

International Child and Information Safety Congress “Digital Games”

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11-13 Nisan 2018, Ankara, TÜRKİYE





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Examination of Digital Game Habits of High School Students

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Abstract

Digital games are becoming more and more popular among today's students. Digital games are used directly or indirectly in many areas such as marketing and communication. In terms of education, digital games allow students to socialize and also provides students with the development of motivation and self-regulation skills. Digital games have become an important pedagogical tool thanks to such benefits. It is important to know the habits and preferences of the students who play digital games to get the best benefit in education. Because the habits and preferences of individuals playing digital games are seen as a cultural phenomenon. So it is necessary to know the preferences and the habits of learners in the target culture. The aim of this research is to analyze the digital gaming habits of high school students. This study is based on survey model. It was conducted in a province in Western Black Sea Region. It was carried out in Anatolian High School students. Participants of this research consist of 418 high school students. The survey was conducted by means of a questionnaire developed by researchers. This questionnaire contains questions about the demographic information of students and determination of the habits of playing digital games. In the analysis phase the percentage, frequency, mean and standard deviation were used. 49.2% of male students and 50.8% of female students participated in the research. 97.3% of the students have a smartphone but 2.7% of the students do not have a smartphone. Also 81.8% of the students have the smartphones with internet connection. When it comes to the frequency of playing digital games 33.7% of the students play digital games everyday, 14.1% play digital games three or four days a week, 25.3% play digital games one day or two days a week, 16.2% play digital games a few times a month. When it comes to the frequency of daily digital gaming 20.5% of students play digital games less than an hour, 21.7% of students play one or two hours, 9.6% of students play three or four hours, 1.2% of students play for five or six hours and 1.2% of students play 7 hours and more. When students are asked where to play their digital games, 50% of students play their digital games on the smartphone, 3.3% of students play digital games on tablet, 3.3% of students play digital games on game console, 6.2% of students play digital games on PC, 34.4% of students play on their laptops. 72.2% students who play digital games say that they play single-user digital game. 27.3% of students say that they play multi-user digital games. When it comes to multi-user digital games, 0.7% of



students say that they play with their parents, 23.4% of students say that they play with their friends, 75.9% of students say that they play with unfamiliar people on the internet. 19.1% of students say that they go to the internet cafe to play digital games. When the findings obtained from research are examined, it is understood that the most majority of high school students have a smartphone with internet connection. Also half of the students play their digital games through the smartphones. These findings can be considered as an important opportunity for the applicability of mobile learning and mobile educational games. When the frequency of students playing digital games is examined, it is determined that one of every three students play a digital game everyday. While most of the students are playing single-user digital games, multi-user digital games are played with unfamiliar people on the internet. There is a possibility that students will be able to cope with unwanted situations and behaviors such as bullying while playing unfamiliar people on the internet. There is not a lot of students who play multi-user digital games with their family. This finding points to the inadequacy of parental control in multi-user digital gaming environments. As a result of research findings, it has been discussed what can be done about the digital game playing habits of students and various suggestions have been made to families, applicants and policy makers.

Keywords: High school students, Digital game playing, habits

1.Introduction

Playing games is a very important activity for children as well as being a tool to express themselves comfortably (Sormaz & Yüksel, 2012). During playing games, children gain experience to support the development of social, emotional and motor skills (De Grove, Bourgonjon, & Van Looy, 2012). In parallel with the digitalization of almost everything in our age, it is seen that games and game tools are affected by this change and take place in children's lives (İnan & Dervent, 2016). Digital games have become used directly or indirectly in many areas such as marketing, communication. It is seen that today's children are rapidly adapting to this development in technology (Pala & Erdem, 2011).

In terms of education, it can be said that games attract more attention of new generation children according to traditional learning methods. In their study Sarı and Altun (2016) found that in courses with elements of gamification students' interest and motivation towards the courses increased and their wishes about their participation in the course increased. Considering the positive effects of digital games on children, it can be said that educators are more interested in using games in teaching (Çağlar & Arkün Kocadere, 2015). Yildiz Durak, Karaoglan Yilmaz and Yilmaz (2017) have determined that they play Dress Up / Make Up Games, Information / Logic Games, Car / Racing / Sports Games, Strategy / War / Adventure Games, Educational Games, Build, Multiplayer Games, Card Games and Simulation Games. In addition, it was examined whether or not the students have changed their computational thinking skills according to the type of play they play. Research findings indicate students' algorithmic thinking, cooperativity



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and problem solving levels display a statistically significant difference based on the type of game that they play. To make the best use of digital games as a teaching method, it is important to know the habits and preferences of the learners to play. Because the habits and preferences of individuals playing digital games are seen as a cultural phenomenon. So it is necessary to know the preferences and the habits of learners in the target culture. The aim of this research is to analyze the digital gaming habits of high school students.

2. Method

In this part of the study, it's given the model of the researcher, the data collection tools, the analysis of the data and the interpretation of the data.

Research Model

This study is based on survey model. Survey model studies are the researches that aim to collect data to determine specific characteristics of a group. These studies are determining the various characteristics of the participants such as opinions, interests, skills, attitudes etc. related to a subject or event (Büyüköztürk et al., 2016). This study was conducted on Anatolian High School students in a province center in Western Black Sea Region during the spring semester of 2016/2017 academic year. Participants of this research consist of 418 high school students.

Data Collection Tools

The survey was conducted by means of a questionnaire developed by researchers. This questionnaire contains questions about the demographic information of students and determination of the habits of playing digital games

Analysis of Data

The data were analyzed by descriptive statistical method and the percentage, frequency, mean and standart deviation were used.

3. Results

Purpose of this study is to analyze the digital gaming habits of high school students. In this section, the distribution of the students by gender, the status of having a smart phone, the status of internet connection in their smart phones, the frequency of digital game play, the devices in which they play digital games and the type of digital games they play are analyzed.

The distributions of the students participating in the study by gender are shown in Figure 1. As seen in Figure 1, 50.8% of the students are female and 49.2% are male.

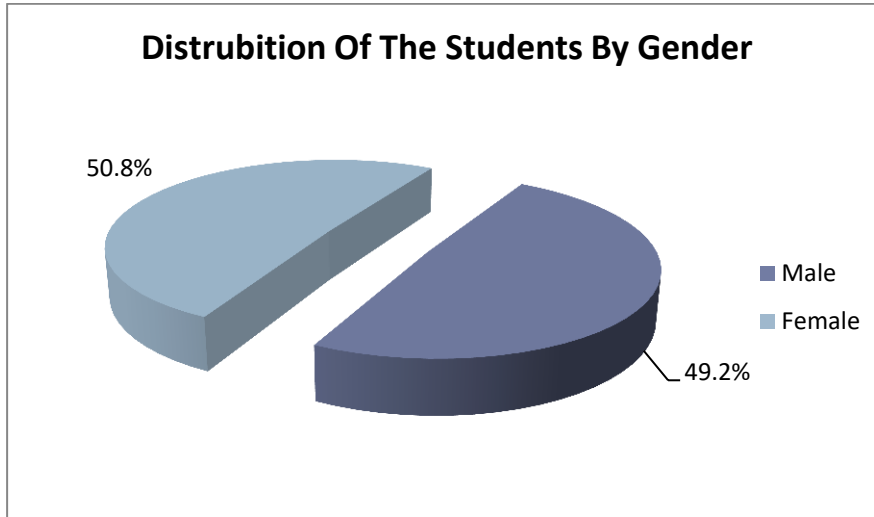


Figure 1. The distributions of the students by gender

The rate of students who have a smart phone is as shown in the Figure 2. According to the figure, almost all of the students (97.3%) have smart phones. Only 2.7% of students do not have a smartphone.

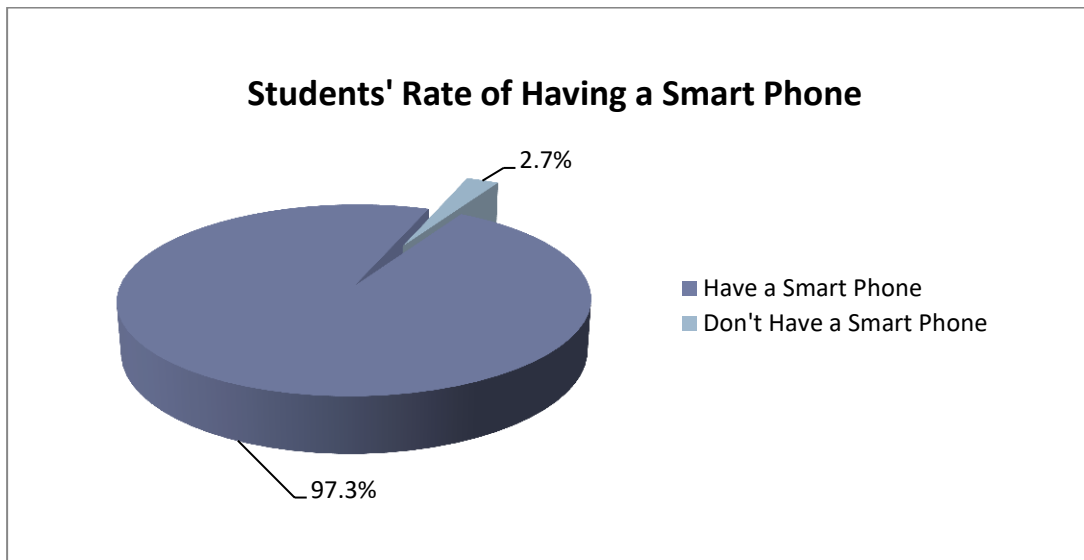


Figure 2. Students' rate of having a smart phone

Internet connection status on students smartphones are shown in Figure 3. According to the figure, more than half of the students have an internet connection on their smart

phones (81.8%). 18.2% of students do not have internet connection on their smart phones.

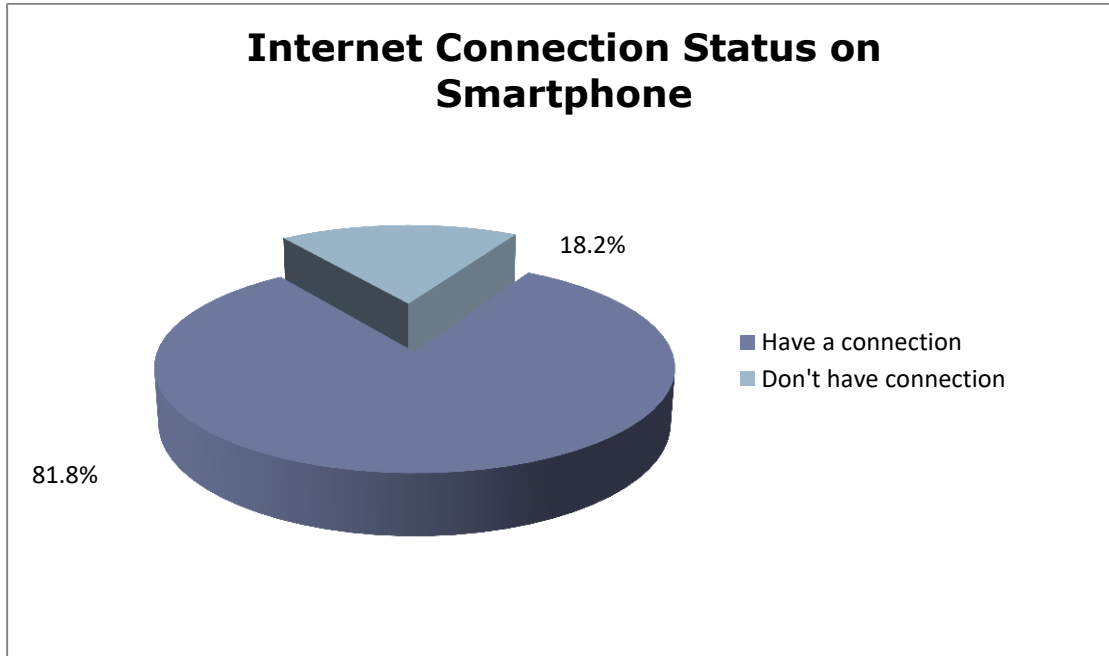


Figure 3. Internet connection status on students smartphones

Distribution of students according to their digital play frequency are shown in Figure 4. According to the figure, 33.7% of the students play digital games everyday, 14.1% play digital games three or four days a week, 25.3% play digital games one day or two days a week, 16.2% play digital games a few times a month.

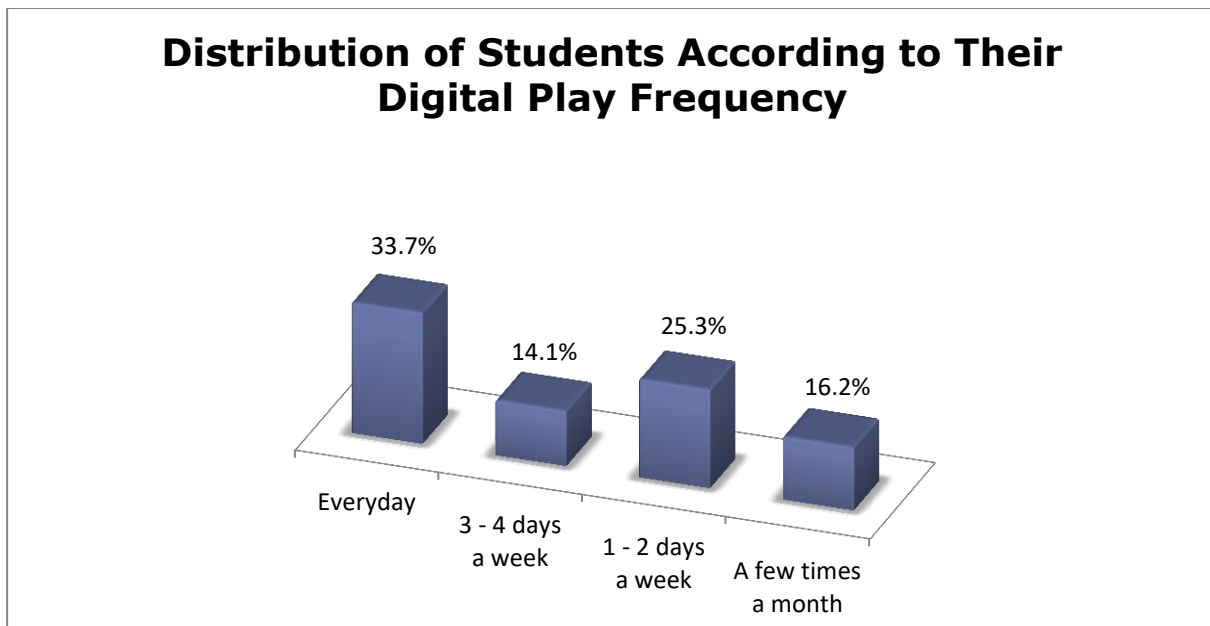


Figure 4. Distribution of students according to their digital play frequency

Distribution of students according to their daily digital gaming frequency are shown in Figure 5. According to the figure, 20.5% of students play digital games less than an hour, 21.7% of students play one or two hours, 9.6% of students play three or four hours, 1.2% of students play for five or six hours and 1.2% of students play 7 hours and more.

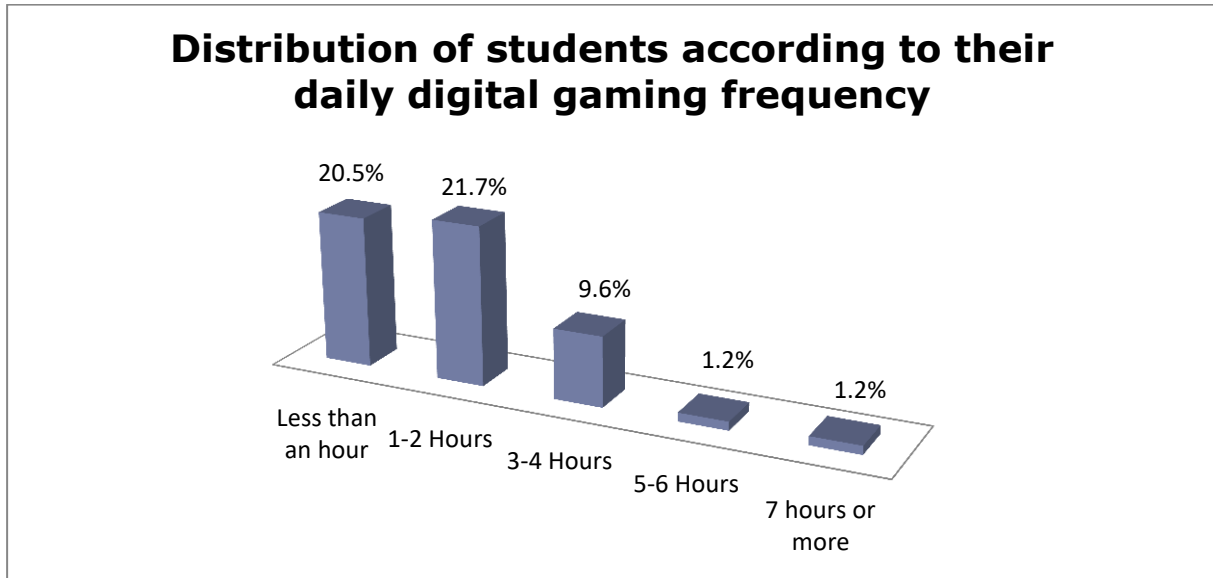


Figure 5. Distribution of students according to their daily digital gaming frequency

Distribution of devices where students play digital games are shown in Figure 6. 50% of students play their digital games on the smartphone, 3.30% of students play digital games on tablet, 3.30% of students play digital games on game console, 6.20% of students play digital games on PC, 34.40% of students play on their laptops.

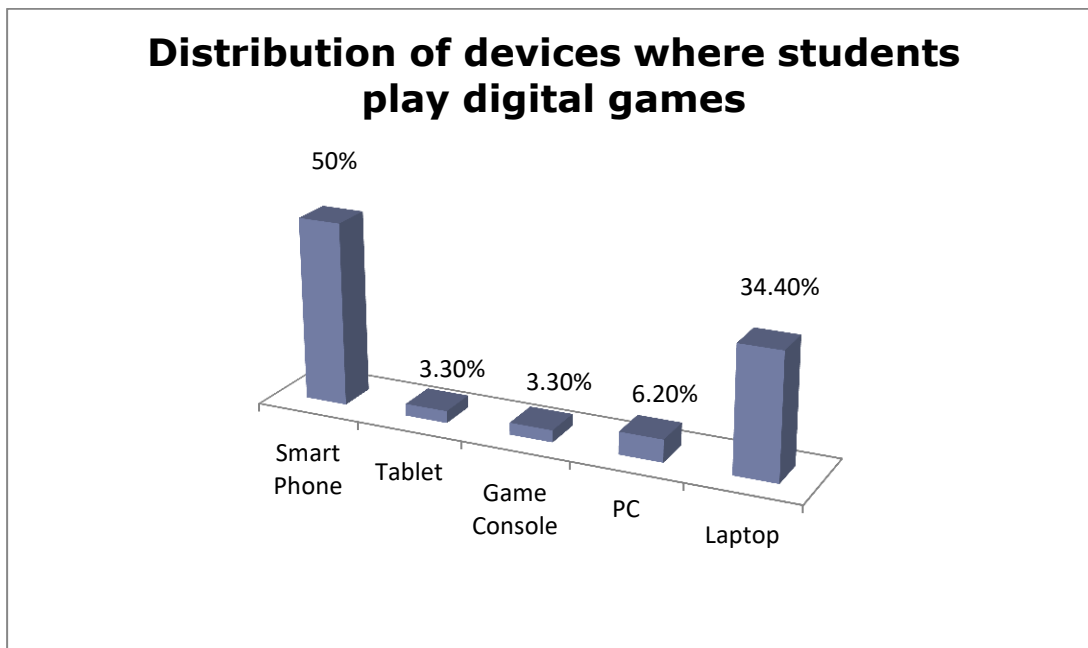


Figure 6. Distribution of devices where students play digital games

Distribution of single-user or multi-user digital game type are shown in Figure 7. According to the figure, 72.2% students who play digital games say that they play single-user digital game. 27.3% of students say that they play multi-user digital games.

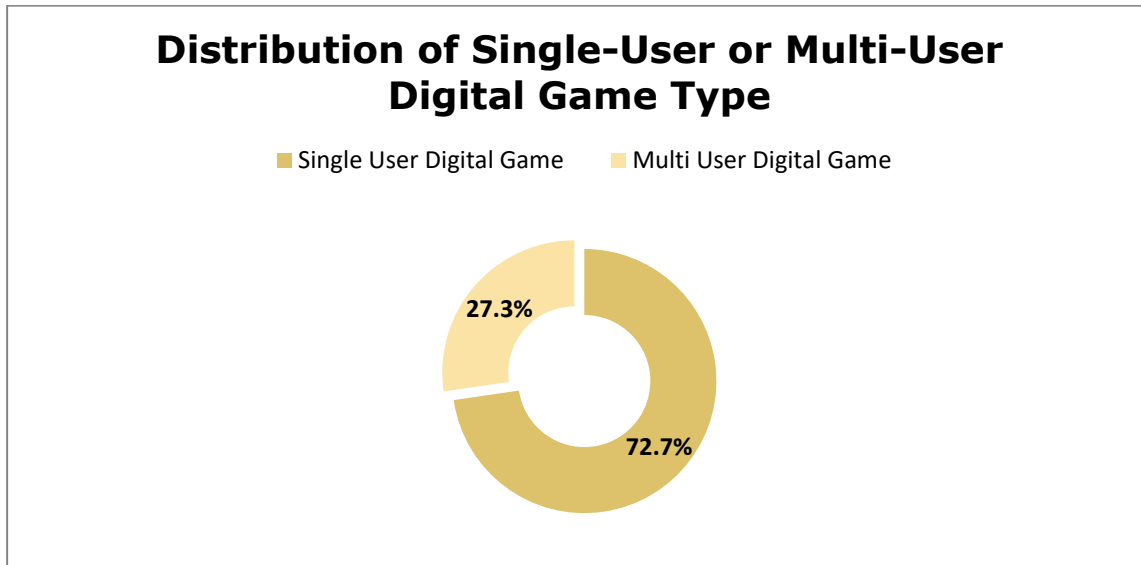


Figure 7. Distribution of single or multi user digital game type

The following findings have been reached when multi-user digital games are reviewed. 0.7% of students say that they play with their parents, 23.4% of students say that they play with their friends, 75.9% of students say that they play with unfamiliar people on the internet. Distribution of with whom the students play the multi-user games are shown in Figure 8.

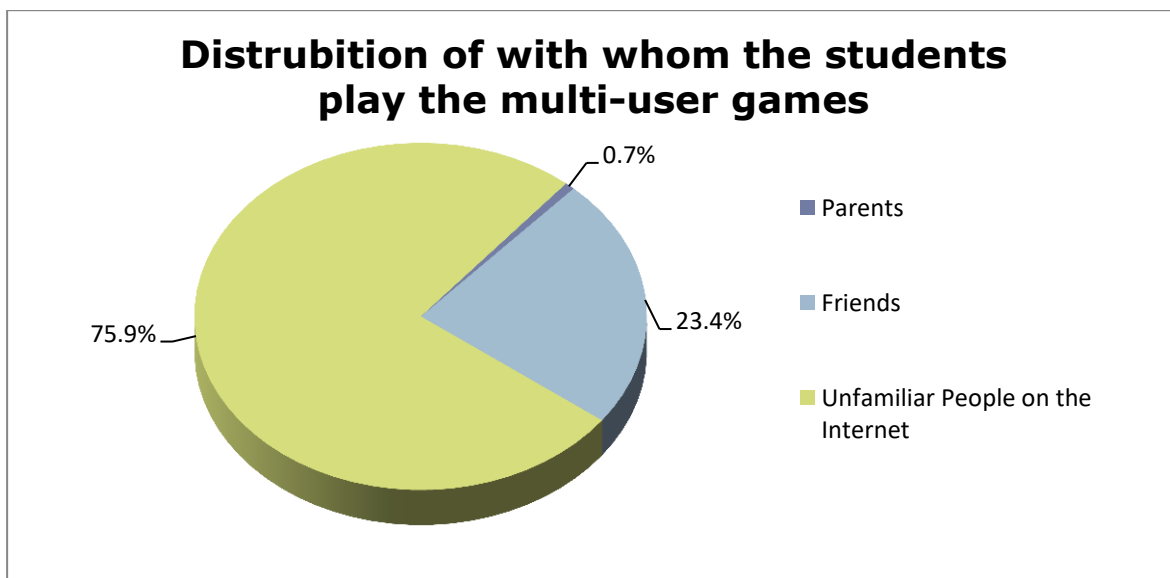


Figure 8. Distribution of with whom the students play the multi-user games



4. Discussion and Conclusion

The aim of this research is to analyze the digital gaming habits of high school students. This study is based on survey model. It was conducted in a province in Western Black Sea Region. It was carried out an Anatolian High School students. Participants of this research consist of 418 high school students. The main results obtained from the research are as follows. 97.3% of the students have a smartphone but 2.7% of the students do not have a smartphone. Also 81.8% of the students have the smartphones with internet connection. Karaođlan Yılmaz, Dilen and Durmuş (2018) determined that 88.7% of high school students had internet access. This shows that most of today's students have internet access. These findings are important opportunities for self-directed learning with technology. These chances can be evaluated and learning opportunities can be provided with self-directed learning with technology. Research shows that self-directed learning with technology is an important predictor of academic motivation (Yılmaz, Karaoglan Yılmaz, & Cavus Ezin, 2018). In addition, Karaođlan Yılmaz (2016) did not find a significant difference in self-directed learning with technology in his study of whether he had made a difference in students with deep and surface learning approach. In the future, learning environment designs can be made by considering these findings in studies to be performed with high school students. When it comes to the frequency of playing digital games 33.7% of the students play digital games everyday, 14.1% play digital games three or four days a week, 25.3% play digital games one day or two days a week, 16.2% play digital games a few times a month. When it comes to the frequency of daily digital gaming 20.5% of students play digital games less than an hour, 21.7% of students play one or two hours, 9.6% of students play three or four hours, 1.2% of students play for five or six hours and 1.2% of students play 7 hours and more. When students are asked where to play their digital games, 50% of students play their digital games on the smartphone, 3.3% of students play digital games on tablet, 3.3% of students play digital games on game console, 6.2% of students play digital games on PC, 34.4% of students play on their laptops. 72.2% students who play digital games say that they play single-user digital game. 27.3% of students say that they play multi-user digital games. When it comes to multi-user digital games, 0.7% of students say that they play with their parents, 23.4% of students say that they play with their friends, 75.9% of students say that they play with unfamiliar people on the internet. 19.1% of students say that they go to the internet cafe to play digital games. When the findings obtained from research are examined, it is understood that the most majority of high school students have a smartphone with internet connection. Also half of the students play their digital games through the smartphones. These findings can be considered as an important opportunity for the applicability of mobile learning and mobile educational games. When the frequency of students playing digital games is examined, it is determined that one of every three students play a digital game everyday. While most of the students are playing single-user digital games, multi-user digital games are played with unfamiliar people on the internet. There is a possibility that students will be able to cope with unwanted situations and behaviors such as bullying while playing unfamiliar people on the internet. There is not a lot of students who play multi-user digital games with their family. This finding points to the inadequacy of



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parental control in multi-user digital gaming environments. Karaođlan Yılmaz and Çavuş Ezin (2017) indicate that through the necessary institutions and organizations to prevent damage to parents and children, preventing and raising awareness is required.

References

Büyüköztürk, Ş., Çakmak, E. K., Akgün, Ö. E., Karadeniz, Ş., & Demirel, F. (2016). *Bilimsel araştırma yöntemleri* (22 b.). Ankara: Pegem Akademi.

Çağlar, Ş., & Arkün Kocadere, S. (2015). Çevrimiçi öğrenme ortamlarında oyunlaştırma. *Eğitim Bilimleri ve Uygulama*, 14(27), 83-102.

De Grove, F., Bourgonjon, J., & Van Looy, J. (2012). Digital games in the classroom? A contextual approach to teachers' adoption intention of digital games in formal education. *Computers in Human Behavior*, 28(6), 2023-2033.

İnan, M., & Dervent, F. (2016). Dijital bir oyunun hareketli hale dönüştürülmesi: öğrencilerin uyarlanmış hareketli versiyona verdiği tepkilerin incelenmesi. *Pegem Eğitim ve Öğretim Dergisi*, 6(1), 113-132.

Karaođlan Yılmaz, F. G. (2016). Examining self directed learning with technology based on different learning approaches. Presented at the *International Academic Conference on Teaching, Learning and E-learning*, Budapeşte.

Karaođlan Yılmaz, F. G., & Çavuş Ezin, Ç. (2017). Ebeveynlerin bilgi güvenliği farkındalıklarının incelenmesi. *Eğitim Teknolojisi Kuram ve Uygulama*, 7(2), 41-57, <https://doi.org/10.17943/etku.288874>.

Karaođlan Yılmaz, F. G., Dilen, A., & Durmuş, H. (2018). Lise öğrencilerinin mobil öğrenme araçlarını kullanma öz-yeterlik düzeylerinin incelenmesi [The examination of high school students' self-efficacy levels of mobile learning tools]. *SDU International Journal of Educational Studies*, 5(1), 1-12.

Pala, F., & Erdem, M. (2011). Dijital oyun tercihi ve oyun tercih nedeni ile cinsiyet, sınıf düzeyi ve öğrenme stili arasındaki ilişkiler üzerine bir çalışma. *Ahi Evran Üniversitesi Eğitim Fakültesi Dergisi*, 12(2), 53-71.

Sarı, A., & Altun, T. (2016). Oyunlaştırma yöntemi ile işlenen bilgisayar derslerinin etkililiğine yönelik öğrenci görüşlerinin incelenmesi. *Turkish Journal of Computer and Mathematics Education*, 7(3), 553-577.



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Sormaz, F., & Yüksel, H. (2012). Değişen çocukluk, oyun ve oyuncağın endüstrileşmesi ve tüketim kültürü. *Gaziantep Üniversitesi Sosyal Bilimler Dergisi*, 11(3), 985-1008.

Yildiz Durak, H. , Karaoglan Yilmaz, F. G., & Yilmaz, R. (2017). Examining the Relationship between digital game preferences and computational thinking skills. *Contemporary Educational Technology*, 8(4), 359-369.

Yilmaz, R., Karaoglan Yilmaz, F. G., & Cavus Ezin, C. (2018). Self-directed learning with technology and academic motivation as predictors of tablet pc acceptance. In *Handbook of Research on Mobile Devices and Smart Gadgets in K-12 Education* (pp. 87-102). IGI Global.