



THE IMPACT OF DIGITAL TOOLS ON PEDAGOGICAL COMMUNICATIVE ACTIVITY AND RHETORICAL COMPETENCE IN A DIGITAL EDUCATIONAL ENVIRONMENT

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Abstract: This article provides a scientific and pedagogical analysis of the impact of digital tools on pedagogical communicative activity and rhetorical competence within a digital educational environment. The concepts of pedagogical communicative activity and rhetorical competence, and the features of their transformation under digital conditions, are examined. The positive and negative influence of five digital tools — video conferencing, written-text communication tools, multimedia, social network platforms, and artificial-intelligence-based speech analysis tools — on pedagogical communication and rhetorical competence is substantiated from a scientific and practical perspective.

Keywords: pedagogical communication, rhetorical competence, digital educational environment, video conferencing, artificial intelligence, nonverbal communication, speech culture, teacher activity, professional training, digital tools.

Introduction. Pedagogical communication activity - the process of transmitting knowledge, ideas, and relationships between teacher and student - is considered one of the most important factors determining educational effectiveness [1]. The quality of this activity largely depends on the teacher's rhetorical competence, i.e., the ability to express thoughts clearly, effectively, and appropriately.

The rapid development of the digital educational environment is fundamentally changing the nature of pedagogical communication activities - instead of traditional, face-to-face communication, forms of communication carried out through video conferencing, written chat, multimedia, and other digital tools are expanding [2]. This change can have both positive and negative effects on pedagogical communication; therefore, it is necessary to scientifically analyze its specific mechanisms.

From this perspective, a scientifically systematic analysis of the mechanisms of influence of various digital tools on pedagogical communication activity and rhetorical competence in a digital educational environment determines the relevance of this article [3].

The level of study of the problem. The theoretical foundations of pedagogical communication activity are deeply developed in the fundamental research of V.A. Kan-Kalik[1], which substantiates the structural stages and methods of pedagogical communication. The theory of pedagogical rhetoric is covered in the works of T.A. Ladizhenskaya. Issues of digital communication and communication in the context of online education are analyzed in the research of G. Salmon [3].

In domestic pedagogical science, the works of R. Yunusov [4] cover the methodology of teaching oratory and speech culture in higher education, while the works of N. Ishmukhamedov [5] highlight the general possibilities of digital educational technologies.

Nevertheless, an analysis of the conducted scientific research shows that in domestic pedagogical science, there are still insufficient comprehensive studies analyzing the influence of various digital tools on pedagogical communication activity and rhetorical competence, each with its own positive and negative aspects. Filling this gap determines the scientific and practical significance of this research.

Discussion. When analyzing the concept of pedagogical communication activity, it is necessary to consider it not merely as information transfer, but as a complex, multi-layered process of interaction between the teacher and the student [1]. Rhetorical competence is one of the main tools determining the quality of this process, which includes the semantic-logical structure of speech, the use of expressive means of language and non-verbal rhetoric.

Video conferencing tools (Zoom, Teams) allow for pedagogical communication without geographical restrictions, but through them, non-verbal signals—full body movement, positioning on the stage—are partially restricted [2]. This requires the educator to pay special attention to the sound-intonation aspect of speech, i.e., the tone of voice and speech tempo, as the primary means of attracting attention now relies more on sound and facial expression.

Written-text communication tools (chat, forum, messenger) allow the educator to express thoughts thoughtfully, without time pressure [3], which develops the ability to express thoughts in a clear, logical, and written form. However, such a form of communication limits rapid, lively, spontaneous communication, and the complete absence of intonation and non-verbal elements sometimes makes it difficult to convey the true meaning of the thought.

Multimedia and audio-visual tools enrich the teacher's speech with visual and sound elements, allowing for a more understandable conveyance of complex ideas [4]. However, the excessive use of these tools can relegate the speech itself to a secondary level, leading the educator only to the position of a "slide reader." Social networks and platforms with a wide audience encourage the educator to communicate with an unfamiliar, wide audience, which develops public speaking skills and adaptation to different audiences, but also poses the risk of a tendency toward a superficial, "click-oriented" style characteristic of such platforms [5].

Speech analysis tools based on artificial intelligence allow for the rapid analysis of a teacher's speech based on objective statistical indicators (speech rate, number of parasitic words). Although these tools serve self-control and correction of technical aspects, they cannot fully assess the artistic and emotional impact of the speech, the internal connection of the teacher with the audience. Therefore, it is advisable to use all digital tools in a complementary manner, combining them with the teacher's live, high-quality self-assessment and teacher-student interaction.

Results. In the process of analyzing the impact of five digital tools on pedagogical communication activities and rhetorical competence, their positive and negative impacts and practical recommendations were systematized. The results of the analysis are summarized in the table below:

No	Digital tool	Impact on pedagogical communication	Impact on rhetorical competence	Practical recommendation
1	Video conferencing	Allows you to communicate without	As a result of the partial restriction of non-verbal signals	Strengthening exercises for conscious control of

Nº	Digital tool	Impact on pedagogical communication	Impact on rhetorical competence	Practical recommendation
	tools (Zoom, Teams)	geographical restrictions while maintaining a visual connection.	(gestures, posture), the emphasis on the sound-intonation aspect of speech increases.	voice intonation and speech tempo
2	Text communication tools (chat, forum, messenger)	Allows for thoughtful expression without time pressures, but limits quick, live communication	Develops the ability to express thoughts clearly, logically, and in a written, polished form	Organizing blended classes that develop written and oral rhetoric in a balanced manner
3	Multimedia and audiovisual tools	Enriches speech with visual and sound elements, allowing complex ideas to be conveyed more clearly	It enhances the visual power of speech, but excessive use can relegate speech itself to a secondary level.	The use of multimedia tools to assist speech but not to replace it
4	Social networks and broad audience platforms	It encourages the educator to communicate with a wide, unfamiliar audience and expands the experience of mass communication.	Develops public speaking skills and adaptation to different audiences, but poses a risk of leaning toward a superficial, click-oriented style.	Guidance on focusing on creating deep, meaningful content
5	AI-based speech analysis tools	It allows for the analysis of a teacher's speech based on rapid, objective statistical indicators (tempo, parasitic words).	Serves self-control and correction of technical aspects, but cannot evaluate the artistic-emotional impact of speech	Applying AI analysis in conjunction with live, qualitative assessment by the educator

As seen from the analysis presented in the table, each digital tool has a positive impact on one aspect of pedagogical communication and rhetorical competence and creates a limitation on another. This indicates the need to use these tools as a complementary, comprehensive system.

Also, the results of the analysis showed that the effectiveness of digital tools depends directly on the teacher's use of them with a conscious, purposeful methodological approach - relying solely on the technology itself, without appropriate rhetorical and methodological training, can sometimes even reduce the quality of pedagogical communication. Overall, the conducted analysis confirmed that the impact of digital tools on pedagogical communication and rhetorical competence is bilateral in nature, necessitating their conscious and balanced application.

Conclusion

In the digital educational environment, the influence of digital tools on pedagogical communication activities and rhetorical competence is complex and bilateral in nature. The research results showed that video conferencing, written-text communication, multimedia, social media platforms, and artificial intelligence tools each serve to develop a specific aspect of pedagogical communication, but none of them can fully replace traditional, live pedagogical communication.

An important task of modern pedagogical education is to inform future and practicing educators about the dual impact of digital tools and to teach them to use them consciously and balancedly. In future research, it is advisable to conduct a more in-depth study of the specifics of using these tools among educators of various age groups and subject areas.

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