THE USE OF A MULTIMEDIA BOARD AS A FACTOR INFLUENCING THE ASSIMILATION OF GEOMETRIC MATERIAL IN ELEMENTARY SCHOOL

Azamova Barno
Teacher of Namangan state university
https://doi.org/10.5281/zenodo.7960898

Annotation: The use of various information tools in teaching makes the lesson non-standard, increases the motivation of children, allows them to be involved in various forms of work and, of course, teaches them to learn and acquire knowledge on their own.
Key words: straight line, curved line, segment, polygon, rectangle.

The use of a multimedia board as a factor influencing the assimilation of geometric material in elementary school Kozmareva Ya. A. At present, it is difficult to imagine the educational process without the use of new information technologies. I would like to note right away that this is due not only to the requirements for the educational process, but also to significant advantages in use: less time spent on preparing for the teacher's lesson, the ability to make the learning process more interesting and exciting. The “exemplary program for academic subjects” states that the level of formation of universal educational activities fully depends on the ways of organizing educational activities and cooperation, cognitive, creative, artistic, aesthetic and communicative activities of the student. Therefore, the teacher needs to understand that not only the content of knowledge itself is significant, but the content of activities in the lesson. Pupils of primary school age have visual-figurative thinking, therefore the role of using high-quality illustrative material is important. Involving in the process of perceiving something new, it is necessary to involve not only vision, but also hearing, emotions, and imagination. Even J. A. Comenius substantiated a means that makes it easier for a child to study book material through the “golden rule” of didactics: “Represent everything that is possible for perception by the senses: visible for perception by sight; audible - by hearing; odors - by smell; subject to taste - taste; accessible to touch - by touch. If any objects can be perceived by several senses at once, let them be immediately covered by several senses ... ”(3. Konstantinov M.A. History of Pedagogy. - M. 1974. p. 41) Based on this, we can say that teaching, taking into account these features will be more effective and will allow the child to perceive educational material more consciously. At preschool age, a child accumulates many ideas about the size, shape, and relative position of objects in a measure around him and on a plane. At this moment, children have experience with random terms, and already in the future it flows into a conscious understanding of the relationship between objects, which they begin to call the words "smaller", "larger", "the same", "different", "between", etc. On the basis of subjective experience, the perception of space is carried out for the younger student and is complicated by the fact that the signs of the space of objects converge with the reproduction of the content and they are distinguished as separate objects of knowledge. Study of the 1st grade (GBOU secondary school No. 501): Methodology "Graphic dictation" by D. B. Elkonin (study of orientation in space). • 4 points (accurate reproduction of the pattern) - 12.5% • 3 points - reproduction containing an error in one line - 22.5% • 2

points - reproduction containing several errors - 37.5% • 1 point - reproduction, in in which there is only a similarity of individual elements with a pattern - 12.5% • 0 points - no similarity - 15%. These data allow us to say that the formation of spatial representations in children of primary school age is rather low.

The formation of spatial representations further affects the formation of spatial thinking and is carried out by certain mental processes, such as perception, attention, memory, imagination, with the mandatory participation of speech. The main ones are logical techniques: comparisons, analysis, synthesis, classification, generalization, abstraction. At present, the development of thinking is the most important. The new SES of primary education sets the following tasks for teachers: - to learn how to describe the mutual arrangement of objects in space and on a plane; recognize, name, depict geometric shapes (point, segment, polyline, right angle, polygon, triangle, rectangle, square, circle, circle); carry out the construction of geometric shapes with given dimensions (segment, square, rectangle) using a ruler, square; use the properties of a rectangle and a square to solve problems; recognize and name geometric bodies (cube, ball); correlate real objects with models of figures. Spatial representations are an activity that includes determining the shape, size, location and movement of objects relative to each other and one's own body, relative to surrounding objects. (Developmental Psychology: Encyclopedic Dictionary / compiled by L.A. Karpenko. - M .: PER SE , 2007. - 176 p.) From this definition, it is necessary to highlight the following - the formation of spatial representations affects the interaction of a person with the environment, and is also a necessary condition for orienting a person in it. The development of spatial representations affects the intellectual development of the child, as it plays a big role in the study of not only geometry, but also in the study of other academic disciplines. With a low level of formation of spatial representations, the child may have difficulties in further learning. In the future, it is very difficult to correct the identified difficulties. This once again proves that the formation of spatial representations should begin from an early age. To become more familiar with the problem of developing spatial representations, one can refer to the programs of initial mathematical training. The content of the geometric material in the program "School of Russia": Grade 1: acquaintance with the mutual arrangement of objects in space and relative to each other. Concepts: "straight line", "curved line", "segment", "polygon", "rectangle". Students begin to draw simple geometric shapes. Grade 2: study the length of a broken line using knowledge about a segment and a straight line. Students learn about angles and their construction using a triangle and a compass. During the study of the polygon, knowledge about the corners is used, the perimeter of the polygon and the rectangle is found, the properties of the rectangle are studied. 3rd grade:

The concept of "area" is introduced. Students find the areas of different shapes using a palette. Find the area and perimeter of a rectangle and a square. Study circles and a circle, the diameter and radius of a circle. Grade 4: They solve problems for recognizing geometric shapes included in more complex ones, depict figures on checkered paper using a ruler, a drawing triangle and a compass. It should be concluded that the geometric material in this program is represented mainly by flat figures, and the measurement of quantities is done by tools. Approximately the same happens in other programs, which differs from the knowledge that children receive in a preschool institution. Thus, the spatial thinking of children remains at a low level of development. This largely explains the difficulties in studying geometry, especially solid geometry, in the senior grades. But it should be noted that geometry is an

integral part of the mathematical program. Geometrical knowledge, including spatial representations, received by children in elementary school, is not only scarce, but also dogmatic, which leads to the fact that schoolchildren do not feel any need to justify their truth. (Galkina, O.I. The development of spatial representations in children in elementary school. - M .: APN RSFSR, 1961. - 89 p.) When teaching geometric material, one cannot rely only on contemplation. The child's motor skills associated with muscle feeling are very important in the development of the psyche, intellect and personality. And visual teaching of spatial representations should provide an opportunity to operate with object models of ideal geometric objects, to reveal geometric facts using the methods of a physical experiment along with a mental experiment. This means that any new representation of the child about the object must be obtained as a result of the active actions of the child himself, aimed at transforming the object. Based on the above information, we can conclude that the use of multimedia equipment will significantly reduce the difficulties with the introduction of geometry in primary grades. It helps prove the following usage factors. New information technologies make it possible to increase: The effectiveness of practical and laboratory classes in natural science disciplines by at least 30%; Objectivity of students' knowledge control by 20-25%; Progress by an average of 0.5 points (with a five-point assessment system); (V.R. Kuchma "Hygienic safety of using computers in teaching children and adolescents") Advantages in using a multimedia board: - Using a multimedia board can provide visibility, which contributes to a comprehensive perception and better memorization of the material. – Presentations facilitate the display of photographs, drawings, graphs, paintings, and also speeds up and facilitates their more convenient reproduction. – Using animation and inserting video clips, it is possible to demonstrate dynamic processes. – Play audio files. – Simultaneously promoted graphic, textual, audiovisual information. - Save time for other activities in the lesson, for the use of other pedagogical technologies. You can use a variety of forms of verbal interaction between the teacher and students, children with each other. – Compliance with the principles of health-saving technologies: the possibility of organizing a change in activities, holding physical education sessions, etc. All these advantages can significantly facilitate the educational process and increase the assimilation of geometric material in elementary school, if: Demonstration of dynamic processes will take place using MD; The position of the child in the lesson, using MD, will move from passive to active (as he masters the material); Wide use of MD capabilities (visibility, interactivity, demonstration of three-dimensional geometric shapes); Changing the position of the teacher from teaching-organizing to stimulating the motivation and initiative of children as spatial representations develop. Conditions will be created for the creative realization of children while working with geometric material, to increase the motivation of each student in the class..

References:

1. Vilenkin N. Ya. Mathematics 5th grade. Textbook.-M.: Mnemosyne, 2013.-279s. 2. Perelman Ya.I. Entertaining geometry, - M.: TERRA - Book club, 2008.-384p..
3. Aryaeva L.V. Information interaction in modern school: the experience of dialogue. Monograph. - St. Petersburg: IPK SPO, 2012. - 244 p.

4. GEF-II is the basis for the modernization of Russian education. [Electronic resource]. Access mode: http://knmc.kubannet.ru/node/976
5. Federal state educational standard for basic general education / ed. I.A. Safronova. - M .: Education, 2011. - 48s.
6. Barno A. M. Improving the methodological training of future primary school teachers using the example of geometry // ACADEMICIA: An International Multidisciplinary Research Journal. - 2021. - T. 11. - №. 3. – C. 2528-2532.