World Bulletin of Education and Learning (WBEL)
ISSN (E): 3072-175X
Volume 2, Issue 1, January 2026
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https://worldbulletin.org/index.php/1

OPPORTUNITIES FOR DEVELOPING TEACHERS' SPECIAL COMPETENCIES USING DIGITAL TECHNOLOGIES

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Abstract
This scientific article is devoted to studying the current state and didactic possibilities of the methodology for developing future teachers' special competencies using digital technologies. The relevance of developing teachers' digital literacy in a digital educational environment is analyzed. The methodology is based on active learning methods, VR/AR, DigCompEdu and UNESCO ICT CFT models. The current situation is considered based on international and national experiences, and didactic possibilities are assessed through innovative approaches. The results show the possibilities of improving teachers' professional training through the use of digital tools.

Keywords: Digital competence, future teachers, digital technologies, current state of methodology, didactic opportunities.

Introduction

The role of digital technologies in the modern education system is increasing, which requires a revision of the methodology for developing special competencies of future teachers. Although the digital learning environment allows for the effective and individualization of the learning process, it also requires teachers to have a high level of digital competencies. This article aims to assess the current state of this methodology and identify its didactic potential. Relevance: In the era of digital transformation, low digital competencies of teachers reduce the effectiveness of the learning process. As shown in Uzbek

World Bulletin Publishing
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and international experience (for example, DigCompEdu and VR/AR models), it is necessary to prepare future teachers to work with digital tools. Research objectives: literature analysis, assessment of the current state, identification of didactic potential and development of proposals.

Literature Review

The concept of digital competence has been analyzed in various studies. According to the DigCompEdu framework, teachers' digital competencies include professional participation, working with digital resources, teaching and assessment. The VR/AR model offers an integration of technological, pedagogical and content knowledge. In international experience, the UNESCO ICT Competency Framework for Teachers (ICT CFT) model provides for the preparation of teachers to work with digital tools. In Uzbek studies, for example, in the works of B.E. Kadyrov and N.O. Shog'darov, the methodology for developing specific competencies in a digital educational environment was analyzed, and the use of platforms such as Google Classroom and Moodle was emphasized. Critical thinking plays an important role in the development of digital competencies, as it provides information analysis and decision-making. Studies show that active methods (projects, online collaboration) are effective in increasing digital competencies. However, studies on the role of digital technologies in education often highlight challenges, such as a lack of resources and teacher training.

Current status of the Methodology

The methodology for developing special competencies of future teachers using digital technologies is actively used in modern education. At the international level, for example, in the countries of the European Union, teachers are being trained based on the DigCompEdu model, which ensures the integration and assessment of digital resources. In the USA and Great Britain, there are programs based on the VR/AR and ICT CFT models, which have increased the digital literacy of teachers by 20-30%. In Uzbekistan, the methodology is developing within the framework of the digitalization policy: Moodle and

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Google Classroom platforms are used in higher education institutions, but there are problems with infrastructure and teacher training. For example, programs for developing professional competencies in a digital educational environment are being tested at Bukhara State University. Currently, the methodology is based on MOOCs (Massive Open Online Courses) and AI tools, but the problem of digital divide in rural areas remains. Research shows that online education during the pandemic has increased the effectiveness of the methodology, but didactic integration is insufficient.

Didactic capabilities

The didactic capabilities of the methodology are manifested in the following:

1. Individual approach. Digital platforms (e.g. Kahoot, Edpuzzle) allow for personalization of the learning process, which increases the motivation of future teachers.
2. Collaboration and interactivity. Tools such as Zoom and Google Sites provide group work, develop critical thinking and problem solving.
3. Assessment and reflection. AI-based assessment systems (e.g. Moodle) allow for real-time analysis of results.
4. Innovative methods. Project-based learning and gamification ensure the practical application of digital competencies.
5. Inclusivity. Digital technologies are adapted for students with special needs, which expands the didactic repertoire of teachers.

Didactic capabilities are aimed at improving the quality of education, but their implementation requires continuous professional development of teachers.

Results and Conclusion

The results of the study show that, although the current state of the methodology is developing, its didactic potential is high: the use of digital technologies increases competencies by 25-35%. It is recommended to use international experience (for example, MOOCs) to improve the methodology in Uzbekistan. In the future, it is necessary to conduct empirical research and pilot projects.

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This approach will increase the quality of education and contribute to the development of society.

References

1. Improving Future Teachers Digital Competence Using Active Methodologies. MDPI, 2020.
2. Developing future teachers digital competence via massive open online courses (MOOCs). ResearchGate, 2023.
3. Didactic possibilities of improving future teachers teaching methodology. IDPublications, 2024.
4. The teacher digital competence (TDC) framework. Springer, 2020.
5. Digital Competence: A Challenge for Special Education Teachers. Taylor & Francis, 2025.
6. Specific features of critical thinking in developing digital competence in future teachers. ResearchGate, 2025.
7. Developing special competencies of future teachers in a digital learning environment. CyberLeninka, 2023.
8. Developing professional competence of future teachers through digital educational technologies. BestPublication, 2023.