

Research Article

Examining 0-6 Year Olds' Use of Technological Devices from Parents' Points of View*

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Abstract

Technological tools are widely used in every area of daily life, such as entertainment, communication, housework, personal care, health, and transportation. Today's needs make technology a necessity instead of a preference. Children often meet technological devices such as televisions, mobile phones, tablets, and computers in their daily lives, and these devices shape their communication, entertainment, and learning structures. For this reason, 0-6 year olds use of technological devices has been examined in this study using quantitative and qualitative research methods as a mixed-model type. The study was conducted using the snowball sampling method. The sample consists of 100 parents for the qualitative dimension and 181 parents for the quantitative dimension. The study's sampling group consists of 281 parents in total. The study examines the choice of technological device; reasons for using technological devices; status of playing digital games, inside games, and outside games; and opinions about digital games' differences using the qualitative method. The quantitative method has been used to examine parents' descriptions of children who use technological devices and what demographic variables these children have. The reasons for preferring a certain technological device have been described using qualitative and quantitative methods and analyzed in terms of certain demographic variables. As a result of the research and according to parents' perspectives, 44.8% of children aged 0-6 years have used mobile phones; 43.1%, tablets, 21.0%, computers; and 70.2% watch television. In addition, these children use technological devices mostly for watching animated films and playing games.

Keywords

Technological devices • Digital game • Mobile phone • Tablet • Computer • Television

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The technological devices often used by children such as computers, tablets, and mobile phones are important devices for communicating and sharing information and are included in many activities, which has changed daily life at home, school, and work. Therefore, using these devices correctly and effectively provides many benefits. Nevertheless, technology for the most part negatively affects children. Family environments and characteristics have an important place in determining child development (Kenar, 2012). While parents mostly watch TV nowadays, children go on the Internet, use social media, and play digital games (Çalışkan & Özbay, 2015). Examining technological devices, which both positively and negatively affect child development, and which digital games are played is important for raising healthy generations. Today's needs have made technology use a seeming necessity rather than a preference (Demir & Özmantar, 2013). Harmless use can be handled as healthy use and harmful use as unhealthy use within this necessity. The definitions of healthy and unhealthy use vary according to the type of technological device used and user's age, intention, and duration of use. Children often encounter technological devices such as televisions, mobile phones, tablets, and computers in their daily lives, and these devices shape children's structures of communication, entertainment, and learning. Before developing strategies about children's technology use, evaluating the current situation is necessary. Although studies on technology use have been made with school children and adolescents in Turkey, studies covering infancy and early childhood (ages 0-6 years) have not been encountered. For all these reasons, this study aims to examine 0-6 year olds' use of technological devices from parents' points of view.

Method

This research uses a mixed-methods design with quantitative and qualitative research techniques. Preferences and reasons for using technological devices have been described and examined in terms of specific demographic variables.

Research Group

This study uses the snowball sampling method. The first study group includes parents with the following two features: (a) Having a child between 0-6 years old, and (b) this child uses technological devices. The first study group consists of 100 voluntary parents.

The second study group includes parents with the following feature: having a child between 0-6 years old. This group consists of 181 voluntary parents.

Data Collection

The study data were collected between September 2015 and May 2016. Quantitative and qualitative data were collected electronically.

Data Collection Tools

The qualitative stage of the study uses a semi-structured interview form prepared for the parents. The questions on this form are: (a) What kind of technology devices does your child choose to use and why do they use them? (b) Do your children play digital games (e.g., on a computer, tablet, or mobile phone); if so, what digital games do they play? (c) Do your children play inside or outside? (d) What do you think about the differences among digital games, playing inside, and playing outside? The quantitative-stage questions were formed using the study results from the qualitative stage as multiple-choice questions.

Findings

Qualitative Data Findings

Data analysis was conducted over the 100 parents who participated in the first stage of the study. According to the analysis, 46.0% of parents stated their children use computers/tablets; 43.0%, mobile phones; and 9.0%, video game consoles (Xbox, etc.), televisions, or other devices.

In the context of the information parents provided, the reasons why children use computers/tablets have been examined under the main themes of purpose of use and preference reason. The sub-themes for purpose of use include academic support, free time, watching animated films, listening to music, playing games, and watching videos. The sub-themes for preference reason include independent use of computer/tablet, having a large screen, being comprehensive, being self-contained, and being comfortable to use.

Children's reasons for using mobile phones have been examined under the main themes of facilitating, purpose of use, and always at hand. The sub-themes for facilitating include accessible, easy to use, small, and portable. The sub-themes for purpose of use include watching animated films, taking pictures, looking at photos, communicating, using the Internet, listening to music, playing games, and watching videos.

According to the parents, the digital games children play have two main themes: educational games and other games. The sub-themes for educational games include intelligence games, painting games, word games, puzzles, and matching games. The sub-themes for other games consist of the two second-level subthemes of special games and general games. The sub-themes for special games include Angry Birds, Angela, AA Game, Pou, Minecraft, Max, Hay Day, Farmville, Where's My Water, Tom, Spiderman, and SimCity. The sub-themes for general games include car-racing, baby-care, dress-up, girl, jogging, make-up, cake-making, battle, and ball games.

Quantitative Data Findings

According to the study data, 44.8% of children use mobile phones, and 14.4% of them started using mobile phones at the age of one. According to the parents, children's purposes for using mobile phones are to watch animated films (26.5%) and play games (24.3%). Also, children's reasons for preferring mobile phones are accessibility (13.8%) and always at hand (12.7%).

According to the study data, 21.0% of the children use computers, and 5.5% of them started using computers at the age of two. According to the parents, children's purpose for using computers is to watch animated films (11.6%) and play games (11.0%). Also, children's reasons for preferring computers are their big screens (9.4%) and easy-of-use (5.5%).

According to the study data, 43.1% of the children use tablets, and 12.7% of these started using tablets at the age of two. According to the parents, children's purpose for using tablets is to play games (28.7%) and watch animated films (26.0%). Also, children's reasons for preferring tablets are ease-of-use (18.2%) and independent use (16.0%). In addition, 70.2% of children aged 0-6 watch television, 22.7% of which started watching television at the age of one.

Discussion and Conclusion

Activities involving developing technology have increased in quantity while changing in quality. Games, toys, and books have been replaced by televisions, computers, mobile phones, tablets, and game consoles. Using these technological devices, which are able to support child development, can bring some negativities if not consciously controlled. Therefore, the study has aimed to examine technological device usage in 0-6 year olds from parents' points of view. In this context and in consideration of the study's findings, 44.8% of the 0-6 year olds use mobile phones, 43.1% use tablets, 21.0% use computers, and 70.2% watch TV. According to data from the Turkish Statistical Institute (TÜİK, 2013), 60.5% of children aged 6-15 use computers, 50.8% use the Internet, and 24.3% use mobile phones. The use of media and technology has not been researched for the pre-school period in Turkey (Baykal, Oranç, Gökşun, & Küntay, 2017). Therefore, this study is a first to look into technology use by 0-6 year olds in Turkey. At the same time, it has limitations in terms of comparing the findings from this age group with other studies performed in Turkey.

The period from 0-6 years is when children develop the fastest. Also, this period in which developmental foundations are laid has critical importance in terms of cognitive, affective, personal, social, emotional, language, and motor-skills development. Apart from passive activities such as watching television in this period, which is important from a developmental viewpoint, children's progression to actively using mobile

phones, tablets, and computers can have positive and negative effects. Children's passive use of media can give rise to obesity, social withdrawal, attention problems, and irregular sleep (Epstein, 2015).

The study reports 44.8% 0-6 year olds to use mobile phones and their preferences for using mobile phones to be accessibility and always at hand. Children's preference for mobile phones is in harmony with mobile phones' technical components. Mobile phones' multifunctional features could also be children's reason for preferring them. With technical components, functions, and personalized features, mobile phones have gathered all technologies under one roof, covering individual's cognitive and social-emotional needs (Yan, 2018).

The 0-6 year olds in the study use mobile phones, tablets, and computers mostly for watching animated films and playing digital games. According to TÜİK (2013) data, 79.5% of 6-15 year olds who use the Internet and 66.8% of 6-15 year olds who use mobile phones use them to play games. Digital games that are played without within moderation provide catharsis and relief (Yalçın-Irmak, & Erdoğan, 2016); children can reinforce many of the concepts they've learned through digital games (Erdal, 2015). Games played in line with their aim can benefit children if not played excessively. However, children's video- and computer game-play can negatively influence their general and social developmental processes. Applications where technological devices mediate through the Internet have certain dangers, such as pornography, weapons, drugs, alcohol, and bomb-making, as well as physical, psychological, and social effects (Tuncer, 2000).

The upper-level cognitive abilities required for school success, such as children expanding their responsibilities, regulating emotions, controlling instincts, thinking flexibly, and creativity, are best taught using unstructured and real-life social games (American Academy of Pediatrics, 2016). For this reason, parents and specialists dealing with children can recommend preferring 0-6 year olds to use non-digital games in order for them to gain the abilities necessary for school success.

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