

## DESIGNING A FRAMEWORK FOR CULTIVATING THE LOGICAL AND PSYCHOLOGICAL THINKING SKILLS OF CHESS LEARNERS.

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**Abstract.** The variety of approaches to the concept of "Logical thinking" and their controversy allow us to offer our own version. In our opinion, logical thinking is an actual psychological-pedagogical and social activity in the process of educational and practical activities aimed at applying various consciously reasonable logical operations in one's activity, creating hypotheses and evaluating the results according to the laws of logic, and using these skills is a systematic formative mental characteristic of a person based on a complex mechanism in solving cultural problems.

**Annotatsiya.** "Mantiqiy fikrlash" kontseptsiyasiga yondashuvlarning xilma-xilligi va ularning qarama-qarshiligi bizga o'z variantimizni taklif qilish imkonini beradi. Bizning fikrimizcha, mantiqiy fikrlash - bu o'z faoliyatida turli ongli asosli mantiqiy operatsiyalarni qo'llash, gipotezalar yaratish va natijalarni mantiq qonunlari bo'yicha baholash va undan foydalanishga qaratilgan o'quv va amaliy faoliyat jarayonida dolzarb psixologik-pedagogik va ijtimoiy faoliyat bu ko'nikmalar. - madaniy muammolarni hal qilishda murakkab mexanizmga asoslangan shaxsning tizimli shakllantiruvchi psixik xususiyatidir.

**Аннотация.** Разнообразие подходов к понятию «логическое мышление» и их противоречивость позволяют предложить свою версию. По нашему мнению, логическое мышление - это собственно психолого-педагогическая и социальная деятельность в процессе учебно-практической деятельности, направленная на применение в своей деятельности различных сознательно обоснованных логических операций, создание гипотез и оценку результатов в соответствии с законами логики, а также использование этих умений - это систематическая формообразующая психическая характеристика человека, основанная на сложном механизме решения культурных задач.

Keywords "Logical thinking", chess, consciousness, thinking, self-evaluation, self-analysis, nurture educational, competitive

**Kalit so'zlar** "Mantiqiy fikrlash", shaxmat, ong, tafakkur, o'z-o'zini baholash, o'z-o'zini tahlil qilish, tarbiyaviy, raqobatbardosh

**Ключевые слова** Логическое мышление, шахматы, сознание, мышление, самооценка, самоанализ, воспитательный, образовательный, соревновательное

In the psychological and pedagogical literature, there is still a debate about the approaches to learning logical thinking and the components that make up its structure. **In the context of innovative developments in the field of education and training, the thinking of students is education at a complex structural level, characterized by the hierarchy and interdependence of the components included in it.**<sup>1</sup>

In chess, the operational and functional component is implemented in the form of a next move on the board. Thus, one move is the result of the logical reasoning of the chess player, which is based on the knowledge and experience-based methods of the operational and functional component: comparison, selection of features, summarization of information obtained on the basis of analysis, etc<sup>2</sup>[7,9].

**The purpose** of the research is to theoretically and methodologically justify and develop the pedagogically effective technological support of the system of formation of logical thinking of chess players.

**The object of research** is educational and competitive activities of chess players.

**The subject of research** is the theoretical, methodological and technological foundations of designing a system for forming the logical thinking of chess players.

#### **Research tasks:**

**1.** To study the situation of the problem of formation of logical thinking of chess players and to determine the important and specific features of the concept of solving it in the field of physical education and sports.

**Research methods,** study, analysis and generalization of materials of scientific methodological literature, study of information materials, official documents published in special periodicals, pedagogical observations, control tests, experience.

The formation of logical thinking at the stage of development and formation of technology for the successful implementation of specified tasks is presented in Table 5 below.

The modules of the author's program for the training of chess players for the training and educational process of the third stage of the experiment have been developed.

**Table 1.**

### **Program for developing the logical and psychological thinking of chess students**

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<sup>1</sup> O' L. Matnazarov, D.B. Yaqubova Shaxmatning boshlang'ich asoslari. Uslubiy qo'llanma. Xorazm Ma'mun akademiyasi nashriylik bo'limi, Xiva-2019. 89 bet. Коломоков О.И., Вершинин М.А. О сущности логического мышления Проблемы образования: теория и практика. - 2000. Учебное пособие. № 2 - С. 84-86.. Коломоков О.И., Вершинин М.А. Программа управления учебной деятельностью студентов // Теоретико-методологические основы формирования педагогической культуры: Мат. межвуз. науч. конф. - Волгоград: ВГАФК, Научный журнал. 2001. - С. 73-76.

<sup>2</sup> Вершинин М.А., Технологические аспекты формирования логического мышления учащихся // Педагогические технологии развития творческого мышления: Мат. межрегион. науч.-методич. конф. - Волгоград: ВГАФК, 2002. - С. 31-37. Вершинин М.А. Эндшпиль: легкофигурные окончания (конь против слона). - Волгоград: Научный журнал. ВГАФК, 2004. - 28 с.

<b>Stage</b>	<b>Objective</b>	<b>Activities (Methods)</b>	<b>Expected Outcome</b>	<b>Evaluation Criteria</b>	<b>Duration</b>
1. Preparatory Stage	To foster students' interest in chess and teach basic rules	- Introducing game elements during lessons - Practicing correct placement of the chessboard and pieces - Motivational discussions	The student knows the chessboard, pieces, and movement rules	80% of students score $\geq 70$ points on the test	1 month
2. Stage of Developing Logical Thinking	To develop combination al thinking, analysis, and strategic decision-making skills	- "Checkmate in one move" exercises - Game analysis and solving combinations - Rapid (blitz) games to train quick thinking	The student can plan 2–3 moves ahead	75% of students correctly solve combination tasks	Months 2–3
3. Psychological Preparation Stage	To develop concentration, patience, and emotional stability	- Tournament games - Stress management exercises	The student remains calm, focused, and stable during games	Psychological test result $\geq 70\%$	Months 4–5

		- Motivational training sessions			
4. Final Stage	To evaluate and strengthen the overall level of thinking	- Analytical tournaments - Individual assessment - Analysis of achievements and shortcomings	The student achieves harmony between logical and psychological thinking	80% or more of students achieve high results	Month 6

The program is aimed at gradually developing students' logical, analytical, and psychological preparedness. Each stage includes clear goals, outcomes, and assessment criteria, with progress monitored through observation and evaluation.

The program can be applied in schools, sports schools, or chess clubs.

**Analysis of results.** The motivational-goal component of the logical thinking of chess players was formed by strengthening internal motivation and cognitive activity, the desire to show oneself in competitive activities as an athlete, more diverse and self-improvement of professionally important skills. Integrated learning and cognitive activity, in which the methods of logical analysis, synthesis, comparison, and generalization are highly relevant in solving theoretical and practical problems. The development of the motivational component was helped by the demonstration of bright and, at the same time, technically rather complex tactical and strategic examples, which reveal a rich spectrum of harmony in the interaction of chess pieces. Analysis of such tasks and self-analysis help to create a highly positive emotional background in learning[1,3,].

Evaluation of the level of performance of teaching technology is considered as an object of its quality management system.

**Table 2**

**Components of logical thinking**

Group name	Components of logical thinking				Integral indicator, G
Experimental group	Motivational-purposeful	Informant P2	Operationally functional	Reflexive P4	G

	P1		P3		
Control group	0,8	0,71	0,72	0,68	0,74
	0,53	0,62	0,57	0,52	0,51

Description of the integrated indicator of the formed logical thinking of chess players (according to the results of the formative stage of the experiment)

In our opinion, only such a highly differentiated landscape (along with progress in the direction of increasing the level of generalization and systematization of the knowledge accumulated by humanity) provides a full opportunity for a synthetic review of the genetic composition of knowledge.<sup>3</sup>

Based on the above, we distinguish the following sets of knowledge within the structural part:

- 1) technological, which represents the information base of the technologies of organization and construction of the activity process;
- 2) methods of studying various phenomena in the process of activity, which combine a set of knowledge about general laws;
- 3) theoretical, including knowledge of goals, principles, methods, tools and various forms of action aimed at achieving specific results in the process of activity;
- 4) methods based on mastering the basics of various methods of organizing and managing the field of activity

**Conclusions.** Analyzing the concepts of "Thinking", "Logical thinking" and the concept of "Logical thinking of a chess player" are related to them, using various conscious logical operations in their activities, creating hypotheses and evaluating them according to the results. made it possible to describe a person based on a complex mechanism of abilities. with the laws of logic and aimed at using these skills to solve current psychological-pedagogical and socio-cultural problems.

During the development of the system of formation of logical thinking of chess players, a number of its functional (gnostic, design, constructive, communicative, organizational) and structural (motivational-target, informational, procedural, diagnostic, result) components were identified. This makes it possible to take into account the specific features of logical thinking, the features of the construction of its

<sup>3</sup> Xolboyeva G.X. Haydarov B.T. Tojiev X.B. Methodology of the improvement of preliminary gymnastic disciplines in increasing activity of preschool age children (case of Uzbekistan). // International Journal of Psychosocial Rehabilitation. 2020. №6 ISSN:1475-7192 Scopus. DOI: 2009-2011, 2013-2020. B 4562-4569., Xolboyeva G.X. **Maktabgacha yoshdagi bolalar harakat faolligini oshirishda dastlabki gimnastika mashg'ulotlarini takomillashtirish mexanizmlari** // SamDU ilmiy axborotnomasi. Ilmiy jurnal. 2019-yil, 6-son. 2091-5446. B.140-144., Kholboeva, Gulhayo Kholboeva (2021) "Mechanisms of improving the motor activity of children aged 6-7 years through initial gymnastics classes," Eurasian Journal of Sport Science: Vol. 1:Iss.2, Article.1. Available at: <https://uzjournals.edu.uz/eaiss/vol1/iss2/1>

content and components, to predict and control the processes of its formation, and to diagnose the results.

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