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FORMATION OF DIGITAL COMPETENCE OF FUTURE COMPUTER SCIENCE TEACHERS IN THE CONTEXT OF ARTIFICIAL INTELLIGENCE DEVELOPMENT

Introduction. The rapid development of artificial intelligence technologies is transforming the educational process and creating new requirements for the professional training of future computer science teachers. Modern educators need to master digital tools, understand the principles underlying artificial intelligence systems, and be able to integrate these technologies into teaching to improve its effectiveness.

Purpose. To identify the pedagogical potential of using artificial intelligence technologies to develop the digital competence of future computer science teachers and to outline the main areas of their application in the educational process of higher education institutions.

Results. The use of artificial intelligence technologies in the professional training of future computer science teachers creates opportunities for personalized learning, the automation of certain educational tasks, and the development of practical skills. In particular, artificial intelligence tools can be used to explain algorithms, analyze source code, identify and correct errors, develop learning activities, create assessment tasks, and prepare interactive educational materials. Completing practical assignments with these tools contributes to the development of algorithmic and critical thinking, as well as information literacy.

Conclusions. Developing the digital competence of future computer science teachers in the context of artificial intelligence development is an important direction in the modernization of teacher education. The use of artificial intelligence tools contributes to the development of algorithmic thinking, digital literacy, practical skills, and future teachers’ readiness for innovative professional practice.

References:

Kryvonos, O., & Kryvonos, M. (2026). Project-based digital activities in computer science classes to promote conscious use of digital technologies. *Information Technologies and Learning Tools, 111*(1), 39–60. https://doi.org/10.33407/itlt.v111i1.6222

Kryvonos, O. M., Biruk, N. P., Torgonska, A. O., & Yatsenko, O. I. (2023). Diagnostics of the formation of high school students’ digital competence. *Information Technologies and Learning Tools, 97*(5), 94–124. https://doi.org/10.33407/itlt.v97i5.5456