

The Importance of Tasks of Creative Description in the Formation of Interdisciplinary Abcissional and Ordinate Connection of Pupils' Thinking in Primary Grades

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Abstract

In the article, the importance of tasks of creative description in the formation of interdisciplinary abcissional and ordinate connection of pupils' thinking in elementary grades is analyzed, and the didactic foundations of mathematical thinking formation are studied.

Keywords: Creative thinking, logic, problem-based learning, space, problem, approach, ability, memory, abstraction, communication, reasoning.

Introduction

Creative concepts and approaches have fueled the development of human culture in various regions of the world. Therefore, creative thinking is very different from just random thoughts. It is considered a real competence based on knowledge and experience, which allows people to achieve expected results in tense and complex situations. Organizations and societies around the world are focusing on the acquisition of innovative ideas, knowledge and skills to overcome the emerging complexities, looking to innovative ideas and creative thinking as a shared initiative.

A pupil is not born with ready-made forms of logical creative thinking. The ability of logical creative thinking is formed in him throughout his life, and special conditions are necessary for its full development. In such an approach, special importance is given to imparting social experience, that is, teaching. D. B. Elkonin, while analyzing the educational activity of pupils, describes its essence as self-change by the pupil [8].

As a result of the research, it was found that in the formation of mathematical creative thinking by interdisciplinary abcissional and ordinate connection, primary school pupils take into account the high level of mental operations (analysis, synthesis, abstraction and generalization), economy and independence of creative thinking, and its flexibility. Based on these, the following conditions for the formation of the mathematical creative thinking of primary school pupils by interdisciplinary abcissional and ordinate connection were based: fullness of acquisition and acquisition of

mathematical knowledge, skills, skills and competences; a wide range of acquired and acquired mathematical knowledge, skills, skills and competences; step-by-step acquisition and acquisition of complex mathematical concepts; formation of mathematical knowledge, skills, qualifications and competences; extension of the process of formation of skills, qualifications and competences in the phase of mathematical knowledge; step-by-step processing of each mathematical skill, skill, and competency.

The study of the problems related to the didactic foundations of the formation of mathematical creative thinking in primary school pupils by interdisciplinary abscissional and ordinate connection showed that it was not a special subject of research works of other authors and was not studied in detail, only some issues of this problem were considered. Although it is very relevant, it has been partially worked out, and the didactic foundations of forming the mathematical creative thinking of primary school pupils by interdisciplinary abscissional and ordinate connection have not been sufficiently studied.

In educational activity that develops theoretical mathematical imagination, it is shown as the integrity of the components of setting educational tasks, learning activities, self-control, and self-evaluation.

The educational task, unlike the practical one, provides an opportunity to explore the method of problem solving and includes a number of learning operations [3].

A.N. Leontev considers activity in a narrow sense as a process directed to the subject of immediate need [4].

Creative thinking is not only an activity, but a mental process that is continuously formed within it. With the help of a continuous formation process, a person uses and changes the relatively stable mental operations available to him, forms new intellectual operations and determines new features of problematic situations and issues [1]. That is why the issue of the regularity of the process of creative thinking, which is divided into separate links or acts (thought actions), is considered important.

When creative thinking is viewed as a subject and a reaction to the problem it solves, it participates as an activity. In creative thinking as an activity, not only the law of passing as his creative thoughts, but also a personal motivational plan, which is common to the thinking of all human activities, is involved.

We note the necessity of formation of their cognitive activity in class and extracurricular activities as a condition for formation of creative thinking of primary school pupils in interdisciplinary abscissional and ordinate connection.

M. Jumaev emphasized that aspects such as listening, reading, observing, measuring, calculating, feeling, perceiving, imagining, remembering, and thinking during various cognitive activities serve to form the imagination and creative thinking of primary school pupils [5].

A problem assignment contains elements of problem questions and tasks. Therefore, it puts the elementary school pupil in a difficult situation. When finding a solution to a problem, its condition is important.

R.A. Khabib distinguishes three main types of problem-based education [6]:

1. Problem statement of knowledge. In such a statement, the teacher not only informs the pupils of this or that rule, but also poses a problem "thinking aloud" and shows the process of solving it.

2. It is necessary to involve pupils in research at some stages of the presentation. In this case, the teacher puts the problem before the pupils, explains the educational material, but during the explanation, he asks the pupils questions that require the process of research and the work to independently solve this or that problem of knowledge.

3. Research method of education. Having understood the problem, the pupils themselves determine the research plan, see the hypothesis (hypothesis), think of a way to test it, observe, conduct experiments, record evidence, compare experiments, evidence, confirm, generalize, prove conclusions.

The place and role of the issues of creative description in the formation of mathematical creative thinking in interdisciplinary abscissional and ordinal connection in primary school pupils. F. Qasimov recommends dividing the system of creative educational tasks in mathematics into the following principles [7]: 1) compatibility of creative educational tasks with the content of the educational material; 2) compatibility of creative educational tasks with the age, interest, and abilities of pupils; 3) the strength of creative tasks equal to the stages of the educational process; 4) interdependence of assignments; 5) complement each other of educational tasks; 6) the complexity of educational tasks.

And M. Jumaev emphasizes the system of tasks of creative description expressed by F. Kasimov [5; 7] and they:

1. Tasks on creating examples and problems and changing them by teachers.

2. Tasks on dividing examples and problems into groups according to a sign:

a) on dividing assignments into groups depending on the answer; b) about finding the regularity in the series of numbers; c) about finding the legality in the example being executed; g) problem-assignments of a combinatorial nature.

3. Assignments on comparison:

a) equality, about finding the numbers correctly for the inequality to be correct; b) about the correct choice of action signs ($>$, $<$, $=$) for equality, inequality to be correct; c) about appropriate use of parentheses for equality and inequality; g) number, on comparison of expressions; d) assignments on the correct choice of numbers, action signs, parentheses for equality, inequality to be correct.

4. Issues-assignments with missing and redundant information.

5. Tasks on solving problems in different ways.

6. Multiple-solution problem-tasks.

7. Problems with a non-standard solution.

8. Creative assignments in mathematical content:

a) about forming an idea about mathematical forms; b) on finding and separating mathematical figures; c) about changing mathematical shapes (about creating shapes from given figures; about dividing shapes into parts and creating new figures from these parts); d) on the classification of figures; e) computational problem-tasks.

9. Problem-assignments in logical description.

10. Problem-tasks.

11. Emphasizes that expressions, equations, and tasks on creating inequalities and solving them serve as the main source for the development of thinking.

In the regulatory and legal documents on increasing the quality and efficiency of primary education, attention is paid to the formation of mathematical creative thinking of primary school

pupils by interdisciplinary abscissional and ordinal connection, while observing the principles of humanitarianism, socialization, integration, democratization, individualization, differentiation of the educational process in their activities. It is aimed to achieve a developmental effect in teaching mathematics. It is also intended to form primary school pupils' readiness for learning based on an integrative and competent approach.

A number of research works are being carried out on the formation of creative thinking in primary school pupils by interdisciplinary abscissional and ordinate connection; it is noted that the activity of primary school pupils acquires a creative description by its nature; the preparation of primary school pupils in mathematics is aimed at creating new, previously unknown knowledge or improving skills.

Regarding creative thinking, we can say that the following descriptions are appropriate: mathematical creative thinking is an important component of the general creative thinking of a person; mathematical creative thinking has features related to the mathematical methods of knowing real existence and the uniqueness of its reflection in mathematics; mathematical creative thinking has a complex and multi-level structure; are important characteristics that determine the level of formation of mathematical creative thinking, which are: ability to perceive, imagine and assimilate knowledge; the ability to determine the relationship between quantitative quantities and relationships; relying on mathematical images, concepts and ideas; ability to reflect; to strengthen ideas about the language sign.

Purposeful and systematic development of the noted important characteristics of mathematical ability in a specially created environment can be a factor that serves to form mathematical creative thinking of primary school pupils.

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