Digital Parentship Practices of Instructional Technology Faculty Members: A Case Study

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Introduction

Being a parent starts much earlier than ever before—that is, before a child's birth and even prior to pregnancy. Potential parents may start by utilizing mobile applications (apps) designed for specific purposes, such as those that track ovulation, fetal development, the stages of pregnancy, and many others. For instance, parenting websites have existed since the 1990s and have since formed into Facebook groups and Instagram or Twitter accounts (Lupton et al., 2016). Parents have even started to share ultrasound scan images of their unborn children, which demonstrates how the next generation are literally digital people even from before their births (Leaver, 2015). As they grow up, they will not be able to recall a time in their life without the existence of electronic devices (Clark, 2012; Leaver, 2015; Reid Chassiakos et al., 2016).

In the literature, several studies have sought to understand the digital technology usage habits of children (Holloway et al., 2013; Kaşıkçı et al., 2014; Nikken & Schols, 2015; Yardi & Bruckman, 2011). These studies have demonstrated that this change in media type has already transformed the means by which, as well as when and how, children encounter such media and how they have spent their time using it over the past decades. While children in the 1970s encountered television, the popular media of the time, starting around four years old, today's children start to interact with media much earlier, from around four months old (Reid Chassiakos et al., 2016). Naturally, the focus of such studies has extended from television to the latest mobile technology–based media. One of the most common media parents and children use is the smartphone, which one might describe as a melting-pot device due to its wide-ranging functional ability. Even though most children do not own a smartphone, they usually have some apps installed on their parent's phone for them to play games or watch videos (Chaudron, 2015). Based on the literature, it seems that most children and even toddlers are now being exposed to digital technology as part of daily life. Even today, most children meet mobile devices before books (Gottschalk, 2019). Radesky et al. (2020), observing that most of these studies are limited to parent-based reports, conducted a study of

their own to understand how children between ages three and five use mobile devices. They used passive sensing applications to collect real data from mobile devices. Their results reveal that 35% (n=121) of the children had their own devices, the screen time of the children with their own devices was 115.3 minutes per day, and the most popular apps were YouTube, YouTube Kids, internet browsers, Siri and other search apps, and video streaming apps.

Over the past decades, the media has transformed into a new structure that has brought about many benefits in addition to introducing certain risks (Livingstone, 2016; O'Keeffe & Clarke-Pearson, 2011; Tomczyk & Wąsiński, 2017), especially for school-aged children and adolescents. In general, the common benefits of digital technology studies mention include early learning (Reid Chassiakos et al., 2016; Rogowsky et al., 2018), improved thinking and problem solving (Murcia et al., 2018), the discovery of new ideas and knowledge (Garrison, 2015), social interaction and reaching more people (Garrison, 2015; Latif et al., 2019; Pempek et al., 2009), instant communication (Drahošová & Balco, 2017; Garrison, 2015; Latif et al., 2019), and accessing online support across various arenas. Negative influences and associated risks include cyberbullying (Benson et al., 2014; Chibbaro, 2007; Mesch, 2009; Olweus, 2012), internet addiction (Brenner, 1997; Davis et al., 2002; Young, 1998), and nomophobia (fear of not having access to a mobile phone) (Lee et al., 2014; Yıldırım & Kişioğlu, 2018). Additionally, these risks have been linked to several psychological consequences, such as cyber depression, anxiety, and negative effects on sleep (Reid Chassiakos et al., 2016; Williams & Godfrey, 2011). Studies have also shown that the use of technology in young children has an effect on creativity. While there are studies (McPake et al., 2013; Stošić & Stošić, 2014; Ihmeideh & Alkhawaldeh, 2017) highlighting that media has positive effects on creativity, others (Vandewater et al., 2006; Radesky et al., 2016; Mustafaoğlu et al., 2018) mention its negative effects.

Since digital technologies have a central role in the lives of today's children from a very young age, such technological devices will likely continue to affect their future lives, too. Thus, all of the benefits and associated risks are equally valid for even the youngest of children. To ensure young children's effective technology usage, it is necessary to focus on the parents' attitudes and strategies that determine their digital parentship practices. Digital parentship includes working for children's effective technology usage while protecting them from the potential risks. For this purpose, in 2016, the American Association of Pediatrics (AAP), the leading international association of child health, issued a set of children's screen time guidelines to help parents protect children from the negative effects of digital devices (AAP, 2021). The World Health Organization (WHO) (2019) later published guidelines in a similar vein regarding the amount of screen time recommended for children under six years old, indicating that no screen time is suggested until age two. After that, sedentary screen time should not exceed one hour each day. Considering these suggestions and other existing studies, digital parentship has a key role to be investigated, with the aim of helping parents meet the challenges of the increasing opportunities and accessibility of technology.

Education is one of the areas significantly affected by recent technological advancements. Today, technology has become an indispensable element of learning, contributing to young children's social and cognitive development (National Association for the Education of Young Children [NAEYC], 1996). The concern for today's educators is related not to whether technology should be used in the classroom but to how they should use it to best effect (Clements & Sarama, 2003). Classrooms are becoming increasingly digitalized, and naturally, parents themselves are expected to possess some basic digital literacy skills to be actively engaged in their children's learning. Parental engagement in students' learning in the digital

age correlates with increased student engagement and success (Ross, 2011); therefore, parents must be able to utilize the affordances of technology instead of seeing technology as a form of pacifier for their children.

In general, the literature puts forward the benefits and risks of technology usage, especially for school-aged children and their parents. Additional literature explains parents' concerns related to the risks and opportunities. There is a need for further studies to be conducted with the parents of young children, that is, up to six years old. The effects of different parental mediation techniques on babies and toddlers are not exactly known. Due to the widespread proliferation of household media technology, parents must become more aware of the potential risks and thereby better manage the content of what their children may be exposed to. The current study explores the digital parentship practices of instructional technology (IT) university faculty members who have children age six or under. Understanding the digital parentship practices of IT faculty members may provide useful insights into how they use technology with their own children. The results may then prove useful in understanding their potential future parental engagement in their children's learning.

Digital Parentship

Studies have found that the amount of time children spend using digital tools is closely related to the amount of time their parents spend using these tools and to their parenting attitudes (Lauricella et al., 2015; Nikken & Schols, 2015). Notably, these devices are often used as a filler activity for children (Chaudron, 2015; Lim, 2016), as a kind of lifeguard for parents to keep their children entertained. Related to this, technology manufacturers, and especially mobile media companies, have added the targeting of infants and toddlers to their regular customer marketing portfolios (Burroughs, 2017).

The issues mentioned reveal that parents have a natural desire to protect their children from the potential negative influences of digital technology. Parenting practices have changed (Burroughs, 2017; Lim, 2016; Livingstone, 2016), with today's parents tending to be more cautious about their children's media use. Thus, digital parenting as a notion has gained considerable attention from scholars. Mascheroni et al. (2018) highlight that digital parenting refers to both the regulating of children's digital technology usage and how the parents incorporate digital technology into their daily lives and parenting practices.

In the mobile media and cloud computing era, children meet new media each day, and that creates certain opportunities and challenges for parents, resulting in the evolution of parenting into "transcendent parenting," which goes beyond traditional physical parenting to virtual and online contexts. Hence, parents need to transcend each media environment that children might experience and interact both online and offline all the time as a part of non-stop parenting duties (Lim, 2016).

The ways in which parents control their children's media usage are referred to as "parental mediation," which originally denoted the rules and limitations surrounding what children were allowed to watch on television and has now evolved to include social and mobile media (Livingstone, 2007; Nansen & Jayemanne, 2016). The literature mentions three main mediation strategies: "active mediation," "restrictive mediation," and "co-viewing" (Bayraktar, 2017; Livingstone & Helsper, 2008). Restrictive mediative parents determine the rules and limitations for their children's technology usage, such as limiting the amount of time spent, banning certain media, and using passwords or screen timers. Active mediative parents talk with their children about the possible risks associated with technology usage and then let

the children discover how to use technology by themselves (Kirwil, 2009; Nansen & Jayemanne, 2016). The co-viewing strategy entails parents using technology alongside their children and communicating with them during that shared experience. In most cases, parents prefer restrictive strategies (Chaudron, 2015) over active ones that require additional time and effort. Research conducted within the scope of the European Kids Online Project states that children were exposed to less risk in terms of pornography, cyberbullying, and communication with unknown people from other countries when their parents applied a restrictive strategy (Duerager & Livingstone, 2012). However, since this approach also restricts children from accessing the internet, it can deprive them of the positive benefits, such as being able to access information, communicating, and having fun.

Children in the age group of six years old and younger, who were therefore born into an already digitally enriched world, are labeled "digitods" (Burroughs, 2017; Holloway et al., 2015). They tend to learn from observation (Chaudron, 2015) and from the behaviors of their parents, siblings, and grandparents, which shows that they need more active mediation; however, most parents remain unaware that their children are mirroring their own behaviors (Chaudron, 2015). For instance, multiscreen practices, such as playing a game on a smartphone while simultaneously watching a movie on the television, have become a daily routine (Lim, 2016). Konok et al. (2019) state that parents may influence their children's usage of mobile touchscreen devices through their own modeling, their digital parenting style, their attitudes and beliefs about the usage of mobile touchscreen devices, and their educational levels. Additionally, according to Chaudron (2015), children do not know what the internet is, what the word "online" means, or what are the benefits and risks they might encounter, all of which makes parents' concerns both plausible and reasonable. However, parents need to understand how digital media has reshaped the world, including the world of their children, to address their concerns (Clark, 2012).

Statement of the Problem

We have shown that existing studies reflect parents' knowledge of the risks and opportunities of technology usage for their children. However, it is still necessary to understand digital parentship practices, especially those of parents with children under age six, and their parenting strategies for these young children. Furthermore, to our knowledge, no study has focused on parents who come from a technical background and who have the knowledge of digital technologies and the effective usage of those technologies. Their position in this digital world should be clarified—for example, whether they are able to implement effective technology usage strategies or have problems in dealing with their children's technology usage. For this reason, the current study aims to understand the digital parentship practices of university faculty members who have a major in IT and who have one or more children under age six. As a department, IT trains information and communication technology (ICT) teachers, who are responsible for the teaching of technology and its integration into education. Therefore, IT faculty members need to exhibit best practices for raising children surrounded by technology, and they are expected to have the skills of effective technology usage for both themselves and their kids. The primary purpose of the current study, therefore, is to understand the digital parentship practices of IT faculty members and their specific purposes for technology usage by their children.

To achieve this purpose, the research questions of the study are as follows:

> (1) What are the digital parentship practices of IT faculty members for their own children under age six?

(2) For what specific purposes do IT faculty members use technology for their own children under age six?

Method

Research Design

We used a qualitative research design to understand the digital parentship patterns of IT faculty members in Turkey. Qualitative research studies focus on describing situations in detail and expressing participants' views and opinions (Fraenkel et al., 2012; Yin, 2011). The study participants responded to 12 questions plus relevant questioning probes to obtain in-depth understanding as a case study. Case study research aims to understand a single case or multiple cases in depth based on predetermined variables that employ different data collection tools or methods, such as questionnaires, observations, and interviews (Yin, 2009). Case studies generally apply when research questions consist of "how" and "why" questions, the research is around a temporary phenomenon, or the researcher has limited or no control (Yin, 2011).

Participants

The participants in this study comprised 13 faculty members in the IT field from any university in Turkey with one or more children under age six. The IT academician, in their role as mother or father, was the participant during the interviewing process. In terms of sample selection, we used a purposeful sampling method. Purposive sampling techniques are mainly used in qualitative studies (Patton, 2002; Teddlie & Yu, 2007) and entail the selection of participants based on a specific purpose in order to answer the research questions.

Data Collection

Demographics Questionnaire
Prior to the study, participants completed a demographics questionnaire to gather information about their characteristics, their education levels, and their own children's profiles. According to the participants' responses, their children did not own a personal device; they only used their parents' devices or the family's home devices. The questionnaire included 10 open-ended questions. Table 1 presents the demographic information of the participants.

Table 1
Demographics of the participants

Participant	Age (years)	Number of Children	Age of Child
P1	35	1	5.5 years
P2	33	2	4 years
P3	44	1	3.5 years
P4	38	2	5 years
P5	38	2	5 years
P6	35	3	6 years
P7	40	1	4.5 years
P8	38	2	6 years
P9	37	2 (twins)	4 years
P10	34	1	11 months
P11	42	2	2 years
P12	38	1	5 years
P13	35	2	2.5 years

Interviews

Interviews are the most common data gathering technique used in qualitative research, enabling researchers to obtain large amounts of data (Marshall & Rossman, 1999). The current study used semi-structured interviews, employing open-ended questions as there was no valid, reliable scale available in the literature to identify digital parentship patterns at the time the study occurred. Also, digital parentship is a new term that has emerged due to recent technological developments, which has necessitated the quest for a deeper understanding of the participants' perspectives. Interviews add strength to understanding the participants' perspectives—how they make meaning of their own experiences—and can obtain information that the researcher may not directly observe otherwise (Patton, 2002).

In the current study, the researchers conducted semi-structured interviews. The researchers then prepared an interview guide based on the established research questions. After piloting the interview protocol with two faculty members, the researchers edited it, making a few significant changes related to the organization of the questions, the language used, and the level of detail in the questions. The final version of the interview protocol included 12 questions with relevant question probes and was divided into three sections of four questions each. The first section relates to the parents' use of technology, the second relates to the participants' children's usage of technology, and the third section relates to the participants' digital parentship practices. To enhance the credibility of the interview protocol, the researchers sought expert opinions from three non-participant IT faculty members. Based on their suggestions, we applied a degree of editing and then finalized the interview protocol. Sample questions of the interview protocol are as follows:

Section 1: Parents' use of technology
1. What are the technological tools you have individually?
2. What are the common technological tools you have in your home?
3. For what purposes do you use technological tools?

      4. Do you feel yourself competent in using technology?
      5. …

Section 2: Children's technology usage
      1. What technological tools does your child(ren) use at home?
          a. Since when have they used these technological devices?
          b. Does your child own a personal technological tool?
          c. Does your child have any social media accounts?
      2. How much time does your child spend with these technological tools during the day?
      3. …

Section 3: Digital parentship practices
      1. How did your child meet with technology?
      2. What applications did you use when your child was introduced to technology (smartphone/tablet)?
      3. Are there any established rules that your child must follow while using technology? If so, what are these?
      4. …

Data Analysis

To analyze the collected data, the researchers followed the common analytical procedures suggested by Marshall and Rossman (1999). First, one of the researchers read the data and wrote out the findings in the form of memorandums. Next, the researcher generated categories, themes, and patterns. During open coding, the researcher generated descriptive and multidimensional themes. In this study, the themes emerged from the data, which is a method Patton (2002) has termed inductive analysis. To ensure the plausibility of the analysis and for the credibility of the study (Marshall & Rossman, 1999), the researcher then worked alongside the other two researchers, and together, they examined the codes and finalized the codebook. During this step, the researchers reviewed all the codes together and discussed them until they reached a consensus. They then discussed the data and coding with an independent expert from the IT field to find the most plausible codes. This ensured the reliability of the study. As a final task, the researchers summarized the data.

Findings

What are the digital parentship practices of IT faculty members for their own children under age six?

Since the participants of this study are all faculty members of IT departments, they carry the characteristics of being digitally literate. Due to developments in technology, parents of children under age six today should probably be digital parents and therefore aware of both the advantages and disadvantages of current technology. For this reason, the researchers aimed to explore the issue of digital parenting and the digital parentship practices of this specific group. The primary concern was the extent to which the participants each use technology for their children in a safe and appropriate way. The participants' responses divided into two themes: parents' technology use and digital parentship roles.

Parents' Technology Use

Since the participants themselves were closely associated with technology through their profession, they were found to use technology in all areas of life—for educational and academic purposes and also for daily life and parenting support. Table 2 shows these findings along with the frequency of mention.

Table 2
Parents' Technology Use

Parents' Technology Use ($N = 13$)		
	n	*f*
Educational and academic purposes	13	23
Daily life purposes	13	35
Support of their parenting	10	29

As expected, all of the participants reported using technology for their own educational and academic purposes, both since their job necessitated its usage and also due to their own personal interest. The other issue participants mentioned was their usage of technology for managing daily life. All of them used technology for leisure activities like watching films, for communication, and for social media. The participants also indicated that they used technology for shopping and for banking needs. One surprising finding in this theme was that 10 of the participants said that they used technology for parenting support. The participants stated that despite being aware of the known issues and risks, they used technology as a virtual babysitter, as the following quote demonstrates:

> *Virtual babysitter, definitely virtual babysitter. There is great freedom after giving the tablet to your child. During that time, the child does not communicate with the parent. It is wrong, and I know it is necessary to spend time with your child, but you can be so exhausted, you can be very tired. So, as a parent we need time to draw a breath. (P1)*

Digital Parentship Roles

Yurdakul et al. (2013) classify digital parentship roles as digital literacy, awareness, control, timeliness, and ethics. The findings of this theme are presented based on these classifications, with the exception of ethics, which is unrelated to the scope of the current study. Table 3 contains the findings along with the frequency of mention.

Table 3
Digital Parentship Roles

Digital Parentship Roles (*N* = 13)	*n*	*f*
Digital literacy	13	69
effective usage of technology	13	24
following the latest innovations	13	17
being open to new perspectives	13	15
dealing with the problems	13	15
Awareness	13	78
Risks	13	45
Opportunities	13	33
Control	10	87
consciousness of the children	10	27
setting of rules	10	25
limiting of specific technologies	5	19
strategies when the rules are broken	13	16
Timeliness	13	45

Digital literacy. As expected, all of the participants have digital literacy skills due particularly to their background experience. They use technology effectively, follow the latest innovations, and are open to new perspectives and able to deal with the problems they face.

Awareness. The second category observed in the data was awareness, which indicates that the participants are aware of the risks and opportunities the technology in question presents. The participants predominantly stated that they try to protect their children from the risks:

> *I think technology is like fertilizer and the kids are like the flowers… I think we should enable the kids to use technology as needed… I mean, in other words, taking advantage of the opportunities and keeping them safe from the risks. (P4)*

According to the participants' responses, the opportunities technology presents can be grouped into educational and physical opportunities. The educational opportunities predominantly mentioned were language development (n = 7), foreign language learning (n = 9), and improving talents in different fields (n = 6); whereas the physical opportunities were associated with hand-eye coordination (n = 6) and improving dexterity (n = 5). The most frequently mentioned possible future risks associated with technology for children were

technology addiction (n = 10), health risks (n = 12), cyberbullying (n = 7), reaching inappropriate content (n = 13), and destroying creativity (n = 3). The risks the participants mentioned refer to their concerns for future potential risks, and they indicated that they had not yet experienced those risks.

The findings revealed that participants were aware of the possible advantages and disadvantages of technology. They believed that when used effectively, technology benefits children but that its disadvantages can be devastating. Regarding the opportunities, the participants preferred certain apps and the internet for educating their children. They especially emphasized that for improving foreign language education, technology plays a critical role that cannot be replicated by traditional methods. According to the participants, this issue means not that a child can learn a foreign language only by themselves with the aid of technology but instead that technology can help to improve their language learning skills. Similarly, one of the most frequently discussed issues was that technology presents an opportunity for language development. Furthermore, participants considered that technology can be effective for educating children in any field, including math, new concept acquisition, or abstract concept learning. Likewise, the participants use technology for its physical contributions, such as improving hand-eye coordination and improving their children's talents in areas like drawing.

Regarding the risks associated with technology usage, participants all agreed that the misuse of technology poses greater risks than opportunities. One of the risks mentioned the most was technology addiction. The participants shared many concerns related to addiction, which can result in unhealthy psychological situations. The second most common response concerned health conditions, which was very much as expected. Mainly, the participants raised concerns about their children's eye health and their posture. The participants also mentioned cyberbullying, which has become a popular term, as a future risk. The participants believed that they were aware of cyberbullying risks and that this awareness enabled them to protect their children to a certain point. However, they acknowledged that they could not offer total protection to their children. Related to this risk, inappropriate content is still reachable for all users, despite all the available precautions. Whatever the participants did as parents, they considered it still possible for their children to reach inappropriate content and be negatively affected by it. Finally, some of the participants believed that when children have a close relation with technology at an early age, their creativity disappears.

Control. The third category observed in the data was control. The collected data showed that the participants used a variety of precautions related to the overuse of technology based on their understanding. While the participants mostly had the necessary knowledge of what should be done when an unexpected situation occurs, 10 believed that the critical element in resolving technology-related risks is about not the parents but the children themselves. One of the most striking common responses was that the increasing level of the children's consciousness was the most important aspect of this process. Whatever they do, technology today enables children or anyone to reach content that is inappropriate for them. The participants considered that their most important task was to instill this awareness in their children, and thus, they did not rely on internet applications for the safety and protection of their children.

The second most important item in this category was setting rules, including time and content limitation, intermittent usage of technology, limiting some specific technological devices, and leaving a distance between the user and the screen. A total of 10 participants pointed out that

they allowed their children to use technological devices for a limited amount of time. None of the parents permitted their children to exceed a specified amount of time, and they tried to instill in their children insight about the maximum length of time they should use a device. Similarly, all of the parents determined the content that their children were exposed to through usage of technology devices. As parents, the participants indicated that their children use technology devices at times that they set and with the content that they determine. They do not allow them to break these rules. Furthermore, four of the participants were also careful about the length of each session during which their children used a technology device, enforcing a one-hour-per-session limit.

As a control mechanism, five of the participants preferred limiting specific technologies to prevent screen addiction. First, they did not have a television in the family home since they believed that it is very difficult to use television effectively with children. Also, they preferred that their children not use smartphones or tablet computers a great deal due to their smaller screens. They pointed to the anxiety they felt regarding the health of their children's eyes. This group mostly used computers or laptops with and for their children. The other participants who allowed the usage of devices with smaller screens did so while keeping an appropriate distance between their children and the device.

The participant parents were then asked about their strategies for dealing with their children when they wanted to exceed their allowed time limit. They indicated that they would offer alternative indoor activities that do not involve using technological devices, such as playing games together as a family. However, five participants stated that they lied to their children when in a crisis with them, saying that the device was out of charge. Interestingly, seven of the participants stated that their children were developing a positive attitude toward such rules and limitations. Three highlighted that using passwords for mobile devices was useless for children because they would just insist over and over until allowed to use the device. Comments showed that, as a control mechanism, eight of the participants used social media eschewal as a strategy. They believed that their children being kept away from social media would ensure that they were protected from cyberbullying. They also stated their preference not to share photos of or personal information about their children online.

Timeliness. The participants were asked about their interest in following the latest innovations, about their technology ownership, and about their purposes for and frequency of changing digital devices. All of the participants had smartphones and personal computers. The other devices they owned included tablet computers (n = 9), televisions (n = 7), game consoles (n = 4), smart watches (n = 2), virtual reality devices (n = 1), and Apple TV (n = 1). A total of 12 participants indicated that they replace their personal computers and smartphones whenever they are broken. Both of these devices were an indispensable part of their lives. Only one of the participants preferred to update his phone and computer as soon as a new version was released to the market.

For what specific purposes do IT faculty members use technology for their own children under age six?

The researchers categorized participants' responses under two headings: initial technology usage and ongoing technology usage.

Initial Technology Usage
First, the participants answered questions about their children's first engagement with technology, including the children's ages when they first used digital technology and the

length of time they would use the technology each day. Table 4 presents these findings. In addition, since technology usage by children has a major effect on them, the participants were asked why their children first used technology to better understand the digital parentship practices in play.

Table 4
Children's Technology Usage

Parent Participant	Age Child Starting Screen Viewing	Time Spent Screen Viewing per Day (by child alone)
P1	6 months	2 hours
P2	6 months	2 hours
P3	2 years	2 hours
P4	2 years	1 hour
P5	1 year	1 hour
P6	1 year	3 hours
P7	1 year	45 minutes
P8	3 years	2 hours
P9	1.5 years	1 hour
P10	7 months	1 hour
P11	1 year	1.5 hours
P12	9 months	1 hour
P13	9 months	2 hours
Average	14 months	1.5. hours

The data show that the children's average time spent screen viewing per day was almost 1.5 hours, which exceeds the WHO's (2019) suggested maximum time. The average age at which the participants' children started to use technology was around 14 months. Upon examining the participants' responses, the researchers observed that all but three allowed screen exposure for their children prior to the WHO's (2019) suggested age of two years. They associated this situation with their busy academic life as well as with crisis moments with their children. Also, four participants indicated that they were mainly inclined to let their children watch something on the screen while eating their food, or in order to feed them, especially when the child was less than one year old.

The participants were also asked about the duration of their children's daily screen exposure. Surprisingly, all allowed their children between one and three hours as a routine. They added that when they wanted to spend time together with their children, they might exceed these routines for watching films or other similar activities. This situation was also an example of a dilemmatic finding from this study. Despite being aware of all the risks, the parents preferred to utilize the available technology to make their own lives easier. Also, they admitted to exceeding the suggested sedentary screen time limit suggested by the WHO (2019). The participants, as individuals who are aware of the risks of technology misuse, were not found to be overly compliant or cautious about the time and duration of their children's screen viewing.

Another striking finding is that the families with at least two children were more indulgent of their second child's technology usage. They indicated that it was impossible to control the younger child while their older child was watching something or playing digital games.

It is important to highlight here that the participants said that they at least attempted to communicate while their child was actively using technology. They stated that communication was a key means of mitigating the risk of screen exposure's negative effects. In addition, they indicated that despite the children using the technology alone, they continued to remain under their control as parents.

Ongoing Technology Usage
The participants talked about the specific purposes for which their children kept using technology, especially during their routine daily usage of the technology. To some extent, the parents reported using technology as a virtual caretaker or babysitter, but the researchers' interest was the parents' purpose for allowing their children to use technology for longer periods of time. The participants' responses were categorized as acquiring digital literacy skills, adapting to the social environment, and spending time as a family.

All of the participants believed that their children should learn to use technology before starting preschool to gain digital literacy skills since they were born into a technology-focused world. On a similar point, three of the participants indicated that technology was the determinant of today's social life; that is, when other children know about popular digital games or cartoon films, their child could feel socially isolated if they were unaware of such things.

The third issue was spending time as a family. The parents used digital technology as a means for spending time together as a family unit, which included watching films, searching for information on the internet, and playing digital games. One of the participants stated that he would search for cartoon pictures together with his child, then print the cartoon to create a painting activity. In this way, the child could both learn basic computer skills and spend time with a parent.

Discussion

The aim of this research was to reveal the digital parentship practices of IT faculty members and their specific technology usage for their children under age six. Due to the developments in digital technology and the fact that the participants all work in the field of technology, it is clear that the participants possess numerous household technological devices. Therefore, the participants are likelier to use technology at home, which as a result exposes their children to these tools in the home from an early age.

The current study unsurprisingly revealed that all participants used technology for their daily tasks as well as for their personal education and professional development needs. However, the majority of the participants did not hesitate to permit their children to use technology from an early age (as young as six months) to spare time for themselves or to attend to their work commitments, and they elected to utilize the available digital technology to facilitate the role of parenting, even though they appreciated that such actions were inadvisable. Coyne et al. (2017) report that mediacentric parents are more likely to use technology to keep their children entertained during the day or to settle them before bedtime. Given that the

participants in the current study are from a technology-related profession, it can perhaps be assumed that they are mediacentric parents. However, in a study by Wartella et al. (2013), only 3% out of 2,300 parents with children under eight years old strongly agreed (plus 26% agreed) that smartphones and tablet computers can facilitate parenting. It may therefore be considered a natural extension for parents interested in technological tools because of their profession to utilize such tools in the care of their children at home.

It was as expected that the participants were found to be digitally literate and also aware of the opportunities and risks of technology usage in the home. The participants highlighted the opportunities that digital technologies provide for their children, including foreign language learning, language development, the development of skills in different areas such as math or concept learning, hand-eye coordination, and increasing hand-based skills. Among these opportunities, the contribution of technology to foreign language teaching was strongly emphasized. Research on language learning has shown that technology positively affects language teaching and that technology-supported language learning is at least as effective as teacher-based face-to-face learning (Zhao, 2013). Research by Linebarger and Vaala (2010) showed that screen media had a positive effect on the language development of infants and toddlers. Similarly, Linebarger and Walker (2005) report that when strategies that support language learning (such as a character's direct conversation with the child, the child's active participation, the labeling of objects, and the opportunity to respond to the child) are used in television content, it positively affects toddlers' vocabulary and expressive language production. However, Zimmerman et al. (2007) state that screen media that was interesting but not developmentally constructive would negatively affect brain development and language acquisition, and in this context, intensive viewing of media such as videos and DVDs had a detrimental effect on language development. Duch et al. (2013), in their study with a disadvantaged group consisting of parents with low income and educational levels, reveal that screen media had detrimental effects on the language development of toddlers. The current study suggests that parents emphasized the positive effects of technology on language development because they are knowledgeable about digital parenting due to their field and pay attention to choosing the appropriate content while using technological tools. Consequently, it is critical for parents to gain adequate knowledge about digital parentship, their appropriate usage of technology, and its effects on their children's development, especially on their learning. Since technology plays a significant role in supporting today's young children in their learning and development, parental technology usage preferences may bear a relation to the improvement of their children's cognitive development according to the age of the child, instead of parents perceiving technology simply as a form of child pacifier or as a kind of supportive tool to their parenting.

The risks the participants mentioned were in line with the literature: access to inappropriate content (Snakenborg et al., 2011), health problems (Brenner, 1997; Sırakaya & Seferoğlu, 2018), technology addiction (Davis et al., 2002), and cyberbullying (Chibbaro, 2007; Mesch, 2009; Olweus, 2012). Another risk the parents expressed is the negative effects of technology usage on creativity. They stated that they felt the overuse of technology could destroy their young children's creativity. However, there are conflicting results about this issue in the literature. Similar to the results of our study, Radesky et al. (2016) found that caregivers (parents and grandmothers of children eight years old and younger) expressed their worries that the use of mobile technology in early childhood would affect children's thinking and behavior styles, and their worries included lower creativity. In a study conducted by Vandewater et al. (2006), watching television was negatively related to creative play; creative play time decreased as the time spent watching television increased. Parallel tothis,

Mustafaoğlu et al. (2018) note that for children under the age of four, playing alone rather than being exposed to technological devices will help to develop creative thinking and individual problem-solving skills. By contrast, McPake et al. (2013) express that the experiences of young children with technological tools in the early years play an important role in the development of their competences regarding communication and creativity. In addition, according to Ihmeideh and Alkhawaldeh's (2017) study with five-to-six-year-old children, technology and digital media can sharpen children's creative skills and foster them to search, discover, and continue experimenting and trying. However, it is important to choose technology effectively, intentionally, and appropriately (Ihmeideh & Alkhawaldeh, 2017). Supporting this statement, Stošić and Stošić (2014) emphasize the importance of choosing digital content that is appropriate for a child's age and that develops creativity, while also stating that the computer affects children's creativity. In conclusion, parents worried about negative effects of technology on creativity may be expressing a preconception and may not have enough information about the use of technology in ways that affect creativity positively.

Some of the participants preferred to prevent screen addiction by choosing not to use certain technological devices, such as televisions, which they considered difficult to use effectively, or smartphones and tablet computers with very small screen sizes, which were deemed to be harmful to their children's eye health. Those parents who allowed the usage of technological tools with small screens attempted to maintain a safe distance between their child and the screen being watched. According to Chaudron (2015), parents may see different levels of risk for their children under age eight due to undesirable economic consequences, incidental inappropriate content, and health or social impacts. For the parents in Chaudron's (2015) study, violence and strong language appear to be more of a concern than sexual content or unwanted connections. In the current study, inappropriate content and health problems were at the fore of the participants' concerns. It is possible, however, that this difference is a result of cultural differences.

The parents believed that children cannot be shielded from harmful content and that children may be confronted with it in some way, at some point. Therefore, they considered it important to educate their young children as conscious users instead of relying on an application to ensure their safe internet usage and trying to prevent their children from accessing harmful content. Duerager and Livingstone (2012) also highlight this issue, as the application of restrictive strategies can prevent children from gaining the benefits of technology. However, since the children in the current study were ages six and under, the majority of participants were found to limit their children's usage of technological tools, and all of the participants determined the content watched by their children. Wu et al. (2014) state that parents play an important role in influencing their children's usage of appropriate technologies and that positive results can only be obtained through appropriate parental mediation and modeling. For example, Lauricella et al. (2015) found that children's screen usage was highly correlated to the parents' screen usage. In this case, the parents should recognize and understand their role in modeling appropriate media usage and in balancing their media usage with other activities (Reid Chassiakos et al., 2016).

Parent-child interaction reduces the common negative effects of screen time and promotes screen-based learning opportunities (Livingstone & Franklin, 2018). Chaudron (2015) suggests that parents' active mediation tends to reduce children's exposure to online risks, but without reducing the positive opportunities. The results of the current study indicate that the parents applied more restrictive mediation. Konok et al. (2019) state that unlike school-aged children and adolescents, who likely possess the skills and knowledge to use the internet or

digital devices more diligently and, therefore, only need parental permission, younger children are likely to require guidance and support to learn how best to use mobile touch screen devices. In the current study, parents may have preferred restrictive mediation because they may think their children are not old enough for active mediation or co-viewing. Furthermore, given that active mediation requires additional time and effort, they may not want to spend more time at home with technological tools because of their jobs (Chaudron, 2015).

One of the biggest problems related to children's technology use is that they do not want to obey rules associated with technology and may insist on continued usage of such technological devices. This may be because their reasons for using such devices are related only to entertainment rather than any intentional learning activity (Dias et al., 2016). In the current study, the participants stated that they preferred doing family activities like playing games without the use of technological devices when their children insisted on exceeding determined screen time. In this way, they tried to draw their children's attention away from screens. Similarly, some of the participants stated that they would be untruthful with their children, saying that the device had run out of charge, even though it was clear that this was not a good method of distracting the child from continued usage. Chaudron (2015) states that some parents can be creative in their restriction strategies and limit the usage of technology with lies, such as the wireless network being unavailable, the loss of power, or a low battery charge level. This means that parents may resort to telling minor untruths when confronted by a difficult situation, regardless of their field of expertise. However, some of the current study's participants stated that they experienced no difficulties in applying rules and limitations. Also, about half of the respondents refrained from sharing photos of or information about their children on social media to avoid cyberbullying. Thus, the researchers observed a number of different parental control practices, with some deemed correct and others incorrect by those considered experts in young children's use of technology.

Regarding children's initial technology usage, the study showed that almost all the participants started to use technology with their children before the age specified by the WHO (2019). Some of the participants stated they used technology as a mediator to feed their child. Chaudron (2015) states that parents' conforming to rules varied according to certain conditions, such as being at home because the child was ill, inclement weather conditions outside, or parents needing quality time for themselves. This was also the case for participants with a high level of digital literacy, as in the current study. Although the participants in the current study understood that such actions are considered inappropriate, they were willing to consider such alternatives when faced with difficult situations. The researchers observed similar behavior regarding the screen time limits that the participants' children were exposed to. Almost all of the participants with children under six years old exceeded the recommended amount of screen time. The amount of time, which was flexible and varied between one and three hours, sometimes increased for family activities like watching movies. At the same time, the participants also emphasized that it was more difficult to set limits on technology usage for children with older, school-age siblings in the house. They did not see it as possible to keep the younger child away from technology while their sibling was using a digital technology device. Nikken and de Haan (2015) observe that parents may encounter more problems while an older child uses a technological device that they consider inappropriate for their younger child. However, the participants in the current study also mentioned the importance of communication and of controlling the content during their children's usage of technological devices to reduce the negative effects associated with technology usage.

In the dimension of ongoing technology usage, the findings revealed that in addition to using technological devices as a virtual caretaker or babysitting service, the participants used digital technologies for their children to help them acquire a certain level of digital literacy skills and thereby adapt to today's social environment, as well as to spend time as a family for extended periods of time. As parents, the participants believed that their children must acquire certain digital literacy skills to keep up with the digital age into which they were born. Yurdakul et al. (2013) state that the educational and psychological benefits of internet usage outweigh the potential risks. At the same time, the participants considered that keeping their children away from the digital world would cause their children to face the problem of social exclusion since all other children use technological devices and the digital world dominates children's culture. Children's use of digital media is perceived as a problematic area that needs to be carefully regulated (sometimes restricted) and controlled by parents (Chaudron, 2015). Thus, the current results align with these previous findings.

Conclusion

Qualitative data analysis indicated that as digital literates, the participants of the study possess knowledge and expertise in the potential opportunities that technology offers as well as the possible risks that it poses to children. Despite this fact, the majority of the participants did not hesitate to allow their children to use screen technology from an early age (as young as six months old) to free up time for themselves or to attend to their work. This implies that the participants utilize technology to facilitate the role of parenting, even though they may appreciate that this behavior is considered inappropriate. Moreover, the participants emphasized that they wanted their children to be conscious about technology usage and aimed to raise their awareness. However, the parents generally preferred restrictive mediation, which may relate to the very young ages of their children. These results show that parents may make mistakes in the management and organization of their children's technology usage, despite their own professional expertise. Therefore, the results suggest the need for broader studies to understand the parental mediation strategies of parents from other fields or professions and for organizing appropriate training programs based on the parents' needs so that they can better understand how to make best use of technology to support their children's education. Parents who have an awareness of the educational affordances of technology can perhaps better reflect their skills in the future educational life of their children. This issue is significant since parental engagement in the digital age may have an effect on children's academic success.

Although the results of the current study cannot be generalized to all parents, as the participants are experts in the field of IT, it may be seen as a guide for family education and lead to larger-scale studies to investigate the current general situation. Even though this number of participants is sufficient for a qualitative study, a much larger sample is required to obtain more generalizable results and to potentially broaden the findings. In addition, similar studies could be conducted with groups of parents who are not experts in this field, with an aim of revealing whether the parents' education or field of work makes a difference in their digital parenting attitudes, beliefs, or actions. Furthermore, since the subject of the study is children ages six and under, another related field is early childhood education. We suggest that researchers and experts design studies involving parents who are early childhood educators.

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