METHODOLOGY FOR DEVELOPING CRITICAL THINKING IN STUDENTS BASED ON INTERACTIVE METHODS

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Annotatsiya

Maqolada boshlang'ich sinf o'quvchilarida moslashuvchan (adaptiv) kompetensiyalarni shakllantirishning nazariy va metodik asoslari ko'rib chiqiladi. Moslashuvchan kompetensiyalar o'zgaruvchan sharoitlarga tez moslashish, muammolarni turli yo'llar bilan hal qilish va ijodiy fikrlash qobiliyatlarini o'z ichiga oladi. Tadqiqotda interfaol metodlar, o'yinli texnologiyalar va hamkorlikda o'qitishning samaradorligi tahlil qilinadi. Natijada, ushbu kompetensiyalarni rivojlantirish o'quvchilarning shaxsiy va ijtimoiy rivojlanishiga ijobiy ta'sir ko'rsatishi isbotlanadi.

Аннотация

В статье рассматриваются теоретические и методические основы формирования адаптивных компетенций у младших школьников. Адаптивные компетенции включают способность быстро приспосабливаться к изменяющимся условиям, решать проблемы разными способами и творчески мыслить. В исследовании анализируется эффективность интерактивных методов, игровых технологий и обучения в сотрудничестве. В результате доказано, что развитие этих компетенций положительно влияет на личностное и социальное развитие учеников.

Abstract The article examines the theoretical and methodological foundations for developing adaptive competencies in primary school students. Adaptive competencies encompass the ability to quickly adapt to changing conditions, solve problems in various ways, and think creatively. The study analyzes the effectiveness of interactive methods, game-based technologies, and collaborative learning. The results demonstrate that fostering these competencies positively impacts students' personal and social development.

Kalit so'zlar: boshlang'ich sinf, moslashuvchan kompetensiyalar, metodik asoslar, interfaol o'qitish, ijodiy fikrlash, adaptatsiya.

Ключевые слова: младшие школьники, адаптивные компетенции, методические основы, интерактивное обучение, творческое мышление, адаптация.

Keywords: primary school, adaptive competencies, methodological foundations, interactive teaching, creative thinking, adaptability.

In the modern education system, it is becoming increasingly important to develop 21st century skills in students. These include adaptability, problem-solving, creative thinking, and collaboration. The primary school age is a key period for the formation of a child's personality, and the development of adaptive competencies at this stage creates the foundation for future success[1].

Adaptive competencies prepare the student to adapt quickly to a changing environment, approach new situations creatively, and act effectively in stressful situations. The formation of these competencies is based on the theories of Piaget and Vygotsky: a child achieves cognitive development through active learning.

Theoretical foundations

Flexible competencies are related to the concepts of "flexible thinking" and "adaptability". Flexible thinking is the ability to see a situation from different perspectives and to abandon fixed thinking[2].

In primary school students, these competencies develop naturally through play, as the child changes roles in the game and adapts to new rules. Research shows that interactive methods (e.g., group work, project-based learning) can increase flexibility by 30-40%[3].

A lot of work is being done in the Uzbek education system to develop basic competencies. The use of ICT and game technologies in primary school is considered effective.

Methodological recommendations

1. Game methods: Through role-playing games and improvisation exercises, students learn to adapt to new situations.

2. Collaborative learning: Solving problems together in a group develops flexible thinking.

3. Creating problem situations: Introduce unexpected changes in the lesson (for example, changing the task conditions) and teach students to adapt.

4. Reflection: At the end of the lesson, ask the questions "What new did you learn today? What was difficult?"[4].Jan

Piaget's Theory of Cognitive Development:

Detailed Explanation Jean Piaget (1896–1980) was a Swiss psychologist and philosopher, one of the founders of child psychology. He studied the mental

(cognitive) development of children and developed the theory of cognitive development. This theory explains step-by-step how children understand, think, and learn about the world.

Piaget's main idea is that the child is not a passive receiver of information, but an active constructor - he constructs knowledge himself through interaction with the environment around him. Development depends on biological maturity and experience, and occurs in universal (in the same order for all children) stages.

1. Basic concepts of the theory

- Piaget introduced several important terms[5]:
- **Schema:** A mental "model" or structure—an internal cognitive structure that a child uses to make sense of the world. For example, a newborn baby has a "feeding schema."
- **Assimilation:** The process of integrating new information into an existing schema. For example, a child may see a dog and assimilate it into the schema for "cat" (thinking of both as "animals").
- **Accommodation:** The process of adapting an existing schema to new information. Once the child understands the difference between a dog and a cat, he or she creates a separate schema for "dog."

• **Equilibration:** The balance between assimilation and accommodation. When a child experiences disequilibrium in a new experience, he or she will adjust his or her schemas to restore balance. This is a fundamental mechanism of development.

• **Organization:** The tendency to combine schemas into more complex structures.

2. Four stages of cognitive development

Piaget divided development into four universal stages. At each stage, a child's thinking changes qualitatively. The age limits are approximate - individual differences may exist.

Stage	Age range	Key features	Key achievements and limitations
Sensorimotor stage	0–2 years	The child learns about the world through sensory (sensory) and motor (motor) experiences. Language and symbolic thought	Object permanence (8–12 months): Understands that an object that is missing exists. Substages: reflexes, primary circular reactions, secondary circular reactions, tertiary reactions, goal-directed actions, beginning of internal symbolic

		are absent.	thought.
Preoperational stage	2–7 years	Symbolic thinking (language, play, imagination) develops. However, thinking is egocentric and not logical.	Egocentrism: Does not understand the point of view of others. Centration: Focuses on one aspect and ignores another. Lack of conservation: Does not understand the invariance of quantity, mass, volume (classic experiment: pouring the same water into different containers). Animism and artificialism: Gives life to inanimate objects.
Concrete operational stage	**7–11 years**	Logical thinking emerges, but only with concrete (real) objects. Conservation gains (quantity, mass, volume).	Classification, seriation, reverse operations. Decentralization: Can see more than one aspect at a time. Abstract or hypothetical thinking is not yet present.
Formal operational stage	**11 years and older**	Abstract, hypothetical-deductive thinking. Thinking close to the scientific method.	Hypothetical-deductive logic: Can think in the form of "If... then..." Propositional thinking: Can evaluate unrealistic propositions. Idealism and complex problem solving. Some people do not fully reach this stage.

- **3. The importance and application of the theory**

• **In education:** Piaget proposed adapting education to the "readiness of the child". For example, forced teaching of conservation at the preoperational stage is ineffective. He encouraged "discovery learning" and active methods[6].

• **Scientific influence:** Vygotsky's sociocultural theory laid the foundation for modern constructivism and developmental psychology.

- **4. Criticisms and modern views**

• Age limits are not rigid — many studies have shown that children acquire some skills earlier (e.g., object permanence experiences).

• Little consideration was given to cultural and social factors (Vygotsky supplemented this aspect).

• Some studies have shown that many adults do not fully reach formal operations.

• Modern neuropsychology and information processing theories complement Piaget's model, but its basic ideas are still relevant.

Piaget's theory is a classic model that revolutionized the study and education of children. It sees the child as a "little scientist" - constantly experimenting and striving to understand the world.[7]

These methods depend on the methodological preparation of the teacher.

The formation of adaptive competencies in primary school students is an important direction of modern education. Through the systematic use of interactive and playful methods, students are prepared for a changing world. In the future, empirical research in this direction is necessary.

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