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Executive-Active Thinking And Its Formation

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Abstract. Visual–active thinking is a form of visual perception that can lead a person to real practical actions. This article presents reflections and opinions on visual–active thinking and the ways of its formation.
Keywords: visual–active thinking, learning activity, practical activity, development of thinking, individual development, play, creative tasks.

Introduction.

Demonstrative-motor thinking is genetically the earliest level. This is a level of thinking in which relationships are revealed directly through manipulation of concrete objects. For example, when a child discovers for himself that he can set a ball in motion by hitting another ball, he uses demonstrative-motor thinking in such situations. Thus, although this level describes the thinking of children in their early years, it is also found in the development of conceptual thinking in adults. Demonstrative-motor thinking is "...a way of thinking that uses visual images and concrete actions to understand and solve problems. It uses concrete examples and experiences to understand information and make decisions instead of abstract concepts and theories. Demonstrative-motor thinking is especially useful in educational and practical activities, because it allows for the rapid and effective application of knowledge in practice." Here, internal mental processes are minimized, and the problem is solved mainly through external practical actions with real material objects. This form of thinking can be observed in children from the earliest years, that is, from the age of 6-8 months to the age of primary school children.

Materials And Methods

Speaking about the structure of a single cognitive process, it should be borne in mind that visual-motor thinking is genetically its initial form and is not considered the "lowest" stage in the development of thinking. The main quality of the thinking process is characteristic of it: it is an indirect and generalized reflection of the connections and relationships of the surrounding reality that are not directly noticeable. It is possible to distinguish not only the two-way connections of visual-motor thinking with other forms of thinking activity - visual-figurative and verbal-logical forms, but also qualitative changes in visual-motor thinking in the process of general mental development.

The psychological and pedagogical features of the development of students' "visual-motor thinking" may vary depending on the age, individual characteristics and level of education of each student. However, the general features of the development of this thinking include the following aspects:

1. Awareness of spatial knowledge. Students can develop their thinking skills by understanding and understanding spatial relationships. This may include the ability to move in space, understand geometric shapes and their relative positions.

2. Development of motor skills and coordination of movements. For the development of visual-motor thinking, it is important to develop motor skills and coordination of movements that allow students to control their movements in the vase. This may be due to sports, dance, drawing and other activities that require physical activity.

3. Visual perception and analysis of information. Students can develop visual-motor thinking through visual perception and analysis of information, for example, graphs, when working with diagrams, maps and other visual materials.

4. Game and creative tasks. The use of game and creative tasks helps to develop visual-motor thinking of students, since such tasks require active actions, including movement and visual perception.

5. Individual development characteristics. It is important to take into account the individual development characteristics of each student, since "the level of visual-motor thinking may differ for each person. Pedagogical work should be focused on the individual needs and abilities of students.

Thus, the development of visual-motor thinking in students requires a comprehensive approach, taking into account various types of activities, games and creative tasks, as well as the individual characteristics of each student.

A. N. Leontiev, describing the interaction of different forms of thinking, writes that the study of complex thinking activity "... created the basis for the adoption of highly developed forms of thinking in a person, often closely interconnected and interchanging with each other." In an adult, high levels of practical intelligence are of particular importance.

Undoubtedly, the practical thinking of an adult, unlike the thinking of a small child, is not always directly related to real changes in the perceived object. However, there are a number of both cognitive and practical tasks, the solution of which cannot be carried out without real changes in the object, which are directly related to the perception of the object and the situation in which it is given. Often, "highly developed forms of thinking act inextricably linked with practical actions under certain conditions".

The development of demonstrative-motor thinking in ontogenesis occurs simultaneously with the development of subject activity and the child's mastery of speech. As E. Goziyev noted, "the empirical observation of the consistency in the complexity of subject activity shows that later and more complex subject skills are formed after the preparation of less complex ones ...".

In the evolution of object-oriented actions, several very important stages can be distinguished: the child's direct contact with the object, the implementation of effective actions first with the hand, and then indirectly with the help of another object,

as a result of which the first object begins to stand out as an object of activity. The use of auxiliary objects is considered the main, determining direction in the development of object-oriented activity, as an intermediate link between object-oriented and instrumental activity. The use of auxiliary objects and the formation of instrumental activity create the necessary conditions for the child's selective attitude to various parts and properties of the object, becoming a means of achieving this result. Thus, the emergence and development of visual-motor thinking in children is associated with the transition from manipulative activity to object-oriented, instrumental activity, and then to elementary forms of effective activity, with the complexity of relationships with adults and peers, with an increase in the volume of assimilation of knowledge and speech. These changes are determined by the child's activity aimed at mastering objects and acquiring socially developed methods of using them.

Pedagogical psychologists have received a lot of evidence about the importance of the development of the child's actions, his objective activity in the formation of perception, memory, attention and thinking. “The role of objective action was studied in connection with the child's mastery of the generalizing function of the word, the development of speech and his initial ideas. The influence of direct practical experience on the thinking of young children and the content of the generalizations being formed; the dependence of their understanding of cause-and-effect relationships on the method of practical acquaintance with objects was established.”

As S. S. Gulyamov noted, “Any practical action includes a directing and executive, operational link.” M. Saidov's research on the development of students' thinking skills showed that "...the effectiveness of performing various tasks in a demonstrative-motor way directly depends on the nature of children's directional-research activity".

Results And Discussions

A study of the methods of initial acquaintance of children of primary school age with new subjects showed that the nature of directional-research activity changes depending on age: directional-research reactions are separated from executive reactions, and methods of investigation corresponding to the properties of objects are formed. Children move from a tactile-motor direction to an observational direction; as a result, different types of directions become more compatible with each other and complement each other, which affects the nature of children's perceptions of the subject.

In demonstrative-motor thinking, the decision-making process can be included directly in the process of a specific practical action, when the decision-maker makes a real change in the situation. In this case, practical action consistently implements each stage of the task solution and creates an opportunity for the child to visually perceive the results of changing the situation; as a result, a direct basis is created for the further course of the thinking process. In this case, thinking takes on the nature of a “step-by-step” process that gradually brings a person closer to the goal (solving a problem, determining the unknown). “Practical action itself partially replaces the thinking operation of anticipating and timely taking into account in a problem situation all the changes arising from the previous stages of solving the problem.”

Conclusion

This is the specific advantage of visual-motor thinking, which provides "continuous control over the course of thinking", which "... creates very favorable conditions for immediate verification and self-examination of each "stage" of the cognitive process". Thus, in visual-motor thinking, practical methods of transforming the object (objects) play a special role, during which the child can identify their hidden, important properties and connections. These methods represent the most important component of visual-motor thinking.

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