

## INFLUENCE OF DIGITAL TECHNOLOGIES ON THE SPEECH DEVELOPMENT OF 5-TO-7-YEAR-OLD CHILDREN

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**Abstract.** The present paper presents the results of an author's research on the influence of social information environment on the speech development and communication skills of five-to-seven-year-old children. It outlines the aspects of the impact of virtual space created through digital information technologies and analyses their effects on children's speech development. Reasons are given for a discussion on the possibilities for overcoming the communication deficits provoked by the excessive use of electronic media.

**Keywords:** digital technologies; information; children; speech development; technologies; communication

### Introduction

Technologies are an integral part of modern society. To a large extent, they determine the direction of its development. They change dynamically and make us dependent on the highly efficient possibilities provided by them. In everyday life as well as the professional activity of people, the need for TVs, mobile phones, computers, tablets, and other technologies is growing. Parents rely on their use because their work is related to them but do not take into account the negative influence leading to changes in their life and that of their children.

Digital technologies attract children's attention quite early. The receptivity of children greatly facilitates the mastery of the ways to use them for entertainment purposes. But for the adults involved in their upbringing and education, it is important to what extent in the long run this entertainment influences the speech development of the growing individuals and stimulates their skills for real communication.

It is an indisputable fact that digital technologies constantly change children's daily lives. Children live in a digital world that offers them various stimuli inherent in the social information environment. They are attractive and dynamic. These characteristics of theirs provoke the need for impressions of the growing individuals seeking to discover the new and the unknown. Curious, impulsive, and emotional,

the children of the 21<sup>st</sup> century easily enter the world of technologies. Who is around? Does the huge amount of information from electronic media stimulate the development of children's speech or has a negative effect on its dynamics? What is the direction of the vector of impact of virtual environment on children's speech development through digital technologies? Does it expand their speech range or limit their social life and distance them from others? To what extent the immersion in what they see through the media stimulates the development of speech and the communication with peers and parents? What is the responsibility of adults to facilitate and promote connection with others through communication?

The research interest directed by the questions asked provoked a purposeful study of the influence of digital technologies – television, internet, electronic games, telephones, tablets – on children's speech development. The results of the observation on the communication between children in different regime moments in educational institutions determined the research goal: research on the influence of digital technologies on the speech development in preschool childhood.

It is assumed that there is a correlation between the speech development of 5-to-7-year-old children and the active use of electronic technologies in children's daily lives.

In connection with the research goal and to prove the hypothesis of the study, the following main tasks were differentiated:

1. Analysis of modern research in the problem area indicated;
2. Development of a methodology for ascertaining the interests of 5-to-7-year-old children in electronic technologies and its impact on speech development;
3. Establishing the opinion of parents about the impact of electronic technologies on the lives of children in the context of their educational control function.

### **Methodology**

To test the hypothesis, a pilot study was conducted with the participation of 20 parents and 10 children aged 5 to 7 years from the preparatory group of St. Patriarch Euthymius Primary School in the town of Veliko Tarnovo.

An author's methodology was used, which included:

1. Survey with the parents: the survey contained 12 questions with scaled and optional answers;
2. Interview with the children;
3. Projective test named *My Favourite Character*.

### **Results**

Freedom of speech is a constitutional fact in Bulgaria. More than 200 licensed and registered programmes are currently produced and distributed on air, by cable or satellite. Many foreign and TV channels are added to them. According to the Humanities Centre, children's programmes are 3% of them or a total of 15,000 out of

50,000 hours. In cinema and television, for example, frames are changed 24 times a second, and children's brains cannot process such an amount of information. At the same time, the real world does not move or change at such a pace. As a result, it becomes uninteresting to children addicted to the screen. The rapid movement of images leads to overstimulation of children's brains and makes it difficult to focus on less intense tasks and activities that require more thinking and concentration.

The information in the global network is far more voluminous. Surfing the net has no predetermined result. The challenge is huge. Seemingly harmless games have a strong effect on the psyche of children. They are often associated with a victory won by battle, with various means at hand leading to suffering and a fatal outcome for the game characters. Children move from level to level only if they have eliminated a certain number of living beings. Under such influence, they often do not distinguish between real and imaginary due to the visual nature of the thought processes and behavioural patterns established. This has a negative effect on their ability to verbalize thoughts. It provokes manifestations of negativism in communication, which is projected into a „general “criminalization” of children's subculture in the field of language, game forms of communication, and general attitudes” (Hristova 2008, p. 43). The inability of preschool children „to understand basic knowledge and to be able to apply it in various life situations can lead to negative changes in their personality, to severe mental breakdowns, and unforeseen behavioural reactions” (Petrova 2020, p. 44).

According to UNESCO, nowadays 93% of the children between the ages of 3 and 6 spend 28 hours a week in front of the screen, i.e. about 4 hours a day. Parents generously provide them with smartphones, tablets, and other technologies to spend more time at ease. Digital technologies engage children's attention with spectacular entertainment opportunities. At first glance, there are benefits for both parties. But is that really the case?

A Sell Cell study shows that 42% of children under the age of 7 spend at least 30 hours a week staring at their smartphone, and 12% use a smartphone before the age of two. Before they turn six, 47% have a smart device.

A study by Michelle Macroy-Higgins and Carlon Colker found that „toddlers learn language best through communication with others. Children who listen to less speech at home have poorer speaking skills and smaller vocabularies” (Colker, Macroy-Higgins 2014, p. 35).

One of the indicators for the full development of growing individuals is the ability to establish connections with other people and emotionally connect with them through verbal contact. Its formation should be purposefully facilitated by adults. Its sustainability is a function of the communication in the family. Ensuring communication is tied to the competencies and experience of parents in the field of education. According to P. Konakchieva, the determining factors here are „cognitive competence (knowledge of children's development and specifics of

upbringing), communicative competence (communication skills, formation of harmonious relations with the child, conflict resolution, etc.), value and sense competence (viewing children as a value and awareness of the mission of parenting in society), behavioural competence (competences for maintaining health, for managing relationships and forming emotional attachment)” (Konakchieva 2019, p. 23). Together, they provide a significant compensatory effect for the development of children because „the deficit in the child’s individual experience is constantly made up through communication and communication experience which is transferred by the adult through interaction in the development process. Thus, artistic language is born within the child’s creative activity as a desire to respond to the communication with an adult” (Legkostup 2017, p. 385).

Communication between children, adults, and peers is the basis for development of speech and expression. According to D. Chuhovska, by mastering language models of communication and transmitting them through the speech act, children strive to respond adequately to the situation, build a strategy, follow a certain discourse, and achieve their communicative intentions that are mediated by interaction with the social environment. (Chuhovska 2016, p. 132 – 136). Technologies are changing the way children's socialization and communication take place. Meetings and face-to-face communication are declining, and virtual communication through various social networks can have a huge negative impact on the mental, emotional, and speech development of the growing individuals. One should not overlook the fact that according to children, what they hear on the screen does not help them in real life communication. Children's intuitive assessment finds support in the research-proved importance of „various types of social interactions that are fundamental for building and regulating interpersonal and intrapersonal social positions and relationships” (Konakchieva, 2016, p. 142).

In this context are the findings made on the basis of the author's research. The analysis of the results of the survey with the parents showed that they often left their children choose their own activities, and their preferences were as follows:

- Tablets;
- PlayStations;
- Smartphones;
- Children's TV shows (movies, series).

A mother said she bought a tablet for her child because his peers told him about a game he also wanted to play. Most parents did not see any danger in their children's computer activities. Their arguments were that their children were small, did not understand, and did not need control. Others found excuses and said they were a new generation and needed to know and be able to work with computers, no matter what they did when using them. They even believed that games were the best tool for learning and speech development. Despite the positive attitude to children's activities in cyberspace, they did not control

them, did not know their favourite characters, did not set time limits. Some of those who wanted to limit their children tried to impose control, but came to their resistance; in conversations, they shared that the children, when separated from their activities, behaved rudely, expressed disagreement by using rude expressions and words, did not show interest in other conversations on topics other than those, and it was difficult to motivate them to discuss issues other than the ones related to the game. However, the parents supported the unreal world built by their children by buying clothes, toys, accessories with the images of their favourite characters. A large part of the respondents - 60% - reported changes in their children's behaviour due to frequent television watching and using the Internet. They described them as follows:

- difficult communication with other children and family members;
- not showing interest in conversations, difficult motivation;
- asking questions that are not typical for the age.

Although the parents considered digital technologies to be a bad solution for entertainment and activities, they could not limit their children's stay in front of the electronic devices. The participants in the research unanimously confirmed that educational television programmes did not support the speech development of their children. Their position corresponds to the results of modern research showing that „without supportive adults and secure communicative connections with them, the activity of the frontal and temporal parts of the brain responsible for social relationships, emotions, and language decreases” (Popova 2017, p. 251).

The data from the interview testified to the steadiness of the children's preferences for watching movies and games on the Internet. Visual environment occupied a main place in their interests. They said that when they came home from kindergarten, they spent time in front of a tablet, TV or PlayStation, and when they were in the park with friends, they often looked for their parents' phone to play because they were bored and had nothing to do. Their favourite games were: Brawl Star, Minecraft, Roblox, Talking Tom Cat, etc.

Their favourite characters from movies and games were Rapunzel, Elsa, Rubble, Chase, Nita, Pam, Spike, Leon, etc., but they found it difficult to tell about a character of their own choice. They used sentences without a logical connection. With the help of supporting questions, they structured a story with effort.

As a result of the research conducted and the analyses performed, the following conclusions can be drawn:

1. The existing international and national legislation in the field of digital technologies is not effective enough and cannot stop their commercialization.
2. Parents do not spend enough time talking to their children, playing, and walking with them.
3. Children have unlimited access to electronic technologies, which has a negative impact on their speech development.

4. Expert support is needed for parents' efforts to limit the negative effects of digital technologies on the competencies of the growing individuals to interact with the world through active communication.

### **Discussion**

The results of the research conducted provoke a discussion with a focus on current challenges related to effective regulation of the quality of children's virtual world. Countless non-compliant documents regulate rules for electronic technologies. There are regulatory commissions that nevertheless give priority to commercialism. We still want access filter programmes, controlled educational sites for children, accounts with trackers, education in prevention, discussion with parents and teachers, and other effective measures to optimize the work on limiting the harmful effects of digital technologies. In this problem area, the commitments of the institutions should be clearly outlined:

- the state: with working laws and monitoring;
- educational institutions: with individualized programmes that stimulate interactivity and sociability; creation of a wide range of opportunities for the realization of children's interests in order to develop speech;
- families: with control and communication with children; directing children's activity to sports, arts, walks with friends, outdoor playing activities, and other dynamic activities based on the exchange of emotions, impressions, and ideas.

### **Conclusion**

Digital technologies have a negative impact on the speech development of 5-to-7-year-old children. They limit the contact with parents and peers and thus generate speech problems that negatively affect children's integration into the social world. Overcoming them requires the joint efforts of responsible institutions and entities with a commitment to ensure full functioning of children in socio-cultural terms.

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