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DEVELOPING ASSOCIATIVE THINKING IN THE EDUCATIONAL PROCESS THROUGH INNOVATIVE TECHNOLOGIES

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Abstract
This article discusses the development of associative thinking in students through the use of innovative technologies. In today's rapidly evolving digital era, the integration of modern technologies into the educational process plays a vital role in stimulating students' thinking and fostering independent and creative approaches to learning. The article provides recommendations and practical approaches for enhancing associative thinking using interactive methods, digital applications, and multimedia tools.

Keywords: Associative thinking, innovative technologies, educational process, methodology, creativity, information technology, interactive methods, cognitive activity.

INTRODUCTION

In the modern education system, the importance of innovative approaches, technologies, and information tools is steadily increasing. The main goal of the educational process is to develop students' thinking potential and to form them as creative and independent individuals. In this process, associative thinking occupies a special place. Associative thinking is the ability to establish connections between ideas, images, and knowledge. It teaches students to put forward new ideas and approach problems from different perspectives.

Today, one of the requirements for organizing a modern teaching system is to apply contemporary pedagogical technologies that enhance the quality and effectiveness of instruction, and for the educator to demonstrate high pedagogical

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mastery as well as a creative approach to the educational process. Every teacher working in an educational institution should not only have a good command of their subject but also know how to organize and implement the teaching process using innovative educational technologies and possess pedagogical competence. It is advisable in the teaching process to use innovative technologies and active teaching tools, apply newly developed educational aids, encourage students to engage in learning, and extensively draw on advanced pedagogical practices and diverse instructional methods.

LITERATURE REVIEW AND METHODS

Associative thinking is one of the important forms of human cognition, which occurs by transitioning from one idea or image to another. This type of thinking underpins creativity, the ability to make quick and effective decisions, the culture of speech, and the skill of analyzing problematic situations. In the pedagogical process, fostering this type of thinking is especially significant in primary and secondary education.

Interactive methods serve to activate students' assimilation of knowledge and develop their personal qualities by increasing engagement between students and the teacher during the educational process. The use of interactive methods helps cultivate students' independent thinking, analytical skills, the ability to draw conclusions, healthy communication, the capacity to express and defend their opinions with reasoning, focus on the core aspects of the lesson topic, and discussion and debate skills. Moreover, such methods create the necessary conditions for students to realize their potential.

Innovative technologies act as powerful tools to enhance the effectiveness of education, ensure the active participation of students, and foster associative thinking. Examples include:

- **Interactive presentations** — explaining topics in a visual way through tools such as PowerPoint, Canva, or Genially.
- **Visual maps and mind mapping** — encouraging students to transition from one idea to another and build connections.
- **Multimedia lessons** — achieving multi-channel impact through videos, audio, and animations.

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- **Game-based technologies** — stimulating logical and associative thinking with gamification elements.
- **Artificial intelligence assistants** — prompting free thinking through Q&A dialogues and chatbots.

Methods for Developing Associative Thinking:

1. **Free association exercises** — students are tasked to say the first words that come to mind related to a given word.
2. **Storytelling based on an image** — creating a connected story inspired by a visual prompt.
3. **Creative writing** — composing a text related to the topic but in a free format.
4. **Question-answer clusters** — generating branched ideas around questions.
5. **Imaginative thinking tasks** — using similes, metaphors, and allegories.

Practical Example: For instance, if the lesson topic is "Spring," the teacher can assign the following task: "Name words associated with 'spring' (flower, rain, sun, renewal, greenery, etc.), then create a story using these words." This exercise develops students' associative thinking, expression skills, and their ability to transition from one idea to another.

The "Cube" Graphic Organizer. This method serves to facilitate the study of a topic by creating various situations. On the six faces of the cube, there are concepts (perspectives) that help to analyze the studied topic (problem) in depth. Essentially, each face of the cube presents one of the following prompts:

Note: The instructions on the six faces of the cube have the following meanings:

1. **Describe!** Examine the object carefully and describe what it is. During the description, pay special attention to clearly conveying the color, shape, and size of the object.
2. **Compare!** Based on comparison, say what the object resembles and how it differs sharply from other things.

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3. **Explain!** Explain why the object has this structure, size, shape, and color. What does the object make you think about? Let your imagination roam free. (The described objects may resemble each other or differ significantly.)
4. **Analyze!** How was the object created (produced)? (You don't necessarily have to know the actual process — imagine it!)
5. **Apply!** Could you use this object in real-life situations? How could you use it?
6. **Justify!** Substantiate your thoughts on the practical value of the object. Try to find convincing arguments during this process.

This method encourages students to approach and discuss a specific topic (problem) from different angles. This activity speeds up the process of finding solutions to the problem.

The "Diamond" Technology. This technology is used to express concepts related to a topic at different levels based on their importance and significance. Concepts, depending on how essential or relevant they are, can be placed around the facets of a "Diamond" or "Star," as well as on a "Staircase" or "Ladder." The most important (key, leading) concepts are placed in the center of the "Diamond" or "Star," or at the top of the "Staircase" or "Ladder." In a lesson, the application of this technology proceeds as follows:

- The teacher divides students into pairs.
- Each pair is given an envelope containing 5 (6, 7, 8, 9) parts of educational material related to the topic, and they are tasked with identifying the core concepts among them.
- After completing the task, the teacher reorganizes the students into groups of six members each.
- Each pair within the group presents and explains their solution to the other two pairs.

Both of the above interactive methods help develop associative speech and thinking in younger school-aged students.

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CONCLUSION

Developing associative thinking is an important task of modern education. Innovative technologies enliven this process and cultivate creativity and critical thinking in students. The teacher's role is to apply such approaches correctly in the lesson and foster independent thinking in students.

It should be noted that interactive teaching methods have, since ancient times in Uzbekistan, been used in the educational process in the form of discussions, debates, negotiations, reflections, analysis, consultations, poetry readings, and reading sessions among teachers and students, as well as among the students themselves.

In conclusion, interactive methods make it possible to solve several issues simultaneously. Most importantly, they develop students' communication skills, help establish emotional connections among students, and, by teaching them to listen to their peers' opinions and work as part of a group, ensure the fulfillment of educational objectives.

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