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FUNDAMENTALS OF CRITICAL THINKING AND ITS METHODS IN PRESCHOOL EDUCATION

Atadjanova Zalina Bakhtiyarovna
English teacher at learning center 'Harvard School'
Khorezm region, Urgench city

ABSTRACT: This article examines the importance of critical thinking in early childhood education. It also highlights the importance of developing children's analytical and critical thinking skills at an early age, and discusses various methods and approaches that can assist in this process. The article also calls for more inclusive and innovative educational programs that will develop children's mental abilities and prepare them for successful lives in the modern world.
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In studies by various psychologists such as L.S. Vygotsky, J. Piaget, D. Wood, D. Halper and others, the concept of ***"critical thinking"*** is discovered. Each psychologist presents this concept in his own way, but they all agree that critical thinking is independent, evaluative, multifaceted and reflective thinking. Critical thinking is a process in which new information is combined with existing knowledge and experience to form new understanding. Unlike creative thinking, critical thinking involves the generation of new ideas, often going beyond experience, external norms and rules. However, clearly distinguishing between creative and critical thinking is challenging. Critical and creative thinking are interdependent and develop in the process of synthesis[1].

One of the most important tasks of education is "to teach the child to strive for self-education," which contributes to the development of critical thinking. The main task of the teacher is to guide the child in the right direction, encouraging him to ask more and more questions to obtain the necessary information and the ability to obtain it from various sources, such as encyclopedias, the Internet, reference books, etc. As a result, curiosity is formed in students. Critical thinking promotes *creative and proactive methods*. If we want to raise an extraordinary personality, then it is necessary not only to continue to fill the child's mind with information, but also to encourage him to think critically, draw conclusions based on the information received, and ask the right questions.[2]

Critical thinking is:

- independent (everyone formulates their ideas, assessments and beliefs independently of others);
- information is the starting point, not the end point of critical thinking (to generate a complex thought, it is necessary to process many facts, ideas, theories, and each new fact is subjected to critical analysis);
- critical thinking begins with asking questions and clarifying problems that need to be solved (traditional cumulative education is replaced by problem-based education);
- critical thinking strives for convincing argumentation (statement - evidence - conclusion);
- a person with critical thinking cannot be manipulated;
- critical thinking is social (work in pairs and groups, debates, discussions are used), the qualities necessary for a productive exchange of opinions are developed: tolerance, responsibility for one's point of view, listening skills. [3]

[1]Rozhkov, M.I. Organization of the educational process at school [Text] textbook / M.I. Rozhkov, L.V. Bayborodova.- M.: Humanit. Publishing center VLADOS, 2009.
[2]1. Zair-Bek S., Mushtavinskaya I. Development of critical thinking in the classroom. Teacher's manual. - M., 2004.
[3]Zagashev I.O., Zair-Bek S.I. Critical thinking: development technology. St. Petersburg: Alliance "Delta", 2003.

In preschool education, the technology for developing critical thinking helps solve the following problems:

- contributes to the development of the child's desire for self-education;
- develops the child's ability to think, starting with searching for his own answers to questions and solving problem situations, and not with answers to the teacher's questions;
- fosters in the child a desire to construct his own knowledge, which arises in the process of activity, and is not acquired ready-made.

The preschool age of a child is characterized as a "why" - every small child strives to know all the reasons for this or that phenomenon. Methods and techniques of technology for the development of critical thinking help the child independently acquire knowledge, form his own opinion, use his knowledge in various situations, develop the ability to ask new questions, formulate a variety of arguments, develop independence, responsibility, the ability to adapt to the current situation, develop monologue and dialogic speech.

In the context of preschool education, the teacher plays a crucial role as both a facilitator and a guide. Instead of directly providing ready-made answers, the teacher encourages children to search for solutions on their own, guiding them through questions, hints, and discussions. This approach strengthens not only cognitive processes, but also emotional and social skills. Children begin to realize that mistakes are a natural part of learning, and that alternative answers or approaches can also be valuable.

The development of critical thinking at this age is closely linked with the use of play-based methods. Play creates a safe and engaging environment where children are more willing to experiment, test hypotheses, and collaborate with others. Story-based learning, problem-solving games, puzzles, and creative tasks such as constructing models or dramatizing situations allow children to connect new knowledge with their personal experiences. This enhances memory, imagination, and the ability to transfer skills into real-life situations.

Moreover, the cultivation of dialogic interaction in the preschool classroom helps children learn to listen attentively, respect turn-taking, and respond thoughtfully. Such communication skills form the foundation for further academic success and for building constructive interpersonal relationships. The systematic use of these strategies fosters a holistic development of the child, combining intellectual, emotional, and communicative growth.

The structure of a lesson on the technology of developing critical thinking consists of ***three stages***:

1. Phase - *challenge* (awakening interest in acquiring new knowledge);
2. Phase - *understanding the content* (obtaining new information);
3. Phase - *reflection* (emergence of new knowledge).

1. Phase – Challenge (Awakening Interest in Acquiring New Knowledge)

Goal: To activate prior knowledge, awaken curiosity, and set a problem that will motivate children to seek answers.

Description: At this stage, the teacher creates a situation of intrigue or uncertainty. The child is encouraged to recall what he already knows, express assumptions, and formulate questions. This stage stimulates interest and prepares the ground for the perception of new material.

Methods and Techniques: Brainstorming ("What do you think about…?"), Asking open-ended questions, Using visual aids (pictures, objects, short videos), Predicting outcomes of a story or experiment.

Example: Before reading a fairy tale, the teacher shows the cover and asks: "Who do you think the main character is? What might happen to him? Why do you think so?"

2. Phase – Understanding the Content (Obtaining New Information)

Goal: To help children perceive and process new information, compare it with their assumptions, and identify contradictions or confirmations.
Description: At this stage, the child actively works with new material: listens, observes, experiments, or discusses. The teacher organizes conditions for joint search and discovery of knowledge rather than passive memorization.
Methods and Techniques: Reading texts with pauses for discussion, Experiments and practical tasks, Graphic organizers (clusters, Venn diagrams, charts), Group work with analysis of situations.
Example: After predicting the fairy tale, the teacher reads it aloud with pauses, asking: "Did it happen as you expected? What surprised you? Why did the character act this way?"

Techniques for developing critical thinking include correct and incorrect statements, cluster, prediction tree, thick and thin questions, reading with stops, cinquain, fishbone, cube, scrambled events, learning by pattern, basket of ideas, associative bush and much more. Critical thinking techniques and methods transfer easily from one to another. For example, the technique "cluster" can turn into "associative bush" or "syncwine"; "cube" - into the "prediction pyramid", etc.[4]
To consolidate the material, it is recommended to use the "associative bush" method - this helps to activate children's knowledge on a certain topic and establish relationships between the highlighted concepts. For example, you might ask children what they associate the number 4 with and get answers like "four seasons," "four parts of the world," or "four times of day."
3. Phase – Reflection (Emergence of New Knowledge).
Goal: To consolidate the acquired knowledge, critically evaluate it, and integrate it into personal experience.
Description: Reflection helps children to make sense of what they have learned, compare their initial assumptions with the final outcome, and articulate new discoveries. This stage encourages self-expression, responsibility for one's thoughts, and the ability to draw conclusions.
Methods and Techniques: Discussion of "What have we learned today?", Drawing or dramatizing the learned material, Creating a short story or retelling from a new perspective, "Plus – Minus – Interesting" method (children share what they liked, disliked, or found curious).
Example: After reading, the teacher asks: "What new did we learn about the hero? What would you do in his place? What lesson can we take from this story?"

We use a critical thinking technique called ***"fishbone"*** to teach children the basics of safe behavior. As part of the theme "earth element - fire" we ask whether fire is an enemy or a friend. Children find the causes of the fire and collect facts that confirm one or another statement. As a result, they easily come to the conclusion that "fire is a friend if used for its intended purpose, for example, to light a stove, light the Olympic flame, light a candle in case of a power outage, light a fire in the forest for warmth and cooking. However, fire is an enemy if you play with fire in the house, use faulty electrical appliances, or fail to put out a fire in the forest."
One of the most interesting techniques for children is the "prediction pyramid", which helps them formulate and build hypotheses, answering the question *"what would happen if..."*.[5]

The purpose of this technique is to teach children to develop and expand their ***hypotheses.***

Also, the development of critical thinking in preschoolers is facilitated by the new generation "fanclastic" construction set. When using it, children develop different types of thinking: linear imaginative thinking when assembling step by step, technical thinking when assembling models according to a sample, structural imaginative thinking when assembling a model from a photo, and engineering thinking when assembling a model according to their own scheme.
Thus, critical thinking includes obtaining information, analyzing it, drawing conclusions and

[4] https://www.pedopyt.ru/categories/5/articles/2960?ysclid=lqlsjcompf206488602
[5] Kluster David | What is critical thinking? | Magazine "Russian Language" No. 29/2002.

making decisions, as well as forming one's attitude towards the result. It is important not to rush to answer children's questions, but to give them the opportunity to think independently, look for answers and draw their own conclusions.[6]

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