USING THE TRIZ (INVENTOR PROBLEM THEORY) PROGRAM IN PRIMARY SCHOOL CLASSES

Narzieva Mastura Sunnatovna*

*Senior Lecturer,
"Department of Preschool, Primary and Special Education Methods",
Bukhara Regional Center for Retraining and Advanced Training of Public Education,
UZBEKISTAN
Email id: narzieva_mastura@umail.uz

ABSTRACT

Developing the creative abilities of primary school students has always been a topical issue. This article discusses modern forms, methods and techniques for developing students' creative abilities using the TRIZ program in primary school.

KEYWORDS: *Creative Thinking, Ability, Education, Class, Lesson.*

INTRODUCTION

The TRIZ program appeared in the mid-20th century, and at first it was not even related to pedagogy. In 1946, Heinrich Altshuller, a former Soviet engineer, scientist, and science fiction writer, began studying the methods most commonly used by inventors. There were about forty such techniques, and all of them, together with the inventive problem-solving algorithm (MHQA), formed the basis of TRIZ.

During this time, he developed new algorithms, and in the early 1980s, educators used it as a basis for experimental classes as well as teaching methods in schools.

The goal of TRIZ pedagogy is to develop flexible thinking and imagination, the ability to solve complex problems skillfully and effectively. **[1]**

In modern pedagogy, the unique methods of working with students, unusual teaching techniques and the TRIZ program are an innovative solution in achieving high results.

Course mode, number of hours. The program is designed for children aged 7-10 years and lasts for 4 years.

The number of students is 34.

1st year study 1 hour per week (total 33 hours)

2nd year study period 1 hour per week (total 34 hours) 3rd year study period 1 hour per week (total 34 hours) 4th year study period 1 hour per week (total 34 hours).

The program is funded by additional study hours.

Venue: It is recommended to conduct classes not only in classrooms, but also in gyms, gymnasiums, playgrounds (depending on the type of educational process).

Types of action:

- Game process (through action games)

- Literary-artistic process

- Visual process

- Perform relaxation exercises, develop creative thinking, dialectical systematic, associative, creative, logical thinking, design action.

The effectiveness and efficiency of the application of the program of the theory of solving inventive problems in grades I-IV depends on the following conditions.

- The desire to volunteer and express themselves.

- Form and style of work, novelty and fun.

- The role of the teacher in ensuring the solidarity of children's initiatives.

- The combination of individual, group and collective action.

- Projects and festivals of different levels, competitions - the opportunity to participate in competitions, the presence of purposeful and effective actions.

- Involve children in open, free thinking.

Outcomes of the extracurricular learning plan.

Requirements for knowledge and skills in the educational process in the program of the theory of solving inventive problems.

The level of the educational process is determined by the requirements of the school's general secondary education program.

Requirements for students to know in the implementation of this program: Must know the first year of study.

- What is Creative Thinking (RTV)?

- Why is it necessary to develop creative thinking?

- Creative Games.

- Methods of fantasy through fine arts.

- Imaging algorithm of fantastic objects.

- Playing games aimed at developing creative consciousness.

- Create objects and fantastic objects using the image algorithm.

- Write their history using icons.

- be able to tell a story using schematic models (pictograms).

- Express your opinion.

- Respect the opinion of others.

- Apply the knowledge and skills acquired under the motto "Do no harm"

In the second academic year, according to the Inventive Problem Theory Program requirements for knowledge and skills that students need to know in the learning process. **[2]**

Must know:

- What is a complex?

- Complex creation algorithm.

- Gianni Rodari's fantasy method.

- The basic concept of the theory of solving inventive problems, the method of fantasy. Skill:

- Writing reality in the form of comics.

- Playing games aimed at developing creative consciousness.

- Weaving fairy tales, inventing fantasy stories using previously learned fantasy techniques.

- Describe the process in terms of the object.

- Express your opinion.

- Respect the opinion of others.

- Apply the knowledge and skills acquired under the motto "Do no harm".

Requirements for knowledge and skills to be acquired by students in the Inventory Problem Theory Program in the third academic year.

Must know:

- "System Operator", "Magic Screen", "Nine Screens", "System", "Subsystem", "Over System", "Function", "Past System", "Next System", "Antisystem "," Not a system ", definition of concepts.

- Puzzle weaving algorithm.

- Algorithm for weaving fairy tales and events based on the method of "morphological box".

- Discussion of the logic of the game "Yes - no". Skill:

- To listen to each other, to express one's opinion, not to speak to each other.

- Ask a question, clear an unknown area.

- Weaving fairy tales and events using the methods of "Morphological box", "Morphological analysis", "Nine screens".

- Development of games using the method of "morphological analysis".

- Have your say

- Respect the opinion of others.

"Don't do any harm!" to apply the knowledge gained under the motto.

Requirements for knowledge and skills that students should acquire during the fourth academic year in the Inventive Problem Theory Thesis program.

Must know:

- Define the concepts of "contradiction", "solution of the principles of opposition".

- Define the concept of "problem of creation".

- Define the concept of "field resources".

- "Inversion", "Heavenly transition", "transition to another state", "pre-set pillow", "Matryoshka", "crushing-merging", "jumping", "turning loss into profit", opposite - method of resolving resistances.

Skill:

- Create a logical connection between the event and the object.

- Solve the problem of "creation" under the motto "Do no harm", eliminate contradictions, strive for the right, apply the acquired knowledge and skills.

Personality in the knowledge acquired by students in the program of the Theory of Solving Inventive Problems in grades 1-4 during four years of study **[3]**

- Awareness, creativity, community, activism:

- Willingness to act in non-standard situations:

- Independence (at the time of decision-making):

- Ability to work collaboratively with others, be able to respond to their own decisions:

- Circulation (communication):

- Respect for others, self:

- Personal and joint responsibility.

TRIZ technology can be used as a universal tool in almost all types of activities (both in the learning process, in games, and in regime moments). This allows you to form a unique, consistent, science-based model of the world in the mind of a school-age child. A successful situation is created, the results of the decision are shared, the decision of one child activates the opinion of another, expands the scope of imagination, stimulates its development. Technology allows each child to show their uniqueness. Teaches children to think outside.

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