OPPORTUNITIES FOR DEVELOPING STUDENTS' META-PROFESSIONAL COMPETENCIES THROUGH THE USE OF ARTIFICIAL INTELLIGENCE TECHNOLOGIES.

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Abstract: This article examines the pedagogical potential for developing the meta-professional competence of university students through the use of artificial intelligence technologies. In the context of modern digital transformation, the study analyzes the importance of such universal competencies as critical and creative thinking, problem-solving, information analysis, collaborative communication, independent decision-making, and reflective practice. It highlights the role of generative, adaptive, and conversational AI capabilities in fostering students' independent and critical thinking, decision-making in problem-based situations, and metacognitive and reflective skills. The article substantiates the need to utilize artificial intelligence not as a replacement for the instructor, but as a pedagogical tool that personalizes education and supports student autonomy.

Keywords: digital transformation, meta-professional competence, generative artificial intelligence, adaptive education, problem-based education, metacognitive competence, reflection, individual educational trajectory.

INTRODUCTION. Today, the rapid development of digital technologies necessitates a fundamental improvement in the content, forms, and methods of the education system. The integration of artificial intelligence technologies into the educational process not only expands students' learning opportunities but also creates new conditions for developing the universal competencies essential for their professional careers. A specialist's competitiveness in the labor market is now determined not merely by the extent of their specific professional knowledge, but also by their ability to adapt to new situations, analyze information, solve problems, work in teams, think creatively, and independently organize their work.

Developing students' metaprofessional competence in higher education is a pressing pedagogical task. Metaprofessional competence represents an individual's ability to apply knowledge, skills, experience, and universal methods of activity in an integrated manner across various professional and social situations. This competence is not limited to professional boundaries; rather, it encompasses a set of universal competencies that enable effective performance across diverse fields of activity.

MAIN PART. The use of artificial intelligence technologies in education can be viewed as an effective pedagogical tool for developing students' meta-professional competence. In particular, generative AI tools enable students to analyze diverse perspectives on a specific issue, formulate questions, develop ideas, compare texts, and refine their own thoughts. Such activities foster the development of students' independent and critical thinking skills.

The adaptive learning capabilities of artificial intelligence make it possible to tailor educational tasks to a student's individual knowledge level, pace of learning, and educational needs. Consequently, this expands the opportunities to create personalized learning pathways, identify a student's strengths and areas requiring improvement, and individualize the educational process.

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One of the key components of meta-professional competence is the ability to make effective decisions in problematic situations. By utilizing AI-driven dialogue tools, students can be presented with problematic situations, case studies, and professional issues, allowing them to analyze these scenarios from various perspectives. In this process, the student acts not merely as a recipient of ready-made answers, but as an active participant who identifies the problem, seeks information, evaluates evidence, and justifies the optimal solution.

Artificial intelligence technologies also offer significant opportunities for developing students' communicative competence. Through virtual dialogues, role-playing scenarios, and professional communication simulations, students can model various communicative situations. In particular, facilitating interaction between parties with differing viewpoints fosters skills such as substantiating one's own arguments, asking questions, listening to alternative perspectives, and drawing constructive conclusions.

The use of artificial intelligence tools also fosters the development of metacognitive competencies. Students gain the ability to analyze their own learning activities, identify errors, pinpoint gaps in their knowledge, and plan future areas for development. In this regard, AI tools serve not merely as information-providing technologies but also as pedagogical instruments that support students' reflective practices. However, it is essential to pay close attention to pedagogical and ethical considerations when integrating artificial intelligence into the educational process. Since AI-generated information is not always entirely reliable, it is crucial to cultivate in students the skills to verify information, cross-reference sources, and evaluate the credibility of evidence. Otherwise, an over-reliance on artificial intelligence could negatively impact a student's independent thinking and creative endeavors. Therefore, it is advisable to utilize AI in education not as a substitute for the human element, but as a pedagogical tool that supports the student's intellectual and professional growth.

The process of developing meta-professional competence based on artificial intelligence can be organized according to the following sequence (Figure 1). Developing meta-professional competence based on artificial intelligence is a process aimed at fostering students' critical and creative thinking, problem-solving, information analysis, collaborative communication, independent decision-making, and reflective skills—all of which are essential in various professional situations.

The process is carried out in the following stages:

1. Diagnostics — the student's existing knowledge, skills, and competencies are identified.
2. Individual goal setting — the student's personal development goals are established based on the diagnostic results.
3. AI-assisted educational activities — individual and interactive learning activities are organized using artificial intelligence tools.
4. Problem-based and creative tasks — critical and creative thinking are fostered through tasks based on real-life situations.
5. Analysis of results — the outcomes of the activities are analyzed; the student evaluates their own performance and determines directions for further development.

Ultimately, artificial intelligence emerges as an effective pedagogical tool that supports the student's independent work, personalizes learning, and develops meta-professional competencies. In this approach, the teacher acts as the primary organizer and pedagogical supervisor of the educational process, while artificial intelligence serves as a tool for personalizing educational content, facilitating rapid feedback, diversifying learning materials, and supporting the student's independent activities.

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CONCLUSION. The purposeful and pedagogically grounded integration of artificial intelligence technologies into the higher education process creates significant opportunities for developing students' meta-professional competence. Specifically, AI technologies enable the development of skills such as critical and creative thinking, problem-solving, information processing, collaborative communication, self-assessment, and reflective practice. At the same time, the effectiveness of using AI tools depends not on the technology itself, but on how well it is aligned with educational objectives. Therefore, developing a pedagogical model, criteria, and methodological conditions for the use of AI technologies in higher education represents a promising avenue for enhancing the methodology used to develop students' meta-professional competence.

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