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Methods for Developing Teachers' Digital Competence

Isomiddinov Ma'rufjon Umid o'g'li

Assistant, Department of Information Systems and Technologies

Karshi State Technical University

Email: marufjonisomiddinov@gmail.com

Abstract

This article analyzes the theoretical and practical aspects of developing teachers' digital competence. The rapid advancement of information and communication technologies in the modern educational system demands new knowledge and skills from educators. In this context, enhancing teachers' digital literacy and involving them in innovative pedagogical activities stand out as crucial issues. The study highlights the core components of digital competence, methods for its development, and effective implementation mechanisms. Furthermore, based on practical examples, the impact of using digital tools on educational effectiveness is demonstrated. The article concludes with actionable recommendations to address existing challenges [2].

Keywords: Digital competence, teacher, information technology, education, innovation, pedagogy, digital literacy, e-learning, methodology.

Introduction

Under current global conditions, digital technologies are being widely implemented across all levels of the education system. This process directly impacts the professional activities of teachers, necessitating the continuous development of their digital competence. A modern educator must not only master their subject thoroughly but also effectively utilize information technologies.

Digital competence is defined as a teacher's ability to effectively use modern technologies in searching, processing, creating, and transmitting information. This competence serves as a critical factor in enhancing the quality of education and organizing the learning process interactively and efficiently [1].

The main objective of this article is to provide a scientifically grounded analysis of methods for developing teachers' digital competence.

Methodology

The research employed the following methods:

- Analysis of scientific literature;
- Comparison and generalization;
- Observation;
- Examination of practical experience.

Through these methods, the essence of digital competence and the primary pathways for its development were systematically defined.



Main Body

Theoretical Foundations of Digital Competence

The concept of digital competence has been elaborated by several international organizations [3]. It comprises the following structural components:

- Information literacy;
- Communication skills;
- Content creation capabilities;
- Safety and cybersecurity culture;
- Problem-solving skills.

These components ensure that educators operate effectively within a modern educational ecosystem.

Methods for Developing Digital Competence

1. **Professional Development Courses**

Targeted professional development programs play a pivotal role in honing digital skills, allowing educators to familiarize themselves with emerging technologies.

2. **Practical Training Sessions**

Reinforcing theoretical knowledge through practical application is essential. For instance, incorporating multimedia tools into classroom teaching significantly enhances instructional practice.

3. **Utilization of Online Platforms**

Modern platforms empower teachers to engage in self-directed learning, thereby fostering lifelong education.

4. **Knowledge and Experience Sharing**

Experience sharing among educators is conducted via seminars and workshops, promoting peer-to-peer collaborative learning [4].

Practical Examples

Currently, numerous educational institutions extensively implement digital tools, including:

- Electronic gradebook/journal systems;
- Online testing platforms;
- Interactive video lessons.

These instruments assist in organizing the learning process efficiently and boosting student engagement.

Challenges and Solutions

Key challenges encountered in developing digital competence include:

- Insufficient technical infrastructure and hardware;
- Low levels of initial preparedness among teachers;
- Lack of adequate motivation.

To resolve these challenges, it is imperative to:

- Strengthen the material and technical infrastructure;



- Organize systematic training workshops;
- Implement an incentive and reward scheme.

Conclusion

According to the study's outcomes, enhancing teachers' digital competence stands as a strategic priority for the modern educational system. The effective application of digital technologies significantly raises the overall quality of instruction. Therefore, implementing a comprehensive set of measures targeted at elevating teachers' digital skillsets is vital, ensuring the successful digital transformation of the education system [5].

References

1. Tolipov O'., Usmonboyeva M. Fundamentals of Pedagogy. – Tashkent: O'qituvchi, 2010.
2. Begimqulov U. Information Technologies in Education. – Tashkent, 2016.
3. Zimnyaya I.A. Educational Psychology. – Moscow: Logos, 2004.
4. Deci E., Ryan R. Intrinsic Motivation and Self-Determination in Human Behavior. – New York: Springer, 2000.
5. UNESCO. ICT Competency Framework for Teachers. – Paris, 2018.
6. European Commission. Digital Education Action Plan (2021–2027). – Brussels, 2021.
7. Bates A.W. Teaching in a Digital Age. – Vancouver, 2015.
8. Anderson T. The Theory and Practice of Online Learning. – Canada, 2008.
9. Isomiddinov Ma'ruf. Integration of IT and Pedagogy — A New Stage of Modern Education // Journal of New Century Innovations. – 2025. – Vol. 87, No. 1. – P. 195–197.