

The problem of developing logical and creative thinking in the educational process.

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Annotation: The problem of developing logical and creative thinking in the educational process is one of the most pressing issues of the modern educational system. Logical thinking develops the ability of students to solve problems, analyze and draw logical conclusions, while creative thinking helps to develop new ideas and offer innovative solutions. This article will consider the importance of the development of logical and creative thinking in the educational process, the difficulties encountered in the implementation of these processes, as well as effective methods. Also, in educational institutions, the role of methodologies, games and practical training aimed at the development of these thoughts is analyzed. Through the results of the article, it is aimed to help teachers develop effective strategies that support logical and creative thinking, through which the learning process of students is expected to be more qualitative. In turn, such an approach serves to form the competencies necessary for their future activities.

Keywords: logical thinking, creative thinking, teaching methods, analytical thinking, creativity, purposeful questioning, critical thinking, interactive methods.

Introduction: the problem of developing logical and creative thinking in the educational process is one of the most important issues of the modern educational system. This process is aimed not only at giving knowledge, but also at developing students' thinking skills, creativity and problem-solving skills.

Logical thinking is the ability of a person to think systematically and consistently, allowing him to analyze, draw conclusions and make logical decisions on the basis of facts. The formation of logical thinking helps students to understand knowledge more deeply and prepares them to make the right decisions in any situation.

And creative thinking is the ability to innovate, develop innovative ideas and find new solutions to existing problems. Developing creative thinking encourages independent thinking in students and encourages them to share their ideas.

There are several strategies for developing logical and creative thinking in the learning process:

1. **Creating problem situations:** presenting situations to students to solve real-life problems. It develops analytical thinking and creativity in them.

2. **Working in a group:** encouraging students to hear and share different perspectives by engaging them in teamwork.

3. **Creative exercises:** increase the creativity of students through various creative activities, such as writing an essay, drawing or preparing a project.

4. **Critical reflections:** encouraging readers to take a critical approach to their work, which further deepens their thoughts.

5. **Conducting experiments:** strengthening theoretical knowledge through practical experiments and allowing new ideas to be tested.

Developing logical and creative thinking is not only an important task for teachers, but also a necessity for every student involved in the learning process. Particular attention should be paid to the formation of these skills in order to ensure their successful future.

The main part: the problem of the development of logical and creative thinking in the educational process is currently considered very relevant. The importance of this topic is determined by several factors:

1. In the age of data: nowadays, people are gaining a lot of information. The ability to analyze them correctly, draw logical conclusions and create new ideas is important.

2. Innovation and creativity: in modern society, innovative approaches, the development of new ideas and the finding of creative solutions are required. Logical thinking plays a key role in this process.

3. Problem solving: various problems arise in life, and logical thinking and creativity are necessary to solve them. Attention should be paid to the development of these abilities in the educational system of Uzbekistan.

4. Improving the quality of education: it is possible to further improve the quality of education by developing logical and creative thinking of students in schools and higher education institutions.

5. Personnel training: to train competitive personnel in the modern economy, it is necessary to improve their logical thinking skills. This helps to operate effectively in the workplace.

Therefore, the problem of developing logical and creative thinking in the educational process can not only meet current needs in the field of education, but also positively affect the overall progress of society. This problem can be solved by updating educational methods, introducing modern pedagogical technologies. The problem of developing logical and creative thinking in the educational process is one of the most important tasks of Education. This process involves not only the acquisition of knowledge, but also the ability to apply them in practice. Below are some key aspects of this issue:

1. Development of logical thinking

Logical thinking is the ability to identify connections between thoughts, draw conclusions and solve problems. To develop logical thinking in the learning process, the following methods can be used:

- Analysis and synthesis: to help students analyze different topics, highlight their main aspects and create new concepts.

- Logical questions: encourage students ' ability to think by asking logical questions during the course of the lesson.

- Problem situations: students are given problem situations and are asked to find solutions.

2. Development of creative thinking

And creative thinking is the ability to create new ideas, to consider existing thoughts in a new way. To develop this:

- Creativity training: engaging students in activities that pave the way for creativity (e.g. art, writing).

- Group work: Organization of group work on projects related to various social issues or areas of Science of Uzbekistan.

- Allowing free thinking: giving students freedom to express their ideas and supporting them.

3. Integration

Combining logical and creative thinking increases the effectiveness of the educational process. Using these two thought styles together, students can be prepared to solve complex problems.

4. Educational methods

Teachers should use innovative educational methods to make their lessons interactive and fun. For example:

- Project-based education: students work on real-life problems.

- Simulation and role-playing games: it is through this that creativity and logical thinking skills can be developed.

Discussion: the problem of developing logical and creative thinking in the educational process is a very important and relevant topic. In the educational process, it is necessary that students not only acquire knowledge, but also develop their own thinking skills. Logical thinking is the ability to understand, prove and draw conclusions about the relationship between causes and consequences, while creative thinking is the ability to develop new ideas, solutions and concepts.

When discussing a topic, the following aspects can be considered:

1. Development Of Logical Thinking:

- To increase their ability to think by asking students logical questions.

- Applying different strategies to solve problems.

- Develop logically based evidence and analysis skills.

2. Development Of Creative Thinking:

- Activities that help open up the creativity potential of students (discussions, brainstorming sessions, project work implementation).

- Support for various types of art and creative techniques.

- Encourage students to try new ideas.

3. Integration:

- Work on projects, combining logical and creative thinking.
- The use of a logical approach in solving problems by combining creativity.

4. Role Of Teachers:

- Teachers should motivate students and encourage them to think independently.
- Teachers should support innovative educational methods and make the learning process interactive.

5. Assessment Methods:

- The introduction of novel methods for assessing the logical and creative thinking of students (for example, project work or portfolio assessment).

6. Problems:

- Lack of methodologies aimed at developing logical and creative thinking in teachers.
- Standardized assessment systems in the educational system can be a limitation in the creation of students.

As a result, the development of logical and creative thinking in the educational process not only increases the student's level of knowledge, but also affects their future success. Cooperation of all parties — teachers, students, parents-is important in this process.

Conclusions and suggestions.

Conclusion:

In the educational process, it is important to develop logical and creative thinking. Logical thinking helps students analyze information, find a solution to a problem, and make decisions. Creative thinking, on the other hand, ensures the development of new ideas, finding innovative solutions and anticipating possible problems in the future. However, there are a number of problems in the development of these two types of thinking in the learning process:

1. Traditional methods of education: in the learning process, many teachers focus solely on providing theoretical knowledge, based on traditional methods. This limits students ' ability to think logically and creatively.

2. Lack of resources: due to the lack of modern technologies, methodologies and materials in educational institutions, difficulties arise in organizing activities of interest to students.

3. Teacher qualifications: teachers ' qualifications for the development of logical and creative thinking are insufficient. This reduces the effectiveness of Education.

4. Student motivation: motivation for logical and creative thinking can be low among students, limiting their active participation.

Suggestions:

1. Introduction of innovative educational methods: students should be encouraged to actively participate by introducing innovative approaches to the educational process, such as interactive methods, project-based teaching, group work.

2. Application of modern technologies: it is necessary to introduce modern resources (computer programs, simulators) necessary for the educational process and direct students to develop new ideas.

3. Organization of trainings for teachers: in order to improve the skills of teachers, it is necessary to conduct trainings on logical and creative ways of thinking.

4. Increasing motivation: to increase interest in logical and creative thinking among students, it is necessary to organize various competitions, exhibitions and science festivals.

5. Individual approach: taking into account the personality of each student, it is necessary to increase their activity in classes using individual approaches to them.

Through the implementation of these proposals, it will be possible to successfully develop logical and creative thinking in the educational process. This serves not only individual development, but also an increase in the innovative potential of society.

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