favorite games of the boys were action and fighting games and the least favorite were platform games whereas platform games were the favorite games of girls. There is few researches about game-plays and game preferences in Turkey. One of them is conducted among the Turkish university students, and in this study, males spent more time on computer and playing games than females like in the literature too (Onay,Tüfekci and Cağiltay, 2005).

3. METHODOLOGY

This descriptive study was based on quantitative data analysis in examining the research questions which are being investigated. In this study, 740 students from elementary schools from different regions in Turkey. One of them is İzmir, and other is Karabük. Two schools were first examined as themselves and then compared with each other. Data were collected by giving the students questionnaire which measured the students attitude to the computers and games. It was suitable that questionnaire was given the higher graduate level students than third graduate level because of students' perception and the mental sufficiency. This survey's results analyzed by using quantitative methods were used as a baseline input data for SPSS program.

4. RESULTS

There were 361 girls and 379 boys in this study. Participants' ages were between 8 and 14. It is seen in Figure.1 that students' grade level is between the 4th and 8th. The participants stated how often they played computer games in a day, in a week. Main problem to the manner of the computers and games was lack of the computers of students. For example, only 163 out of 740 students not have computer, whereas 577 out of students do not have computer. However, although many students do not have computer in order to play computer game, 654 (88,4 %) students stated that they play computer game at least one day per week. Only 86 (11,6 %) students stated not to play computer game.

GRADE LEVELS OF PARTICIPANTS

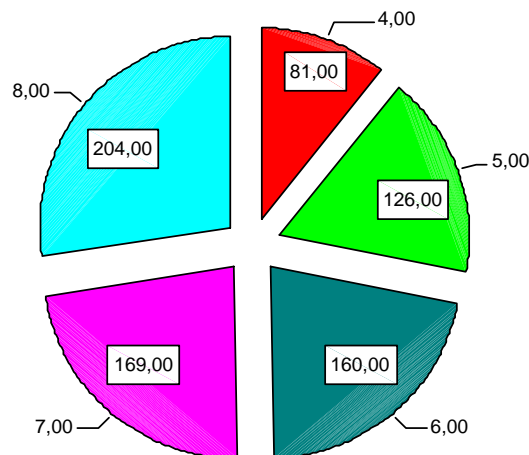


Figure.1: Grade levels of participants

When the students who stated not to play computer games were asked what might be the reason for not playing computer games, their reasons for this point showed diversity. For example, as it is seen in the Figure.2 that for the first choice 45,3 % of the participants selected being "Not Accessing to Computers" as a reason, for the second choice 23,3 % of the participants selected "Not Interested" as a reason, for the third choice 18,6 % of the participants selected being "Not Knowing How to Play Computer Games" and for the fourth and fifth choices participants selected "Having No Time" and "Waste of Time".

NOT PLAYING COMPUTER GAMES

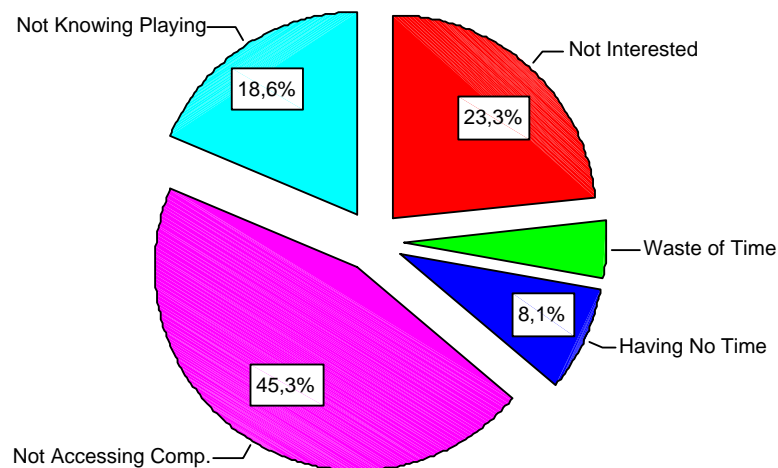


Figure.2: Reasons why the students do not play computer games

It is obviously seen that main reason not to play computer games is "Not Accessing Computers". However, "Waste of Time" is the most ineffective reason for playing computer games among participants. If children are provided the computers in order to use, this rate will decrease sharply. So, children can be use computers for playing computer games.

4.1 Relations between game preferences and grade levels of the students

The students who stated playing games were asked what their favorite game genre preference are from thirteen game genres given them. For the first choice "Action-Adventure Games" (Resident Evil, Tomb Raider...) were chosen with 17,4 % (114) of the game players. Also, "Atari Games" (Pacman, Pinball...) were chosen with the same percents of "Action-Adventure Games" with 17,4 % (114). "Fighting Games" (Mortal Kombat, Takken...) which were the third choice were chosen with 15,6 % (102) of the game players. "Sports and Racing Games" (NBA, FIFA...) were chosen as a fourth choice by 13,8 % (90) of the game players. At last, "Quiz/Trivia Games" (Jeopardy...) were chosen as a fifth choice by 10,9 % (71) of the game players. (In figure.3)

GAME CHOICES

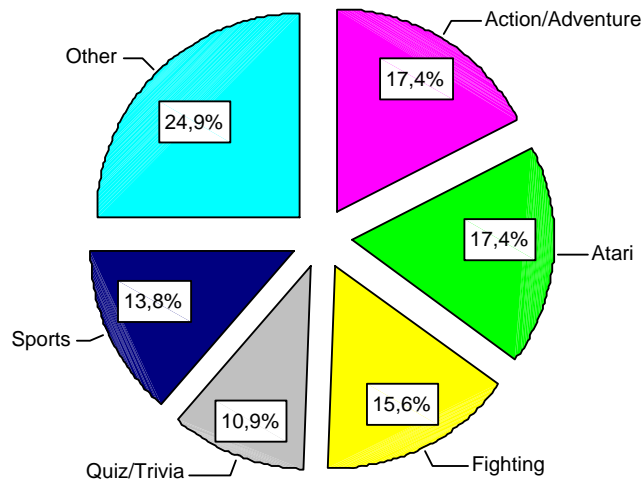


Figure.3: Students' game choices

On the other hand, students' grade levels showed differences on game preferences. In this study, 4th, 5th, 6th, 7th and 8th graders were taken into consideration. The most popular game among the 4th graders was "Atari Games" with 25 out of 81 students. The most popular game among the 5th graders was "Atari Games" with 35 out of 126 students, too. When 6th graders were examined, their most popular game was "Fighting Games" with 29 out of 160. In the same way, the most popular game among the 7th graders was "Fighting Games" with 27 out of 169 students, too. Furthermore, the most popular game among the 8th graders was "Action-Adventure Games" with 44 out of 204 students.

Moreover, 426 out of 740 students stated that they do not go to the "internet café" in order to use computers and plays computer and video games any time. Only, 7 out of the 740 students stated going there everyday. Also, rest of the students (307) stated that they go to the "internet café" from time to time.

Game preferences among the students have shown similarities because of the students' same grade levels and cognitive developments. On the other hand, there are not meaningful resemblances between grade levels and game preferences. Although there is not direct connection among them, students' game preferences depends on their grade level. For example, more complex games are preferred then less complex games by the 7th and 8th grade students. Moreover, 4th and 5th grades play less complex games such as "Atari Games".

4.2 Relations between game preferences and gender of the students

There were 361 girls and 379 boys in this study. While 20,8 % of girls stated that they do not play computer games, only 2,9 % of boys stated that they do not play computer games. When girls' game preferences were examined, the most popular game among the girls was "Atari Games" which was the first choice with 66 out of 361. Then, the second choice "Quiz/Trivia Games" were selected 62 out of the 361 girls, and the last game selected by the girls as a third wanted game was "Action-Adventure Games" with 53 out of the 361 girls.

When boys' game preferences were examined, the most popular game among the boys was "Fighting Games" which is the first choice with 82 out of 379. Then, the second choice "Sports and Racing Games" were selected 78 out of the 379 boys, and the last game selected by the boys as a third wanted game was "Action-Adventure Games" with 61 out of the 379 boys.

According to the data collected in this study, it is easily said that there are some differences on game play and game preferences between the male and the female students. Girls prefer playing "Atari Games", "Quiz/Trivia Games" and "Action-Adventure Games" rather than "Fighting Games" and "Sport Games". On the other hand, boys prefer "Fighting Games", "Sport Games" and "Action-Adventure Games" rather than others.

4.3 Relations between game preferences and the social status - living environment

In this study, it is found that there is a direct relationship between the students' game preferences and the social status-living environment. Because the living environment shows people's economic status, this connection is clearly understood. Participants' attitude to the game play, computers and game preferences from Karabük is more positive than the participants from İzmir. Because the schools' environment selected for this study in Karabük has high social and economic status then the schools' environment selected in İzmir. This means that, environment of the schools is more important for determining social and economic status of students than whole city.

5. CONCLUSION

The purpose of this study was to determine the current status of computer usage, game play characteristics and preferences among the Turkish elementary school students. The issues of computer usage, game-play characteristics, game choices influenced by some effects and game preferences were investigated. Attitudes of the elementary school students to the computer games and game play, it must be considered that educational games which include instructional aim and purposes can be easily implemented into the current educational system. Motivational characteristics of games can help instructors provide students' motivation and retention in high levels. Among Turkish elementary school students the more favorable game genres were "Fighting Games", "Atari Games", "Quiz/trivia Games", "Sport Games" and "Action-Adventure Games". "Strategy Games" were the less favorable game themes among the Turkish elementary level students. These games need more cognitive and mental abilities, and because of this reason participants in this study preferred suitable games to their grade level rather than "Strategy Games". Moreover, from the results, it can be seen that gender makes a difference between game play of the participants as well as the game preferences. The results are similar to what the literature says as the male game players were more than female game players. Furthermore, game genre and theme preferences are different between male and females. While females generally preferred "Quiz/trivia Games", "Action-Adventure Games", boys generally preferred "Fighting Games", "Action-Adventure Games" and "Sport Games". Also, "Atari Games" were selected as a game preference between the male and the female participants as the most preferable game. This result supports the results of Onay, Tüfekçi and Çağıltay's (2005) study which was conducted to determine the current status of game play and preferences among the Turkish university students, and Sherry, Holmstrom, Binns, Greenberg and Lachlan's (2003) study. In this study, it was determined that owning a computer also has an effect on the game play. More owning a computer changes differences in Turkey as depending by the social and economic status. Moreover, while more than half of the game players have their own computers in some region, few of the game players have their own computers in other regions. Owning a computer increases to play games of the participants.

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