

**DEVELOPMENT OF COGNITIVE COMPETENCES
THROUGH DIGITAL EDUCATIONAL TECHNOLOGIES**

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Abstract. *The article analyzes the fact that digital learning technologies are an important didactic tool in the development of cognitive competencies, that e-learning platforms, multimedia resources, interactive programs, artificial intelligence-based learning systems, virtual and augmented reality technologies are taking the learning process to a qualitatively new level, that they allow students not only to passively receive knowledge, but also to actively assimilate, analyze and apply it, turning the learning process into an interactive and person-oriented system, that the learning process organized through digital learning technologies significantly activates the cognitive activity of students, which, along with increasing the effectiveness of the learning process, also has a positive effect on the personal and professional development of students, the role of digital learning technologies in the development of cognitive competencies, their theoretical and methodological foundations and practical effectiveness, the impact of digital tools on students' thinking processes, their potential for increasing the level of knowledge acquisition, and existing problems.*

Key words: *direction, quality, knowledge, skills, competence, cognitive, digital, education, competence, information, interactivity, communication, technologies, teaching, pedagogy, education, efficiency, performance, systematization, creation, ability.*

The process of digital transformation, which is the main driver of social development in the 21st century, creates the need for a radical renewal of all spheres of human activity, in particular, the education system. As a result of the rapid development of information and communication technologies, the mechanisms of creating, transmitting and mastering knowledge are changing significantly. In such conditions, the main task of education is not limited to providing traditional knowledge, but is to develop the intellectual potential of a person, form independent thinking, improve the culture of working with information, and train him as a competent specialist who can make quick and effective decisions.

In modern pedagogical paradigms, the competency-based approach is considered a priority, in which special attention is paid to the integrated formation of students' knowledge, skills and competencies. In this regard, cognitive competencies - that is, a person's ability to perceive, analyze, process, systematize and create new knowledge - are recognized as one of the main factors determining the quality of education. Cognitive competencies expand the student's ability to develop critical and creative thinking, find effective solutions to problem situations, and apply their knowledge in practical activities [2].

Digital learning technologies are emerging as an important didactic tool in the development of these competencies. Electronic learning platforms, multimedia resources, interactive programs, artificial intelligence-based learning systems, virtual and augmented reality technologies are taking the learning process to a qualitatively new level. They allow students to not only

passively receive knowledge, but also actively assimilate, analyze, and apply it, turning the learning process into an interactive and person-centered system [1].

The learning process organized through digital learning technologies significantly activates the cognitive activity of students. In particular, features such as visualization, interactivity, and flexibility facilitate the understanding of complex educational materials, increase concentration, and develop long-term memory. At the same time, the digital environment creates opportunities for students to learn independently, assess their level of knowledge, and form an individual development trajectory. This, in addition to increasing the effectiveness of the educational process, has a positive impact on the personal and professional development of students. However, despite the wide possibilities of digital educational technologies, there are a number of problems associated with their effective integration into the educational process. In particular, factors such as insufficient formation of teachers' digital competencies, methodologically imperfect development of educational resources, insufficient technical infrastructure, and information overload can negatively affect cognitive efficiency. Therefore, when introducing digital technologies into the pedagogical process, it is important to thoroughly analyze their didactic capabilities, develop scientifically based methodological approaches, and take into account the psychological characteristics of students.

The relevance of this topic is determined, first of all, by the need to scientifically substantiate the possibilities of developing cognitive competencies through the effective use of digital educational technologies. This is an important factor in improving the quality of education, enhancing the intellectual potential of students, and preparing them for the requirements of modern society. At the same time, research in this area also makes a significant contribution to the development of a new direction in pedagogical science - digital didactics.

As one of the main factors of the development of modern society, digital technologies are developing on an increasingly large scale. This process also requires the introduction of new approaches, innovative technologies, and teaching methods in the education system. The main goal of education today is not to provide students with ready-made knowledge, but to form in them the ability to think independently, analyze information, and use it effectively. In this regard, the issue of developing cognitive competencies is of particular importance [5, 6].

Digital educational technologies appear as an important didactic tool in this process, serving to increase the efficiency of the educational process. They help students to deeply assimilate knowledge by presenting educational materials in an interactive, visual and flexible form.

Cognitive competencies include a person's abilities to perceive, process, analyze and create new knowledge. They consist of the following components: perception; memory; attention; thinking; reflection. These competencies play a key role in the intellectual development of the student.

Digital technologies create the following opportunities: presenting educational materials in a visual and interactive form; ensuring an individual approach; monitoring the level of mastery; organizing independent learning; using global information resources. This increases the efficiency of the educational process.

Digital tools affect cognitive processes in the following ways [3, 4]:

- Perception: rapid perception of information through multimedia;
- Memory: long-term retention using visual images;
- Thinking: development of analytical thinking through problem-solving tasks;
- Attention: concentration of attention through interactive elements.

Digital technologies increase the level of student learning; develop independent reading skills; activate creative thinking; increase student motivation.

Key problems:

- insufficient technical infrastructure;
- low digital literacy of teachers;
- lack of methodological support;
- information overload.

Solutions:

- teacher training;
- introduction of modern platforms;
- development of methodological manuals;
- individualization of education.

In conclusion, it is worth noting that digital learning technologies are an important factor in the development of cognitive competencies. They activate students' thinking, help them to deeply assimilate knowledge, and form modern competencies. At the same time, the effective use of these technologies depends on their didactic basis and use in accordance with pedagogical goals.

REFERENCES:

1. Андреев А. А. Дистанционное обучение: теория и практика. – Москва: РАО, 2018. – 256 с.
2. Bates A. W. *Teaching in a Digital Age: Guidelines for Designing Teaching and Learning*. – Vancouver: BCcampus, 2019. – 521 p.
3. UNESCO. *ICT in Education: Transforming Education through Technology*. – Paris: UNESCO Publishing, 2021.
4. OECD. *Digital Education Outlook 2023*. – Paris: OECD Publishing, 2023.

5. Роберт И. В. Современные информационные технологии в образовании. – Москва: Дрофа, 2015. – 312 с.
6. Хуторской А. В. Современная дидактика. – Санкт-Петербург: Питер, 2019. – 368 с.