



DISTINCTIVE FEATURES OF THE FORMATION OF IMAGINATION ON THE BASIS OF GEOMETRIC SKILLS OF MENTALLY RETARDED STUDENTS

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Abstract:

This article highlights the skills of mentally retarded students in mastering mathematical knowledge, the peculiarities of shaping geometric skills, difficulties in studying geometric materials, methods of teaching the teacher geometric shapes.

Keywords: Mathematics, geometrics, mental retardation, school, student, calculation.

Introduction

The need for an individual and differential approach to the formation of elementary mathematical concepts of children depends on the fact that disorders in their psychophysical development appear to be diverse. Against the background of organic or functional pathology of the central nervous system, as a rule, they are accompanied by a violation of the functioning of the upper nervous system and manifest themselves in a constant or temporary variety of cognitive problems with varying degrees of severity [1]. For intellectually underdeveloped students, the study of mathematical material presents great difficulties, the reasons for which are primarily explained by the peculiarities of the development of the cognitive and emotional-volitional sphere of mentally retarded schoolchildren. According to the results of research conducted by specialists in the field of studying the characteristics of mentally retarded children, you should pay attention to the following signs that are characteristic of them: - with the underdevelopment of all neuropsychic functions, mainly the constant failure of abstract forms of thinking; - combination of intellectual impairment with arbitrary forms and imbalance of speech, perception, memory, attention and behavior; - underdevelopment of



cognitive activity is manifested in a lack of visual - effective thinking, mobility of mental processes, the importance of comparing surrounding events and phenomena according to important signs, logical thinking. - the slow pace of thinking and the inactivity of mental processes determine the lack of opportunity to transfer the method of movement studied in the educational process to new conditions;

- underdevelopment of thinking affects all processes of mental activity: perception, memory, attention. First of all, all functions of distraction and generalization suffer, the components of mental activity associated with the analytical-synthetic activity of the brain are disrupted. In the emotional-volitional sphere, this is manifested in the underdevelopment of complex emotions and arbitrary forms of behavior. Despite the fact that the teaching of mathematics is of a practical nature and is interconnected with classes in labor education, painting, Natural Science, Geography, History, Physical Education, mentally retarded schoolchildren are obliged to master the existing complex of theoretical concepts. The first thing to do is master the concept of a number, if the student has the level of development of mental operations (analysis, synthesis, abstraction, generalization, comparison, classification). The peculiarity of mental activity, the shortcomings of thinking in a genetically later verbal-logical form inevitably lead to difficulties in mentally retarded students in the process of visualizing abstract mathematical concepts and forms. Thus together, scientists (m.N.Perova, L.B.Baryaeva, V.V.Ekk) proved that the development of cognitive abilities in mathematics as a subject of study included the necessary conditions for correcting the intelligence and personality of mentally retarded students. The most important aspect of correcting thinking in mentally retarded readers was the improvement of deductive, not only inductive conclusions, that is, the identification of the reasons for the origin of homogeneous phenomena, for which they used these generalizations to explain new phenomena of the same order, which are already known. The study of geometric material is important in developing the spatial imagination of mentally retarded students, orienting them in everyday life and forming their practical skills. The main tasks and content of studying geometric material in an auxiliary boarding school. Instruction, manuals, didactic materials. Drawing and measuring instruments. Basic methods and methods in the study of geometric material.

Main functions: - Development of spatial representations: the formation and development of spatial concepts (shape, size, location) in students.



- To give an idea of geometric shapes: to introduce students to simple geometric shapes (point, straight line, curve, straight line cut, beam, triangle, rectangle, square, circle).

- Formation of drawing and measuring skills: teaching students skills to work with tools such as a ruler, a circle, an angle meter.

- Development of practical skills: teaching students to use geometric knowledge in everyday life (for example, determining the shape of things, measuring length, determining location).

- Development of mathematical thinking: the development of such abilities in students as logical thinking, analysis, generalization.

- Promoting cognitive development: helping students develop perception, attention, memory and imagination through geometric materials.

Content: - Geometric shapes in the plane: point, straight line, curve, straight line cut, beam, angle, triangle, rectangle, square, circle.

- Geometric shapes in space: cube, parallelepiped, pyramid, sphere, cylinder, cone (in simplified form).

- Dimensions: length, face, volume (in simplified form).

- Spatial orientation: determining one's position and the location of things.

Instruction, manuals, didactic materials:

- Models of geometric shapes: models of geometric shapes made of wood, plastic or cardboard.

- Picture cards: cards depicting geometric shapes and their terms.

- Drawing tools: Ruler, circle, angle gauge.

- Geometric constructors: constructors designed to assemble and construct geometric shapes.

- Games: Games created on the basis of geometric materials

- Worksheets: worksheets with assignments on drawing, painting and geometric shapes. Educational posters: posters with geometric shapes and their features.

Drawing and measuring instruments:

- Ruler: to draw straight lines and measure length.

- Circle: to draw circles and measure length.

- Angle gauge: for measuring angles.

- Measuring tape: for measuring length. Basic methods and methods in the study of geometric material:



- Exhibitionism: showing geometric shapes and manipulating them.
- Practicality: practical training in drawing, measurement and construction of geometric shapes.
- Games: learning geometric materials through games.
- Asking questions: asking questions that activate students.
- Individual approach: to give assignments adapted to the level of development of each student.
- Step-by-step approach: moving from simple to complex.
- Repetition and reinforcement: repetition and reinforcement of the material studied.

Pedagogical-psychological, didactic features of the formation of imagination on the basis of geometric materials of mentally retarded students, effective factors, principles are identified in mathematics lessons, the formation of geometric representations the effectiveness of work is practically described; In mathematics lessons, criteria, methods and tools are systematized, aimed at the formation of imagination on the basis of geometric materials of mentally retarded students; The model of the formation of imagination on the basis of geometric materials of mentally retarded students in mathematics lessons is improved on the basis of pedagogical-correction; the formation of imagination on the basis of geometric materials of mentally retarded students, didactic approaches are embedded in the content of the curriculum on a scientific and practical basis, as well as mathematics lessons conducted in special institutions. In the process of teaching mathematics, students' speech develops, the vocabulary of which is enriched with specific mathematical terms and phrases. Students learn to comment on their activities, provide a complete verbal report on solving the problem, performing arithmetic operations, or completing geometry assignments. In all types of assignments, no matter what style, students should strive to distinguish important features of form, movement, phenomenon from those that are irrelevant. All sorts of insignificant features are required for this in objects in observation tasks, exercises, etc., since this plays a huge corrective role, and mentally retarded readers hardly notice the important and insignificant aspects of the formation concept. Only repeated observations, teacher assignments, directing the attention of schoolchildren to the fact that important ones remain unchanged when insignificant signs change will help to form concepts. Mathematical knowledge consolidation cannot be done



without the implementation of repetition exercises. Exercises are used to develop computational skills, problem solving skills. Exercises should be used in a certain system, with increasing difficulties. The exercise system should be chosen in such a way that new knowledge will connect with existing knowledge and help them expand and deepen. Difficulty level not only it should determine the complexity of the assignment, but also the individual capabilities of the students. When teaching mathematics to mentally retarded students, an inductive way of knowing is often used. This type of education is more focused on the peculiarities of the development of thinking of mentally retarded students. Therefore, many mathematical concepts, properties of geometric shapes, mathematical operations, properties of relations are struck empirically. When striking the features of the figure, arithmetic operations, figures, using models of shapes and drawings, specific operations with aggregates of objects, a short form is resorted to for recording the content of tasks. These include diagrams, pictures, etc. The educational organization develops one or more versions of the general education (education) program adapted according to the standard, which is explained by the peculiarities of children's needs. L.A.Kairova writes that changes in teacher activity have the following directions. 1) analysis and selection of the educational content of the topic studied in the lesson. Ensuring high motivation at each stage of the lesson. 2) change the structure of the lesson and the time allotted for the implementation of each component of the lesson. 3) Organization of children's activities in the lesson, which ensures that the student joins the educational process and interacts with peers. 4) selection and implementation of various technological methods that create conditions suitable for the capabilities of children. 5) the use of various didactic materials to organize different types of activities. [P. 2, 25 Thus, we can say that in order to organize the education of mentally retarded children in the conditions of inclusive education, it is necessary for the teacher to master basic defectological knowledge and introduce innovative technologies.

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