

The Main Directions for Improving Methodological Training of Future Informatics Teachers in the Conditions of Digitalization

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Abstract: This article examines the impact of digitalization on the education system and the main directions for improving the methodological training of computer science teachers. The article emphasizes the need to improve the pedagogical and digital competencies of computer science teachers by integrating digital technologies into the educational process. It also discusses the role of innovative pedagogical methods and modern educational technologies used in improving the methodological training of computer science teachers. The article presents proposed strategies and practical approaches for updating teachers' pedagogical knowledge in the context of digitalization, using modern interactive methods, online learning platforms, as well as providing teachers with digital skills. The article provides scientific and pedagogical recommendations for developing areas for improving the methodological training of future computer science teachers.

Keywords: Digitization, methodological preparation, pedagogical competencies, digital skills, educational technologies, interactive methods, pedagogical methods, digital educational resources, professional development, innovations in education.



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Today, digital technologies are deeply penetrating all spheres of our lives, including the education system, which directly affects this process. In the context of digitalization, the educational process is moving to a qualitatively new level, which requires students to reconsider new methods of acquiring knowledge, and teachers to reconsider methodological approaches. In particular, for computer science teachers, it involves the effective use of digital technologies, enriching the educational process with interactive, as well as individual and group work opportunities, teaching and using new pedagogical methods [1-2].

In the context of digitalization, the IT teacher must not only have technological knowledge, but also be ready to update pedagogical approaches in the formation of students digital skills. This requires improving the methodological preparation of the teacher, since the IT teacher must effectively apply pedagogical knowledge into practice through the successful use of digital resources, online platforms and innovative methods[3].

This article considers the main areas of improving the methodological training of future computer science teachers in the context of digitalization, the use of innovative pedagogical methods and

modern educational technologies, as well as recommendations for improving the digital competencies of future teachers. The aim is to identify effective methods and strategies for training teachers based on the digital transformation of the education system. It is important to identify the main areas of methodological training in the training of computer science teachers[4]. The following areas play a key role in improving the methodological training of teachers in the context of digitalization:

1. Development of pedagogical and digital competencies

Digital competencies occupy a special place in the work of an informatics teacher. Teachers should be provided with the necessary knowledge to use modern pedagogical technologies, as well as the skills to organize the educational process through digital resources. This process serves the professional development of the teacher and the formation of digital skills of students[5-7].

2. Use innovative pedagogical methods

In the context of digitalization, computer science teachers need to use new pedagogical methods, such as project-based teaching, reinforcing students' knowledge through problem-based tasks, and organizing interactive lessons. These methods help to increase student activity and effectively organize the learning process.

3. Use of online learning and interactive resources

Online learning platforms and interactive resources greatly assist teachers in providing students with up-to-date knowledge in computer science classes. These resources allow teachers to individually monitor students' learning progress, conduct interactive activities, and analyze students' knowledge. Computer science teachers need to be trained in the skills necessary to use these tools effectively[8].

4. Pedagogical practice and teacher professional development

Practical training and experience exchange play an important role in improving the methodological training of computer science teachers. Regularly involving teachers in pedagogical laboratories and practices, providing them with opportunities to use new pedagogical technologies, ensures their professional development[9-10].

5. Use of interactive methods and multimedia tools

Informatics teachers use multimedia tools (video, animations, presentations, etc.) in the lesson process to attract students' attention and help them better understand the educational material. The use of these methods raises the teacher's methodological preparation to a higher level[11-13].

Conclusion. In the context of digitalization, improving the methodological preparation of future computer science teachers is necessary to meet the modern requirements of the education system. Teachers should be prepared to successfully apply digital technologies in the educational process, use innovative pedagogical methods, and provide students with digital competencies. This will increase the pedagogical and digital skills of computer science teachers, and the educational process will become effective and interactive. Improving the methodological preparation of teachers in the process of digitalization is important for the successful implementation of the digital transformation of the education system[14].

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