THE IMPACT OF MODERN DIGITAL TECHNOLOGIES ON SPEECH DISORDERS IN CHILDREN: POSITIVE OPPORTUNITIES AND NEGATIVE CONSEQUENCES

Jumaniyozova Munira Khurshid qizi
4th-year Student, Faculty of Pedagogy, Psychology, and Inclusive Education,
Nizami State University of Uzbekistan

Annotation

This article is devoted to a scientific and pedagogical study of the influence of modern digital technologies on speech disorders in children. The findings of the research demonstrate that, when used appropriately and under pedagogical supervision, interactive applications, audiovisual materials, and speech therapy programs contribute to the expansion of children's vocabulary, the development of phonemic awareness, and the formation of proper speech culture. Conversely, excessive screen time, passive content consumption, and solitary use of digital devices increase the risk of speech impairments, stuttering, delays in dialogic speech, and social isolation.The article provides practical recommendations for the rational use of digital technologies and the development of children's communicative potential, based on the speeches and decrees of the President of the Republic of Uzbekistan, Shavkat Mirziyoyev. Among these recommendations, particular emphasis is placed on adjusting screen time according to age, subjecting digital content to pedagogical evaluation, fostering a culture of digital hygiene, employing interactive yet dialogue-based learning, and utilizing specialized speech therapy programs.

Keywords

Digital technologies, children's speech, disorders, speech therapy, pedagogical supervision, interactive learning, presidential decrees

Introduction

In today's era of globalization and information technology, digital technologies are becoming an integral part of human life. In particular, mobile devices, Internet networks, artificial intelligence-based applications, and multimedia tools have a direct impact on the developmental processes of children. While the digital environment expands opportunities for children to acquire knowledge, communicate, and shape their worldview, its influence on their speech development and communicative competence is multifaceted—both positive and negative—emerging as a pressing scientific issue.

As emphasized by the President of the Republic of Uzbekistan, Shavkat Mirziyoyev: "In building the New Uzbekistan, young people who possess deep knowledge and mastery of digital technologies will be a decisive force." From this perspective, the development of a digital educational environment and the instruction of the younger generation in the rational use of information technologies have been identified as a priority task for the country.In particular, the "Digital Uzbekistan – 2030" strategy, decisions aimed at the digitalization of the education system, and regulatory acts on the modernization of preschool and primary education have established the legal framework for these reforms. At the same time, in his speeches, the President has placed special emphasis on the upbringing of young people, their moral and ethical development, and healthy growth, noting that "Raising our children to become well-rounded individuals is our most important task." This underscores the need for a thorough study of children's psychological and speech development characteristics in the process of using digital technologies.

Scientific studies indicate that excessive use of digital devices may lead to negative consequences in children, such as a reduction in vocabulary, slowing of dialogic speech,

articulation disorders, and a decline in attention and memory processes. Conversely, interactive applications, audiovisual programs, and educational platforms, when used purposefully and under pedagogical supervision, contribute to the expansion of children's vocabulary, the development of phonemic awareness, and the formation of proper speech culture.

Children's speech is a complex psycholinguistic process shaped by biological, social, and pedagogical factors. L.S. Vygotsky, A.R. Luria, and J. Piaget emphasized the decisive role of social interaction in speech development. In particular, the age range of 0–7 years is considered the most sensitive period for speech formation. Recent studies (WHO, 2019; American Academy of Pediatrics, 2020) indicate that excessive use of screen-based devices can lead to delays in children's speech development.

Passive content consumption (such as watching cartoons or videos) does not promote the development of active speech in children, as the child listens but does not respond. Studies show that children who spend excessive time in front of screens may have a vocabulary that is 15–20% lower and tend to use grammatically simpler sentences. Moreover, individual use of smartphones or tablets can lead to phonetic and phonemic disorders. Speech therapy practice indicates that among children aged 4–6, there is an increase in the incorrect pronunciation of sounds such as "r," "l," "sh," and "ch," as well as stuttering and disruptions in speech tempo.

The one-way nature of information transmission in the digital environment contributes to the weakening of dialogic speech. This condition reduces question-and-answer skills, limits the ability to express thoughts coherently, and diminishes social communication competencies. According to Twenge (2018), children who excessively use gadgets experience increased social isolation and decreased verbal activity.

Audiovisual tools simultaneously activate both the auditory and visual analyzers, accelerating the process of speech perception and aiding in the improvement of pronunciation when learning foreign languages. If parents or educators discuss the content with the child, screen time can have a positive impact on speech development. Additionally, for children with speech impairments, specialized voice-based programs, alternative communication tools, and artificial intelligence-based technologies contribute to enhancing communicative independence.

To mitigate the negative effects of digital technologies and make effective use of their positive potential, it is necessary to regulate screen time according to age, subject digital content to pedagogical evaluation, foster a culture of digital hygiene, develop methodological guidelines for parents, and prioritize an interactive yet dialogue-based approach in the educational process.

To reduce the negative impact of digital technologies and make effective use of their positive potential, it is necessary to:

➢ Regulate screen time according to age;
➢ Subject digital content to pedagogical evaluation;
➢ Foster a culture of digital hygiene;
➢ Develop methodological guidelines for parents and educators;
➢ Prioritize an interactive, dialogue-based approach in the educational process.

As emphasized by President Shavkat Mirziyoyev in his speech on March 5, 2022: "Raising our children to become well-rounded individuals is our most important task," this once again underscores the necessity of the rational use of digital technologies.

Today, although digital technologies have become an integral part of children's lives, their impact on speech development is twofold—both positive and negative. Research shows that interactive applications, audiovisual materials, and speech therapy programs, when used appropriately and under pedagogical supervision, help expand children's vocabulary, develop phonemic awareness, and foster proper speech culture. At the same time, excessive screen time,

passive content consumption, and solitary use increase the risk of speech disorders, stuttering, slowing of dialogic speech, and social isolation.

Practical Recommendations:

➢ Adjust screen time according to age: For children aged 0–2, screen use is not recommended at all; for children aged 2–5, daily screen time should not exceed 1 hour.

➢ Subject content to pedagogical evaluation: Multimedia, applications, and videos should be selected in a way that positively affects the child's speech development.

➢ Foster a culture of digital hygiene: Parents and educators should protect children from prolonged screen exposure and coordinate it with communication and learning activities.

➢ Interactive, dialogue-based learning: The use of applications and audiovisual tools should be conducted under pedagogical supervision, with discussions and exercises carried out together with the child.

➢ Use of specialized programs and inclusive tools: For children with speech impairments, speech therapy applications, voice exercises, and artificial intelligence-based communication tools are effective in strengthening speech and social skills.

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