# Digital Game Playing Profiles of Gifted Students

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## Abstract

Beyond their entertainment value, games offer valuable learning experiences. The current study seeks to explore digital games as more than just tools for entertainment consumption; instead, they are seen as a medium for life experiences. The study aims to uncover the gaming behaviors and preferences of gifted individuals. Participants in this study include gifted primary and secondary school students who attend a science and art center in Ankara.  A survey-type study was carried out to reveal the students' digital game-playing profiles. The survey started with questions including demographic information, and asked participants questions such as what age they started playing games, how often they played games, how long they played games, their preferred devices, their favorite games, spending money on the game, and producing videos. The five favorite games were asked as open-ended questions, making game videos closed-ended and cascade questions. The findings are presented as frequency and percentage. Whether the profile difference according to gender was significant or not was determined by the chi-square test. As a result of the study, the gender factor had significant effects on the participants' digital game-playing profiles. Accordingly, the duration of playing games, frequency of playing games, paying for games, and recording game videos differ according to gender. Although there are differences in the types of games preferred by male students and female students, the sandbox game Minecraft and card games are at the top of the list of the most popular games for both female students and male students. Considering the game-playing preferences of students, the most appropriate digital game types that can be integrated into the education of gifted students are sandbox and card game types.

**Keywords:**  digital games, gamer profile, gifted students

## Özel Yetenekli Öğrencilerin Dijital Oyun Oynama Profilleri
### Öz

Oyunlar eğlenceli olmanın yanında öğretici özelliğe de sahiptir. Bu araştırma, dijital oyunları bir eğlence-tüketim aracı değil bir yaşam deneyimi olarak görmekte olup özel yetenekli bireylerin ticari oyun oynama profillerini ortaya koymayı amaçlamıştır. Araştırmanın katılımcıları Ankara'da bilim ve sanat merkezi'ne devam eden ilkokul ve ortaokul çağındaki özel yetenekli öğrencilerdir.  Öğrencilerin dijital oyun oynama profillerini ortaya koymak için tarama türünde bir çalışma gerçekleştirilmiştir. Öğrencilere bir anket uygulanmıştır. Anket demografik bilgileri içeren sorularla başlamıştır. Daha sonra öğrencilere hangi yaşta oyun oynamaya başladıkları, ne sıklıkta oyun oynadıkları, ne kadar süre oyun oynadıkları, tercih ettikleri cihazlar, en sevdikleri oyunlar, oyuna para harcama ve video üretme durumları sorulmuştur. En sevdikleri beş oyun açık uçlu, oyun videoları çekme durumları kapalı uçlu ve dereceli soru haline getirildi. Elde edilen bulgular frekans ve yüzdelik olarak sunulmuştur. Cinsiyete göre profil farkının anlamlı olup olmadığı ki-kare testi ile belirlenmiştir. Araştırma sonucunda katılımcıların dijital oyun oynama profillerinde cinsiyet faktörünün önemli etkilerinin olduğu görülmüştür. Buna göre, oyun oynama süreleri, oyun oynama sıklıkları, oyun için ücret ödeme durumları, oyun videosu çekme durumları cinsiyete göre farklılaşmaktadır. Kız ve erkek öğrencilerin tercih ettikleri oyun türlerinde farklılıklar göze çarpsa da sandbox türünde olan Minecraft oyunu ve kart oyunları hem kızlar hem de erkekler için en sevilen oyun listesinde ilk sıralarda yer almaktadır. Öğrencilerin oyun oynama tercihler göz önüne alındığında özel yetenekli öğrencilerin eğitimine entegre edilebilecek en uygun dijital oyun türleri sandbox ve kart oyunu türüdür.

**Anahtar kelimeler:**  Dijital oyunlar, oyuncu profili, özel yetenekli öğrenciler

# INTRODUCTION

Digital games help players gain higher-order thinking skills and develop cognitive, affective, and psychomotor areas (Fanetti, 2011). Games use mechanisms such as challenge, reward, competition, and mystery to capture attention and provide safe play spaces where learners can make mistakes in a safe environment, where failure is a recognized and accepted part of the process, and where they can reflect on those mistakes (Whitton, 2011). Considering the impact of games, their integration into the teaching environment is an essential field of study. Van Eck (2006) divided the use of games in education into three groups: students' game design, teachers' or game developers' educational game design, and commercial games' educational use.

The digital game design of the students in the first group emphasizes the design process and programming skills. However, since not every content can be used in this field, and not every teacher may be competent to design games, the use of this field in educational applications has been limited. According to Van Eck (2006), the second group is when teachers or game developers design games for educational purposes. This use is more complex than the first group and requires more effort. The dimensions of educational game design consist of learning content, learning principles, and computer game design (Prensky, 2006). Designing an educational game that can provide motivating interaction is a challenging task (Laine & Lindberg, 2020). The educational game design process is also complex as it is a field where multiple disciplines combine (Hanghøj et al., 2022). The observation of inadequate designs in the game developed for educational purposes reveals the difficulty of this work, and this has led to the fact that there are very few developers willing to spend money and time on educational games. Consequently, many games designed for educational purposes are poorly produced and of poor quality (Annetta, 2008). According to Gee (2003), good games are preferred because they have self-teaching properties. In this way, games are played for a long time and by many people. If the game fails to teach itself, its gameplay is limited, and the developer does not continue developing it. To prevent this, designers have started to design games that are easy to play and short-term. However, the fact that players do not like games that are easy to play and end quickly has led game designers to look for solutions for designs that can be played especially in schools and workplaces, targeted at young people, fun and easy to learn, challenging and can be played for a long time.

The third group is the use of commercial games for educational purposes. Although not developed for educational purposes, commercial games are used in the classroom for support, presentation, and/or evaluation purposes. In such games, the quality and interest in the games are naturally at a high level. Van Eck (2006) believes this group will be the most promising category. Games have a motivational element that helps achieve and sustain engagement over a long period, but game design research in educational contexts lacks a comprehensive explanation of motivational factors and design principles that can help increase students' long-term engagement (Laine & Renny, 2020). Since the emergence of digital games, the virtual worlds they simulate can differ greatly from each other. While some games focus on real-time action dynamics where the player's coordination and reflexes are tested, other games may prefer simulations that focus on strategic or puzzle-solving thinking (Mizutani et al., 2021). The use of commercial games in education has some weaknesses, and these weaknesses can be reduced with some strategies. Choosing games suitable for the curriculum, analyzing the game, evaluating and applying it in line with educational needs, and not choosing inappropriate games are strategic steps (Nuraini et al., 2021). Commercial games can also be played in different genres and on different platforms. At this stage, it is essential to examine the commercial games preferred by different individuals, their game-playing profiles, and the features of these games, taking into account their characteristics.

Little research has been done on whether gifted students play video games or their experiences while playing games (Wood & Szymanski, 2020). When we look at the research in Turkey on gifted students and digital games, game-playing profiles (Ağaoğlu & Metin, 2015; Koçak, 2019), and digital game addiction (Yavuz, 2018; Oğurlu et al., 2021; Durak et al., 2022), Ağaoğlu and Metin conducted a comparative study and emphasized that participants attending science and art centers played more computer games and frequently preferred adventure and intelligence/logic games (Ağaoğlu & Metin, 2015). Gifted students mostly use computers, tablets, or phones to play games and think digital games expand their imagination, entertain themselves, and increase their creativity (Koçak, 2019). Oğurlu et al. stated that the gender factor affects the level of digital game addiction rather than being a gifted individual (Oğurlu et al.,, 2021). Koç et al. (2024) examined the motivation of gifted primary and school students to participate in physical activity and their motivation to play digital games in terms of various variables using the A statistically significant, low-level, negative relationship was explored between the students' age variable and the uncertainty sub-dimension of the desire to play games. Male students participated in more physical activities and expressed a greater desire to play digital games according to the gender variable.

Based on integrating digital games into education and research on gifted individuals and digital games, this research aims to reveal the commercial game-playing profiles of gifted students and discuss the educational potential of games within the framework of their preferred digital games. The research questions of the study are as follows:

- What is the age at which students start playing digital games?
- What is the frequency of students playing games?
- What is the playing time of the students?
- What devices do students prefer to play digital games?
- How do students pay to play digital games?
- What are the top five favorite games of female students?
- What are the top five favorite games of male students?
- What is the status of students making game videos?

## METHOD

### Research Design

A survey-type study was conducted to determine gifted students' commercial digital game-playing profiles. Perhaps the most widely used survey model in the social sciences (Desselle, 2005) tries to put the characteristics of a group into perspective. The questions of the survey studies must be clear and not misleading; the participants must answer the questions honestly, and enough questionnaires must be administered and collected. In addition to these challenges, survey studies enable data to be collected from a huge sample (Fraenkel et al., 2012).

### Participants

The participants consisted of 168 students, 64 females, and 104 males, attending the Science and Art Centre in Ankara. A convenient and criterion-based sampling method was used when creating the participants of the research. Most of the studies in the literature prefer this method, and this method is based on items that are available, quick, and easy to access. In criterion-based sampling, the participants is selected in line with certain criteria (Baltacı, 2018). In our research, playing digital games was determined as a criterion. 35.2% of the students participating in the study are primary school students, and 64.8% are secondary school students. The distribution of students according to grade levels is presented in Table 1.

**Table 1.** Distribution of Students by Grade

|                  | Class | N   | %    | Total % |
|------------------|-------|-----|------|---------|
| Primary school   | 2     | 8   | 4.8  |         |
|                  | 3     | 9   | 5.4  | 35.2    |
|                  | 4     | 42  | 25   |         |
| Secondary school | 5     | 38  | 22.6 |         |
|                  | 6     | 14  | 8.3  | 64.8    |
|                  | 7     | 43  | 25.6 |         |
|                  | 8     | 14  | 8.3  |         |
| Total            |       | 168 | 100  | 100     |

### Data Collection

A "Digital Game Experience Survey" was prepared to determine the game-playing profiles of the students. According to Roopa and Rani (2012), there are four survey questions: contingency questions/cascade format, matrix questions, closed-ended questions, and open-ended questions. In this questionnaire, contingency questions, closed-ended questions, and open-ended questions were used. The survey started with demographic information, and they were asked about the age at which they started playing games, how often they played games, how long they played games, their preferred devices, their favorite games, spending money on the game, and producing videos. Their five favorite games were asked as open-ended questions, making game videos closed-ended and

cascade questions. The survey questions were prepared with a closed-ended, but the "other" option was added to indicate inappropriate special situations. The survey was created only for individuals who play games. The survey questions were prepared considering digital game research (Sevim, 2014; Ağaoğlu & Metin, 2015).

The survey questions were evaluated by three experts in Computer and Instructional Technology and one expert in the field of Assessment and Evaluation. The questionnaire was presented to the students in printed form and was filled out only by volunteer students. The questionnaire was distributed to the participants face-to-face by the researcher, and the parts that were not understood while filling in the form were clarified. The following information was collected from the students to reveal their game-playing profiles:

- Students' age to start digital games
- Frequency of students' playing games by gender
- Students playing time by gender
- The preferred devices by students while playing games according to their gender
- Students' status of paying for digital games according to their gender
- A list of students' five favorite games
- Students' making game videos according to their gender

**Data Analysis**

Categorical data were generally collected in the study. Categorical data shows the number of objects, individuals, or events a researcher has found in a particular category. The researcher tries to see the frequency of specific characteristics, objects, individuals, or events. Most of the time, it is helpful to convert these frequencies to percentages (Fraenkel et al., 2012). Demographic information and the participants' digital gaming experiences were explained with descriptive statistics such as frequency and percentage and presented with tables. Whether the profile difference according to gender was significant or not was determined by the chi-square test.

**Research Ethics**

Necessary legal permissions were obtained from the University and the Ministry of National Education.

# FINDINGS

One hundred and sixty-eight questionnaires belonging to 64 female and 104 male students were evaluated. The age at which students start playing digital games is presented in Table 2.

**Table 2.** Students' Age to Start Digital Games

|  |  | N | % |
|---|---|---|---|
|  | Under 6 years old | 54 | 34.6 |
| Starting Age | Ages 6-10 | 94 | 60.3 |
|  | After 10 years old | 8 | 5.1 |
| Total |  | 156 | 100 |

Considering the age at which students started digital games, 34.6% of 156 students met digital games before the age of 6, 60.3% met between the ages of 6-10, and 8% met after the age of 10. The frequency of gameplay by the students is presented in Table 3.

**Table 3.** Frequency of Students' Playing Games by Gender

|        |        |   | Every day | 1-2 times a week | 1 per week | Less than 1 per week | Total |
|--------|--------|---|-----------|------------------|------------|----------------------|-------|
| Gender | Male   | N | 48        | 41               | 7          | 4                    | 100   |
|        |        | % | 48.0      | 41.0             | 7.0        | 4.0                  | 100.0 |
|        | Female | N | 18        | 23               | 7          | 15                   | 63    |
|        |        | % | 28.6      | 36.5             | 11.1       | 23.8                 | 100.0 |
| Total  |        | N | 66        | 64               | 14         | 19                   | 163   |
|        |        | % | 40.5      | 39.3             | 8.6        | 11.7                 | 100.0% |

The percentages of the answers given by a total of 163 students, 63 female and 100 male students (5 missing data), to the questionnaire question about the frequency of game playing of the students, are given in Table 3.

A chi-square test was performed to understand whether there was a significant difference between the frequency of playing games between male and female students. In line with the values, the difference is significant in favor of male students ($X^2$=17.574, p<.01). This situation is consistent with the interest in digital games by gender in general.

**Table 4.** Students' Playing Time by Gender

|        |        |            | Less than 1 hour | 1-3 hours | More than 3 hours | Total |
|--------|--------|------------|------------------|-----------|-------------------|-------|
| Gender | Male   | N          | 17               | 51        | 21                | 89    |
|        |        | % Gender   | 19.1             | 57.3      | 23.6              | 100   |
|        |        | % Duration | 40.5             | 68.0      | 80.8              | 62.2  |
|        | Female | N          | 25               | 24        | 5                 | 54    |
|        |        | % Gender   | 46.3             | 44.4      | 9.3               | 100   |
|        |        | % Duration | 59.5             | 32.0      | 19.2              | 37.8  |
| Total  |        | N          | 42               | 75        | 26                | 143   |
|        |        | %          | 29.4             | 52.4      | 18.2              | 100   |

The percentages of the answers given by a total of 143 students, 89 males, and 54 females, to the question about the playing time of the students, are given in Table 4. According to this table, male students mostly play between 1-3 hours, while female students play less than 1 hour. These data are also consistent with the general trend, as in Table 3. In addition to the students who did not answer, answers that were difficult to categorize were given as "I do not know, a little until my mum lifts me until I get bored, 1-7 hours, 30 minutes to 3 hours, 15 minutes-2 hours, 1-hour breaks until my head hurts, 15 minutes-2 hours until I get sleepy until my mother warns me until I get bored, different hours on weekdays and weekends". A chi-square test was performed to determine whether there was a significant difference between the playing time of male and female students ($X^2$= 13.3216, p<.01). In line with the values obtained, the difference is significant in favor of male students.

**Table 6.** The Preferred Devices by Students While Playing Games According to Their Gender

|  | Female | | Male | | Total (168) | |
| --- | --- | --- | --- | --- | --- | --- |
| Device | N (64) | % | N (104) | % | N (168) | % |
| Computer | 25 | 39.1 | 51 | 49 | 76 | 45.2 |
| Mobile phone | 24 | 35.6 | 37 | 37.5 | 61 | 36.3 |
| Tablet | 30 | 46.9 | 41 | 39.4 | 71 | 42.3 |
| Game Console | 12 | 18.8 | 33 | 31.7 | 45 | 26.8 |

It is noteworthy that there are some differences according to gender in the devices students prefer while playing games. According to the preferred ratio among females, computers and mobile phones are evenly distributed; and for men, this ratio is in favor of computers. A similar difference is also noticeable in the game console. This may be because men who consider themselves more professional in digital games turn to computers and game consoles that offer a better gaming experience than mobile devices with higher graphics and processor features.

**Table 7.** Students' Paying for Digital Games According to Their Gender

|  |  |  | No | Yes | Total |
| --- | --- | --- | --- | --- | --- |
| Gender | Male | N | 54 | 49 | 103 |
|  |  | % | 52.4 | 47.6 | 100 |
|  | Female | N | 50 | 13 | 63 |
|  |  | % | 79.4 | 20.6 | 100.0 |
| Total |  | N | 104 | 62 | 166 |
|  |  | % | 62.7 | 37.3 | 100 |

The status of students paying for digital games according to their gender is presented in Table 7. When the general student profile is analyzed, 62.7% of the students pay a price. However, when we look at the price payment status according to gender, there is a difference between male and female students. A chi-square test was performed to understand whether the difference in paying for the game was significant in males and females ($X2= 12.1224$, $p<.01$). The difference was significant in favor of male students. The list of students' favorite games is included in Table 8 and Table 9.

**Table 8.** List of Female Students' Top Five Games (>5%)

| Game's Name-Code | N(57) | % | Game Description |
| --- | --- | --- | --- |
| Minecraft | 22 | 38.60 | Sandbox |
| Game13 | 8 | 14.04 | Puzzle – problem-solving – two-player |
| Game1 | 8 | 14.04 | Card Game – Strategy – mobile game |
| Game 10 | 7 | 12.28 | Action (Skateboard without crashing into obstacles) |
| Game11 | 7 | 12.28 | Life Simulation- Build- Sandbox |
| Game 12 | 7 | 12.28 | Puzzle – problem-solving – two-player |
| Game 14 | 5 | 8.77 | Music - Single-player mobile game |
| Game 8 | 4 | 7.02 | A unified platform for gaming and game development |
| Game 2 | 4 | 7.02 | An online multiplayer strategy and action game (18 years of age, although there is no age limit) |
| Game 15 | 4 | 7.02 | An online multiplayer strategy and action game aims to expand space. |
| Game 6 | 3 | 5.26 | Multiplayer, first-person hitting game, online, "Pay to win" (16+) |
| Game 4 | 3 | 5.26 | Action-Adventure-Sandbox- 18+ |
| Game 3 | 3 | 5.26 | Card Game - Strategy |

**Table 9.** List of Males' Favorite Games (>5%)

| Game's Name-Code | N(104) | % | Game Description |
|---|---|---|---|
| Game1 | 39 | 37.50 | Card Game – Strategy – mobile game |
| Minecraft | 36 | 34.62 | Sandbox |
| Game 2 | 26 | 25.00 | An online multiplayer strategy and action game (18 years of age, although there is no age limit) |
| Game 3 | 22 | 21.15 | Card Game - Strategy |
| Game 4 | 21 | 20.19 | Action-Adventure-Sandbox- 18+ |
| Game 5 | 18 | 17.31 | Online multiplayer Battle (MOBA) |
| Game 6 | 14 | 13.46 | Multiplayer, first-person shooter, online, "pay to win" (16+) |
| Game 7 | 13 | 12.50 | Sports - Football game |
| Game 8 | 10 | 9.62 | A unified platform for gaming and game development |
| Game 9 | 10 | 9.62 | Multiplayer, first-person hitting game, online, |
| Game 10 | 8 | 7.69 | Sports - Football game |
| Game 16 | 7 | 6.73 | Racing game |
| Game17 | 7 | 6.73 | Sports - Basketball Game |

The games that female students stated they liked the most are presented in Table 8 and the games that male students liked the most are presented in Table 9. Male students play the most card games, online multiplayer strategy games, and action games other than Minecraft. It has been observed that females prefer to play card games and puzzle-type games the most, except for Minecraft. The Minecraft game ranks first for male and female students in the overall percentage value. When Table 8 and Table 9 are examined together, male and female students prefer the Minecraft game at a close rate. At the same time, there is a significant difference between male and female student preferences for other games. The main reason for this finding may be that the Minecraft game appeals to the playing preferences of both genders in terms of supporting different playing preferences. According to the findings, war, adventure, and sports games are naturally less preferred by female students.

A finding from Table 8 and Table 9 is that none of the students' favorite games are among the games that qualify as educational games. Although they may strengthen some skills, they are not included in the educational digital game category on the list.

The video recording status of the students is given in Table 10.

**Table 10.** Students' Making Game Videos According to Their Gender

| | | | No | Yes | Total |
|---|---|---|---|---|---|
| Gender | Male | N | 57 | 45 | 102 |
| | | % | 55.9 | 44.1 | 100 |
| | Female | N | 58 | 6 | 64 |
| | | % | 90.6 | 9.4 | 100 |
| Total | | N | 115 | 51 | 166 |
| | | % | 69.3 | 30.7 | 100 |

The status of students' making game videos is presented in Table 10. While 9.4% of female students made game videos, 44.1% of male students preferred to make videos.

A chi-square test was conducted to determine whether there was a significant difference between male and female students' preferences for making game videos ($X2= 22.3021 p<.01$). In line with the value obtained, the difference is significant in favor of male students. This is consistent with the general topic preferences of females and males on video streaming channels. The videos they record show that the "YouTubers" who focus on game narration are generally men.

The games in which the students shot the most videos are presented in Table 11.

**Table 11.** Games in which students shoot game videos

| Game | N (48) | % |
|------|--------|---|
| Minecraft | 27 | 56.3 |
| Game 1 | 8 | 16.7 |
| Game 17 | 4 | 8.3 |
| Other games | 4 | 8.3 |

As observed in Table 11, Minecraft is the most frequently mentioned game for student-generated video content.

## DISCUSSION & CONCLUSION

Most of the gifted students started playing digital games before the age of 10. It is improbable to start the game afterward. Most children started playing games between the ages of 6 and 10 (60%). Turkish Statistical Institute data states that the average age of children using computers is 8 (Turkish Statistical Institute [TUIK], 2013). This situation shows that the age of starting digital games has increased from the primary education level in our country by the general trend. The acquaintanceships that take place at later ages are realized due to the limitations imposed on children by families for reasons such as the instinct to protect them from developmental negativities.

Considering the game-playing profiles of gifted students, 77.7% of female students and 96% of male students play computer games "once a week" or more. In addition, there is a significant difference between males and females in favor of males. When we look at TUIK Child and Informatics data, duration of playing digital games was higher among males (TUIK, 2022). When we look at gifted students' digital game playing time, females mainly play "less than 1 hour," and males play "between 1-3 hours". About 90% of females play digital games for less than 3 hours, while 80% of males play digital games for more than 1 hour. There is a significant difference in favor of men between the time they play digital games and gender. Ozcan and Biçen (2016) looked at the technological device usage habits of gifted students in their social lives. The gender factor was not examined in the study and 69% of the gifted children spend 0-3 hours with technologic devices in a day, 25% of them spend 4-7 hours in a day while 7% of them do not spend any time with technologic devices. Technology has an important place in the education of gifted students (Ozcan and Biçen, 2016). In this study, most of the gifted students use technological devices every day for non-gaming purposes.

TUIK determined the game types of children between the ages of 6-15. According to this data, adventure games are preferred most by females with a rate of 44.3%, while sports games are preferred with a rate of at least 11%. While war games are most preferred by males with a rate of 65.4%, sports games are preferred with a rate of 18.2% (TUIK, 2022). In this study, when we look at the students' favorite digital games, students play the most card games, online multiplayer strategy games, and action games other than Minecraft. Females prefer to play card games and puzzle-type games the most, except for Minecraft. In addition, in the video-making status of the students, the difference is significant in favor of male students, and the game with the most videos is Minecraft. Learning game types is important for discovering students' interests and getting to know students. It may be more useful for researchers to give game names along with game types in the studies.

The current study explored significant differences between the digital game-playing profiles of gifted male and female students. Camcı (2011) suggested that students' preferences that vary according to gender are based on two reasons. The first reason is the differences in students' skills, and the second is the social attribution of different roles to the two genders. Koç et al. (2024) found a significant difference between the motivation of gifted individuals to play digital games and the gender variable. Kerr and Huffman (2018) stated digital games and sports activities as the predicted activities for men in their study on the gifted and gender variable. In addition, this situation is sometimes seen as an identity problem that needs to be dealt with. The occurrence of gender differences is not only observed in the digital game world. However, it may be more accurate to attribute these differences in digital games to "different interests" instead of attributing them to talent differences.

Gifted female students mostly prefer tablets, while male students prefer computers more. While females prefer the game console the least, male students' preference rate for game consoles is higher than female students. In the research conducted by Lopez-Fernandez et al. (2019) on the gaming profiles of adult women, women prefer computers and game consoles to play digital games. The research conducted in Finland stated that game consoles

were aimed at males and young men under 30 (Tilastokeskus, 2019). While our research yielded results consistent with Finland, they differed from the results of Lopez-Fernandez et al. (2019). In this case, it suggests that the age factor may influence the choice of playing games and gender.

Braun et al. (2016) examined students' favorite game types, game addiction levels, and personality traits, and found that the neuroticism levels of those who played regularly were low. In the research, they stated that action game players are more extroverted, and found it essential to investigate the relationship between favorite game genres and personality traits (Braun et.al, 2016). In our study, male students preferred action games more, and the games men prefer to play are usually called "pay to win," that is, games that you must pay to succeed. Although such games are initially offered for free, after reaching a certain level in the game, they implicitly charge fees for reasons such as power, weapons, equipment, the game's currency, precious stones, etc. This fee may not be paid if desired, but in this case, it is not even sincere to lag far behind the competitors. Minecraft, on the other hand, charges extra for some unique maps and digital accessories, but it is still not included in the category of such games. The game with the most captured videos is Minecraft, and Minecraft games appeal to a wide age range. It shows the importance of a detailed examination of the Minecraft game with features such as being loved, and the video being shot by students. Another game on the list of the most loved games by both females and males is a card game. This game is also in the mobile game category. Another game that draws attention is a sandbox game that was videotaped but fell behind in the list of the most popular games, this game is like Minecraft as it reveals the experience of children producing content by shooting videos. The reasons and consequences of producing this type of content are also an interesting research topic. It is possible to say that while Van Eck (2006) prefers commercial digital games with high potential for use in education, sandbox-type games are the most suitable game type to appeal to male and female students. The next type of game can be specified as card games. Our study focused on the commercial game-playing profiles of gifted students and collected data from individuals who played games. However, in integrating commercial games into education, the experiences and opinions of students who do not play games are also meaningful. The current study was conducted before the pandemic, but investigating the impact of the pandemic process on gifted students' digital game preferences will also contribute to the literature.

The research data were collected only from students who stated that they play digital games. It will be important to take into account the data collected from students who do not play digital games when planning digital games in the education of gifted individuals.

### Limitations

Although they were intended to be included in the research participants, secondary school students' response rate to the survey was significantly low due to their preparations for exams. Therefore, only the findings of primary and middle school students were considered.

This research is limited to data collected from gifted students studying at a science and art center operating in Ankara. A convenient sampling method was preferred when creating the participants of the research.

The research data was collected only from students who stated that they play digital games. However, the ratio of students who play digital games to students who do not play digital games was not determined.

### Statements of Publication Ethics

We declare that we comply with all publication ethical principles in this research. This study was carried out in accordance with permission numbered 145888481-605.99.E-794 2225 from Çankaya district governorship (Çankaya MEM).

### Researchers' Contribution Rate

Please specify the contribution rate of each author in the manuscript. Please do not change Author information; you may change or add titles according to the manuscript. No Table title is needed for this table.

| Authors | Literature review | Method | Data Collection | Data Analysis | Results | Conclusion |
|---|---|---|---|---|---|---|
| First author | ☒ | ☒ | ☒ | ☒ | ☒ | ☒ |
| Second author | ☒ | ☒ | ☒ | ☒ | ☒ | ☒ |

**Conflict of Interest**

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