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THE RESULTS OF THE STUDY OF THE INFLUENCE OF CHESS GAMES ON THE COGNITIVE DEVELOPMENT OF CHILDREN WITH HEARING IMPAIRMENT

РЕЗУЛЬТАТЫ ИССЛЕДОВАНИЯ ВЛИЯНИЯ ШАХМАТНЫХ ИГР НА КОГНИТИВНОЕ РАЗВИТИЕ ДЕТЕЙ С НАРУШЕНИЕМ СЛУХА

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Аннотация

В настоящее время дети, имеющие различные нарушения слуха, имеют достаточно большое представительство среди других нозологических групп. Снижение или потеря слуха у детей сопровождается дефицитом внимания, которое определяет возможности развития познавательной деятельности, что создает психолого-педагогические трудности в их обучении и воспитании. Развитие когнитивной сферы слабослышащих и глухих детей является неотъемлемым условием их нормального развития, эффективной образовательной деятельности и успешной социализации. Игровая деятельность является эффективным средством развития значимых психологических и психофизиологических функций детей, активизации их познавательных способностей, воспитания устойчивого интереса к интеллектуальной деятельности. Одним из средств этой группы, отличающимся большим ресурсным потенциалом в развитии познавательной сферы детей младшего школьного возраста, является игра в шахматы.

Ключевые слова: дети, нарушение слуха, когнитивные процессы, шахматы.

Annotation

Currently, children with various hearing disorders have a fairly large representation among other nosological groups. The reduction or loss of hearing in children is accompanied by a lack of attention, which determines the possibilities for the development of cognitive activity, which creates psychological and pedagogical difficulties in their education and upbringing. The development of the cognitive sphere of hearing impaired and deaf children is an indispensable condition for their normal development, effective educational activities and successful socialization. Game activity is an effective means of developing significant psychological and psychophysiological functions of students, intensifying their cognitive abilities, and fostering a steady interest in intellectual activity. One of the means of this group, which has great resource potential in the development of the cognitive sphere of children, is the game of chess.

Keywords: children, hearing impairment, cognitive processes, chess.

The age of children raised in preschool educational institutions is considered by experts to be the most favorable period for the natural and directed formation and development of the foundations of conscious reflexive behavior, as well as the education of typological characteristics of reflection. The importance of this age period in ontogenesis is also associated with the creation of the fundamental foundations of human social behavior, the possibilities of his successful self-determination and self-realization in society [6].

The child's ability to refine the level and content of his knowledge, as well as correctly evaluate his own actions, is a product of his cognitive activity, the result of reflexive behavior. Without self-identification of one's own mistakes and the cause-effect relationships of their occurrence, it becomes problematic and sometimes impossible to achieve the main goal in any type of activity [1].

When it comes to children with hearing impairments, it should be borne in mind that damage to the relevant organs responsible for the perception of sound information reduces the functional capabilities of the nervous system, leading subsequently to

certain impairments in the process of mental development, speech development, and the development of analytical and synthetic thinking [10].

At the same time, such a lag in the development of thinking in this contingent of children becomes obvious in all its components. This is manifested in the deterioration of the verbal side of thought processes, and in a significant lag in verbal and logical thinking, and in the delay in the formation of mental operations of analysis, synthesis, comparison, generalization, abstraction, and in a lack of motivational component, and in low cognitive activity [2].

Therefore, the purposeful development of the cognitive sphere of hearing-impaired and deaf children is a prerequisite for their normal development, effective educational activities and successful socialization.

To determine the nature of the influence of cognitive development indicators of hearing-impaired and deaf preschool children on the success of their educational activities, an analysis was carried out between two corresponding groups of indicators in preschoolers of a specialized preschool educational organization.

The results of the analysis between the indicators of cognitive development of this contingent of children and their academic performance allowed us to establish the following patterns:

- indicators of the level of memory development in children of primary school age with hearing impairments are practically unrelated ($r=0.020-0.098$; $p>0.05$) to their academic performance;
- indicators of the level of attention development of primary school children with hearing impairments are practically unrelated ($r=0.020-0.151$; $p>0.05$) to their academic performance;
- indicators of the level of visual and imaginative thinking development in children with hearing impairments have statistically significant positive associations with academic performance;
- indicators of the level of development of analytical and synthetic thinking in children with hearing impairments have statistically significant positive correlations with academic performance.

According to experts, games, game-related tasks, etc. are a fairly effective means of developing cognitive processes in children. During games, children develop the

ability to concentrate attention, which is transferred to other types of their activities, including educational [4, 8].

Representatives of pedagogy and psychology have long established a clear relationship between children's play-based activities and the pace of their mental development. This is due to the fact that play activities have a positive effect on the ontogenetic development of the child and thus create a zone of immediate development of mental actions [3].

In this regard, it seems obvious that games, play activities, and play-based tasks in children should be considered as the main, basic means of developing a child's mental activity, which is necessary for him to successfully master new knowledge.

Experts emphasize that for children, play is one of the tools for developing significant psychological and psychophysiological functions of students, activating their cognitive abilities, fostering a sustained interest in intellectual activity and the need for it [7].

One of the means of this group, characterized by a great resource potential in the development of the cognitive sphere of children, is the game of chess [5, 9].

A survey of qualified teachers and coaches who teach the game of chess to hard of hearing and deaf children showed that in their work they use exclusively existing official programs developed for healthy children, adapting them to the peculiarities of the contingent with hearing disabilities.

The content analysis of existing programs carried out by these experts and the comparison of the targets and main tasks presented in them, the amount of hours allocated for mastering and the timing of implementation, the main elements of the content and methodological support allowed them to establish that each of the considered educational programs to a greater or lesser extent has a certain number of prerequisites for use in work with the hearing impaired and deaf children.

As a result, experts note that according to the total total number of matching coefficients, three programs have the greatest number of prerequisites for using hearing-impaired and deaf children for primary chess instruction: Chess - School (matching coefficient - 0.87), Chess in Elementary School (matching coefficient - 0.69), Chess (the compliance coefficient is 0.59).

An experimental test of the effectiveness of cognitive development in hearing-impaired and deaf children by including chess lessons in the form of elective classes three times a week for one hour in academic subjects revealed that by the end of the fifth month of the pedagogical experiment, the accuracy of attention in hearing in children with hearing impairments improved statistically significantly, as well as its productivity.

Learning to play chess in addition to the program composition during the pedagogical experiment had a positive effect on improving the level of development of visual-imaginative thinking and imaginative memory of children with hearing impairments. At the same time, in this nosological group of children, the increase in the corresponding indicators was 14.3% and 17.6%.

The revealed statistically significant changes in cognitive indicators in hard-of-hearing and deaf children who studied chess are consistent with the main provisions formulated by experts who found that the effectiveness of chess players' gaming activities is most closely related to the level of development of memory, attention, thinking and other mental processes.

Thus, the results of the study make it possible to specify the resource potential of playing chess in terms of the development of cognitive indicators such as accuracy and productivity of attention, visual-imaginative and analytical-synthetic thinking, and imaginative memory in hard-of-hearing and deaf children.

At the same time, the psychological and pedagogical conditions that ensure the effectiveness of the process of developing cognitive interest in children with hearing impairments include:

- providing the necessary auditory and speech environment;
- development of reflection as an ability to independently identify errors and identify their causes during the game of chess;
- modeling and construction of educational chess material based on activity-based and differentiated approaches to students;
- creation of a favorable educational play environment that affects the intellectual, motivational and emotional spheres of children;
- focus on achieving success;
- meeting the special educational needs of this contingent of children;

- the use of didactic games to activate cognitive processes;
- taking into account the actual psychophysiological and psychological-pedagogical of this contingent of children.

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