Berlin Studies Transnational Journal of Science and Humanities ISSN 2749-0866
Vol.2 Issue 1.5 Pedagogical sciences
http://berlinstudies.de/

INNOVATIVE METHODEN ZUR BEWERTUNG DES LOGISCHEN DENKENS UND DER PERSÖNLICHEN QUALITÄTEN VON SCHÜLERN DER GRUNDKLASSE IM PROZESS DES SCHACHUNTERRICHTS.

Kholiqov Umidjon Quchqorivich
Doktorand der Gulistan State University im Fachbereich "Pädagogik".
shox75@mail.ru Usbekistan

Zusammenfassung: Im Artikel hängt die Ausbildung persönlicher Qualitäten und logischen Denkens von Grundschülern durch das Schachspiel in der Erziehung der jungen Generation in hohem Maße von den individuellen Eigenschaften des Spielers und mentalen Prozessen wie Gedächtnis, Aufmerksamkeit ab , und Denken werden als aktuelle wissenschaftliche und praktische Fragen untersucht.

Um das Potenzial von Grundschülern, Schach zu lernen, vollständig einzuschätzen, wird eine Methodik zur Bestimmung der Fähigkeit zum Schachspielen in 5 Bereichen vorgeschlagen: psychologische Qualitäten, körperliche Qualitäten, mentale Qualitäten, kreative und spirituell-moralische Qualitäten**.**
Schlüsselwörter: Aufmerksamkeit, Wahrnehmung, Denken, Gedächtnis, Schach, persönliche Eigenschaften, logisches Denken, Schachspiel

INNOVATIVE METHODS OF EVALUATING LOGICAL THINKING AND PERSONAL QUALITIES OF PRIMARY CLASS PUPILS IN THE PROCESS OF CHESS TEACHING.

Kholiqov Umidjon Quchqorivich
Gulistan State University Phd student of the "Pedagogy" department. Uzbekistan

Abstract: In the article, the formation of personal qualities and logical thinking of elementary school students through the game of chess in the education of the young generation depends to a large extent on the individual characteristics of the player, and mental processes such as memory, attention and thinking are studied as an actual scientific and practical issue.

In order to fully assess the potential of elementary school students to learn chess, a methodology for assessing the ability to play chess in 5 areas is proposed: psychological qualities, physical qualities, mental qualities, creative and spiritual-moral qualities.
Key words: attention, perception, thinking, memory, chess, personal qualities, logical thinking, chess game

INTRODUCTION

It is true that bright chess stars and world champions are emerging in Uzbekistan. It is no coincidence that our compatriots often surprise the world of chess. Already, along with countries such as India and China, Uzbekistan can justifiably claim the honorable name of the homeland of chess. The discovery of a complete collection of chess figurines made of ivory at the Afrosiyab monument, and the

discovery of two unique chess figurines from the Kushan Empire period in the ancient Dalwarzintepa area confirm that the game of chess existed on our land before BC.

In fact, this game, which is considered by our ancestors as a "wheel of the mind", has been widespread in our land since ancient times. Amir Temur, an incomparable master of military science and chess, reformed the rules of ordinary chess and even created a complex type of chess. It is known from history that he was named "Shatranji Kamil".

Chess can be considered as one of the pedagogical tools that help children to think logically and to form personal qualities. According to many psychologists and pedagogues, chess also affects the formation of the child's personal qualities. In many advanced countries, the game of chess is included in the primary stage of school education and is used as one of the most active tools for the creative formation of students. It should be stated that it has been proven in the researches of many local and foreign scientists that the students' practice of chess has a positive effect on their mastery of other academic subjects.

In the Presidential Decree No. 3906 of the President of the Republic of Uzbekistan dated August 9, 2018 "On additional measures to develop chess in the Republic of Uzbekistan" and No. 4954 dated January 14, 2021 "On measures to further develop and popularize chess and improve the system of training chess players" it is stated that "... gradual inclusion of chess teaching in general secondary schools, training of highly qualified coaches, strengthening the material and technical base of chess clubs and chess classes of general secondary schools", "... relevant 1000 general secondary schools 2nd, 3rd and 4th graders will be taught chess in the educational school within the scope of "Physical education" on the basis of an 18-hour plan, and it is envisaged that they will be provided with methodical support.

Scientific studies confirm that children who regularly play chess do better in school, especially in the science of nature, which is one of the best indicators of their future success in school:

- formation of logical thinking skills, multi-pass games develop logic, memory and imagination. During the game, the child is taught to be persistent, to strive for the goal, to be attentive;
- logical decision-making is formed. The concept of play methodically forms personal qualities in a young child, such as making decisions on time and being fully responsible for them, as well as being able to quickly focus on a goal and find ways to achieve it;
-they form personal qualities of rational approach to failures. This means not only careful work on mistakes with correct conclusions, but also personal qualities to apply them purposefully in the future. All this develops intelligence and the ability to think creatively, as well as enhances creativity;
- expanding the limits of strategic and systematic thinking. Chess teaches you to analyze the situation and develop successful logical chains in your mind.

Analysis of literature on the topic

The level of study of the problem. Various aspects of primary education are actively used by B. Abdullaeva, B. Adizov, G. Akramova, G. Boymurodova, N.Dilova, G. Najmiddinova, Kh. Nazarova, R. Nurzhanova, R. Safarova, N. Tosheva, Z.

Kholmatova, G. Hasanova, O. Karkhonova, Sh. Toshpulatova. in our Republic. In the implementation of chess games in education, it is possible to point out the researches of M. Mukhiddinov, A. Mazmudov, M. Khaylaev, R. Kasimjonov, Eson Ali, H. Turdialiyev, B. Kholmirzaev and others' regarding the theory and practice of chess.
Peculiarities of primary school students and problems of teaching them to think logically are studied by the scientists of the Commonwealth of Independent States (CIS) such as V. Averin, N. Belitskaya, V. Belich, V. Bibler, V. Gagai, B. Geidman, E. Gorlova, Dayana Halperi , N. Dick, A. Zak, M. Kalugin, N. Novotortseva, I. Krotov, G. Levitas, N. Leonova, L. Likhtarnikov, A. Markova, M. Matyukhina, S. Spiridonova, M. Mauerman, G .Zuckerman O. Tarasova. E. Revin, V. Knyazeva, Ya. Gabbazova, G. Nesis, G. Alekseev, G. Kasparov, A. Arrash, A. Kotov, N. Krogius, T. Petrosyan et al. In the process of chess education, pedagogical and psychological aspects of forming the student's personality have been developed.
Among the foreign scientists , E. Fromm, M. Mauerman, A. Maslow, Jenny Steele, Curt Meredis, Charles Temple, R. Zuzoueu, Robert Ferguson, Florian Vaulon. A. Bisno, Ernst Bensch, Uwe Bensch, Dj. Bul A. Inizian, J. Kalmi, S. Frene, P. Kergomar, J. Piaget, S. Benjamin, etc., studied the necessity of teaching logical thinking of younger students and improving the chess teaching process in one way or another.

Many famous chess players got acquainted with chess for the first time at a young age, in particular, H. Capablanca, A. Karpov, P. Keres, S. Reshevsky, M. Aive first got acquainted with the ancient game at the age of 4, N. Gaprindashvili, G. Kasparov at the age of 5, V. Smyslov, B. Spassky, R. Fisher started playing at the age of 6, and A. Alyokhin, M. Tal at the age of 7. Of course, not all children who are attracted to the game of chess become champions. However, it should be noted that the contribution of chess to the formation of a well-rounded person is very large

The research of foreign and local scientists, as well as the experience of teaching chess, show that the age range of 5-10 years is the most favorable period for starting chess training, because from this period children begin to develop logical thinking and personal qualities. At this stage of development, chess is an ideal model. Intensive formation of a child's intelligence at primary school age plays a big role not only in the human psyche, but also in his life as a whole. If chess were to be taught to all, the "educational" instruction would be the leading one, concerned with understanding exactly what chess gives all children, whether they continue to play the game or not.

Research methodology

Experimentally, it was found that the speed of intellectual reaction in children who actively play chess is 40% higher than in children who do not play the game. This means that the mental characteristics of each child will not be permanently fixed with one information, but will undergo progressive changes in certain educational conditions. It can be said that chess plays an important role in providing such conditions.
Chess is a tool for all-round development of a child. It is universal education in the nature of games aimed at improving the general culture. Chess affects the formation

of external and internal speech, combinatory and logical thinking, willpower, vital activity, criticality, self-analysis and self-evaluation, and the ability to receive independent education.

The problem with school education has always been and besides that it does not provide the ability to apply the acquired knowledge in practice. Chess is an interesting practical activity for children, which is practically developed and has an integrated theory.

For this reason, all children should be taught chess, and according to experts, the best time to do this is in elementary school or even preschool age. Students who like chess should be given the opportunity to continue their studies in high school.

Often a child may have the inner potential (talent) to become a chess grandmaster in the future. But due to his age or other reasons, he is not yet attracted to chess. In such cases, it is impossible to make a decision based on external factors alone, without taking into account his hidden talent. Unfortunately, in chess didactics there are no objective tools that allow to see the "hidden" talent of nature, to determine and evaluate the child's development indicator in chess.

According to T. Ogneva, "In order to increase the quality and speed of the child's development through chess, it is important to know the child's ability to play chess before learning this game." He developed a system of psychological methods that allowed to see the real development area of each child. This allows to determine the load depending on the child's ability in the educational process. As a result, the forecast of the child's logical thinking increases.

In order to objectively evaluate logical thinking in playing chess, it is necessary to know the requirements for chess players, that is, what psychological, physiological, mental, creative, moral qualities a chess player should have. Thus, a comprehensive assessment of the child's potential for the game of chess is the main task. Various diagnostic tools and methods can be used for this. These methods of learning chess and diagnosing personality formation should be based on the principles of developmental education covering the entire educational material.

It is difficult to develop the method of logical thinking and identification of personal qualities for primary school students in the game of chess, and it requires special psychological and pedagogical diagnostic methods. In our opinion, such methods allow a systematic assessment of all components of the chess game. A comprehensive approach to the assessment of competence should be developed taking into account the personal qualities possessed by the best representatives of the chess world and the conditions for their high-level success.

The proposed comprehensive methodology for determining the logical thinking and personal qualities of primary school students includes psychological, physical, intellectual, creative and spiritual-moral qualities characteristic of talented chess players.

Unlike other methods, the proposed complex methodology based on empirical data is developed based on the analysis of scientific and specialized literature, psychological and pedagogical experiences, experience of teaching chess lessons, and the experiences of the world's leading chess players. In the course of the research, we

divided the requirements for a talented chess player into 5 block groups: psychological, physical, intellectual, creative and spiritual-ethical. Naturally, they are all interrelated. This grouping is conditional and helps the child to identify the necessary development opportunities at the beginning of the chess path. This distinction consists in determining which of these qualities are considered innate and which can be developed throughout life, and which of them apply only to the game of chess.

Requirements for the personality of a chess player:

Psychological - memory, attention, reflection, concentration, self-awareness, resistance to stress, self-control, self-confidence, diligence, mobility, emotional control, ability to shift attention, etc.

Intellectual - general scientific knowledge, chess theory, the ability to distinguish the main, the ability to analyze information, the ability to study the psychology of the opponent, the activity of thinking, etc.

Creative - the ability to see the problem, systematic logic of thinking, initiative, divergent thinking, etc.

Physical - willpower, hard work, self-organization, discipline, warrior qualities, self-control, fatigue control, etc.

Ethical - motivation, culture of communication, moral values, willingness to help, ethical standards, etc.

Diagnostic tools can be used to determine the compatibility of the child's personal qualities based on the specified requirements and their components.

Analysis and interpretation of diagnostic results

As mentioned above, learning chess is a comprehensive assessment of the formation of logical thinking and personal qualities. Belo, the chart is given which shows the personality characteristics and diagnostic tools and developmental level of a person who is tested. Based on the recommended tools (tests, chess game, solving problems), numerical indicators are determined and included in the table.

Indicators of determining the effectiveness of teaching by improving logical and personal qualities in students of 2-4th grade (by percentage) (experimental class - 960 students, control class - 790 students)

№	Criteria	Grades	Levels of mastery					
			At the beginning of experiment			At the end of experiment		
			High	Medium	Low	High	Medium	Low
1	Memory	Experiment	260	300	400	480	320	160
		Control	230	245	315	195	275	320
2	Concentration	Experiment	285	315	360	460	325	175
		Control	145	270	375	285	270	235
3	Stress tolerance	Experiment	295	290	375	470	325	165
		Control	160	275	355	190	270	330
4	The level of	Experiment	260	345	355	475	330	155

	knowledge of chess theory	Control	200	265	325	275	260	255
5	The level of knowledge of the exact sciences	Experiment	310	335	315	575	230	155
		Control	240	230	320	200	350	240
6	Qualities of will	Experiment	300	255	405	490	300	170
		Control	220	210	360	290	150	350
7	Industriousness	Experiment	245	220	495	495	305	160
		Control	290	365	135	190	250	350
8	Discipline	Experiment	310	290	360	465	325	170
		Control	165	285	340	280	290	220
9	Self-control	Experiment	225	355	380	480	345	135
		Control	160	275	355	175	285	330
10	Patience	Experiment	210	295	455	510	295	155
		Control	290	180	320	220	300	270
Total :		Experiment	2700	3000	3900	4900	3100	1600
		Control	2100	2600	3200	2300	2700	2900
Mean :		Experiment	270	300	390	490	310	160
		Control	210	260	320	230	270	290

The results of pre-experimental mastery in determining the effectiveness of teaching by improving the formation of logical and personal qualities in students of 2-4 grades

Classes	Number of 2-4 grade pupils	Level of mastery		
		High	Medium	Low
Experimental class	960	270	300	390
The class of control	790	210	260	320

Determining the learning rates in the experimental class and the number of students of grades 2-4, respectively, by $X_i n_i$ and those in the control class by $Y_j m_j$, we have the following statistically grouped variation series, and also, we mark the high indicator with 3 points, and the average indicator with 2 points and a low indicator with 1 point.

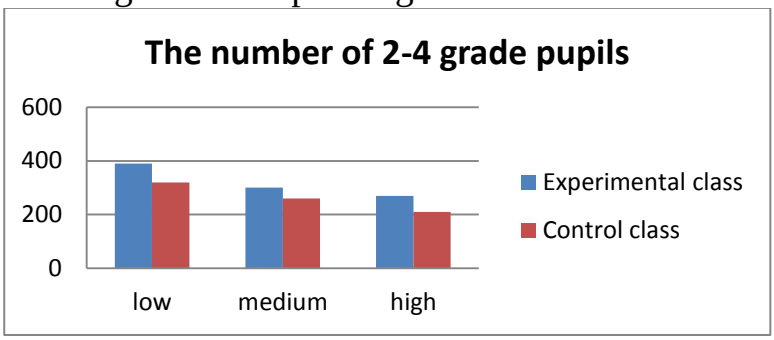
Mastery rates in the experimental class:

$$\begin{cases} X_i & 3; & 2; & 1; \\ n_i & 270; & 300; & 390 \end{cases} \qquad n = \sum_{i=1}^{3} n_i = 960$$

Mastery rates in the control class:

$$\begin{cases} Y_i & 3; & 2; & 1; \\ m_j & 210; & 260; & 320; \end{cases} \qquad m = \sum_{j=1}^{3} m_j = 790$$

A diagram corresponding to these selections will be as following:



Picture 1. At the beginning of experiment

The results of the post-experimental mastery of determining the effectiveness of teaching by improving the formation of logical and personal qualities in students of 2-4th grade.

Classes	Number of 2-4 grade pupils	The level of mastery		
		High	Medium	Low
Experimental class	960	490	310	160
Control class	790	230	270	290

We introduce the same designations as above for the mastery rates in the experimental class and the number of students of grades 2-4, respectively.

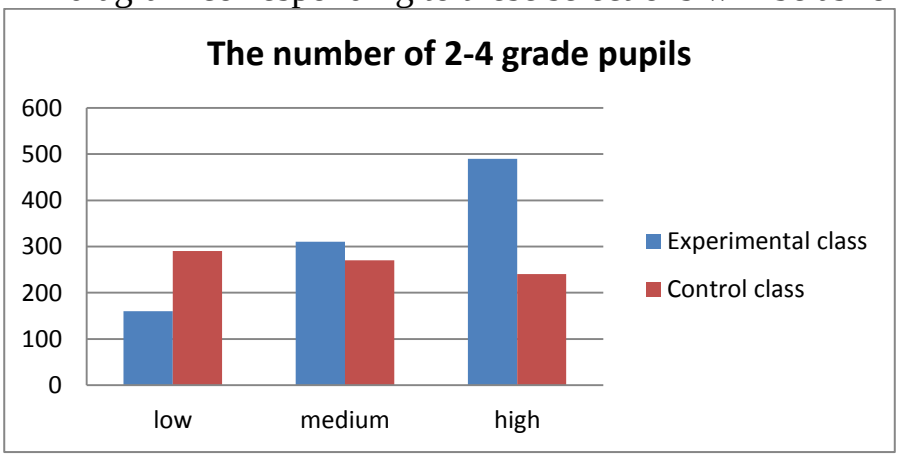
Mastery rates in the experimental class:

$$\begin{cases} X_i & 3; & 2; & 1; \\ n_i & 490; & 310; & 160; \end{cases} \qquad n = \sum_{i=1}^{3} n_i = 960$$

Mastery rates in the control class:

$$\begin{cases} Y_i & 3; & 2; & 1; \\ m_j & 230; & 270; & 290; \end{cases} \qquad m = \sum_{j=1}^{3} m_j = 790$$

A diagram corresponding to these selections will be as following:



Picture 2 . At the end of experiment.

Based on the above results, we calculate the quality indicators of experimental work.

As we know $\overline{X}$ =2,34; $\overline{Y}$ =1,94 $\Delta_x = 0{,}05$; $\Delta_y = 0{,}1$.

Quality indicators from this:

$$K_{усб} = \frac{(\overline{X} - \Delta_x)}{(\overline{Y} + \Delta_y)} = \frac{2{,}34 - 0{,}05}{1{,}92 + 0{,}1} = \frac{2{,}29}{1{,}93} = 1{,}18 > 1;$$

$$K_{бод} = (\overline{X} - \Delta_x) - (\overline{Y} - \Delta_y) = (2{,}34 - 0{,}05) - (1{,}92 - 0{,}1) = 2{,}29 - 1{,}91 = 0{,}38 > 0;$$

From the obtained results, it can be seen that the criterion for evaluating the effectiveness of teaching is greater than one, and the criterion for evaluating the level of knowledge is greater than zero. It is known that the mastery in the experimental class is higher than the mastery in the control class.

So, it was found out from the statistical analysis that the experimental work carried out to determine the effectiveness of teaching logical and personal qualities formation in students of 2-4th grade is effective.

Conclusion and recommendations

The process of teaching children to play chess helps in many ways to form logical and personal qualities in them. It depends on the individual characteristics of the chess player, and includes his mental processes such as memory, attention and thinking.

The game of chess develops the visual and figurative thinking of schoolchildren, helps the emergence of logical thinking, develops perseverance, attentiveness, thinking and striving for a goal. A child who learns this game criticizes himself, learns to think logically, make independent decisions, fight to the end, and not be discouraged by failures.

Through chess activities, we promote the ideas of the primary school students regarding the formation of their logical thinking and personal qualities during the educational process.

1. To teach students logical thinking and consistent correct procedures: comparison, analysis, synthesis, generalization, classification, comparison of analogies.
2. Forming the system of students' logical skills and qualifications.
3. Teaching students to identify their own logical errors and to be critical.
4. Diagnosing the level of students' logical thinking.
5. Motivational study of students' activities to form their logical thinking.
6. Development by the teacher of the system of logical tasks used in the process of teaching chess.
7. Consistent composition of the lesson material, taking into account the optimal compatibility of the structure of the organization of chess activities with the tasks of forming logical thinking.
8. It is necessary to control and correct the level of formation of students' logical thinking and personal qualities.

References

1. “On the Strategy of Actions for the further formation of the Republic of Uzbekistan” Decree of the President of the Republic of Uzbekistan // Collection of

legal documents of the Republic of Uzbekistan, 2017. - 6 №766. -Б. 38.
2. Decree No. PD-4954 of the President of the Republic of Uzbekistan dated January 14, 2021 "On measures to further shape and popularize chess and improve the system of training chess players".
3. Decree No. PD-347 of the President of the Republic of Uzbekistan dated August 5, 2022 “On additional measures to popularize and shape Chess”.
4. Anisheva V. E. (2002). Methodological features of individualized primary chess teaching for children of primary school age 22p
5. Bartashnikov A. (1988) . Psychological features and the formation of operative memory in schoolchildren and chess players. Doctoral dissertation of psychological Sciences. (Психологические особенности и формирование оперативной памяти у школьников и шахматистов. Дисс. канд. псих. наук.) - М., 211р.
6. Vershinin M. A. (2005). The theory of designing a system for the formation of the logical thinking of chess players. (Теория проектирования системы формирования логического мышления шахматистов) (Doctoral dissertation, [Volgograd State Academician of Physical Culture, Department of Theory and Methods of Physical Education])., 506p.
7. Gabbazova A.Y. (2005). Intellectual development of younger children Actual development of children of primary school age in the process of learning to play a chess game. Doctoral dissertation. 19.00.07: M., 151p., 61:05-19/671.
8. Grishin V. G. (1995) Children play chess: book for educators of kindergarten children and parents 2nd ed., revised. -M.: Enlightenment: JSC “Edu. lit”, 159 p.
9. Juraev R. Kh., Makhmudov, A. Kh., & Kamilova, A. B. (2019). Chess is an effective means of continuous formation and development of children's creative abilities 58-64p.
10. Zak A. (1997). Journey to Wits, or How to help a child become smart. M, A. Knyazeva V.V. (2000). The structure and content of the subject chess in the system of the general education school in Russia. (Структура и содержание учебного предмета шахматы в системе общеобразовательной школы России.), 410р.
11. Makhmudov A.Kh. et al. (2021). Chess for first-time learners and secondary schools ducational and methodological manual/ - Tashkent: Nodirabegim publishing house, 96 p.
12. Makhmudov A., Yakubov J. (2019). Forming children's creativity by teaching the chess house.: School and life. - Tashkent. No. 2. 8-10.
13. Makhmudov H., Toshev A., Toshev M. (2022). Innovative methods of assessing the chess skills of elementary school students Methodology manual.-T.
14. Sukhin I. (2019) Chess in kindergarten: guidebook– Moscow. 320 p.
15. Tarasova O. V. (2005). Pedagogical conditions for the formation of logical culture of young schoolchildren, the means of chess Tarasova O.V-Doctoral dissertation, 13(01).
16. Umanskaya E.E. (2018). Chess at school. The first year of study: textbook. allowance for general education. Organ. 2nd ed. -M.: Enlightenment,, 175 p.