

# DEVELOPMENT OF DIGITAL COMPETENCES AND DIGITAL CULTURE OF TEACHERS

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**Abstract.** In the context of digitalization of education, the development of digital competencies and culture of teachers is becoming a necessary element of professional growth. This article examines the theoretical aspects of digital competence, the main components of digital culture and approaches to improving their level among teaching staff. Methods aimed at creating a modern educational environment that promotes the effective implementation of digital tools and technologies are considered. Emphasis is placed on the importance of developing skills in using digital platforms, data analysis tools and communication tools.

**Key words:** digital competence, digital culture, professional development of teachers, educational technologies, digital tools, educational environment, digitalization of education.

**Introduction.** The development of the modern information society, intensive updating and reformatting of the domestic education system, which increasingly depends on the immersion of its subjects in the information and communication (computer, multimedia, digital) environment, leads to a gradual updating of the conceptual apparatus, the introduction of new definitions into scientific circulation and a rethinking of existing ones [4]. Analyzing certain educational problems associated with the use of computer technologies, domestic and foreign scientists increasingly use the concepts of "digital competence", "digital literacy", "digital culture of a teacher", which are becoming a kind of indicators of the professional training of a modern teacher. Digital technologies serve as a potential for stimulating more inclusive and sustainable development and stimulating innovation, and contribute to increasing the effectiveness of educational services. Today, it is important to take advantage of digital transformation, which contributes to the creation of jobs and provides access to educational services, and also allows solving potential problems (Ovcharuk et al., 2022) [1].

Modern education is undergoing significant transformations associated with digitalization, which requires new approaches to the professional training of teachers. Digital competence and culture of teachers are becoming key factors in the effective use of digital technologies in educational practice, facilitating adaptation to digital platforms, data analysis tools and innovative teaching methods. The purpose of this article is to study the main aspects of the formation of digital competence and culture in teachers and to identify approaches for their

practical development. The article will consider approaches to creating an educational environment that promotes the development of these competencies and skills [2,3].

**Research methods.** Today's realities require not only a high level of education of specialists, but also a new type of intelligence, way of thinking, speed of communication and professional mobility, digital competence. This will ultimately change their attitude to the rapidly changing economic, technological, social and information factors of production and the surrounding world [5-7].

Digital competence and culture of a teacher are important components of the modern educational process and include knowledge, skills and attitudes that help teachers effectively use digital tools and resources [8]. Formation of digital competence of a teacher requires constant updating of knowledge and skills in the field of information technology, as well as the ability to introduce digital methods into teaching, improving the quality of the educational process and interaction with students (fig.1).

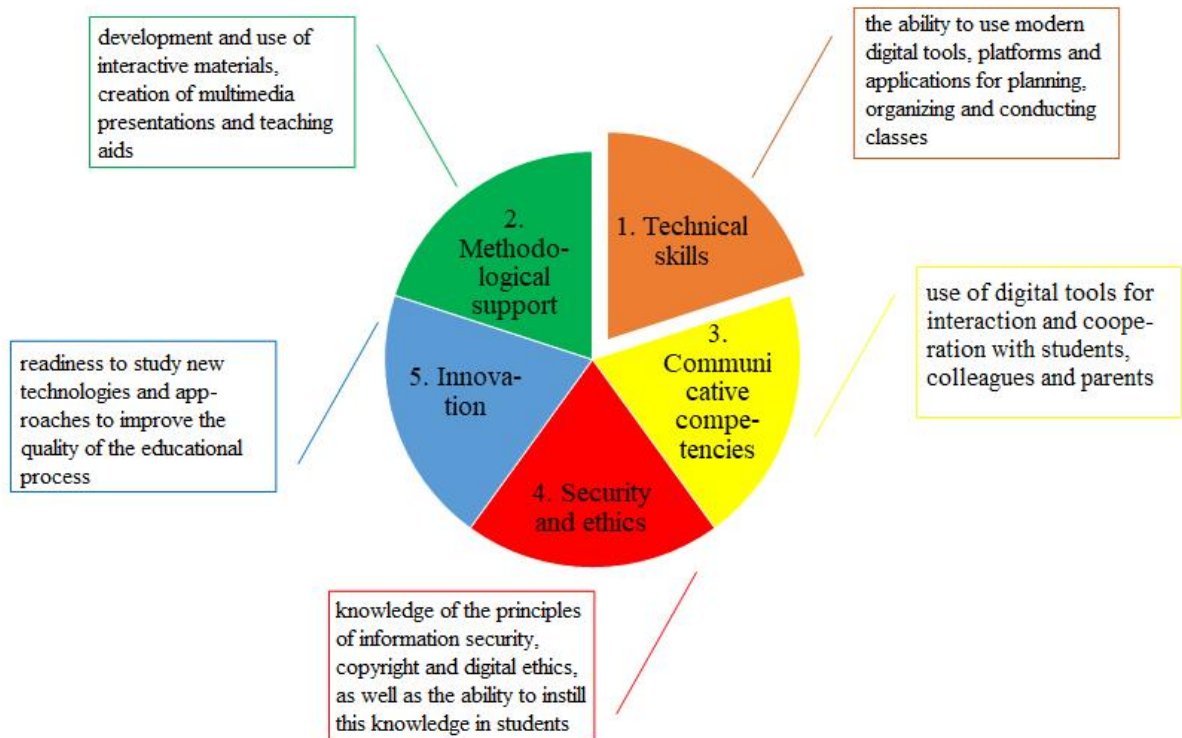


Figure-1. The main aspects of digital competence of a teacher.

***The importance of the digital culture of the teacher.*** Digital culture helps to form stable attitudes in teachers to use innovative methods in education. It includes:

- Openness to technologies and continuous professional development, which allows integrating technologies into educational practice [9,10].
- Understanding the role of digital technologies in the development of critical thinking, creativity and independence of students.

- Support for digital literacy among students, which helps prepare them for the requirements of modern society.

The modern education system requires that teachers have both digital competence and a formed digital culture. These qualities allow for more effective adaptation of the educational process to the needs of students, making it more interactive and accessible.

**Results.** We have developed an algorithm for the development of digital competencies and pedagogical culture of teachers, which may consist of the following key stages

1. Needs analysis:

- Determining the level of digital competencies of teachers.
- Identifying gaps in knowledge and skills.
- Identifying the needs of the educational institution for digital tools and resources.

2. Strategy development:

- Formulating a long-term strategy for developing digital competence of teachers.

- Defining goals and objectives.

- Selecting priority areas of development.

3. Infrastructure creation:

- Providing access to the necessary technical equipment (computers, projectors, interactive whiteboards, etc.).

- Developing and implementing information systems (LMS, electronic diaries, etc.).

- Providing access to high-speed Internet.

4. Organization of training:

- Developing advanced training programs.

- Conducting trainings, seminars and master classes.

- Creating communities for sharing experiences.

5. Implementation of digital technologies:

- Integrating digital tools into the educational process.

- Developing and using digital educational resources.

- Supporting innovative projects of teachers.

6. Evaluation and adjustment:

- Regular evaluation of the effectiveness of the implemented measures.

- Analysis of results and feedback from teachers.

- Adjustment of the development strategy if necessary.

**Conclusion.** Developing digital competencies and culture among teachers is essential for integrating digital technologies into the educational process. This requires a comprehensive approach that includes theoretical training, practical training and continuous professional development. Integrating digital culture allows teachers to apply more modern methods aimed at improving the quality and

accessibility of education, which ultimately improves the quality of education and helps prepare students for life in a digital society. Forming digital culture and competencies is the key to creating an effective and modern educational environment.

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