Big Data on Children's Use of Information and Communication Technologies in Türkiye

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ABSTRACT

This study examines the habits of children in Türkiye regarding their use of information and communication technologies (ICT) and the impacts of this usage on children. In today's world, where digital technology is rapidly proliferating, children's exposure to digital tools from an early age presents both opportunities and risks. Based on data from the Turkish Statistical Institute (TÜİK), the research analyzes children's internet, social media, and smartphone usage rates, purposes, and habits according to age and gender groups. The findings indicate that the vast majority of children have access to digital technologies, their usage durations are progressively increasing, and this situation affects children's development, social relationships, and daily routines. The study emphasizes the necessity of fostering digital literacy skills, providing parental guidance, and developing balanced usage habits.

1. INTRODUCTION

The rapid changes and advancements in science and technology in recent years have led to a swift increase in information and, consequently, transformations in the mass communication tools through which information is conveyed. In the past, when information was solely produced and shared in print media, it was sufficient for individuals, as information consumers, to possess basic skills. In an era where the mediums for producing and sharing information have diversified and become more complex, the use of technology for accessing information is a crucial element [1]. Therefore, technology, in its continually evolving form, has become integrated into life. This change and advancement have accelerated the production, dissemination, sharing, and utilization of information [2].

Digital technology use among young children (ages 4-6) has increased rapidly in the last decade. Young children now interact with various devices that offer non-interactive viewing as well as interactive games, learning, and social connection. While stationary devices like televisions and desktop computers remain prevalent in homes, portable devices provide young children access to digital technology both inside and outside the home. Furthermore, advancements in digital technology have led to the integration of digital literacy into educational curricula, further increasing the likelihood of a child's exposure to digital technology in a typical day [3].

The digital world is creating significant impacts on human life; it is transforming social, economic, political, and cultural structures. These developments are progressing rapidly and are expected to increase even more in the future. According to TÜİK data, the proportion of households in Türkiye with internet access increased from 42.9% in 2011 to 92% in 2021, while the rate of regular internet users among individuals rose from 45% to 82.6%. These figures show that individuals are increasingly benefiting from the opportunities offered by the digital world. It is noted that even those resistant to digitalization utilize digital means in areas such as banking, shopping, communication, and news acquisition, and that environmental factors have changed in this context [4].

For children, who are under the influence of many environmental factors during their developmental process, the time period in which they live and the environmental conditions arising from this period are extremely important. The stimuli children will encounter are directly influenced by these environmental conditions. The integration of digital technologies into children's daily lives and their impact on cognitive, emotional, and social development is increasingly widely accepted. However, it is also known that these new technologies offer new opportunities in children's learning processes [5]. Concurrently, these new applications and opportunities also impose new roles on parents.

As children's curiosity about using information and communication technologies becomes increasingly widespread, efforts are being made by parents, caregivers, and regulatory bodies to understand the potential benefits and challenges of this phenomenon. The rapid expansion of research in recent years has yielded a set of findings that deserve synthesis to inform recommendations and best practice guidance. Additionally, recent studies provide insight reflecting the evolving digital landscape with which children interact. This study aims to provide a comprehensive analysis by including all relevant variables associated with children's use of information and communication technologies in Türkiye.

2. DIGITAL TECHNOLOGY USE AMONG CHILDREN IN TÜRKIYE

2.1. Internet Usage Rate Among Children in Türkiye

Internet usage among children was 82.7% in 2021 and increased to 91.3% in 2024. When examined by gender, 92.2% of boys and 90.3% of girls used the internet. These rates were 83.9% and 81.5%, respectively, in 2021. Among children using the internet, 97.4% stated they used it regularly. This rate was 98.6% in 2021. Among children who regularly use the internet, 42.9% spent approximately two hours or more online on weekdays, and 53.6% did so on weekends. When daily internet use of approximately two hours or more was analyzed by age group, this rate was 30.6% for the 6-10 age group and 54.4% for the 11-15 age group on weekdays. On weekends, the rates were 43.2% and 63.5%, respectively [6].

2.2. Purpose of Internet Use Among Children in Türkiye

When examining the purposes of internet use among children who are regular users, the most frequent activities were watching videos (83.9%), doing homework, learning, or participating in online courses (75.0%), and playing or downloading games (72.7%). The least common activity among children on the internet was sending and receiving emails (13.2%).
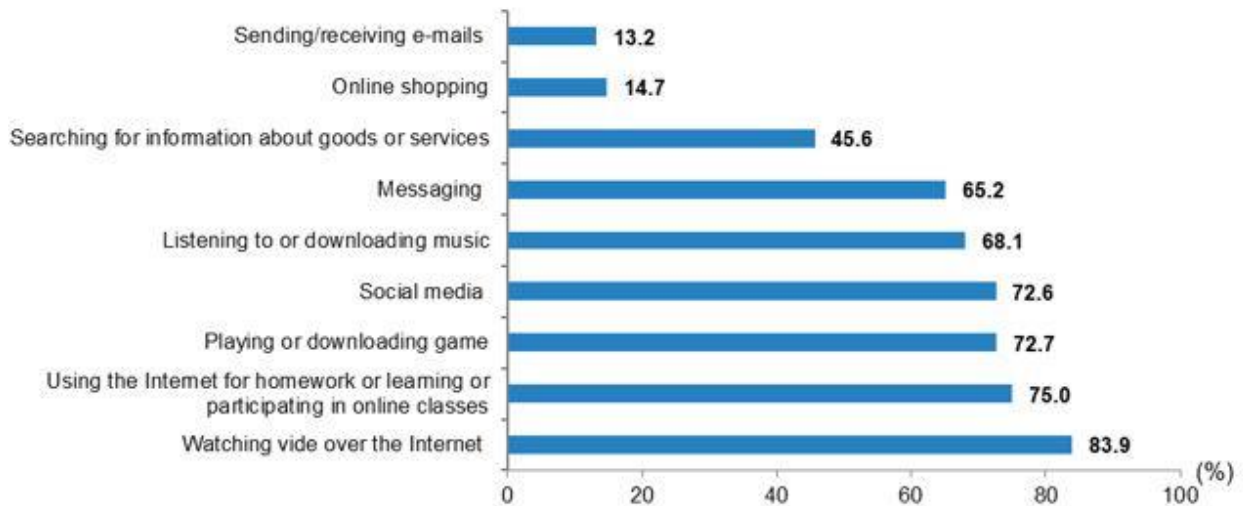

Figure 1. Purposes of Internet usage by children using Internet regularly, 2024

2.3. Social Media Usage Rate Among Children in Türkiye

The social media usage rate among children was 66.1% in 2024. It was observed that 68.1% of boys and 64.0% of girls used social media. When

social media usage is examined by age group; this rate was 53.5% in the 6-10 age group and 79.0% in the 11-15 age group. Among children using social media, 97.9% used it regularly. Among children who regularly use social media, the proportion spending approximately two hours or more on

social media platforms was 37.1% on weekdays and 49.5% on weekends. It was observed that the rate of children aged 11-15 spending approximately two hours or more on social media was almost 20 percentage points higher than that of children aged 6-10 [6].

2.4. YouTube Usage Rate Among Children in Türkiye

The most used social media platform among children was YouTube (96.3%). This category was followed by Instagram (41.5%), TikTok (26.2%), Snapchat (21.4%), Pinterest (13.6%), Facebook (9.5%), and X (4.9%). When the use of social media platforms is examined by age group; YouTube was the most used application in both age groups. The second place was taken by TikTok (11.7%) in the 6-10 age group and Instagram (63.0%) in the 11-15 age group.

2.5. Smartphone Usage Rates Among Children in Türkiye

In 2024, the proportion of children reporting they used a mobile phone/smartphone was 76.1%. When mobile phone/smartphone usage rates were analyzed by age group, this rate was 66.3% among children aged 6-10 and 86.2% among children aged 11-15. The proportion of children stating they regularly used a mobile phone/smartphone was 98.2%. When examining the purposes for which these children used their mobile phones/smartphones, the most common purposes were browsing the internet (77.9%), making video or audio calls (77.3%), watching movies, series, TV broadcasts, or videos (75.0%), and using social media (73.6%) [6].
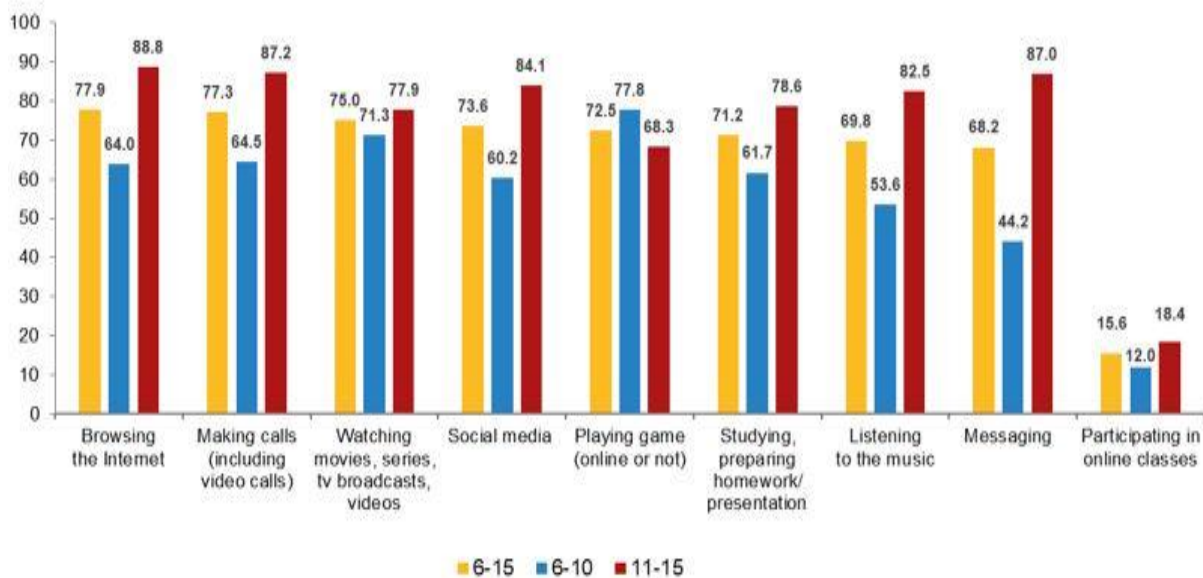

Figure 2. Purposes of phone use according to age groups

2.6. Phone Usage Habits of Children by Age Group

Among children who regularly use mobile phones/smartphones, 32.6% reported checking their mobile phones/smartphones at least every 30 minutes. This rate was 33.9% for boys and 31.2% for girls. Among children who regularly use mobile phones/smartphones and check them every half hour, the rate was 19.6% for the 6-10 age group, while it was 42.8% for the 11-15 age group. The proportion of children who regularly use a mobile phone/smartphone, check it at least every 30 minutes, check it as the last thing before sleeping and the first thing after waking up, and check it while watching TV and while eating with others was 3.4%. The proportion of children exhibiting at least one of these habits was 58.6%. This rate was 52.4% in 2021.
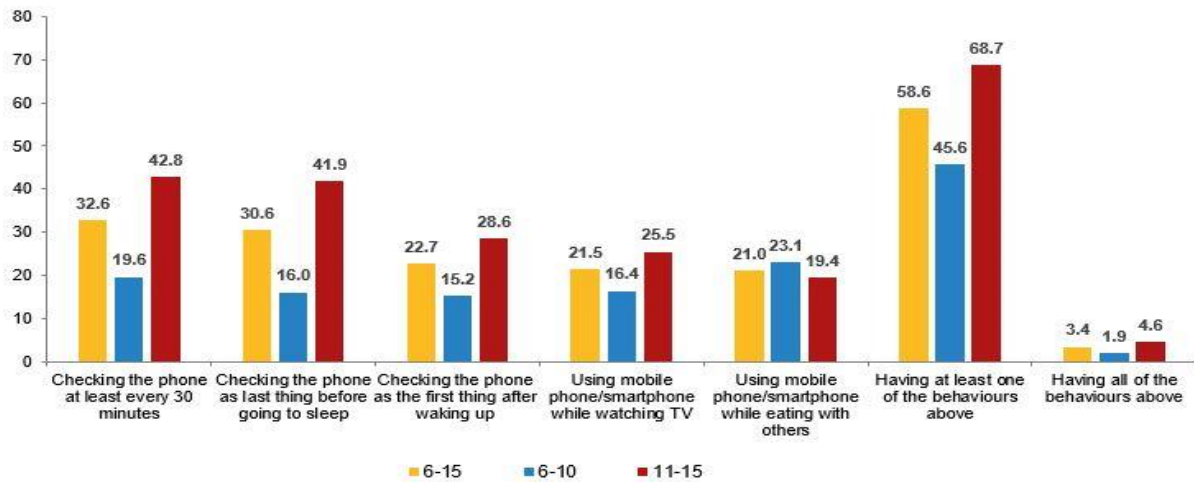
Figure 3. Phone usage habits of children using mobile phone/smartphone regularly by age group

3. CHILDREN'S USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES IN TÜRKIYE

3.1. Rate of ICT Technology Ownership Among Children by Age Group

The existing literature on children's use of digital technologies includes screen time, mobile device use [7,8], digital technology use [9], media use [10], and digital device use. Despite differences in definitions in the literature, findings to date show that children are accessing digital technologies at increasingly younger ages and spending more time using them [11]. In a 2024 survey conducted by TÜİK [6], the proportion of children who reported using at least one technology product such as a computer (desktop/laptop/tablet), mobile phone/smartphone, smartwatch, or game console solely for their own use was 63.8%. This rate was 66.9% for boys and 60.5% for girls. When children who own an ICT product solely for their own use were analyzed by age group, the most significant difference was observed among children using mobile phones/smartphones. In 2024, the proportion of children owning a computer solely for their own use was 35.7%, a mobile phone/smartphone was 43.9%, and a smartwatch was 14.3%. In 2021, these rates were 46.3%, 39.0%, and 3.9%, respectively.
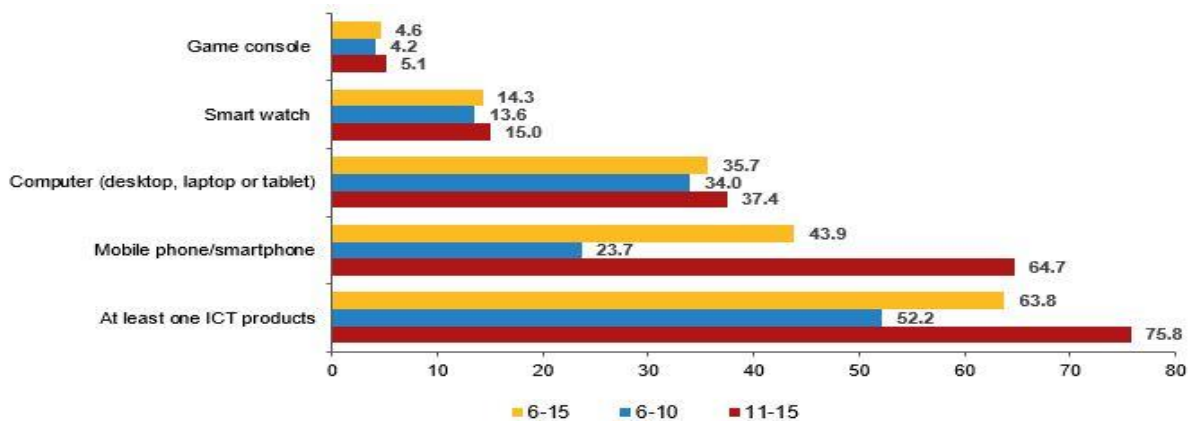

Figure 4. Rate of ICT technology ownership among children by age group

3.2. Digital Game Playing Rate by Gender

In 2024, the proportion of children who reported playing digital games was 74.0%. When the digital game playing rate was analyzed by gender and age group; the rate for boys was 82.8%, while for girls it was 64.8%. This rate was 80.6% for boys and 70.6% for girls in the 6-10 age group; in the 11-15 age group, it was 85.0% for boys and 58.7% for girls.

Among children playing digital games, 90.8% stated they played games regularly. It was observed that 25.6% of children playing digital games regularly on weekdays and 41.8% of those playing regularly on weekends spent two hours or more per day. When analyzing children who play digital games for approximately two hours or more per day by age group, this rate was determined as 21.8% for the 6-10 age group and 29.8% for the 11-15 age group on weekdays. On weekends, these figures were 37.4% and 46.6%, respectively.

When children who play digital games regularly were asked about their personal thoughts regarding playing games, 46.3% stated that their parents thought they played games for too long. Among children who regularly play digital games, 40.1% reported playing more than planned, 35.6% said playing games caused them to neglect their responsibilities, 29.9% stated they devoted too much time to playing games, and 23.4% reported feeling restless and unhappy when not playing digital games. When children were asked about situations resulting from the time they spend in front of screens for activities such as computer, mobile phone/smartphone, internet and social media use, playing digital games, and watching television, 34.4% of children stated they read fewer books due to spending more time in front of screens. This was followed by 33.3% studying less, 25.5% spending less time with family, 18.6% meeting face-to-face and playing with friends less, and 17.2% sleeping less.

4. Conclusion

The use of information and communication technologies by children in Türkiye is becoming increasingly widespread and profound. Internet access, social media usage, smartphone ownership, and digital game playing rates show a marked increase, particularly in the 11-15 age group. While this situation facilitates children's integration into the digital world, it can also bring negative consequences such as excessive use, distraction, reduction in social relationships, and lack of physical activity. Research data reveal that for a significant portion of children, the time spent in front of screens shortens time spent reading books, studying, and being with family and friends. In this context, the proper guidance of digital technologies as tools in children's development is of great importance. Parents, educators, and policymakers should develop children's digital literacy skills, raise awareness about safe internet use, and adopt balanced approaches to screen time management. Future studies are recommended to monitor the long-term effects of digital technologies on children's cognitive, emotional, and social development and to develop intervention programs.

Conflict of Interest

The authors declare that there is no conflict of interest.

Author Contributions

Study Design, ND; Data Collection, ND; Statistical Analysis, ND; Data Interpretation, ND; Manuscript Preparation, ND; Literature Search, ND. Author have read and agreed to the published version of the manuscript.

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