



## **Global Conference on Multidisciplinary Research and Innovation**

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### **SOCIAL NEED FOR THE DEVELOPMENT OF DIVERGENT THINKING IN STUDENTS IN A DIGITAL EDUCATIONAL ENVIRONMENT**

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Today, digital technologies are penetrating all spheres of our lives. The widespread use of digital tools in the educational process also contributes to a significant increase in the quality of student learning. However, not only the provision of knowledge, but also the development of students' creative abilities and independent thinking, that is, divergent thinking, is becoming an important social task. The concept of divergent thinking was introduced into scientific circulation by J. Guilford (1956), which expresses the creative and non-traditional direction of human thinking. According to Guilford, divergent thinking is a type of thinking aimed at finding not one, but several alternative solutions to a problem. In the works of N. Selwyn (2019), M. Prensky (2001), and D. Laurillard (2013) on the influence of the digital educational environment, it is noted that digital technologies have a positive impact on the formation of a student as a self-regulating, creative, and adaptable student. Scientists of Uzbekistan A. Tulaganov (2020),

The constructivist approach is the use of digital tools that encourage the student to independently discover knowledge. Problem-based learning approach - activation of thinking through situational tasks on digital platforms. Experimental approach - measurement of the level of development of divergent thinking in students using digital technologies. The study was conducted in higher educational institutions of the Surkhandarya region during the 2023-2024 academic year. 120 students of the "Technology Education" program



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participated. Creative activities were organized for them in the digital environment through problem tasks, 3D modeling, platforms such as "Google Classroom," "Moodle," "Tinkercad," and "Canva." As can be seen from the results, problem tasks and the process of interactive learning, organized through the digital educational environment, led to a significant development of students' thinking in a creative direction. The digital educational environment creates favorable opportunities for the formation of divergent thinking.

- Digital competence of the teacher: the teacher must be able to correctly direct technological tools towards didactic goals.
- Student motivation: it is necessary to encourage the student to be active in the digital environment based on internal motivation.
- Integrated approach: increasing the practical significance of problem tasks by ensuring interdisciplinary connectivity.
- Formation of digital ethics: compliance with information security, copyright, and ethical standards.

From this point of view, the digital educational environment is not only a system for transmitting information, but also a psychological and pedagogical platform that organizes the student's thinking at a new level. The advantages of the digital educational environment are as follows: Flexibility: the possibility of learning regardless of time and place. Interactivity: real-time communication between student and teacher. Individual approach: teaching according to the level of knowledge of each student.

Divergent thinking in students is the ability to find multiple, unique, and original solutions to problems. This type of thinking is formed on the basis of creativity and shows its incomparable importance in the learning process. Divergent thinking transforms the student from a perceptive person who only accepts existing knowledge into a person with independent thinking, who creates new



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ideas. Therefore, the development of this skill is a priority goal in the modern educational process. The digital educational environment has important pedagogical and psychological opportunities for the development of divergent thinking in students. In such an environment, the student forms himself as a creative, independent, analytically thinking person. Also, problem-based learning, project-based learning, and simulation classes using digital platforms show high effectiveness in the development of divergent thinking.

Divergent thinking allows students to see problems differently and try to solve them in many directions. In this process, the student reveals their inner potential, creates new meanings and concepts from existing resources. This increases learning motivation and encourages broader thinking. Therefore, teachers develop divergent thinking through creative tasks, innovative projects, and interactive lessons.

One of the factors that plays an important role in the development of divergent thinking is the flexibility of the learning environment and the availability of supporting educational tools. With the help of modern technologies, the student has the opportunity to freely express, test, and revise their thoughts. At the same time, the processes of cooperation and exchange of ideas in the group stimulate the emergence of new ideas, which further strengthens the divergent direction of thinking. Psychological aspects are also of great importance in the formation of divergent thinking in students. To master independent thinking, a student must have an environment free from intellectual curiosity, anxiety, and fear. If a student is aware of the novelty and originality of their idea, they will strive to seek more new solutions. Therefore, positive encouragement and encouragement are the main tools in the pedagogical process. Divergent thinking also includes a high degree of critical thinking and multifaceted analysis of the problem. This ability encourages the student to consider the tasks facing them not only in a



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single solution, but also in several options. As a result, students acquire activated, independent, and creative activity, which increases the effectiveness of the developed solutions. In general, the development of divergent thinking in students is one of the modern criteria of the educational process.

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