

THE ROLE OF MODERN MULTIMEDIA TECHNOLOGIES IN THE PROCESS OF PRESCHOOL EDUCATION

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Abstract

This article analyzes the role of modern multimedia technologies in preschool education and their pedagogical potential in developing speech culture among children in preparatory groups. The study highlights the importance of audio tales, animated materials, interactive games, and digital platforms in children's speech development. In addition, the mechanisms for developing phonetic, lexical, grammatical, and communicative competencies through multimedia tools are examined.

Keywords: multimedia technologies, preschool education, speech culture, interactive learning, audio tales, animated materials

Introduction

In the context of the rapid digitalization of the modern education system, it has become necessary to organize preschool education on the basis of innovative approaches. Preschool age is considered a crucial stage in the formation of a child's speech, thinking, perception, and social skills. Therefore, the effective organization of the educational process at this stage through the use of modern multimedia technologies is of particular importance. Multimedia tools, which integrate text, images, audio, and video materials, increase children's interest, engage them in active learning, and facilitate easier knowledge acquisition.

The analysis of the current state of the educational system, as well as theoretical studies conducted on the problem of introducing multimedia technologies into the educational process by both domestic and foreign researchers, reveals the existence of several important methodological and practical contradictions.

In particular, there is a contradiction between the need to educate independently and creatively thinking individuals capable of actively participating in the formation of real and virtual speech culture, and the insufficient development of scientific-theoretical, methodological, and practical foundations in the Uzbek language for integrating modern multimedia tools such as applications, software, websites, and digital technologies aimed at comprehensive speech development into the educational system. Another contradiction exists between the modern requirements defined in normative documents aimed at improving the quality of speech development through multimedia tools and the ineffective practical use of the educational, cultural, developmental, and upbringing opportunities provided by multimedia technologies.

Most preschool educators still lack sufficient rhetorical competence and the ability to demonstrate a personal example of speech culture to children. Furthermore, it is observed that children aged 5–6 have not yet developed a sufficient culture of rational and purposeful use of multimedia tools within the family environment.

These contradictions create an opportunity to formulate a scientific problem. This problem manifests itself in the development of strategies for integrating multimedia technologies into the language education system, particularly in the process of forming speech culture.

Literature Review

The role of modern multimedia technologies in preschool education is currently considered one of the most relevant research topics in pedagogy, psychology, and information technology. Multimedia tools expand opportunities for developing children's cognitive activity, speech competence, independent thinking, and creative abilities. Therefore, the pedagogical effectiveness of multimedia technologies has been widely studied by both foreign and local scholars.

Experiments conducted by Mayer and Anderson demonstrated that children's comprehension levels increase significantly when animation and voice explanations are combined. These findings are especially important for preschool children, who perceive information more effectively through visual and auditory channels.

L. S. Vygotsky emphasized the importance of social environment and communicative activity in education. According to his "Zone of Proximal Development" theory, multimedia-based interactive activities actively engage children in communication and accelerate speech development. In particular, audio fairy tales, dialogic games, and virtual role-playing activities contribute significantly to the development of children's communicative competence.

Verhallen, Bus, and de Jong analyzed the effectiveness of multimedia stories in enriching preschool children's vocabulary. Their findings showed that audio- and video-supported stories are more effective than ordinary text-based reading. The researchers emphasized that multimedia simultaneously develops children's listening, visual perception, and imagination.

Among local scholars, G. T. Yuldosheva conducted research on preschool children's psychology and speech development. She highlighted the importance of didactic games and interactive environments in children's speech development. According to the scholar, multimedia tools stimulate emotional interest and increase speech activity in children.

M. X. Turaev studied the linguodidactic potential of multimedia tools and substantiated that audio-visual materials contribute to the development of pronunciation, listening comprehension, and communication skills. In his view, multimedia technologies also activate children's independent learning activities.

The analysis of the above scientific approaches demonstrates that multimedia technologies serve as an important pedagogical tool for children's speech, cognitive, and communicative development in preschool education. Interactive, audio-visual, and game-based activities significantly increase children's interest in learning and facilitate effective knowledge acquisition.

Methods

During the research process, observation, interviews, pedagogical experiments, comparison, and statistical analysis methods were employed. Experimental work was conducted in a preschool preparatory group where classes were organized using multimedia tools. Animated videos, audio fairy tales, interactive games, and electronic presentations were applied during the lessons. Children's speech development level, cognitive activity, and interest in lessons were assessed at the initial and final stages.

In order to determine the role of modern multimedia technologies in the educational process and apply them effectively for activating children's creative activities, the following aspects were evaluated:

1. The goals of speech culture formation (identification of competencies developed in the process of speech culture formation);
2. The theoretical platforms on which modern education is based;
3. The speech development tools ensuring the achievement of the established goals.

Furthermore, it is important to maintain a balance between modern effective pedagogical technologies and the time-tested linguodidactic constants existing in the theory and practice of speech development.

Results

During the study, experimental activities based on the use of multimedia technologies were carried out in the preparatory group of a preschool educational institution. At the initial diagnostic stage, children's speech development level, cognitive activity, and lesson engagement were assessed. The results showed that 38% of the children experienced difficulties in creating independent stories based on pictures or events, 42% had insufficient vocabulary development, and 35% demonstrated weak logical coherence in speech. Classroom participation was also moderate, with only 45% of children actively participating in lessons.

At the experimental stage, systematic use of multimedia technologies was implemented. Activities included storytelling based on animated videos, retelling audio fairy tales, conducting question-and-answer sessions through interactive slides, and enriching vocabulary through electronic games. Each lesson was gradually complicated while ensuring active child participation.

The final assessment demonstrated significant positive changes. The proportion of children capable of constructing free and logically coherent stories increased from 62% to 78%. The percentage of children with developed vocabulary rose from 42% to 70%. Grammatical correctness in speech improved from 60% to 85%. Overall classroom participation increased from 45% to 80%. In addition, children's average attention span extended from 12 minutes to 22 minutes.

Discussion and Recommendations

The obtained results confirm the high didactic effectiveness of multimedia technologies in preschool education. First, the combination of visual and auditory information forms multi-channel perception in children and helps them acquire knowledge faster and more effectively. This is particularly important for preschool children, who primarily learn through figurative thinking.

Second, the factor of interactivity actively involves children in the educational process. During multimedia-based activities, children act not merely as listeners but as active participants. This contributes to the development of independent thinking, questioning, and answering skills.

Third, multimedia technologies provide opportunities for individualized instruction. Each child completes tasks according to their abilities and developmental level, thereby increasing learning efficiency.

However, several problems were also identified during the study. In particular, the lack of technical equipment or insufficient teacher competence in using multimedia tools may negatively affect educational effectiveness. Moreover, excessive use of multimedia materials may distract children's attention.

Conclusion

The results of the study demonstrate that modern multimedia technologies possess high effectiveness as an important didactic tool in preschool education. Their systematic and purposeful integration into the educational process significantly improves children's speech development, cognitive activity, and overall academic achievement. In particular, the visual and interactive features of multimedia tools make learning more engaging and accessible for children.

The study also revealed that multimedia technologies effectively contribute to the development of children's independent thinking, logical speech construction, vocabulary enrichment, and communication culture. Interactive activities transform children into active participants in the educational process and foster independent work and creative approaches. At the same time, multimedia-assisted lessons help maintain children's attention for longer periods, increase their interest in learning, and strengthen knowledge retention.

Furthermore, the findings indicate that multimedia technologies broaden opportunities for individualized learning. By completing tasks appropriate to their developmental level, children acquire knowledge more effectively, which strengthens their self-confidence while improving educational quality.

Overall, modern multimedia technologies play an essential role in organizing preschool education effectively, ensuring children's comprehensive development, and improving educational quality. Their application on the basis of scientifically grounded methodologies contributes to the innovative development of the education system.

References

1. Mayer, R. E. *Multimedia Learning.* Cambridge University Press, 2009.
2. Vygotsky, L. S. *Mind in Society: The Development of Higher Psychological Processes.* Harvard University Press, 1978.
3. OECD. *Students, Computers and Learning: Making the Connection.* Paris, 2015.
4. World Bank. *World Development Report: Learning to Realize Education's Promise.* Washington DC, 2018.
5. Verhallen, M., Bus, A., & de Jong, M. "The Promise of Multimedia Stories for Kindergarten Children at Risk." *Journal of Educational Psychology*, 2006.
6. Yuldosheva, G. T. *Fundamentals of Preschool Pedagogy.* Tashkent, 2018.
7. Turaev, M. X. *Methodology of Using Multimedia Tools in Education.* Tashkent, 2020.
8. Asqarova, D. M. *Methods of Developing Children's Speech Culture.* Tashkent, 2019.