



Examination of Preschool Children's Technology Use in Terms of Parent and Child Views

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ABSTRACT : In research, it was aimed to examine the technology use of preschool children in terms of parent and child views. The explanatory sequential design model, one of the mixed method designs, was used. The sample consists of 400 parents with pre-school children and 120 children attending pre-school education. Data were collected with the "General Information Form", "Parental Opinions Scale about the Technology Use of Preschool Children", "Child Interview Form". "Kruskal Wallis H test", "Mann Whitney U test" and content analysis were used. According to the results; Children use technological devices for "personal", "family", "educational system" and "social" reasons; "Physical pains", "restriction of social life", "harmful content", "inactivity", "thoughts of wasting time", "radiation", "insomnia", "aspire to virtual character" It was determined that they found it harmful because of the reasons. They use them with positive emotions; their use is hindered/limited by "mother", "father", "older-little sibling", "pet", "external factors"; It was determined that they participated in the time limitation due to "body health", "brain/mental health", "trust in parents" and they thought that these tools would negatively affect their friendship relations. It has been determined that there are similarities in the frequency of use of technological tools by parents and children.

Keywords: Child, parent, preschool technology,

INTRODUCTION

Since the first ages, with the existence of human beings, the sense of curiosity has brought the desire to explore and started the efforts to communicate with people. First, with the discovery of fire, communication efforts made with pictures drawn on the cave walls showed a transition towards technology tools over time (Özyurt and Badur, 2020). Advances in science and technology have brought about a rapid change in our lives. In our age, which is also called the "information age" and "digital age", the use of technology is heavily involved in our social life. It is aimed to raise individuals with 21st century skills (creativity, critical thinking, communication, cooperation) (Zehir et al., 2019).

Although there are many definitions of technology in the literature, it is defined by Turkish Language Society (2021) as "application knowledge, application science, which covers the construction methods related to an industry branch, the tools, equipment and tools used and the way they are used". The rapid realization of technological advances, especially since the 18th century, has led to the spread of technology in all areas of life such as economy, health, education, entertainment and communication (Akbiyık and Karadüz, 2014). According to 2019 Internet World Stats data, there are 69.1 million internet users in Turkey. It is the third country with the highest internet users in Europe after Russia (116.3 million) and Germany (79.1 million). According to the Internet World Stats data of 2010, 30% of people around the world use the Internet. In July 2020 data, this rate increased to 60% (We are Social 2020a). Likewise, according to the 2010 Turkish Statistical Institute internet usage data, 38% of Turkey is internet users. In January 2020, this rate increased to 74%. The rate of internet access from homes has increased from 7% to 88.3% in the period from 2004 to 2019 (Turkish Statistical Institute, 2020). The mobile phone usage rate of people in Turkey is 92%. In addition, the average time they spend on the internet daily is 7.5 hours (We are Social, 2020b). During the Covid-19 pandemic, there is an increase in the rate and duration of internet and technology use due to working from home and distance education activities (Altun, 2021).

These technological advances in today's information age have become important in the lives of children who are introduced to technological tools from an early age (İnci and Kandır, 2017; Demir Öztürk and İnci, 2020). Today, internet age children, who are defined as "digital native" or "Z generation", and who are in touch with technology from the moment they are born, live in a period when technology is experiencing digital transformation, everything accelerates and access is very easy with the internet environment. This process, in which technology advances very rapidly, affects children from their daily lives to their educational experiences and games. Because they live in a digital age, internet technologies and technological tools are a normal part of daily life for this generation (Küçüköğlü, 2019). In the preschool period, where learning is the fastest, children are curious and willing to try (Demir Öztürk and İnci, 2020). The frequent use of technological tools, especially by the close circle of children, in the daily life process affects and shapes the lives of children by presenting a model for technology (Blum and Parette, 2015). As a result of this situation, it is very important that children receive a good education

on the use of technology, especially in the preschool period, which is considered the basis of education (VeziroğluÇelik et al., 2018).

Like many tools used in the learning processes of preschool children, the use of technology is an effective tool that provides rich learning environments that support children's learning, enabling them to realize more effective, meaningful and permanent learning (Yanpar, 2020; McManis and Gunnewig, 2012; Epstein, 2013; IşıkoğluErdoğan, 2017). The research conducted by Yelland and Masters (2007) shows that the use of technology improves children's spontaneous problem-solving skills and supports their language, literacy, and social-emotional learning skills. For this reason, adults should guide and support children when they need them so that they can use technological tools effectively and correctly, especially in the preschool period, which is of critical importance for the development of children (NAEYC, 2012; Işıkoğlu Erdoğan, 2017). While the correct and effective use of technology in the preschool period provides many benefits to children, its long-term and unsupervised use can negatively affect the developmental areas of children. Children who spend time with technological devices for a long time have learning difficulties, visual and postural disorders, and the incidence of technology addiction increases in the coming years (Aydın, 2016). In addition, attention deficit, obesity, aggression, being asocial, retardation in language and physical skills can be seen (Nunez Smith et al., 2008). Considering all these issues, it is seen that the effective use of technology by preschool children is very important in terms of children's developmental areas. From this point of view, in this study, it is aimed to examine the effects of preschool children's effective use of technological tools and technology use in terms of children's development areas and to examine the roles of families in children's use of technology.

MEDHODOLOGY

2.1. Model of the Research

In this research, which will be carried out to examine the views of parents and children regarding the technology use of preschool children, the explanatory sequential design model, which is one of the mixed method designs in which quantitative and qualitative research methods are applied together, was used. Mixed methods research is a research approach that “collects and integrates quantitative and qualitative data to understand the research problem and draws conclusions by taking advantage of this integration” (Creswell, 2017). Due to the nature of the explanatory sequential design, a quantitative research approach was adopted in the first stage and a qualitative research approach in the second stage.

2.2. Study Group of the Research

Due to the nature of the explanatory sequential design, first the sample was determined to collect the quantitative data, and then the study group was determined to collect the qualitative data. The study group of the quantitative dimension in the research consists of 400 parents who have children in the pre-school period, who are educated in 2 official and independent kindergartens and 1 kindergarten affiliated to the primary school in the Tarsus district of Mersin province in the 2021-2022 academic year. The study group of the quantitative part of the research consists of parents who have children in the pre-school period selected by “easily accessible sampling/convenient sampling”. The qualitative part of the research consists of 120 children, who are educated in 2 official and independent kindergartens affiliated to the Provincial Directorate of National Education and 1 kindergarten affiliated to the primary school, with normal development and using technological tools, in the Tarsus district of Mersin province, which was selected by “purposive sampling”.

2.3. Data Collection Tools

In order to collect the quantitative data of the study, the "Parental Opinions Scale about the Technology Use of Preschool Children" developed by Kılınç (2015) was used to examine parents' views on technology use of preschool children. In order to collect the qualitative data of the research, the “Child Interview Form” developed by the researchers was used to examine the technology use of preschool children.

“Parental views on technology use of preschool children scale” was developed by Kılınç (2015). The scale consists of 31 items. It is a 5-point Likert-type scale consisting of two parts: “Parental views on technology use of preschool children” and “Preschool age children and their families' frequency of use of technological tools”.The first part of the scale consists of six sub-dimensions. Items 17, 21, 22, 23 and 24 include the sub-dimension of “Family Guidance in Using Technology”; Items 4, 5, 7, 8, 14 and 25 include the sub-dimension of “Benefits of Technology”; Items 9, 11, 19 include the sub-dimension of “Using Technology Areas”; Items 3, 15, 16, 20; Items 1, 10, 12, 13 constitute the sub-dimension of “Abilities to Use Technology” and items 2, 6, 18 constitute the sub-dimension of “Suggestions”. Parental views of the scale are listed from left to right as “1-Strongly Disagree”, “2-Disagree”, “3-No Opinion”, “4-Agree”, “5-Strongly Agree”. The 6 items in the second part of the scale, “the frequency of use of technological tools”, from left to right are “(1) Several times a day”, “(2) Once a day”, “(3) Several times a week”, “(4) Once a week” is in the form of “(5) Never”. The “scope validity” and “construct validity” of the scale developed by Kılınç (2015) were made. In order to ensure the reliability of the scale, Kılınç

(2015) conducted an “internal consistency analysis”. He calculated the calculated “Cronbach Alpha internal consistency coefficients” for the sub-dimensions and the whole scale as follows: “Internal consistency coefficient for the first sub-dimension .64”, “Internal consistency coefficient for the second sub-dimension .74”, “Internal consistency for the third sub-dimension” coefficient is .64”, “Internal consistency coefficient for the fourth sub-dimension is .67”, “Internal consistency coefficient for the fifth sub-dimension is .65” and “Internal consistency coefficient for the sixth dimension is .75”. He determined that the “Cronbach Alpha internal consistency coefficient” was .73 for the entire scale. Büyüköztürk (2020) states that a scale reliability coefficient of .70 and above is sufficient.

The “Child Interview Form” was developed by the researchers in order to collect the qualitative data of the research. In order to determine the views of preschool children on technology use, individual interviews were conducted with the children. The open-ended interview questions prepared by the researcher were formed on the basis of the sub-dimensions of the scale in order to provide parallelism to the scale containing the parents' views on the use of technology by the children. While creating the “Child Interview Form”, opinions were taken from an academician who is an expert in the field of preschool education and 3 preschool teachers with 10 years or more of professional seniority in order to ensure the validity of the content, and all necessary arrangements were made for the purpose. Before the application, the children were informed about the research and their confidence in the research was ensured. A pilot study was carried out with five children aged 60-72 months who continue to pre-school education, and it was observed that the children did not have any problems with the clarity of the questions. The fact that the questions in the research were clear and understandable contributed to the content validity. While collecting the data, the views of the children in the study group were included and the data was provided as detailed as possible. The fact that the data were detailed and presented directly contributed to the validity and reliability of the study. In this study, codes were given to each child (Ç1, Ç2, Ç3.....) during the analysis of the data.

Child Interview Form “Which technological device(s) do you use?”, “Why do you use technological devices?”, “Do you think a child who goes to preschool should use technological devices? Why?”, “What do you think are the benefits of using technological tools for you?”, “What do you think are the harms of using technological tools?”, “Do you have difficulty using technological tools? If you have difficulties, what are they?”, “How do you feel when using technological tools?”, “Is there a situation/event/person that prevents/limits you while using technological tools? If so, how does it make you feel?”, “What do you think about the time limit of your parents while using technological devices?”, “How does spending time with technological devices such as tablets, smartphones and television affect your friendships?” It consists of 10 questions.

2.4. Process

Before starting the application, the "Ethics Committee Approval" document from Mersin University Social and Human Sciences Ethics Committee and the application form to be able to conduct research in pre-school education institutions were filled in at ayse.meb.gov.tr and research permission was obtained from the Ministry of National Education. After all these permission and approval procedures were completed, parents and children were reached through pre-school education institutions and provided with the necessary information about the research, and it was informed that only the parents and children who volunteered to participate in the research would participate in the research. In the study, primarily quantitative data were collected in accordance with the explanatory sequential design.

Parents were informed about the purpose of the study; The “Parental Opinions Scale on the Use of Technology by Pre-School Children” was introduced. The measurement tools delivered to the parents were collected back about a week later. The application time of the scale is 25 minutes on average.

In the process of collecting qualitative data, first of all, school administrators and teachers were informed about the interview process, and permission was obtained from the preschool education institution where the children attended for the recording of the interview. In addition, necessary permissions were obtained from the parents of the children by using the parental consent form, and the research was carried out on a voluntary basis. Each child was interviewed individually. All of the interviews were conducted in empty classrooms or rooms of pre-school education institutions. During the interview, the researcher avoided asking leading questions. At the beginning of the interview, the researcher introduced himself, explained the purpose of the research, and promised that the participant's information and the interview would be kept confidential. The researcher collected the class lists with the information of the children from the teachers and determined the appropriate days and times for the application. Each interview lasted an average of 20 minutes. The children who were interviewed were given codes from Ç.1 to Ç.120, respectively. The interviews took approximately 3 months to complete.

2.5. Evaluation and analysis of data

SPSS 26 was used in the analysis of quantitative data. In order to reveal the general distribution of the data, the arithmetic mean, standard deviation and frequency distributions were examined. Scale forms were filled by 429 parents. The return rate is 93%. 29 out of 429 returned data were not included in the analysis because they contain a lot of missing information. The records obtained from the interviews conducted by the researchers were converted into written records. As a result of the interviews transcribed by the researchers, a 172-page interview note was formed. In the study, 167 children were interviewed, but since the answers given by the children during the interviews were not suitable for the purpose of the research, analyzes were carried out on the data obtained from 120 children. Descriptive analysis and content analysis were used in the analysis of the data obtained with the "Child Interview Form". "The basic process in content analysis is to gather similar data within the framework of certain concepts and themes and to interpret them in a way that the reader can understand" (Yıldırım and Şimşek, 2018).

In order to reflect the views of the interviewed participants in a striking way, direct quotations are frequently included. All data were reviewed in detail, and similar expressions were coded. After the coding, the themes to represent the codes were decided, and finally, after the codes and themes were organized in tables, the findings were defined. All the answers in the interview form were examined one by one and codes were created by bringing them together within the framework of themes. The coding made was discussed by the researchers and an academician, the differences of opinion were determined and the correct coding was decided. In this way, differentiating codes were arranged and the consistency of the codes was ensured. The encodings between the two encoders were compared and the reliability between the two encoders was calculated as 90.5%. The frequency values of the themes and codes obtained as a result of the data analysis are given in tables.

RESULTS

3.1. Quantitative Findings

In this section, the findings obtained from the analysis of the data collected from the parents through the "Parental Opinions Scale about the Technology Use of Preschool Children" are included.

Table 1 Arithmetic Mean and Standard Deviation by Sub-Dimensions of the Scale of Parental Views on Technology Use of Preschool Children

Sub-Dimensions	Min.	Max.	\bar{x}	Ss
Harms of Technology	1,0	5,0	4,00	,776
Family Guidance in Using Technology	1,0	5,0	3,69	,542
Suggestions	1,0	5,0	3,29	,600
Technology Using Skill	1,0	5,0	2,99	,649
Technology Usage Areas	1,0	5,0	2,93	1,009
Benefits of Technology	1,0	5,0	2,64	,743

According to Table 1, when the mean scores of the sub-dimensions of the parental opinions about technology use are examined; The highest (\bar{x} =4.00) sub-dimension of "Harms of Technology"; It is seen that the "Benefits of Technology" sub-dimension is the lowest (\bar{x} =2.64). Accordingly, it can be said that parents have the highest perception of "Harms of Technology" and the lowest level of perception of "Benefits of Technology".

Table 2 Arithmetic Mean and Standard Deviation of Items Related to the Sub-Dimensions of the Parental Views of the Preschool Children's Technology Use Scale

Family Guidance in Using Technology	\bar{x}	Ss
Item 23. I encourage my child to play with his sibling and friends instead of using technological devices.	4,283	,9798
Item 21. I carefully choose the computer programs that my child will use.	4,218	,9500
Item 17. I limit the time while making my child use technological devices.	4,205	,9825
Item 22. I ask my child questions about what he/she does while using the computer.	4,118	1,0056
Item 24. My child is completely free to choose or play games in technological devices.	1,615	,9268
Benefits of Technology		
Item 14. When appropriate programs are used, technological devices such as computers and tablets contribute to the linguistic development of children.	3,340	1,2158

Item 8. When educational programs are used, technological devices such as computers and tablets are more beneficial than books in pre-school education.	2,718	1,1752
Item 5. Children who are allowed to use technological devices are more creative	2,625	1,1034
Item 7. The use of technological tools increases my child's attention development.	2,440	1,1958
Item 4. Frequent use of technological tools enables children to know the world better.	2,435	1,1572
Item 25. My child reinforces many concepts learned in his daily life and education with computer games.	2,280	1,1938
Technology Usage Areas		
Item 19. My child's computer, tablet, etc. in learning numbers and numbers. I use technological tools	3,012	1,2987
Item 9. I use technological devices such as computers and tablets to teach my child sounds and words	2,940	1,2411
Item 11. Computer, tablet, etc. to teach my child shapes. I use technological tools such as	2,843	1,2536
Harms of Technology		
Item 20. Children's spending too much time with the computer causes the physical health of children to deteriorate.	4,265	,9961
Item. Frequent use of technological devices by preschool children weakens their relations with their friends.	4,043	1,2388
Item 15. The use of technological tools negatively affects the socialization of children.	3,990	1,1769
Item 16. Children who use technological devices excessively cannot express themselves easily.	3,720	1,1769
Technology Using Skill		
Item 10. My child can use smart phones easily.	3,510	1,0417
Item 13. My child is able to play games on the internet.	3,273	1,2458
Item 12. I allow my child to play with my phone.	3,060	1,2021
Item 1. My child has difficulty using technological tools.	2,122	1,0417
Suggestions		
Item 6. When used with a guide, technological tools are very useful for preschool children.	3,787	1,0607
Item 18. Preschool children should never use technological devices such as computers and tablets.	3,165	1,2636
Item 2. Technological tools such as computers and tablets should be used in the education of preschool children.	2,912	1,2384

When Table 2 is examined; In the "family guidance" sub-dimension of the parents, the highest expression "I encourage my child to play with his sibling and friends instead of technological tools" ($\bar{x}=4,283$), and the lowest expression "My child is completely free in choosing or playing the game on technological devices" ($\bar{x}=1,615$). their participation was determined. According to the table, it can be stated that parents direct their children to play with their siblings or friends instead of using technological devices all the time, they are careful when choosing the programs they will use, they limit their children's use of technology, and they are in contact with their children during the use of technological devices. It can be said that parents are against children's uncontrolled use of technological devices.

In the sub-dimension of "Benefits of technology", it is seen that the highest average score is "When appropriate programs are used, technological devices such as computers and tablets contribute to the linguistic development of children" ($\bar{x}=3,340$). As a result of this situation, it can be expressed in the common opinion of parents that the use of technological tools will contribute to the language development of children when appropriate programs are used.

In the sub-dimension of "Technology usage areas", respectively, "My child uses the computer, tablet, etc. in learning numbers and numbers. I use technological tools" ($\bar{x}=3,012$), "I use technological devices such as computers and tablets to teach my child sounds and words" ($\bar{x}=2,940$), "Computer, tablet, etc. to teach my child shapes. I use technological tools such as" ($\bar{x}=2,843$). Accordingly, it can be said that parents benefit from technological tools in teaching numbers, numbers, sounds, words and shapes to their preschool children.

In the sub-dimension of "The harms of technology", respectively, "Spending a lot of time with the computer causes the physical health of children to deteriorate" ($\bar{x}=4.265$), "The frequent use of technological devices by preschool children weakens their relations with their friends" ($\bar{x}=4.043$), "Technological The use of tools negatively affects children's socialization" ($\bar{x}=3.990$), "Children who use technological tools excessively cannot express themselves easily" ($\bar{x}=3.720$). According to this finding, it can be said that parents who have children in the preschool period have the belief that their children's use of technology may cause physical and social negativities in children.

The expressions they most agree with in the sub -dimension of "Technology use" are "My child can easily use smart phones" ($\bar{x}=3.510$), "My child can play games on the internet" ($\bar{x}=3.273$), "I allow my child to play games with my phone" ($\bar{x}=3.060$), while they agree less ($\bar{x}=2.122$) with the statement "My child has difficulty using technological devices". According to this finding, parents stated that their children can use smart phones, play games on the internet and allow their children to use their phones. In addition, parents stated that children did not have any difficulties in using their technological devices. The statements in the "Suggestions" sub-dimension, respectively, showed a high level of agreement with the item "Technological tools are very useful for preschool children when used with a guide" ($\bar{x}=3.787$), and "Preschool children should definitely not use technological devices such as computers and tablets" ($\bar{x}=3.165$), "Technological tools such as computers and tablets should be used in the education of preschool children" ($\bar{x}=2.912$). Accordingly, it can be stated that parents think that it is beneficial for preschool children to use technological devices with a guide, but that children should not use technological devices such as computers and tablets on their own.

Table 3 Parental Views of Preschool Children's Technology Use Scale Item Scores Regarding the Frequency of Technology Use

	Severaltimes a day		Once a day		Severaltimes a week		Once a week		Never	
	n	%	n	%	n	%	n	%	n	%
Frequency of Children's Computer Use	56	14,0	30	7,5	28	7,0	36	9,0	250	62,5
Frequency of Children's Tablet Use	84	21,0	51	12,8	38	9,5	38	9,5	189	47,3
Frequency of Children's Smartphone Use	159	39,8	98	24,5	86	21,5	34	8,5	23	5,8
Frequency of Parent' Computer Use	41	10,3	22	5,5	69	17,3	65	16,3	203	50,7
Frequency of Parent's Tablet Use	34	8,5	19	4,8	32	8,0	30	7,5	285	71,3
Frequency of Parent's Smartphone Use	214	53,5	70	17,5	23	5,8	16	4,0	77	19,3

In Table 3, it was determined that 62.5% (n=250) of the children never used a computer. When examining the frequency of tablet use of children; It is seen that 47.3% (n=189) never use tablets. It was determined that 39.8% (n=159) of the children used smartphones several times a day. When the data obtained from the frequency of computer use of the parents were evaluated, it was found that 50.7% (n=203) never used a computer. When the data obtained from the frequency of use of tablets by parents are evaluated; It is seen that 71.3% (n=285) never use tablets. It was determined that 53.5% (n=214) of the parents used a smartphone several times a day, and 19.3% (n=77) never used a smartphone.

3.2. Qualitative findings

In this section, the findings obtained from the analysis of the data collected from the children with the "Child Interview Form" are included.

Table 4 Technological Tools Used by Preschool Children

*Technological Tools Used by Children	f
Television	120
Smartphone	120
Tablet	66
Computer/Laptop	32

*Multiple Response

Table 4 shows that 120 children each use television and smart phones, 66 children use tablets, and 21 children use computers/laptops.

Table 5 Reasons for Preschool Children to Use Technological Tools

Theme	Codes	f
Personal Reasons	Desire to play	22
	Boring	10
	Desire to have fun	8
	Technology curiosity	5
	Request for information	4
	Listen to music	4
	Being alone/freedom	2
	Taking photos/videos	1
	<i>Total</i>	56
Familial reasons	Communication and communication	16
	Being a role model	8
	Lack of communication within the family	4
	Lack of love and interest	2
	<i>Total</i>	30
Reasons Based on the Education System	Knowledge/concept learning	16
	Educational site use	3
	Doing homework	2
	<i>Total</i>	21
Social Reasons	Role modeling of the close environment	6
	Communication and communication	4
	Pandemic	3
	<i>Total</i>	13
Grand total		120

In Table 5, four different themes were formed from the answers given by preschool children regarding the reasons for using technological devices. These themes were categorized as “Personal Reasons” (f=56), “Family Reasons” (f=30), “Educational System Reasons” (f=21) and “Social Reasons” (f=13). Under the theme of “Personal Reasons”, “Desire to play” (f=22), “Boring” (f=10), “Desire to have fun” (f=8), “Technology curiosity” (f=5), “Request for information” (f=4), “Desire to listen to music” (f=4), “Being alone/freedom” (f=2), “Taking photos/videos” (f=1) were coded. Under the theme of “Family Reasons”, “Communication and communication” (f=16), “Being a role model” (f=8), “Lack of communication within the family” (f=4), “Lack of love and interest” (f=2) were coded as Under the theme of “Reasons Based on the Education System”, coding was made as “Knowledge/concept learning” (f=16), “Educational site use” (f=3), “Doing homework” (f=2). Under the theme of “Social Causes”, coding was made as “Role modeling of the close environment” (f=6), “Communication and communication” (f=4), “Pandemic” (f=3).

Examples of the reasons for children's use of technology are as follows: Ç4: “I love playing games on the phone”. Ç9: “I get bored because no one plays games with me, then I play games on the phone”. Ç10: “... Because Minecraft is only available on the phone. I play it because it's fun”. Ç14: “I use my father's computer because I am very curious”. Ç17: “I am learning new information from the tablet”. Ç23: “Because I can open a song whenever I want”. Ç24: “I can spend time alone on the phone as I want”. Ç29: “Because we are going somewhere. So we can take pictures”. Ç1: “I call them when my parents are at work”. Ç8: “When my father comes home, he plays a match and I play with him”. Ç15: “Because no one plays with me at home”. Ç42: “Because nobody loves me”. Ç32: “I turn on the computer and learn something immediately”. Ç47: “Because my teacher wants us to watch things on EBA”. Ç48: “Because I do my homework using my tablet”. Ç76: “My friend A.....

is always playing on the phone”. Ç79: “I call my teacher when I am at home”. Ç115: “I cannot play with my friends because of the coronavirus”.

Table 6 Themes and Codes Regarding Preschool Children's Use of Technological Tools

Themes	Codes	f
Positive attitude	Playing games	14
	Watching cartoons	10
	Having fun	10
	Have knowledge	9
	Fastaccess to information	8
	Doing activities	7
	Watching videos	7
	Online education	6
	Growth thinking	4
	Continuousplayability/durability	3
	Taking pictures/videos	2
	Total	80
Negative attitude	Underage	9
	Bodilypain (eye, ear, neck, etc.)	7
	Thoughts of harm	6
	Adult anxiety about anger	5
	Bring sleep	4
	Distraction	3
	Social distancing	3
	Don'thold your toilet	1
	Total	38
I don'tknow		2
Grand total		120

Table 6 shows the answers given by preschool children regarding the reasons for using/not using technological devices. According to the table, three different themes were created from the answers given by the children. These themes were categorized as “Positive attitude” (f=80), “Negative attitude” (f=38), “I don't know” (f=2). Under the theme of “Positive attitude”, “Playing games” (f=14), “Watching cartoons” (f=10), “Having fun” (f=10), “Having knowledge” (f=9), “Fast access to information” (f=8), “Doing activities” (f=7), “Watching videos” (f=7), “Online education” (f=6), “Growth thinking” (f=4), “Continuous playability/durability” (f=3), “Taking photos/videos” (f=2) were coded. Under the theme of “negative attitude”, “Underage” (f=9), “Bodily pain (eye, ear, neck, etc.)” (f=7), “Thoughts of harming” (f=6), “Adult's anxiety about anger” (f=5), “Bring sleep” (f=4) “Distraction” (f=3), “Social distancing” (f=3), “Don't hold your toilet” (f=1).

Sample thoughts on whether or not children use technology are as follows: Ç7: “He should use it because he can play any game he wants”. Ç19: “We should use it because we watch cartoons on television”. Ç21: “We should use it, there are fun things on our tablet”. Ç30: “I should use it, I learn knowledge”. Ç32: “We should use it, when we are curious about something, we look quickly”. T77: “You should use it, teachers give homework”. Ç43: “I should use it, I open a video from the phone”. T11: “It should be used, it is necessary for online lessons”. Ç56: “We should use it, because we have grown”. Ç61: “It should be used, it does not get old when played”. Ç46: “You should use it, mothers can take pictures”. Ç120: “No, he should not use it, because we are small”. Ç3: “We shouldn't use it, our eyesight will deteriorate”. Ç16: “It should not be used, phones will harm us”. Ç81: “He should not use it, if our father sees it, he will get angry”. Ç13: “We shouldn't use it, we get sleepy”. Ç111: “It should not be used, children get distracted when they play a lot”. Ç33: “We shouldn't use it, we can't play with our friends”. Ç90: “It should not be used, it may slip under it”. Ç8: “I don't know”.

Table 7 Themes and Codes Regarding the Benefits of Technological Tools for Preschool Children

Themes	Codes	f
Useful	Playing games	23
	Having a fun time	21
	Educational content (activities, drawing, numbers, letters, language teaching)	18
	Communication (video call)	17
	Watching cartoons/videos	13

	Continuousaccess	9
	Getting information from interactive media	8
	Taking photo	4
	Latent learning	3
	Total	116
Not useful	Bodilypains (headache, eyepain)	4
Grand total		120

In Table 7, two different themes were formed from the answers given by preschool children regarding the benefits of technological tools. These themes were categorized as "Useful" (f=116), "Not useful" (f=4). Under the "Useful" theme, "Playing games" (f=23), "Having a fun time" (f=21), "Educational content (activities, drawing, numbers, letters, language teaching)" (f=18), "Communication (video call)" (f=17), "Watching cartoons/videos" (f=13), "Continuous access" (f=9), "Getting information from interactive media" (f=8), "Taking photos" (f= 4), "Latent learning" (f=3) coding was done. Under the theme of "not useful", "Bodily pains (headache, eye pain)" (f=4) was coded.

Examples of children's thoughts on the benefits of technology are as follows: Ç119: "I think it is very useful because we can play a lot of games". Ç78: "It is useful because I have a lot of fun while playing games on the phone". Ç5: "I draw pictures and paint using my tablet". Ç47: "We can video call our mother, father and loved ones". Ç100: "Children can watch cartoons". Ç8: "I think it is useful because we can use it whenever we want". Ç22: "When we want to see Atatürk, we can look at his pictures on the internet". Ç14: "It allows us to take pictures". Ç6: "Sometimes it teaches us something without realizing it, we learned it once we saw it". Ç37: "I don't think it's useful, it hurts our eyes".

Table 8 Themes and Codes Regarding the Harms of Technological Tools for Preschool Children

Themes	Codes	f
Harmful	Physicalpains (eyedeterioration, head, neckpain, handnumbness)	29
	Restriction of social life	20
	Feelingtired	16
	Harmful content (online risk)	16
	Inactivity	12
	Time wasting thought	8
	Radiation	7
	Insomnia	5
	Concern about not being able to go out	3
	Embrace the virtual character	2
	Total	118
Not harmful		1
I don'tknow		1
Grand total		120

Table 8 shows the responses of preschool children about the harms of technological tools. According to the table, three different themes were created from the answers given by the children. These themes were categorized as "Harmful" (f=118), "Not harmful" (f=1), "I don't know" (f=1). Under the "harmful" theme, "Physical pain (eye deterioration, head, neck pain, hand numbness)" (f=29), "restriction of social life" (f=20), "Feeling tired" (f=16), "Harmful" content (online risk)" (f=16), "Inactivity" (f=12), "Time wasting thought" (f=8), "Radiation" (f=7), "Insomnia" (f=5), "Concern about not being able to go out" (f=3), "Embrace the virtual character" (f=2) were coded.

Examples of children's thoughts on the harms of technology are as follows: Ç91: "It is harmful because our hands go numb while holding phones". Ç9: "We cannot go to our friends if we watch too many cartoons". Ç54: "I feel tired when I look at the computer". Ç63: "While playing games or watching something on the internet, we come across harmful things". Ç14: "We can't move because we can't get up, and this will hurt us". Ç116: "If we play games on the phone, we waste our time". T41: "Technological instruments give off radiation". Ç43: "When I open a game on my phone, I lose my sleep". Ç26: "When I watch cartoons, it's almost evening, I'm late for the park". Ç37: "Some kids do things like spider-man, but it's not real. A person dressed in clothes, little children can believe him". Ç101: "I don't think it's harmful, it's very fun".

Table 9 Themes and Codes Regarding Preschool Children's Difficulty Using Technological Tools

Themes	Codes	f
The unforced child	Think it's easy	60
	Think of growing up	12
	Total	72
The forced child	Finding a password	11
	End of charge	10
	Illegality	9
	Internet access problem (freezing)	7
	Not perceiving the game contents	5
	Can't find anyone to ask about the content	4
	Total	46
I don't know		2
Grand total		120

In Table 9, three different themes were created for the difficulties of preschool children while using technological tools. These themes were categorized as “The unforced child” (f=72), “The forced child” (f=46), “I don't know” (f=2). Under the theme of “The unforced child”, coding was done as “Think it's easy” (f=60), “Think of growing up” (f=12). Under the “The forced child” theme, “Finding a password” (f=11), “End of charge” (f=10), “Illegality” (f=9), “Internet access problem (freezing)” (f=7), “Not perceiving the game contents” (f=5), “Can't find anyone to ask about the content” (f=4) were coded. Examples of children's thoughts on whether or not they have difficulty using technology are as follows: Ç117: “I am not forced, because it is very easy”. Ç26: “No, I don't have any difficulties, I can open the games immediately”. Ç25: “I can use it because I have grown up, it is not difficult at all”. Ç54: “My mother's phone has a password, I can only open it if she answers it”. Ç81: “My father always changes the password of our computer, so that we do not play without permission”. Ç10: “Sometimes, when we are watching something, we run out of charge, then we have difficulty”. Ç12: “For example, I can't read the rules while downloading a new game, then I may have difficulty”. Ç33: “While playing my game, the game freezes, then I start over, it becomes difficult”. Ç61: “Sometimes I don't understand how to play when I download a new game”. Ç6: “If we use it alone, we can't ask anyone when something is on our mind, we will have difficulty then”.

Table 10 Themes and Codes Regarding the Emotions of Preschool Children While Using Technological Tools

Themes	Codes	f
Positive Emotions	Happiness, joy	18
	Fun	17
	Excitement	15
	Reality	13
	Bravery	9
	Desire	8
	Comfort	4
	Total	84
Negative Emotions	Pain/pain	16
	Tiredness	10
	Anger/nervous	8
	Topanic	2
	Total	36
Grand total		120

In Table 10, two different themes were created regarding the emotions felt by preschool children while using technological tools. These themes were categorized as “Positive emotions” (f=84), “Negative emotions” (f=36). Under the theme of “Positive emotions”, “Happiness, joy” (f=18), “Fun” (f=17), “Excitement” (f=15), “Reality” (f=13), “Bravery” (f= 9), “Desire” (f=8), “Comfort” (f=4) were coded. Under the theme of “Negative emotions”, coding was done as “Pain/pain” (f=16), “Tiredness” (f=10), “Anger/nervous” (f=8), “To panic” (f=2).

Examples of children's thoughts on the emotions they feel while using technological devices are as follows: Ç40: "I feel happy because I love watching cartoons". Ç2: “I watch very good videos on the computer, I spend my time very happily”. Ç110: “It is very fun to play games”. Ç24: "You know, we are going through a chapter in the game, here I am getting excited". Ç40: “For example, I see Atatürk on the phone. I feel like it's real.” Ç91: “It is very nice to win in games”. Ç80: “I

feel very comfortable when my mother gives me her phone”. Ç8: “My eyes hurt a lot when I watch something”. Ç34: “When I use my tablet, my arms get very tired, I feel tired”. Ç47: “I get angry because they don't let me play until I finish the game”. Ç119: “I don't know what to do when I encounter some things, I get confused”.

Table 11 Findings Regarding Conditions/Events/Persons That Prevent/Limit Preschool Children's Use of Technological Tools

Themes	Person/situation/event	Feeling felt	f
Yes	Mother	Happiness, Confidence, Sadness, Worry	35
	External factors (Pet, ambient noise, battery drain, power outage, internet outage)	Pain/pain, Anger/nervous, Boredom, Worry	33
		Happiness, Confidence, Anger/nervous	21
	Father Big-Little sibling	Anger/nervous, Boredom, Obstinacy/persistence	
	Total		109
			11
Grand total			120

Table 11 shows the responses of preschool children to the emotions they feel about the “situation/event/person” that hinders/limits their use of technological devices. According to the table, two themes were formed from the answers given by the children. These themes were categorized as “Yes” (f=109), “No” (f=11). Under the “Yes” theme, the person/situation/events were coded as “Mother”, “External factors”, “Father”, “Big-little sibling”. Emotions under the code “Mother” are “Happiness, Confidence, Sadness, Worry” (f=35), emotions under the code “External Factors” are “Pain/pain, Anger/nerve, Boredom, Worry” (f=33), Emotions felt under the code “Father” are “Happiness, Confidence, Anger/Nervous” (f=21), emotions felt under the code “Big-little brother” are “Anger/nervous, Boredom, Obstinacy/persistence” (f=20), categorized.

Examples of children's thoughts on the situation/event/personal feelings that prevent/limit their use of technological devices are as follows: Ç10: “Yes, my mother is preventing it. I feel happy, I can get permission to play again”. Ç76: “Yes, my mother says, come on, just don't watch, your eyes hurt. Our mother wishes for our well-being”. Ç23: “Yes, my mother. I feel very sad when my game is half-finished”. Ç56: “Yes, my mother takes it from me. I feel like I will never be able to play again”. S13: “I have a cat, he always wants me to play with him, if I don't he scratches me”. Ç30: “The sound of the broom makes me angry while watching cartoons”. Ç100: “Sometimes the battery of the phone runs out, then I get very bored”. Ç34: “When the electricity is cut off, it is as if it will never come”. Ç41: “No, nothing prevents me”. Ç15: “My father takes it when I am tired, then I am happy to play other games with him”. Ç28: “While watching something, my father says to bring it now. Fathers know the truth”. Ç101: “When my father comes home, he turns off the cartoons and turns on the news. I am so angry”. Ç12: “My brother also wants to play, I get very angry”. Ç112: “My sister wants her tablet back while I am doing something. Then I get bored”. Ç84: “My brother wants to buy, and I don't give. We are fighting”.

Table 12 Themes and Codes Regarding Preschool Children's Time Limitation by their Parents while Using Technological Tools

Themes	Codes	f
Yes, they should	Physical health	43
	Brain/mental health	20
	Trust your parents	10
	Total	73
No, they shouldn't	Sadness	23
	Irritability/anger	10
	Anxiety	7
	Make it secret	4
	Total	44
I don't know		3
Grandt total		120

In Table 12, three different themes were created for the answers given by the preschool children regarding their parents' time limits when using technological devices. These themes were categorized as "Yes, they should" (f=73), "No, they shouldn't" (f=44), "I don't know" (f=3). Under the theme of "Yes, they should", coding was done as "Physical health" (f=43), "Brain/mental health" (f=20), "Trust in parents" (f=10). Under the theme of "No, they shouldn't" (f=44), "Sadness" (f=23), "Irritability/anger" (f=10), "Anxiety" (f=7), "Make it secret" (f= 4) were coded as follows.

The examples of their children's thoughts on their parents' time limiting while using technological devices are as follows: Ç71: "Yes, they should, if we play for a long time, our eyes will be damaged". Ç120: "If they do, our brain will not be harmed. Because radiation is very harmful". S16: "Yes, mothers and fathers think about us". Ç74: "No, they should not. I am sad". Ç22: "No, they should not. I get very angry when my game is half-finished". Ç46: "No, they shouldn't, or if they don't give it to me to watch it again, then I can't watch the video again". Ç99: "No, they should not. Then I will secretly take my tablet".

Table 13 Themes and Codes Regarding the Effects of Preschool Children's Spending Time with Technological Devices on Their Friendship Relationships

Themes	Codes	f
Negative effects	Be offended	42
	Loneliness	17
Positive effects	Play together	21
	To share	13
Not effect	Disease (Coronavirus)	18
	Play online	8
I don'tknow		1
Grand total		120

Table 13 shows the answers given by preschool children regarding the effects of spending time with technological devices on their friendship relations. According to the table, four different themes were created from the answers given by the children. These themes were categorized as "Negative effects" (f=59), "Positive effects" (f=34), "Not effect" (f=26), "I don't know" (f=1). Under the theme of "negative effects", coding was done as "Be offended" (f=42), "Loneliness" (f= 17). Under the theme of "positive effects", coding was done as "playtogether" (f=21), "To share" (f=13). Under the theme of "Not effect", codings were made as "Disease (Coronavirus)" (f=18), "Play online" (f=8).

Examples of their children's thoughts on how their children's spending time with technological devices affect their friendship relations are as follows: Ç27: "He gets offended at us because we don't play with our friend". Ç115: "If we always play with our tablet, we will not have any friends". Ç19: "We can play together nicely". Ç95: "When my friend comes to us, I give him my tablet, he will be happy too". Ç47: "It does not affect, because there is coronavirus, we can't play together anyway". Ç69: "It does not affect, we are already playing online".

3.3. Similar/Different Findings Obtained with Quantitative and Qualitative Data Collection Tools

In the research; It has been determined that there are similarities/differences between the quantitative data obtained from the parents from the sub-dimensions of the "Parental Views of the Preschool Children's Technology Use Scale" and the qualitative data obtained from the children through the "Child Interview Form" formed from the sub-dimensions of the scale. According to this; It was determined that parents and children had similar views in the sub-dimension of "family guidance in the use of technology". It has been concluded that while children use technological devices, parents limit their time and prevent/limit their children's use of technology. It was observed that the answers given by the children were supportive of their parents. In the sub-dimension of "benefits of technology", it was concluded that parents do not have enough information. It was determined that they agreed that the use of technology by children would contribute to the language development of children. From the data obtained from children, it has been seen that children have more comprehensive and positive knowledge about the benefits of technology. It was concluded that the responses of parents and children were similar in the sub-dimension of "technology usage areas". According to this; While parents stated that they benefited from technology in teaching educational content, children agreed with this view and stated that technology supports information acquisition processes and technological tools are tools that provide educational content. It was concluded that parents and children gave similar responses in the sub-dimension of "harms of technology". There is a prevailing opinion that the use of technological devices by parents and children will cause physical and social problems in children. It was determined that parents and children gave similar answers in the sub-dimension of "the ability to use technology". According to this; Children can easily use technological tools. In the "Suggestions" sub-dimension, it was determined that parents and children had different opinions. While parents state that their children should not use technological devices alone, the majority of children agree that they should use technological devices.

DISCUSSION, CONCLUSION, SUGGESTIONS

4.1. Results Obtained with the Quantitative Data Collection Tool

In this research, it was concluded that parents had the highest perception of “Harms of Technology” and the lowest level of perception of “Benefits of Technology”. In the research by Şalcı, Karakaya, and Tatlışme (2018), in which the use of technological devices by children aged 3-6 were examined, it was concluded that parents do not have enough information about the benefits of technology. This situation is in parallel with the result of the current research. Regarding the “Family Guidance” sub-dimension of the “Parental Opinions About Preschool Children's Technology Use Scale”, parents said, “I encourage my child to play with his sibling and friends instead of technological tools” “I carefully choose the computer programs that my child will use” It has been determined that they have a high level of agreement with the items “I ask my child questions about what he/she does while using the computer”. It has been revealed that they agree with the statement “My child is completely free in the choice of games in technological devices or in playing the game” at a low rate. In line with the results obtained from the family guidance dimension, it was found that parents directed their children to play games with their siblings or friends instead of using technological devices for a long time. There are different studies in the literature to support this result of the research. Yengil, Güner, and Topakkaya (2019) attach importance to family guidance in their research. Parents state that care should be taken not to expose children to technological devices for long periods of time. In addition, it has been determined that parents try to reinforce some of their children's education in their daily life processes through technological tools by providing sufficient control. In the research conducted by Yıldız (2021), it was found that the parents limit the time while using the technological tools of the preschool students and they check their children at regular intervals. In the study conducted by Akın (2019) to examine parents' attitudes about information and communication technologies, it was found that parents' guidance is very important when their children use technological devices. In the studies conducted by Kılınc (2015), Şahan (2017), Özcan (2018), Bulut (2018), Oğuz (2020), Author (2021), it was found that family guidance is very important in the use of technology by preschool children. Since the brain development of pre-school children is not yet completed, families should impose restrictions on the use of technology. The times and ways in which children use technology are possible with parental guidance.

In the “Benefits of Technology” sub-dimension, respectively, “Technological devices such as computers and tablets contribute to the linguistic development of children when appropriate programs are used”, “Technological devices such as computers and tablets are more beneficial in pre-school education than books when educational programs are used”, “Children who are allowed to use technological tools” are more creative”, “The use of technological tools increases my child’s attention development”, “The frequent use of technological tools allows children to know the world better”, “My child reinforces many concepts learned in his daily life and education with computer games”. As a result of this situation, it can be stated that parents agree that the use of technological tools will contribute to the language development of children when appropriate programs are used. There are also studies that conclude that the use of technological tools will contribute to children's social, academic and cognitive skills. The Ericson Institute reviewed 165 studies of digital media use in early childhood. It has been concluded that the use of technology positively affects empathy, self-confidence and decision-making skills, increases the sense of curiosity, and supports development holistically through games (Donohue and Paciga, 2017). In the research conducted by Bulut (2018) to examine the effects of technology use of preschool children on their school success and social life, it was concluded that the technology used through appropriate programs would contribute to the language development of children. The widespread use of technology among children in recent years has affected the play world of children and provided suitable environments for their learning and development (Arnott, 2018). It is thought that the parents' knowledge about the content of technological tools and applications and the technology used at appropriate times under parental supervision will support the developmental areas of children.

In the sub-dimension “Fields of Use of Technology”, respectively, “My child uses the computer, tablet, etc. in learning numbers and numbers. I use technological tools”, “I use technological devices such as computers, tablets, etc. to teach my child sounds and words”, “Computer, tablet, etc. to teach my child shapes. I use technological tools such as”. As a result of this situation, it can be said that parents benefit from technological tools in teaching numbers, numbers, sounds, words and shapes to their preschool children. There are studies that show parallelism with this result of the research. Research conducted by (Jonassen and Kwon, 2001) indicates that technological tools used for the right purposes will contribute to the educational processes of children. In the research conducted by Pavlick (2018), it was concluded that parents benefit from technological tools for their children's homework, activities and games. It is thought that the use of technological tools by families is important in supporting children's 21st century learning skills and laying the foundations of media literacy.

Regarding the “harms of technology” sub-dimension, parents' “Spending too much time with the computer causes the physical health of children to deteriorate”, “Preschool children's frequent use of technological devices weakens their relations with their friends”, “The use of technological devices adversely affects the socialization of children”, “Children who use technological devices excessively cannot express themselves easily”. As a result of this situation, it can be said that

parents who have children in the pre-school period have the belief that their children's use of technology may cause negativities in terms of physical and social development of children. In addition, parents may think that their young children are vulnerable to the problems they may encounter during their use of technology. There are studies in the literature that show parallelism with this result of the research. In the study conducted by BayrakÇelik (2020) with 26 mothers who have children in the pre-school period, it was concluded that the increase in the use of technology by children may cause physical pain in children. In addition, there are thoughts that this situation will cause a decrease in the quality of life of children due to the limitation of movement in children. In a study by Şahan (2017), in which the purposes of using technology of preschool children were investigated, parents stated that children's use of technological devices for long periods of time would negatively affect children's physical health and that children might experience difficulties in expressive language skills. Children's spending time on technological tools for long periods of time instead of playing games with their peers causes them to play alone. This situation causes children to communicate less with their peers and negatively affects their socialization. In addition, children's use of bad words or nicknames containing negative expressions used by the characters they watch and identify with against other individuals around them may also negatively affect children's social relations (Arnas and Erden, 2006). "Developing children's feelings and behaviors such as love, respect, cooperation, responsibility, tolerance, cooperation, solidarity and sharing" is one of the foundations of pre-school education (Ministry of Education, 2013). It is thought that pre-school children's social relations will not be adversely affected by helping each other and using technological tools in cooperation. In addition, it is foreseen that the problems that children may encounter while using technological devices can be minimized with the conscious and controlled use of technology and family guidance.

Regarding the "Technology Using Skill" sub-dimension, it is seen that the expressions that parents most agree with are "My child can easily use smart phones", "My child can play games on the internet", "I allow my child to play games with my phone", and "My child has difficulty using technological devices". It was determined that they did not agree with the statement much. As a result of this situation, it can be thought that the children's technology use skills are at a high level according to the parents. There are studies that show parallelism with this result of the study. In the research conducted by Akkoyunlu and Tuğrul (2002) with 77 children aged 5-6 years, the relationship between the skills of using computers in the home environment and the use of technology was investigated. As a result of the research, it has been determined that children can use technological tools alone or with the help of adults. Neuman (2014), on the other hand, examined the effect of tablet use on acquiring emergency literacy skills in a study conducted with 109 preschool children in Australia. As a result of the research, 70% of the parents stated that the children who use tablets are very useful in gaining emergency literacy. In the study conducted by Kılınç (2015), it was found that although the use of technology by preschool children negatively affects the developmental processes of the children, the technology use skills of most of the parents are quite good. Similar results were obtained in the study conducted by Altun (2019) with 143 preschool children and their parents. With the rapid development of technology in recent years, children are thought to have a good level of technology use skills since they grow and develop with technology from the moment they are born.

Regarding the "Suggestions" sub-dimension, parents highly agreed with the items "Technological tools are very useful for preschool children when used with a guide", "Children in preschool age should definitely not use technological devices such as computers and tablets", while "Computer in the education of preschool children, it has been determined that they have less participation in the item "Technological devices such as tablets should be used". As a result of this finding, it is thought that preschool children have the thought that it would be beneficial to use technological tools in the presence of a guide, and they are against children to use technological devices such as computers and tablets on their own. There are studies to support this result of the research. In a study conducted by Palaiologou (2016) with parents, it was found that preschool children thought that it would be more appropriate to get acquainted with technology from an early age so that they can acquire the skill of using technological tools in the coming years. In the research conducted by Hatzigianni and Margetts (2014) with parents, opinions about children's computer use were investigated. As a result of the research, it has been found that the use of computers by preschool children will support their educational processes and they have a positive attitude towards the use of technological tools for the development of technology skills.

According to the results obtained from the findings related to the frequency of technology use of parents and children, there are similarities in the frequency of technology use of children and parents. Only 5.8% of children never use smartphones. Likewise, 19.3% of parents do not play games, etc., apart from communication. It was concluded that they never used smart phones for any purpose. While 47.3% of the children never used tablets, it was concluded that 71.3% of the parents never used a tablet. In addition, it was concluded that 62.5% of the children never use a computer, while 50.7% of the parents do not use a computer. From these data, it was found that children and parents mostly use smartphones in their daily and weekly life processes. The fact that all of the parents in the study group have smartphones may be a factor in this situation. In addition, we can think that this is due to the development of smart phones and their lighter, easier and more practical use compared to computers and tablets. Similar results were obtained in the study conducted by Özsoy and Atılgan (2018).

They stated that the reason why children prefer computers less than tablets and phones is that they have difficulty in finding applications through computers and using keyboard and mouse. In the research conducted by Akin (2019), it was concluded that the majority of children use smartphones. It is thought that the frequency of using technological tools is intense due to the fact that parents are in working life or due to the needs of the age. It is thought that the reason why tablets are used more by children is related to the fact that parents use computers more in their working processes. In addition, since tablets are used with touch technology like smart phones, it can be said that they are more preferred by children.

4.2. Results Obtained with the Qualitative Data Collection Tool

It was determined that all of the children in the study group of the study used technological devices. With the advancement of technology and today's conditions, technological tools that people can easily access are in a position that preschool children can easily access. Researches show that the frequency of use of preschool children increases due to the ease of access to technological devices. (Arslan, 2017; Sapasağlam, 2018). In a research conducted by Palaiologou (2016) in England, Greece, Malta and Luxembourg, it was found that the majority of children use digital technology. As a result of the research conducted by Delikanlı (2019) with 169 children aged between 48-60 months, it is stated that children constantly use technological devices such as television, smart phone, tablet and computer. It is thought that the technology use of preschool children is provided by parents or other adults responsible for the care of children.

In the research, it was determined that children gave more than one answer regarding the technological tools they used. Technological devices used by children were found to be television, smart phone, tablet, computer/laptop. As a result of rapidly developing technologies in the 21st century, technological tools are easily taking their place in the lives of children. The widespread use of televisions in all households and the use of smartphones by all parents suggest that children become users of technology from an early age. In the research conducted by Doğan and Gökler (2012), it was found that television was used extensively by children. Gundoğdu et al. (2016) examined the media use of preschool children. As a result of the research, all of the children watch television and also tablet, computer and mobile phone etc. It was found that they used at least one of the technological tools. Akin (2019), in his study examining the technology use of preschool children, determined that the most preferred technological devices by children are television, smart phone, tablet and computer. Similar results were obtained in the research conducted by Yengil, Güner, Topakkaya (2019). The fact that technological tools are seen as electronic caregivers in recent years is thought to be a factor in the formation of this situation. Technological tools are used to make children behave in their daily lives, to facilitate their eating situation, etc. purposes are often included.

Four different themes were formed from the answers given by the children regarding the reasons for using technological devices. These themes were categorized as "Personal Reasons", "Family Reasons", "Educational System-Based Reasons" and "Social/Social Reasons". Under the theme of "Personal Reasons", "Want to play games", "Boring", "Desire to have fun", "Technology curiosity", "Want to learn", "Want to listen to music", "To be alone/freedom", "Taking photos/videos" was coded. Codes such as "Communication and communication", "Role modeling", "Lack of communication within the family", "Lack of love and interest" were made under the theme of "Family Reasons". Under the theme of "Reasons Based on the Education System", coding was made as "knowledge/concept learning", "Educational site use", "Activity". Under the theme of "Social/Social Causes", coding was made as "Role modeling of the immediate environment", "Communication and communication", "Pandemic". Young children use technological devices to play games and have fun (Holloway, Green, & Livingstone, 2013). Play is the living space where children express themselves best. Considering that preschool children learn through play, it can be thought that children establish a link between play and learning through technological tools. At the same time, the constantly changing features of technological tools attract the attention of children more than any toy. In addition, there are studies showing that parents offer digital games to their children instead of real playgrounds to increase children's interest in digital games (Gürcan, Özhan, & Uslu, 2008; Tuğran, 2016). In the study conducted by Kadan and Aral (2018) with 636 preschool children, it was determined that children use technological tools especially for playing games. It is normal for preschool children to show intense interest in technological tools as well as being interested and curious about everything around them. The colorful, animated and lively screens of technological devices affect children's play behaviors. This situation can be explained by the fact that the games in the technological tools used by preschool children are fun and attractive to children (Formby, 2014). It is an expected result that the primary reason for the preference of technological devices by children is play, as the preschool period is play-based and children learn through play. In a study conducted by Chaudron et al., (2015) with children in seven countries, it was concluded that the meaning that parents attribute to technological tools affects children's technology use habits. In the research conducted by Alkhwadeh, Ihmeideh and Alkhwadeh (2017), it was stated that the interest of children who are introduced to technology at a young age is due to the fact that they are modeled by adults who care for the child. In a study conducted by Tunstall and Bull (2012) with 18 preschool children, it was concluded that the use of media entertains students and motivates them to learn at school and at home. In a study conducted by Aral Doğan and Keskin (2018) with 281 parents with children between the ages of 0-6, the

use of technological tools by preschool children was examined. It has been concluded that children mostly prefer technological tools to play digital games. In the research conducted by Güngör, Gülay Ogelman, ErtenSarıkaya and Körükçü (2020), it was found that children prefer technological devices especially for playing games. In addition, it has been concluded that they use technological tools due to their desire to obtain information. Darga (2021) concluded that preschool children use technological devices to play games, watch cartoons and videos. In the research conducted by Kayış (2022), the reasons for using technological devices for preschool children were determined as playing games, watching videos, listening to music, and having fun. With the spread of pre-school education and the advancement of technology, EBA etc. by teachers in the children's home environment. Suggesting educational content of sites, giving homework on the internet can be shown as reasons for preschool children's use of technology for information purposes. At the same time, it can be thought that children in this period use technological tools for reasons such as being able to access information quickly whenever they want, enabling them to learn according to their own speed and capacity, and accessing the same information over and over again whenever they want. Ateş and Saltalı (2019) are of the opinion that the use of technological tools should be seen as an educational resource. Another reason for preschool children to use technological devices is that they take other individuals around them as role models, starting with their families. Children in this period tend to look for exemplary role models. Efforts to identify with the character they model are very important in terms of personality and language development. It has been concluded that technological devices are used by children for reasons such as the involvement of parents in working life and video calls to reach other relatives such as grandparents. In the research conducted by Avinç (2017) with 41 children aged 0-8, it was revealed that children were introduced to technological tools by seeing them from their parents. In the study conducted by Han and Yan (2019), it was concluded that children model their mothers while using technological tools. It is considered normal for them to start using technological tools by imitating their environment at the preschool age, which is the most critical period for personality development. The active use of technological devices by parents attracts the attention of preschool children who are in the period of curiosity. Communication and video-speaking features of technological tools attract the attention of children. Children who live far from their families and close circles and whose parents are in working life use technological tools for communication purposes. In addition, the fact that technological tools can be used in different functions such as taking photographs is shown as a reason for different use by children. The inadequacy of families in showing interest and love to children leads children to use technological devices more and as a result, it may cause communication problems within the family (Özcan, 2018). In recent years, the time spent together has been decreasing due to the fact that almost every member of the family prefers to spend time with technological devices. It is thought that this situation causes a lack of communication within the family. In the study, it was found that one of the reasons for children to use technological tools was due to the pandemic process. It is an expected result of the research that children who cannot go out and go to school during the pandemic process use technological devices to spend time at home.

Three different themes were created from the children's answers about whether or not children should use technological tools. These themes were categorized as "Positive attitude", "Negative attitude", "I don't know". Under the theme of "Positive attitude", respectively, "Playing games", "Watching cartoons", "Having knowledge", "Fast access to information", "Making an activity", "Waving videos", "Online education", "Growth thinking", Codings were made as "Continuous playability/durability", "Photo/video shooting". Under the theme of "negative attitude", codings were made for "Thinking of harming", "Adult's anxiety about getting angry", "Bringing sleep", "Distraction", "Getting away from social environment", "Don't hold your toilet". In the study conducted by Erişti and Avcı (2018) with 23 children in the pre-school period, it was concluded that more than half of the children had a positive opinion about using technology since they use web-based applications on tablets, phones and computers. In the study conducted by Kol (2012), it was stated that the use of technology in the preschool period would affect children positively. In the research conducted by Avinç (2017), it was seen that the activities that children do with technological devices are mostly playing games and watching videos. In the study conducted by Mete (2014), in which the views of 60-72-month-old children and their mothers about the cartoons on television were examined, it was concluded that the reasons for using television were intensely watching cartoons. Thanks to the functionality and durability of technological tools, children include devices with different features and areas of use in their lives. In addition, children who play games with technological tools receive instant feedback. In this way, children can acquire faster and more accurate information. In the study, it was also concluded that families or other adults responsible for the child's care showed anger or forbidding behavior about children's use of technological devices. Adults should guide children to use technology consciously instead of banning children's use of technology and getting angry with them. Thus, it can be ensured that children benefit from technological tools. It is thought that the use of technology has increased in order to interrupt face-to-face education, to conduct education online, and to provide access to information by children during the pandemic process. In addition, it was concluded from the answers given by the children that the use of technological devices distracted their attention. Long-term use of technology can lead to this situation. It is important for the development of researching and developing generations that children use technology in a way that will keep their interest and attention level alive. Likewise, it is thought that as the time spent by children with technological devices increases, they postpone their

physiological needs such as toilet and sleep. In a study conducted by Bulut (2018) with 40 parents who have children in the preschool period, he concluded that children hold their toilets for long periods of time while using technology.

Two different themes were created from the answers given by the children regarding the benefits of technological tools. These themes were categorized as "Useful" and "Not useful". Under the "Useful" theme, "Playing games", "Having fun", "Educational content (activities, drawing, number, letter, language teaching)", "Communication", "Watching cartoons/videos", "Continuous access", "Getting information from the interactive environment", "Taking pictures", "Hidden learning" coding was done. Under the theme of "not useful", "Bodily pains (headache, eye pain)" was coded. Today, it is seen that toys are replaced by games played through technological tools. Children who frequently use technological tools see these tools as potential play tools. Technological tools attract the attention of children, shape their entertainment, learning and communication and support their development areas. The use of technology related to educational content can contribute to the awareness of pre-school children. Children can learn many concepts such as numbers, shapes, colors and sounds with technological tools. The programs that children watch and the content they listen to can support language development by improving their vocabulary. In the research conducted by Yalçın and Erden (2018), with the help of technological tools; It was determined that he learned many concepts, his cognitive skills were supported, his judgment power and language skills improved. Decat et al. (2019), the effect of touch technology on the development of literacy skills in the preschool classroom was investigated. As a result of the research, it was found that the use of technology contributed to children's literacy skills. The visual-motor and language skills of children using the software prepared by Elimelech and Aram (2019) to develop children's early literacy skills were evaluated and positive effects were encountered. The fact that digital tools help children learn while having fun is seen as a reason for preference for children. In addition, it has been concluded that children find their use of technology useful in terms of learning the difficult situations in daily life. Through technological devices, children can see things that they are not likely to encounter in daily life and can access information on the subject they want. It can be said that embodying the learning of preschool children by offering different options and materials by technological tools increases the quality of learning.

Three different themes were created from the answers given by the children regarding the harms of technological devices. These themes were categorized as "Harmful", "Not Harmful", "I Don't Know", respectively. Under the "Harmful" theme, "Bodily pain (eye deterioration, head, neck pain, hand numbness)", "Restriction of social life", "Feeling of fatigue", "Harmful content (online risk)", "Inactivity", "Wasted time" Codifications were made as "thought of spending", "Radiation", "Insomnia", "Concern about not being able to go out", "Assimilating virtual character". In line with these answers, it is thought that children are aware of the harms of technological tools and that adults responsible for the care of children guide their children in this regard. There are studies in the literature to support this result of the research. There are opinions that spending time with technological devices will harm children's physical postures and negatively affect eye health (Cordes and Miller, 2000; Şen, 2012). Radesky, Schumaer, and Zuckerman (2015) state that children who use devices with screens such as television, smart phone, computer, tablet from a very close distance can see deterioration in their eyes. In addition, posture disorders can be seen in children who stay immobile away from physical exercises, and their spines can be damaged. In the research conducted by Plowman, Stevenson, Stephen, and McPake (2012), it was concluded that technological devices used inactively can cause many health problems such as obesity. Using technological devices for hours causes physical problems in children's hands, wrists and necks. At the same time, it is one of the risks stated by these researchers that sensory organ coordination will develop late in these children. Cox, Skouteris, Rutherford, Fuller Tyszkiewicz, and Hardy (2012) stated in their study with children between the ages of 2-6 that excessive television watching leads to reduced physical activity in children. Situations such as the rapid and continuous change of the screens of technological devices and lack of sleep can also distract the attention of children whose development has not yet been completed. Chassiakos, Radesky, Christakis, Moreno, and Cross (2016) state that violent games and videos that children encounter through technological devices can cause sleep disorders in children. In addition, it has been stated that the blue lights emitted by technological devices prevent the secretion of melatonin and therefore the children are sleepless. Nathanson and Beyens (2018) investigated the effects of using electronic devices on the sleep patterns of preschool children in the United States. As a result of the research, it was found that the use of technological devices in this period caused sleep disorders in children. In the research conducted by Mustafaoğlu and Yasacı (2018), laziness, sleep, aggression and attention deficit problems have emerged regarding the harms of technology. In the study conducted by Zuckerman (2015), it was found that technological devices reduce children's social interaction. There are different studies showing similarity to this result (Halmatov, Akçay and Ekin, 2017). Children express one of the harms of technological devices as radiation. The use of technological equipment has been declared as a probable carcinogen at category 2B level by the World Health Organization (WHO, 2021). The fact that technological devices are connected to the Internet and communicating with unidentified people may expose children to online risks (Kaşıkçı, Çağiltay, Karakuş, Kurşun, & Ogan, 2014). Children in this period cannot think that technological devices can harm themselves and their environment due to their developmental characteristics. In addition, harmful content that cannot be noticed by children can affect the subconscious of children (Radesky et al., 2015).

Preschool children may think that what they watch on the screen is real due to their developmental characteristics. As a result of this situation, they may be influenced by what they watch or play and engage in dangerous or inappropriate behaviors (Burakand Ahmetoğlu, 2015). There are researchers who state that parents who keep their children away from many dangerous situations in real life do not act carefully while their children use technology (Kaşıkçı et al. 2014). Children want to make sense of everything they see or hear while using technological tools. At the same time, because they cannot think abstractly, they cannot distinguish between real and imaginary situations. It can be influenced by the natural sense of curiosity, which is one of its periodic characteristics, and other scenes of violence or bad content. They can satisfy their curiosity through what the virtual characters do. For example, the character that children identify with in cartoons solves their problems using violence, which may lead to the perception that children will always solve problems with violence. In the research conducted by Darga, Öztürk, and Öztürk (2021) with 103 parents who have children in the pre-school period, it was concluded that approximately 65% of the children imitate the cartoon characters they watch. Even though they are used unsupervised and unconsciously by preschool children, technological devices that can cause many negative situations are not noticed enough by parents. For this reason, it is very important for parents to be aware of the harms of technology in terms of providing appropriate guidance to their children. It is thought that it is necessary to determine the awareness levels of parents about children's use of technology and to raise awareness when necessary.

Three different themes were created from the answers given by the children regarding the difficulties in using technological tools. These themes were categorized as “The child who is not forced”, “The child who is forced”, “I do not know”. Under the theme of “No”, coding was made as “Thinking that it is easy” and “Thinking that he has grown”. Under the “Yes” theme, coding was made as “Finding a password”, “Charging expired”, “I can't read and write”, “Internet access problem (freezing)”, “Can't detect game contents”, “Can't find anyone to ask about the content”. In line with the answers received from the children, it is thought that more than half of the children do not encounter any difficulties while using technological tools. This can be explained by the fact that touch technologies do not require much motor skills and can be used easily through applications. Technological tools provide ease of learning for children even on complex subjects through applications or simulations suitable for the learning speed of children (Oktay, 2007). In addition, it is thought that the permissive attitudes of the parents during the use of technology are also a factor in the formation of this situation. In the study conducted by Özsoy and Atılğan (2018) with 20 children and 20 parents, it was found that children can easily use technological devices and download applications without being literate. In a study conducted by Özyürek, Özkan, Bedge and Yavuz (2015) with 86 mothers who have children in the preschool period, it was determined that 75% of the children could use technological devices alone and did not encounter any difficulties while using them. Similar results are encountered in the research conducted by Güngör, Gülay Ogelman, ErtenSarıkaya and Körükçü (2020). Unlike these results, APA (2016) recommends that children use technological devices with the help of an adult. Gundoğdu et al. (2016) in their study with the parents of 102 children aged 2-6, stated that the use of technology by children may be beneficial in cases where adults are present. Moreover; Researchers stated that it is important for parents to spend more time with their children during their children's use of technology in terms of children's needs and duration of use. This is considered important in order to prevent children from accessing sites with harmful content and sites with non-educational violence and sexual content. In addition, since preschool children have just started to do purposeful activities, they may have difficulty understanding the applications and games they use through technological tools. In addition, it is expected that they have difficulty in understanding digital content since they have not yet acquired literacy skills. Therefore, children need their parents in their activities. It is seen that children need their families from the problems they encounter during the use of technological tools. It is thought that parent or adult guidance is important in order to guide children correctly, direct them to appropriate content, and support the child's ability to cope with the situation when faced with any difficulties.

Two different themes were formed from the answers given by the children regarding the emotions they felt while using technological devices. These themes were categorized as “Positive emotions” and “Negative emotions”. Codes such as “Happiness, joy”, “Fun”, “Excitement”, “Reality”, “Courage”, “Desire”, “Comfort” were made under the theme of “positive emotions”. Under the theme of “negative emotions”, coding was made as “Pain/pain”, “Fatigue”, “Anger/nervous”, “Don't panic”. It is thought that children use these devices with more positive emotions when parents provide a safe environment by encouraging their children to use technological devices. Conscious and controlled use of technology improves children's creativity and self-confidence skills (Haugland, 1997). Preschool children can experience intensely curious and questioning emotions due to their seasonal characteristics. Children who satisfy their curiosity while doing various researches can experience exciting emotions (Başaran, 2006). During the use of technological tools, children go through processes that develop creative thinking skills such as concept learning, self-control, and learning through exploration. This situation increases the children's desire to learn and develops the sense of courage along with their desire to learn on their own. Having fun while using technological devices enables children to feel a sense of ambition, success and comfort (Işıkoğlu, Erol, AtanandAytekin, 2021). In a study conducted by Bulut (2018) with parents who have children in the preschool period, parents found that children are angry and show aggressive behaviors when using technology. Negative emotions may also

arise in children during the use of digital tools. As a result of the difficulties encountered during the use of technological tools, children may experience emotions such as anger, anger and panic. In the formation of these situations, the situation of being afraid of the parent or not sharing enough due to the absence of the parent can be effective. In addition, situations such as children's inability to understand the rules in applications and the level of difficulty can be annoying for children. It is thought that these feelings that children feel in the face of difficulties may cause psychological problems by negatively affecting their personality development. Likewise, by integrating with the characters they identify with, they can unconsciously use the element of violence as a problem-solving method and reflect emotions such as anger and resentment accordingly.

Two different themes were formed from the answers given by the children regarding the situation/event/person that prevents/limits the use of technological devices. These themes were categorized as "Yes, it happens", "No, it does not happen". Under the theme of "Yes, it happens", person/situation/events were coded as "Mother", "Father", "Big-little sibling", "External factors". The emotions felt under the code "Mother" are "Happiness, Confidence, Sadness, Worry", the emotions felt under the code "Father" are "Happiness, Confidence, Anger/Nervous", and the emotions felt under the "Big-little sister" code are "Anger/Anger", respectively. Emotions felt under the code of "nervous, Boredom, Stubbornness/persistence", "Pet" were categorized as "Pain/pain", "External Factors" codes as "Anger/nervous, Boredom, Worry", respectively. There are studies that show parallelism with this finding of the study. In the research conducted by Yaman (2018), it was determined that mothers were more interested in the content and use of technological devices, and they had conversations with children by asking various questions. (Yaman, 2018). In the research conducted by Işın (2019) on the use of technology by 1112 parents with children between 13-60 months and their children, it was concluded that the majority of families limited especially the time of screen use. In a study conducted by Tosun (2019) with 64 preschool teachers and 56 parents to examine the computer usage habits of preschool children, it was concluded that 41% of the children were kept under surveillance by mothers, 14% by fathers, and 32% by both mothers and fathers. In a research conducted by Nikken and Schols (2015) on 105 parents with children between the ages of 0-7, it is stated that parents are the ones who introduce children to technological tools and who need to keep their children's technology use under control. It can be thought that parents impose restrictions in order to enable children to acquire the skills of using technology in daily life and to minimize the risks that may come from technological tools. This is important in terms of establishing a balance between daily life and technological tools. In the study conducted by Oğuz and Kutluca (2020) to examine the technology use of preschool children, it was concluded that mothers, in particular, limit their children's use of technological devices and limit the time. Mothers' limiting their children's use of technology may be due to their lesser involvement in working life than fathers, their more protective attitude, or their beliefs about the harms of technology rather than its benefits. In addition, the negative emotions experienced by children when they are asked to take a break from using technological devices may also be a harbinger of future smartphone addiction. From the answers given by the children, it was concluded that their siblings prevented and limited their use of technology. It is thought that this situation is caused by the inability to share technological tools, the modeling of siblings or sibling jealousy. Families can find solutions to problems between siblings by talking to all their children and making agreements.

Three different themes were formed from the answers given by the children regarding the time limitation of their parents while using technological devices. These themes were categorized as "Yes, they should", "No, they shouldn't", "I don't know". Under the theme of "Yes, they should", coding was made as "Physical health", "Brain/mental health", "Trust in parents". Under the theme of "No, they shouldn't", codings were made as "Sadness", "Irritability/anger/anger", "Anxiety" and "Don't do it in secret". Families have important duties to raise awareness of children while using technological tools. One of them is that children should set time limits on their use of technology. The fact that the majority of the children's families give a positive response to the time limit may be an indication that the children are conscious about this issue or that they are beginning to be conscious. This situation is important in terms of keeping the technology use of children under control within certain limits as the right model for families. Another response obtained from children is trust in family members. From the moment they are born, children grow up following their parents as a model. Healthy interactions and relationships based on trust and love with family members support the development of children and shape their behavior. From the answers given by the children, it is thought that the feeling of trust in the parents is related to the healthy attitudes that the families offer to the children. Trying to forbid children from using technological devices may cause damage to children's sense of confidence, and as a result, children may use technological devices in secret. Özkan (2017) examined the use of technological devices by children in the 5-6 age group in terms of maternal views. It has been concluded that mothers get negative reactions from children when they want to limit their children. BayrakÇelik (2020) conducted a study with the mothers of 26 pre-school children, in which almost all of the mothers wanted to limit the time, however; found that their children did not adapt to this situation and showed crying behavior. In a study conducted by Yıldız (2021), it was found that parents set maximum time limits to keep children's technology use under control. The use of technology by children for different purposes other than information and education can create a state of concern for parents. It can be thought that they

limit their time to protect their children from the harmful effects of technology and situations such as cyberbullying. In a research conducted by Jago, Wood, Zahra, Thompson, and Sebire, (2014) with 954 parents with children in the 5-6 age group in 57 schools, children's screen time was investigated. It is stated that parents have a great role in children's use of technological tools and they should guide their children.

Four different themes were formed from the answers given by the children regarding the effects of spending time with technological devices on their friendship relations. These themes were categorized as "Negative effects", "Positive effects", "Doesn't affect", "I don't know", respectively. Under the theme of "adverse effects", coding was made as "Offence" and "Loneliness". Under the theme of "positive effects", coding was done as "playing together" and "sharing". Codes such as "Disease (Coronavirus)" and "Online playing" were made under the theme of "Does not affect". The constant use of technological tools by preschool children causes a decrease in communication with their peers. According to the research conducted by Plowman, McPake, Stephen (2010), it was found that the cooperation and sharing skills of children who use technological devices for a long time decrease. In addition, it is argued that as a result of this situation, the social-emotional development areas of children, where there is a decrease in their sense of responsibility and motivation, are negatively affected. Gundođdu et al. (2016) stated that excessive use of technological devices may cause negative situations in the social development of children because they do not spend time with their peers and family members. In the study conducted by Yalçın and Erden (2018), it was concluded that the use of smart devices causes situations such as communication breakdown and loneliness in children. There are also studies with different opinions in the literature. It has been determined that children are in constant interaction and communication with each other while using technological tools (Heft and Swaminathan, 2002). Children can have the opportunity of peer teaching, especially when they use technology in groups. In the study conducted by Bulut (2018), parents reached the conclusion that their children's use of technological devices showed a positive development in helping, sharing, love and respect, which are social-emotional development behaviors. Some of the opinions taken from the children are that it will not affect their friendship relations. With the increase in games played on virtual platforms, digital interactions have also started among preschool children. This situation has also changed the socialization environments of the children, regardless of the presence of any friends or time constraints. The quarantine practices applied together with the pandemic process have caused children not to go out and spend time with their friends. Although children have stated that this situation will not affect them, it is thought that this situation may cause social-emotional and behavioral problems in children in the future. It is very important for children to spend time with their peers for a healthy development.

4.3. Similar/Different Results from Quantitative and Qualitative Data Collection Tools

It was concluded that the results obtained from parents and children were similar in the sub-dimensions of "family guidance in technology use", "harms of technology", "areas of technology use" and "technology use skills". This may be due to the fact that parents start to develop skills in their children by providing technology to their children, and therefore both their children who use technology excessively and themselves encounter the harms of technology. It is thought that parents limit/prevent their use of technology to a certain extent by limiting their children's time because they encounter or are likely to encounter the harms of technology. It was concluded that the results obtained from parents and children showed differences in the sub-dimensions of "benefits of technology" and "recommendations". Since this situation may be a generation gap between parents called "digital immigrants" and children called "digital natives", since children learn based on fun as the primary user while using technological devices, awareness about the benefits of technology begins to be formed, parents believe in the harms of technology, have a protective attitude. thought to be caused by them.

Suggestions

In line with the findings obtained from the research, the following suggestions are presented:

Suggestions for Families

- Children under the age of 2 should avoid the use of technology.
- They can attend digital literacy seminars given by educators or information communication specialists who are experts in the field on the correct and effective use of technology by preschool children.
- Promoting appropriate technological content should be ensured for children to use technology effectively, not as passive audience.
- They should research technological content and applications that are suitable for children's age and development, and direct children to quality applications.
- They should not forget that preschool children take their families as role models, and they should pay attention to the use of technology with their children.
- In order to prevent children from using technology for a long time, they should create social learning environments and encourage children to engage in daily activities based on movement.

- Technology use of children should be observed, children should not be left alone as much as possible.
- In order to prevent children from spending a long time with technological devices, parents should offer children various social activities and games, and spare time for their children.

Suggestions for Preschool Teachers:

- Preschool teachers can participate in the training given on the use of technology by preschool children and their effects on the developmental areas of children.
- Programs that teachers will use in the educational environment should be educational and aim to provide children with skills such as problem solving, critical thinking and creativity.
- By increasing their knowledge about technology, preschool teachers can integrate the use of technology into their teaching activities in order to diversify classroom activities and ensure learning retention in children.
- They can include activities that will increase the effective use of technology by children in classroom activities.
- Considering the parent-teacher cooperation in the preschool period, they can meet with parents about their children's use of technology.

Suggestions to Institutions:

- In universities that train pre-school teachers, studies that will improve the skills of pre-service teachers in the use of technology should be included, and it can be ensured that pre-service teachers are compared with appropriate examples on the correct and effective use of technology in internship practices.
- Technology integration of acquisitions and indicators in the Preschool Education Program with the activities in the curriculum can be realized by the Ministry of National Education.
- Technology activities to be integrated into the curriculum by the Ministry of National Education can be prepared by interacting with institutions specialized in the field of informatics and technology (TUBITAK, etc.).
- The internet infrastructure provided to institutions by the Ministry of National Education should be updated and access to content provider websites that may be useful for children should be provided.
- Education can be given to teachers and families by informatics experts at the Ministry of National Education on the effective and efficient use of technology by children.
- Informing educators, teachers and children about the consequences of children's long-term use of technology can be conducted by health institutions.
- The Ministry of Family and Social Services may provide training for parents on the use of technology by children.

Suggestions to Researchers:

- Studies on technology by researchers should be examined and meetings or presentations should be made to families and teachers on this subject.
- Studies on technology use of preschool children can be planned longitudinally.
- Studies to be planned on the use of technology by preschool children can be done through observation.

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