

**THE THEORETICAL FOUNDATIONS OF DEVELOPING STUDENTS'
METACOGNITIVE ACTIVITIES IN TEACHING TECHNOLOGY IN GENERAL
EDUCATION SCHOOLS**

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Annotation: The article highlights the role of pedagogical technologies in modern education and the importance of improving metacognitive activities in developing analytical and creative thinking among secondary school students. The development of metacognitive skills enables learners to expand their knowledge, choose appropriate learning strategies, use them effectively under changing conditions, and generate new ideas. The article also provides recommendations for improving metacognitive activities.

Keywords: technology, metacognitive activity, metacognition, exercises, innovation, topic, materials, modern economy, science, culture, technology, activity, metacognitive knowledge, metacognitive control, self-assessment, reflective practices.

Enter. In the conditions of modern social development, one of the most important tasks of the education system is the formation of independent, free and sufficient knowledge and reading skills. Each stage of the development of human civilization requires new forms of thinking, new methods of cognitive activity. In today's era, when information flows are infinitely expanded, and the reliability of information varies, a person should not be limited to acquiring ready-made knowledge, but should have the ability to analyze, compare, evaluate and draw independent conclusions.

An overview of metacognition and its role in education. The main goal of each educational organization is to provide sufficient knowledge to pupils and students and help them develop study skills. What is the concept of metacognition and metacognition? Metacognition is the understanding of a person's thought processes, feelings, that is, thinking about this thinking, being aware of one's thoughts, evaluating and regulating their essence. For example, when a person analyzes thoughts about academic activities or future goals, it can be called metacognition.

"Metacognitive" issues were developed for the first time in cognitive psychology. In 1976, the concept of metacognitive aspects of problem solving was introduced. Also, in educational practice, there is a need for methods and means of organizing and managing the subject's own cognitive activity. Currently, the work of scientists within the framework of metacognitive psychology has created theoretical conditions for the development of metacompetency as a pedagogical problem in education.

D. Flavel's theory of metacognition in 1979 defines it as "thinking about one's thinking", which includes a model consisting of four main components: metacognitive knowledge, metacognitive experience, goals or tasks, and actions or strategies. This theory suggests that metacognition is a

higher-order process that allows people to consciously plan, monitor, and regulate their cognitive processes to improve learning and problem solving.

Components of the theory. Metacognitive knowledge: This is a person's stored knowledge about cognitive processes, including their abilities and the factors that influence them. It includes the following beliefs.

Persons: Knowledge of oneself and others as a cognitive being.

Tasks: Knowing the difficulty and demands of the task.

Strategies: Knowledge of different strategies that can be used to complete a task.

Metacognitive experiences: These are conscious thoughts that arise during a cognitive task, such as feelings of confusion or understanding.

Goals or tasks: specific goals or cognitive tasks that an individual is trying to accomplish.

Actions or Strategies: Deliberate steps taken to achieve a goal, such as planning, monitoring, or evaluating progress.

Basic principles. Self-awareness and regulation: The basic idea is that some people are better at monitoring and regulating their thought processes than others.

Application of knowledge: metacognitive knowledge and strategies are activated and used to guide the thinking process and achieve a specific goal.

The concept of metacognition has been widely researched in the fields of psychology and pedagogy and has various theoretical bases. These theories help to explore how students self-perceive and control their learning activities. Below is a detailed description of the main theories related to metacognition and their application in education.

John Flavell is one of the main scientists who introduced the concept of metacognition into the scientific literature. According to his definition, metacognition is the ability to understand and effectively manage self-awareness activities (eg, one's thoughts, knowledge level, and learning strategies). Flavell divides metacognitive activities into two main parts: metacognitive knowledge and metacognitive control strategies.

These two components are crucial in forming students' ability to understand and effectively manage their learning activities. In her work, Ann Brown has focused on the application of metacognition in teaching and learning activities. He believes that metacognitive skills help students solve complex problems and that these skills should be intentionally taught by teachers. Brown emphasizes the importance of metacognitive strategies in understanding and remembering learning material, such as self-questioning, making inferences, and making connections.

Among Lev Vygotsky's educational theories, his concept of "Zone of Proximal Development" is closely related to metacognition. He believes that students learn best by solving problems that they cannot solve on their own, but at a level that they can solve with the help of others. This activity provides an opportunity for students to develop their metacognitive skills as they learn how to apply their knowledge and how to choose strategies. Gregory Schraw and Dennison proposed their metacognitive self-evaluation model. In their model, they divide metacognition into three main parts: self-planning, monitoring, and evaluation. This model is important in understanding how students perceive and effectively manage their learning activities. These theories are a valuable resource for further understanding the concept of metacognition and its role in education. Each theory helps students learn how to develop and apply their knowledge effectively. Metacognition is the ability to understand and manage one's learning activities.

The term comes from the Latin "meta" (ie, mutual) and the Greek "gnosis" (ie, to know) and refers to the study of one's thinking activities. Metacognition involves how an individual perceives, analyzes, and controls their own knowledge, learning strategies, and learning activities.

Metacognition consists of two main components: metacognitive knowledge and metacognitive control strategies. Metacognitive knowledge includes an individual's knowledge, learning abilities, and self-concept. It is divided into three main types: declarative knowledge, procedural knowledge and conditional knowledge. Declarative knowledge is what we know about ourselves, such as what subjects we are good at or what strategies work for us. For example, Metacognition consists of two main components: metacognitive knowledge and metacognitive control strategies. Metacognitive knowledge includes the student's knowledge, learning abilities, and self-concept. It is divided into three main types: declarative knowledge, procedural knowledge and conditional knowledge. Declarative knowledge is our existing knowledge, such as what subjects we are good at or what strategies work for us.

For example, it is possible to sew, repair and change clothes and household items by hand. Even when using a sewing machine, a lot of work has to be done by hand. It is necessary to know how to use tools correctly to perform manual work correctly and qualitatively. The quality of sewing products, the productivity, work ability and mood of the seamstress largely depend on the correct selection of equipment. Handicraft requires a comfortable workplace, that is, adapted to the location of work tools and materials. Also, knowing the complete information about the equipment is emphasized as an effective work activity. Conditional knowledge is the ability to know when and where to apply a particular knowledge or strategy.

Metacognitive control strategies include techniques used to effectively manage learning activities. Through these strategies, students can improve their performance by planning, monitoring, and evaluating their learning activities. Metacognition plays a very important role in education because it helps students manage their learning more effectively and independently. Metacognitive skills offer students opportunities for independent learning, increased productivity, and problem solving. Through independent study, students learn how to manage their own learning effectively, helping them become independent learners. By increasing efficiency, students become more flexible in choosing and applying their own learning strategies, which helps them learn new topics faster and more deeply. Metacognitive problem-solving skills help students solve complex problems independently as they develop the ability to analyze and coordinate their learning activities. Thus, metacognition is an important tool in education that enables students to effectively manage their knowledge, learning activities, and strategies. It enriches educational activities by increasing self-awareness and coordination skills, and makes students more independent and effective learners. The concept of metacognition has been analyzed and defined by different authors and researchers based on different approaches. These definitions and approaches provide ample opportunities for a deeper understanding of learning activities and their application in education. Below are some important researchers' approaches and definitions of metacognition. John Flavell defines metacognition as "understanding and controlling one's thinking activities." He divides metacognition into two main components: metacognitive knowledge and metacognitive control strategies. In Flavell's definition, self-awareness and self-management skills are key components of metacognition.

Anne Brown (1987) metacognition self-knowledge and learning. as the ability to effectively manage their activities. He believes that metacognitive skills help students solve complex problems independently, and these skills should be intentionally taught by teachers. Deborah

Meichenbaum defines metacognition as planning, monitoring, and evaluating learning activities. In his work, metacognitive skills are aimed at teaching students to manage their learning effectively. Thomas Nelson and Louis Narens describe metacognition as a two-level model: the first level is the learning activity itself (cognitive level), and the second level is how to perceive and understand the learning activity (metacognitive level). They point to the effective management of one's knowledge and learning strategies as the main task of metacognition. Marcia Linn views metacognition as decision-making activities in learning. According to her, metacognition helps students to learn what strategies to choose when receiving new knowledge and how to effectively apply this knowledge.

Summary. The work of scientists in the field of metacognition also contributed to a deeper understanding of various aspects of metacognitive activities studied in the international scientific community. These works mainly focus on the development of metacognitive skills and strategies in the fields of education, psychology and pedagogy. Alexander Luria was one of the founders of the Russian school of neuropsychology, and although his work did not directly affect the concept of metacognition, it helped to understand mental activities in the development of self-control and self-analysis skills. In his work, Luria explores how one can consciously analyze and control one's personal experience, thereby forming metacognitive skills. is important. Vasily Davydov pays great attention to the use of metacognitive approaches in educational theory and teaching methodology. His work is aimed at developing students' abilities to consciously analyze and control their own activities.

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