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What Preschool Children Do with Technology?

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ABSTRACT

The purpose of this study is to investigate the activities that children engage in with technology. In this direction, preschool children's ownership of technological devices, which devices they own and what they do with these devices were examined. This study was designed as qualitative research. The study group consisted of 34 preschool children studying during the 2023-2024 academic year. Data was collected through semi-structured interviews. The results of the study revealed that most of the children have a device at home and these devices are mostly tablets, and by smartphones. It was determined that almost all the children played digital games and the games varied. It was seen that all the children participating in the study watched cartoons, and most children watched YouTube. It was concluded that many of the children participating in the study did not watch TikTok. A thorough examination of the content they watched revealed the coexistence of appropriate and inappropriate materials. Therefore, informing parents about parental lock and similar applications that can be installed on devices, and preparing guides, books, seminars, etc. on the use of technology for parents were suggested.

Keywords:
Children, technology, digital games, YouTube, TikTok

1. Introduction

Technology has become an integral part of societies with its continuous change and development. As the effects of technology on human life continue to increase, traditional media such as TV and radio has been replaced by digital media, which has radically changed the way we communicate, entertain, and obtain information. Children are the most affected by this change. People who grow up with technology and feel comfortable using it are called 'digital natives' (Prensky, 2001). The first digital natives are now turning into technology-savvy parents and children are born in digital homes where they are exposed to the digital world from the moment they are born (Chaudron et al., 2015). In the current technological age, digital devices such as smartphones, tablets, laptops, etc. are widely used among different age groups (Oliemat et al., 2018). Among these devices, tablets and smartphones are more preferred especially by children in the younger age group. The increasing frequency of the use of these devices among preschool children is due to their features such as portability, screen size, lightness, and autonomy (Dashti & Yateem, 2018). The preference for digital devices stems from their affordability and the capacity to incorporate numerous interactive applications (Christakis, 2009; Covolo et al., 2021).

The American Academy of Pediatrics (2016) has advised that children aged 2-5 should have limited exposure to technological devices due to increasing worries. It is recommended that their usage be restricted to 1 hour per day and that they should only be exposed to high-quality content while under parental supervision. For

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children over the age of 6, the recommended screen time limit is extended to a maximum of 2 hours per day. However, despite all these recommendations, children's screen usage time continues to increase. According to a nationwide survey conducted by Common Sense Media in the USA, 98% of families with children between the ages of 0 and 8 had at least one mobile device at home, and children between the ages of 2-4 spend an average of two and a half hours a day in front of the screen, while those between the ages of 5-8 spend more than 3 hours a day in front of the screen (Rideout & Robb, 2020). According to TurkStat, the utilization of the internet among children aged 6-15 in Türkiye stands at 82.7%. Additionally, a study conducted by Konca in 2022 revealed that children between the ages of 3 and 6 spend over 3 hours per day engaging with screens. These findings have raised apprehensions among both families and researchers regarding the potential consequences of excessive screen time on children. This has increased the concerns of families and researchers about the effects of screen use.

Digital devices, which can be used simultaneously both at home and outside for entertainment, education, and interaction, can have positive and negative effects (Elias & Lemish, 2021). Various studies have been conducted to understand the impact of digital devices on young children's learning and development (Blackwell et al., 2014; Connell et al., 2015; Kabali et al., 2015; Straker et al., 2018). The findings of these studies indicated that regular use of tablets, smartphones and similar devices may have both positive and negative effects on children's learning and development. While digital media can create opportunities for learning, health and strengthening family ties, unsupervised media use can be problematic, excessive, and harmful (Browne et al., 2020).

In today's connected age, apps play a critical role in integrating software and hardware, running on a variety of devices from smartphones to tablets to laptops to smart TVs. Their versatility makes apps a powerful component of emerging media ecologies. (Burroughs, 2017). One of the most popular applications is social media platforms, which are YouTube, Instagram, TikTok and Twitter. Social media platforms allow people to share information, ideas, pictures, videos and more, create personal profiles and interact with other people through a specific network (Siddiqui & Singh, 2016). Among these platforms, it has been determined that children mostly prefer video and picture applications such as YouTube and TikTok (Ofcom, 2022). YouTube, a free web-based service that allows users to view, upload, share, rate, add to playlists, report, comment and subscribe to other users, includes video clips, music videos, short and documentary films, film trailers, live broadcasts and other content such as vlogs and educational videos (Srinivasacharlu, 2020). While YouTube may offer hundreds of harmless and well-produced educational videos for young children, it is also common to see inappropriate and disturbing content targeting these children (Papadamou et al., 2019). Although YouTube has in recent years required content creators to label whether their videos are targeted at children and restricted content targeting children in personalized ads, comments, stories, and live chats (Neumann & Herodotou, 2020), YouTube's algorithmic recommendation system can still recommend inappropriate content to children. This is because they mimic or derive from appropriate content (Papadamou et al., 2019).

As another social media platform, TikTok has gained significant popularity as a social media platform in recent years by enabling users to share short videos ranging from 5 seconds to 3 minutes in length (Kaya & Kaya, 2023). Apart from dance, music and popular culture as content, this application also enables users to share their own personal video contents. Similar to other social media platforms, TikTok has an algorithmic structure within itself (Kaya & Kaya, 2023). This application, which continues to be popular all over the world, has brought many discussions. TikTok enables users to conduct live broadcasts and potentially earn money through these live sessions. The platform has encountered the threat of being prohibited in numerous nations for its perceived objectionable content. Among the main reasons for the ban request are that the shared content is not filtered, and children can easily access the content and are open to abuse (Özel & Asarkaya, 2023). Considering all these objectionable contents, it is very important to examine preschool children's access to this application and the contents they are exposed to.

While many children use social media platforms such as YouTube or TikTok to watch videos, mobile applications that include games or education and training are similarly popular among children (Meyer et al., 2021). Digital games can be defined as any game that uses electronic hardware to present some or all the games (Stieler-Hunt & Jones, 2015). Digital games differ from other screen-based media. They provide a unique blend of media experiences known to be effective on children. These experiences include goal orientations, interaction, control over action, feedback, points, praise, rewards such as collecting items, progressing to

higher levels, winning. Additionally, digital games allow children to actively participate in the narrative, develop a sense of identification with the characters, engage in interactions with fellow players, and gain social recognition from peers and family for their skills and achievements (Lieberman et al., 2009).

According to Livingstone and Blum-Ross (2020), the concept of screen time conceals important features of what (content), when (context), where and with whom children watch or play. While screen time is useful in terms of paying attention to the amount of screen time and expressing concern, it is also a barrier to realizing the potential benefits that children can gain from interacting with screens in their daily lives (Teichert et al., 2021). Evaluating the activities undertaken during this period is considered crucial, rather than perceiving screen time solely as the number of hours children spend in front of electronic devices. The prevailing trend in conducting such evaluations relies heavily on parental reports, as evident from most studies conducted in this field. (Kılıç et al., 2019; Konca, 2022; Przybylski & Weinstein, 2019; Radesky et al., 2020). In the family environment, individuals can use different digital devices at the same time. For this reason, there may be difficulties for family members to accurately report who uses which tools and for how long (Domoff et al., 2019). In addition, the accuracy of parents' recall of their children's use of digital devices may be low because they spend time with their own personal devices, their attention is in this direction, and the content is difficult to monitor (Radesky et al., 2020).

Studies have underlined the necessity of knowing how children learn to utilize technology, implying that incorporating technology into early childhood education is critical for children's learning and development (Sum et al., 2024). To effectively address the requirements of children, the use of information and communication technology (ICT) in early childhood education must be planned (Parette et al., 2009). Furthermore, the use of technology in early childhood settings has been identified as a developmentally appropriate approach that can assist young learners (Xie et al., 2018). In Türkiye, most of recent research were conducted about teachers' and parents' views about children's technology use (Aksoy, 2021; Can et al., 2023; Cengiz Saltuk & Erciyes, 2020; Erdoğan & Ergenekon, 2021; Gökel, 2020). However, there is a lack of research focusing on what children do with technology in Türkiye. Therefore, the aim of this study is to examine what children do with technology and seeks to answer the following questions: *Do children have technological devices? Which technological devices do they have? What do children do with these technological devices?*

2. Methodology

2.1. Research Model

This study was designed according to qualitative research method and phenomenology design. Qualitative research is a type of research that focuses on qualities that are difficult to measure, such as words or observations, and is based on the interpretation and analysis of qualities (Glesne, 2013). Qualitative researchers tend to be interested in social structures, individual experiences and/or the relationships between them (Glesne, 2013). Since this study seeks to explore what children do with technology qualitative method would fit for this study.

2.2. Participants

In this study, convenience sampling method, one of the non-random sampling methods, was used. Convenient sampling method, whose main purpose is to prevent loss of time, material, and labor, is expressed as the researcher collecting data from a sample that the researcher can easily access (Büyüköztürk et al., 2019). The participants of this study consisted of 34 children in the 4-6 age group attending a preschool affiliated to the Ministry of National Education in the academic year 2023-2024. The gender distribution of the children is given in Table 1.

Table 1. *Distribution of Children in the Study Group According to Gender*

Gender	Number of Children	%
Female	20	58,80
Male	14	41,20

As seen from Table 1, a total of 34 children participated in the study, 20 of them were girls and 14 of them were boys.

2.3. Data Collection Tools and Procedure

Semi-structured interview, one of the qualitative research methods, was used to collect the data. Interview technique is a powerful method used to determine people's perspectives, experiences, emotions, and perceptions (Yıldırım & Şimşek, 2008). Parental consent forms were delivered to the parents through the teachers. After the consent forms were collected, children who were allowed to participate in the study by their parents were included in the study group. The data of the study were collected in November-December 2023 of the 2023-2024 academic year. Children were informed about the interview before the interview started. All interviews were conducted individually.

2.4. Data Analysis

The overall goal of content analysis studies is to lead future academic studies within the area of the subject under consideration, as well as to assess the general trend on the subject (Ültay et al., 2021). Since this study aimed? to lead future research about children's technology usage content analysis was applied. Further, content analysis was used to analyze the qualitative data collected during the investigation. In content analysis, Yıldırım and Şimşek (2011) recommended creating a key table for coding data, then coding the data based on the table, determining themes, creating categories, and revealing concepts. As a result, the interview transcripts were exposed to content analysis. By following their suggestion, tables were created based on themes.

2.5. Validity and Reliability

Yıldırım and Şimşek (2008) recommended seeking expert advice to ensure validity in qualitative studies. To ensure trustworthiness in this study, the three researchers who conducted it received comments from two independent experts in early childhood education and intercultural research who were not involved in the study after creating the questionnaires. Further, according to Creswell (2013), inter-rater reliability refers to two or more coders examining the qualitative database, assigning codes to the database, and comparing coder results to establish the amount of agreement on the codes. Therefore, two of three researchers coded the findings separately, then the codes were compared. Based on comparison, the codes were matching by 97%.

2.6. Ethical

The necessary permissions to conduct this study were obtained from Burdur Mehmet Akif Ersoy University Non-Interventional Clinical Research Ethics Committee with the decision numbered 2023/525 on 01.11.2023. In addition, all ethical rules such as obtaining the necessary permissions before, during, and after data collection, adhering to the principle of volunteerism, giving the right to leave the study at any time, not answering any question, keeping private information confidential and not sharing the data with anyone were followed.

3. Findings

The study's findings confidently cover several aspects of preschool children's technology engagement, including device ownership, digital games, game preferences, cartoons, favorite cartoon elements, YouTube videos, preferred video content, TikTok videos, favored TikTok aspects, and findings related to interactions with strangers in these games.

Do children have a tablet, smartphone or computer at home?

Table 2. *Children's Ownership of Technological Devices*

Technological device	Number of People	%
Have	27	79,40
Do not have	7	20,60

As seen from Table 2, 27 out of 34 children have a technological device and 7 do not.

Which technological devices do children own?

Table 3. *Technological Devices Owned by Children*

Types of Devices	Number of People	%
Tablet	23	63,90
Smartphone	11	30,60
Computer	2	5,90

According to the data presented in Table 3, more than half of the children participating in the study own a tablet. After the tablet, the most owned device was determined to be the smartphone.

Do children play digital games on tablet, smartphone or computer?

Table 4. *Children's Playing Games with Technological Devices*

Digital Games	Number of People	%
Yes	31	91,20
No	3	8,80

The findings from Table 4 revealed that most of the children participating in the study play digital games on tablets, smartphones, or computers. Only 3 out of 34 children did not play digital games.

Which digital games do children play on tablet, smartphone or computer?

Table 5. *Digital Games Played by Children on Tablet, Cellphone or Computer*

Digital Games	*f*	Digital Games	*f*
Masha and the Bear Game	1	Princess Game	1
Escape from the Police Game	3	Girl Cat (1-2) Game	1
Talking Cat Tom and Angela (1-2)	4	Deer Simulator	1
Car Parking (1-3)	1	Robot Building Game	1
Roblox	7	Racing Games	1
Barbie Games	3	Tofaş Game	2
My Little Ponny	1	Chick Game	1
Snake Game	2	House game	1
Minecraft	3	Nail Painting Game	1
Elsa Game	1	Baby Games	1
Gun games	2	War games	1
Zombie Games	1	Match Game	1
Hero Games	1	Running Game	1
Car games	6	Box Game	1
GTA 5	1	Sniper Games	1
pubg	1	Cooking Games	1
Red Ball Game	1	Police Games	1
Track Racing Game	1	Rainbow Game	1
Popit Phone Design Game	1	Hairdresser Game	1
Makeup Game	1	Browl Stars	1
Color Changing Games	1	Kazim Master Game	1
Dress Up Games	5	Soldier Game	1
Coloring Game	2	Drink Making Game	1
Cartoon Game	1	Pizza Game	1
Fog Game	1	Engine Games	1
Pk XD Game	1	Silent Castle	1
Game of Catch	1	Fighting Game	1
Maze Game	1	Lego War Game	1
Clothes Sewing Game	2	Scary Games	1

Table 5 illustrated that children mostly play Roblox, car and dress-up games. After these games, it is seen that children prefer escaping from the police, Talking Cat Tom, and Angela (1-2) and Minecraft.

What do children like the most in the digital games they play?

Upon scrutinizing the children's answers regarding their favored aspects in the games they participated in, it was evident that there was a diversity in preferences. Some children stated that they liked to perform actions involving daily life practices in the games they played. One of the children (C18) said, *"I like giving the girl cat*

a bath, feeding her, brushing her teeth, dressing her, applying make-up and doing her hair. Tom is a bit of a boy, but I dress him up, put him to bed or give him a bath.", (C26) said, "*I like doing the hair in the hairdresser game*." and (C16) said, "*I like dressing the girls in the dress-up game with the things I want*." In addition to these, a few of the children stated that they like winning, beating the opponent and passing obstacles. (C21) "*There are obstacles and I like passing them*.", (C25) "*I like beating the opponent in match games*." and (C34) "*I like winning the most*." In the interviews, it was also determined that children liked actions involving speeding and running away in games. (C8) said, "*I like driving a car, I like to get in the car and run away from the police in GTA 5*." (C20) said, "*I like racing and jumping off the ramp in the Tofaş game*." Strikingly, three children stated that they liked violent acts in games. (C6) "*I like the gun game in Roblox, (I like the Emergency Response game) I like to shoot with a gun there*.", (C27) "*I like to build houses with blocks and explode things in Minecraft.”*, and (C28) "*I like to escape from Kazım usta and throw things at his head when I enter his house while chasing Kazım usta*."

Do children watch cartoons?

Analysis of the children's answers in the study revealed that all of them reported watching cartoons.

Which cartoons do children watch?

Table 6. *Cartoon Watched by Children*

Cartoons	*f*	Cartoons	*f*
Masha and the Bear	7	Nils and the Flying Goose	1
Smurfs	2	Niloya	1
Spider man	2	Rafadan Crew	3
Barbie	2	Trt Diyanet Children	1
My Little Ponny	2	Peppa Pig and George	3
Hot Wheels	1	Little Bus Tato	1
Lightning Mcqueen	2	Wolfoo	1
Unicorn	1	Fireman Sam	1
pajama masks	3	Edmond and Lucy	1
Miraculous Ladybug and Cat Noir	1	Princess Cartoon	1
The Little Mermaid	1	Sponge Bop	2
Elsa	2	Red Panda	1
Tractor Movies	1	King Şakir and Elephant Necati	1
Gun Movies	1	Mickey Mouse	1
Gabby	1	Panda	1
Kukuli	1	Car Movie	1
Pepe	1	Crushing cars	1
Brave Princess Ivandoe	1	Cardboard Square	1
Bugs Bunny Cute Hero Stories	1	Brave Heroes	1
Tom and Jerry	2	Oscar in the Deserts	1
Leo: Hürkuş 3 Anka Island	1	Goat Cartoon	1
İbi	2	TRT Children's Cartoons	2
Flower Girl	1	Nasreddin Hodja Time Traveler	1
Trt Children's Cartoons	1	Animal helpers	1
Eagle	1	Very nice moves	1
Muppet Cartoon	1	Nastya	2
Teen Titans Go	1	Come to the sound child	1
Bee Yeast	1	Skibidi toilet	1
Heidi	3		

The data from Table 6 revealed that children mostly watch Masha and the Bear cartoon, followed by Pijamaskeliler, Heidi, Rafadan Crew and Peppa Pig and George.

What do children like the most in the cartoons they watch?

The examination of children's responses concerning their favorite aspects of the cartoons they watched indicated a diversity of preferences. Notably, seven children singled out the element of laughter as the most appealing feature in cartoons. (C13) used the expression "*I like Masha's goofiness*.", (C27) said "*I like Jerry's jokes*." and (C17) said "*I like Rafadan crew's funny antics*." It was observed that five of the children liked the characters fighting against the bad guys and saving people and animals the most in the cartoons they watched. (C19)

said, "*I like when Fireman Sam saves people*.", (C14) said, "*I like when Teen Titans Go saves people*." and (C26) said, "*I like when animal helpers help animals*." Among the children who stated that they liked the characters running, singing, and flying in cartoons, (C3) said, "*I like Ponnys because they have wings and can fly*."

Do children watch YouTube videos?

Table 7. *Children Watching YouTube*

YouTube	Number of Children	%
Yes	30	88,20
No	4	11,80

Based on the findings in Table 7, most of the children watch YouTube videos. Only four children stated that they did not watch YouTube.

Which YouTube videos do children watch?

Table 8. *YouTube Videos Watched by Children*

YouTube Videos	*f*		*f*
Nastya	2	DS Videos	2
Lina	2	They Make a Man Without a Body in the Videos	1
Car Parking Videos	1	Cat and Dog Videos	1
Fun Videos	1	Sesegel Kids Videos	1
Snake Game Videos	1	Painting Videos	1
My Little Ponny Videos	1	I'm Watching Cartoons	2
Masha and the Bear	4	Videos of Children Escaped	1
Minecraft Videos	3	Dad in the Game Channel Videos	1
Spiderman Videos	1	Videos of Scary Things Happening	1
Barbie Videos	2	Match Videos	1
Strawberry Shortcake Videos	1	Ladybug And Cat Noir Videos	1
Police and Robber Videos	1	Not Laughing Challenge	1
Cam Guys' Battle (Skibidi Toilet) Videos	2	Videos Without Swearing	1
Roblox Videos	2	Buggs Bunny	1
Niloya Videos	2	Aslan Hürkuş 3 Anka Island,	1
Red Ball Videos	1	World of Heroes	1
Kazim Usta Videos	2	Scary Videos of Cars Exploding	1
Fatih Selim	1	GTA 5 Videos	1
Fairy Tale Videos	1	Fake Game Videos	1
Videos of Pouring Beads into a Toy Truck	1	Enes Batur Videos	1
Elif's Dreams Videos	2	Xo Alperen	1

The data from Table 8 revealed that children mostly watch videos of the cartoon film Masha and the Bear. These videos were followed by game videos such as Minecraft and Roblox. Among the videos preferred by children, there were videos of child Youtubers such as Nastya, Lina, Fatih Selim and Sesegel child. It was also determined that children watched videos containing violence and horror elements such as camera men's war (skibidi toilet) videos and videos with scary things.

What do children like the most in the YouTube videos they watch?

An analysis of the children's responses regarding their preferred content in YouTube videos revealed that six of them highlighted game videos as their favorite. These children expressed a keen interest in watching gameplay and derived great pleasure from observing others participate in different gaming activities. One of the children (C 10) said, "*I like that the levels in red ball videos are passed and not dropped*." (C 33) said, "*I like watching GTA 5 videos*.". (C 6) said, "*Camera men give the world to people, Skibidis want to take the world, I like them to fight*." and (C 4) mentioned, "*I like them digging the ground in Minecraft videos*." Three of the children stated that they liked the various activities that child Youtubers do in their videos. C 30 stated that they did various activities with Nastya's family in the videos she watched and that she liked them going out to eat as a family the most. (C 23) expressed "*I like Lina making slime*." and (C 11) pointed out "*I like Fatih Selim playing with toys*." Three of the children stated that they liked that the YouTube videos they watched contained funny elements. (C 28)

"*Rattle cats sing on two legs, and it is very funny.*" and (C 27) "*They fall because they are not paying attention and I like them to fall*."

Do children watch TikTok videos?

Table 9. *Children Watching Tiktok*

TikTok	Number of People	%
Yes	13	38,20
No	21	61,80

As seen from Table 9, majority of children do not watch TikTok. While children stated that they do not watch TikTok, they also expressed that the application is harmful. One of the children (C1) used the expression "*No, I don't watch it, because they are harmful*". Similarly, (C4) said, "*No, because my mum said it was harmful*." With his statement, it is seen that he has the knowledge that the application may be inappropriate for children. However, a certain number of the children stated that they had watched TikTok before but no longer watch it. For example, C6 mentioned *"I used to watch it before, but now I don't watch it*." Similarly, C15 confirmed "*I used to watch it before, but then I deleted it from my tablet*." One of the children (C19*)* said*" I had installed it on my tablet, but then I deleted it because I couldn't open it*", while another one (C3) said, "*My mum doesn't allow it, but I still have it on my phone*". Three of the children stated that they watched TikTok videos through family members. One child explicitly mentioned (C8) *"No, but I watched it on my sister's phone*.", while another child affirmed (C33) "*Yes, I watched it on my brother's phone*."

Which TikTok videos do children watch?

The examination of children's answers revealed a notable disparity in the content they claimed to have viewed on TikTok. Notably, three children indicated watching movies and cartoons on the platform, indicating a lack of familiarity with TikTok among some children. (C14) "*Sometimes there are cartoons, sometimes they do something, they make a video of watering flowers*." and (C18) "*I like films*." It was observed that two of the children watched popular videos. For instance, (C23) "*Energy video, they were making cakes in energy videos*." and (C14) "*They throw the bottles from the stairs.*" Strikingly, one of the children stated that he watched TikTok videos secretly from her mother. When asked what was included in these videos, (C22) said, "*There is a person who prepares food for his wife and then she takes off her clothes.*"

What do children like the most in TikTok videos?

After meticulously analyzing the children's responses regarding their preferred aspects of the TikTok videos, it was discovered that there existed a diverse range of answers. (C32) used the expressions "*I like when people are funny*." and (C23) mentioned "*I like when they make slime*." Although three of the children stated that they watched TikTok videos, they answered "*I don't know*" when asked what they liked the most. However, one of the children (C17), who was thought to have no knowledge about the TikTok application, answered "*Nasrettin Hodja's movie*."

4. Discussion and Conclusion

In this study, it was aimed to determine what preschool children do with technology. Data has been collected on children's ownership of technological devices, including the devices they have access to at home. The study also investigated their habits of playing digital games, including the specific games they play and their preferences within those games. Additionally, the study examined their habits of watching cartoons, YouTube, and TikTok, including the content they watch and their favorite channels.

Upon completion of an analysis regarding the ownership of technological devices among the children involved in the study, it was determined that most of them owned a device. Further examination revealed that tablets were the most owned device, followed by mobile phones. Similar to this finding, Kanak and Özyazıcı (2018) determined that children's device ownership rates increased significantly from 60-72 months. Papadakis et al. (2019) determined that children mostly prefer tablets in their research. Radesky et al. (2020) determined in their study that children mostly own tablets, followed by mobile phones. Darga (2021) determined that children mostly use phones and tablets. It is thought that children's ownership of devices such as tablets, phones, etc. may be due to the socioeconomic differences of the region where the research was conducted or

the fact that these devices are now available to a wider audience. These devices may also be preferred because they are easily portable, ergonomic, and affordable.

The current study revealed that nearly all the children involved in the research engaged in playing digital games on tablets, smartphones, or computers. Similar to this finding, Üstündağ (2019) determined in his study that the majority of children between the ages of 4-6 play digital games. An examination of the games played by children revealed a diverse range of 58 digital games. Notably, children exhibited a higher preference for Roblox, dress-up, and car games. Moreover, an analysis based on gender indicated that girls were more inclined towards Talking Tom and dress-up games, while boys demonstrated a greater affinity for car and Roblox games. Ürün and Atıcı (2022) determined that children played 18 different digital games. In their study, it was also observed that all the girls played Elsa and coloring games, while all the boys played car racing and PubG. It is thought that gender, age, and interests may be effective in the games preferred by children. The study suggested that factors such as gender, age, and interests may influence children's game preferences (Üstündağ, 2019). The results of current study support these findings.

When the most shocking things that the children participating in the study liked the most in the games they played were analyzed, the answers showed diversity. Some of the children stated that they liked performing actions involving daily life practices such as dressing, feeding, make-up, care, etc. the most in the games they played. In the study conducted by Ürün and Atıcı (2022), it was observed that children's answers about why they play digital games included the themes of entertainment, love, life/daily life. In the study, it was stated that this situation supported their children to see the game as an entertainment environment.

Digital games are based on challenge, fantasy, and curiosity (Hussain et al., 2003). Based on the current study, a variety of children stated their preference for overcoming their opponents, securing victory in the match, and successfully tackling the obstacles. For this reason, it is thought that children like the elements of winning and overcoming obstacles in the face of challenges. Lieberman et al. (2009) argue that digital games offer a distinctive combination of media experiences that set them apart from other screen-based games. These experiences are believed to be effective due to various factors such as goal orientations, interaction, feedback, rewards, control over action, identification with the character played, participation in the story, and interaction with other characters. This unique blend of features contributes to the overall appeal and effectiveness of digital games in engaging players. The pre-school period can become a cool factor for children as these skills and achievements are socially recognized by peers and family.

The findings indicated that all the children who participated in the study were viewers of cartoons. The study findings of Yazıcı et al. (2019) showed that a large proportion of 60-72-month-old children watched cartoons. The findings of this study regarding the children's cartoon watching status support the results in the literature. An examination of children's cartoon preferences revealed that the most popular choice among them is Masha and the Bear. Subsequently, Pijamaskeliler, Heidi, Rafadan Crew, and Peppa Pig and George also garnered significant viewership. These animated series are primarily broadcasted on TRT Kid, Cartoon Network, and YouTube. Kırlıoğlu and Ünlü (2023) investigated the content of violence in cartoons broadcast on TRT Kid and Cartoon Network channels. They noted that Cartoon Network channel contains more elements of violence compared to TRT Kid channel. Violence elements were found in all the cartoons such as Masha and the Bear, King Şakir and Adventure Time broadcasted on Cartoon Network channel. On the other hand, Çin et al. (2023) found no physical bullying in Rafadan Crew cartoon, but they determined that there were verbal bullying behaviors such as teasing, scolding, humiliating, commenting on physical or gender characteristics. Mahmood et al. (2020) determined that the depiction of violence in cartoons by the cartoon hero was responsible for the increase in violence and anti-social behaviors in children. The portrayal of violence, destruction, and harm by heroes has been proposed to significantly influence the minds of children, potentially leading to the development of a personality that normalizes anti-social behaviors. Krish (2006) revealed that especially action cartoons can develop violent behaviors in children. Children who cannot understand the difference between basic reality and fantasy can learn negative behaviors such as tolerance, helpfulness, love, and respect.

Upon analyzing children’s preferences revealed that most of them, specifically seven children, favored the inclusion of laughter element in the cartoons they viewed. Additionally, the children mentioned their enjoyment of characters fighting with the bad guys, saving people and animals, running, singing, and flying. The reasons behind children’s attractions to cartoons can be attributed to the fact that they are funny,

entertaining and that they admire the heroes. Children who can identify themselves with the heroes in cartoons, heroes saving the world and overcoming obstacles affect children (Yaşar Ekici, 2015). Coşkun and Önem (2024), in their study on children's tendency to identify with cartoon characters, found that the favorite cartoon characters of children living in different socio-economic regions varied. They found that children liked characters with superhuman characteristics and positive behaviors more. In another study, Akça and Çilekçiler (2019) found that girls defined the character of Elsa as a princess with a beautiful appearance, extraordinary abilities, and a beautiful voice, and that they wanted to be Elsa for her appearance and ice-making ability. While explaining the characters they would like to be, the children used expressions such as I would like to have magical powers, I would like to fly, and I would like to throw a net.

YouTube offers an endless variety of content for children. While some of this content is age-appropriate, there is also an alarming amount of inappropriate material (Papadamou et al., 2020). The findings revealed that almost all the children participating in the study watched YouTube. The data indicated that the children collectively watched 44 unique YouTube videos. The data revealed the children watched Masha and the Bear cartoon videos more, followed by game videos such as Minecraft and Roblox. When the YouTube content preferred by children was analyzed in the Ofcom (2022) report, it was observed that children mostly preferred joke and challenge, funny, music videos, digital game teaching and videos of other people playing games, and animation and cartoon videos. Toksoy (2021) determined that children mostly use YouTube platform to watch videos, cartoons, etc. and that children from low socioeconomic environments mostly watch videos of games and YouTube publishers. Among the videos preferred by children in the study were videos of Child YouTubers such as Nastya, Lina, Fatih Selim and Sesegel child. The findings indicated?? YouTuber channels for children have a high rate of followers. All the channels that produce content for children in Türkiye; Princess Lina Tv has 3.91 million subscribers, Fatih Selim Tube has 3.38 million subscribers and Sesegel Kids channel has 3.77 million subscribers. YouTube’s inappropriate content has become a risk factor for children. YouTube, which occupies an important period especially in the lives of young children, has become a risk factor for children due to its inappropriate content (Boğa & Sağlam, 2021). Sapsağlam (2023) aimed to determine the quality of visual and auditory messages in YouTubers' videos for children and found that the videos contained negative verbal expressions and visual content such as violence, aggression, slang, harmful habits. The study also found that children watched videos containing violence and horror elements, such as camera men's war (skibidi toilet) videos and videos with scary things. Zhang et al. (2019) conducted a study with 3000 Chinese children to examine whether violent cartoons lead to an increase in aggressive thoughts and behaviors among children. The findings of the study revealed that short-term exposure to a violent cartoon triggered more aggressive thoughts and aggressive behaviors than a non-violent cartoon.

Upon analyzing the preferred content of YouTube videos among the children involved in the research, it was found that they expressed a fondness for watching gameplay videos and highlighted the presence of humorous elements in these videos. In his study, Toksoy (2021) found that children's behavior and speech patterns changed significantly after watching YouTube videos and that children spoke with more emphasis and changed their voices while speaking. YouTube is a platform for sharing movies and videos owned by Google. It facilitates the creation of a channel, the hosting of videos in a single place belonging to the channel, and access through subscriptions (Lira et al., 2019). YouTube, which initially featured professional and long-term content, started to offer short, often funny, and easy-to-access videos to users (Kılıç & Kaya, 2021). In many countries, the age for opening a social media account is set at 13. When social media platforms were examined, children have access to these platforms even though they are below the specified age limit (Çubuk & Erol, 2022). YouTube, which is increasing in popularity day by day, contains attractive content for everyone young and old alike (Boğa & Sağlam, 2021). Most of the YouTube channels with the most subscribers target young children as viewers. Hundreds of channels for young children contain offensive content as well as well-produced and educational videos. YouTube's algorithm-suggestion system can recommend inappropriate content to children because it imitates appropriate content or is based on appropriate content (Papadamou et al., 2020). In the study, children's favorite things in YouTube videos included various activities that Youtubers do in their videos. The monetization feature of the YouTube platform has brought along the concept of child Youtuber over time. The channels of Child Youtubers, which are still very popular today, are managed by their parents. On these channels, which aim to attract children, the focus of the videos is on the activities of the Child Youtubers. Looking at these ChildYoutubers’ channels, it is seen that videos of children at home, shopping, on the street, etc. are shot (Demir & Kargın, 2020).

TikTok, one of the most popular applications among social media platforms, allows creating videos that usually last 15-60 seconds and sharing them with the wider TikTok community (Li et al., 2021). What makes Tiktok different from other social media apps is having variety of background music, challenges, dance videos and funny videos, and requires less time to create videos. This application, which has gained popularity all over the world, brings with it several dangers for young children along with a myriad of content. Özel and Asarkaya (2023) examined the suitability of the content on the TikTok platform for preschool children. The findings of the current study revealed that the videos contain incorrect style and language, elements of physical, verbal, and psychological violence, content that is not suitable for children's age and developmental characteristics, topics, slang, sexuality, sexism. Özel and Asarkaya (2023) also found that values such as love, happiness and tolerance were included in the videos, but these values did not cover the videos in general. In this study, most of the children who participated in the study did not watch TikTok. While children stated that they did not watch TikTok, they also considered the application as harmful. A certain number of children who watched TikTok stated that they had watched TikTok before but not now, and a few of the children who watched TikTok stated that they watched TikTok through their family members. Strikingly, one of the children stated that he watched Tiktok secretly from his mother. The same participant was confronted with inappropriate images in the videos he watched.

Upon analysis of the preferred TikTok videos by the participating children, they exhibited preferences for humorous and slime videos. In addition, the fact that the answers included watching cartoons and animated movies led to the conclusion that some children did not have any knowledge about the TikTok application. A few children stated that they did not know what their favorite thing was. The shorter length of TikTok videos compared to the YouTube platform, parents' more reaction to the TikTok application, or the fact that TikTok content does not attract children's interest too much may lead to these answers. Anggraeni and Robandi (2023) determined that the most popular TikTok content among children was comedy, and the children who enjoyed watching TikTok videos may face the danger of being exposed to content that was not suitable for their age group.

As a result of this study, most children owned a device and that this device was mostly a tablet, followed by a phone. Almost all the children played digital games and the games varied. Roblox, dress-up and car games were more preferred by children. In the games they played, children stated that they mostly liked to perform actions involving daily life practices such as dressing, feeding, make-up, care, etc., defeating the opponent, winning the match, and passing the obstacles. All the children participating in the study watched cartoons. It was determined that children mostly watched Masha and the Bear cartoon, followed by Pijamaskeliler, Heidi, Rafadan Crew and Peppa Pig and George. Children stated that they liked those cartoons had elements of laughter, that heroes fought against villains, saved people and animals, ran, sang, and flew. It was determined that almost all the children watched YouTube. The YouTube videos watched by the children varied. Children's preferred videos included videos of child Youtubers such as Nastya, Lina, Fatih Selim and Sesegel child, and videos with violence and horror elements such as camera men's war (skibidi toilet) videos and videos with scary things. The children stated that they liked watching game videos and gameplay in YouTube videos and that they liked when their videos contained funny elements. It was observed that most of the children participating in the study did not watch TikTok. While children stated that they did not watch TikTok, they added that the application was harmful. The fact that the answers included watching cartoons and animated movies among the answers led to the conclusion that children did not have any knowledge about the TikTok application. In conclusion the study found that children are exposed to both appropriate and inappropriate content and that most of them use technological devices and popular apps.

5. Recommendations

- Parents should be informed about safety in children's use of social media and technology by experts on these issues.
- Guidelines, books, seminars, etc. on children's use of technology can be prepared for parents.
- Parents can be informed about parental lock and similar applications.
- More comprehensive studies can be conducted on children's screen preferences.
- Quantitative studies can be conducted to examine children's preferences in terms of various demographic variables.
- In-service teachers should be educated about effective technology usage for children.

- Pre-service teachers should be prepared to teach both children and parents about how technology should be used.

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