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CHESS AS A MEANS OF TEACHING MATHEMATICS

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This article discusses chess as a means of teaching mathematics, as well as the analysis of general aspects of chess and mathematics, their mutual proximity, and scientific discussions

Keywords; pedagogical research, intellectual games, taffakkur, strategy of struggle, tactics, analytical thinking.

Chess and mathematics have a very ancient long history. Therefore, it is important to analyze the general aspects of chess and mathematics, to consider their mutual proximity. The process of solving various problem situations that occur on the chess board mathematics is directly related to the application of certain rules, such as solving problems. Also, chessboard and sipohs are used to solve many mathematical ideas, puzzle games and show visual.

At a meeting with scientists, the president of the Republic of Uzbekistan Shavkat Miromonovich Mirziyoyev spoke about the importance of mathematics and set tasks to strengthen the interest of young people in this science. "Mathematics is the basis of all Exact Sciences. A child who is well versed in this science will work successfully in an area that wants to grow up to be smart, broad – willed." Therefore, great attention is paid to the development of mathematics and chess by the head of our state. As a vivid example of this, we should mention the decisions made in recent years on the widespread development of the field of mathematics and chess. In particular, the state support of the president of the Republic of Uzbekistan for the further development of mathematics education and Sciences on July 9, 2019, as well as V. The Academy of Sciences of the Republic of Uzbekistan.I.Resolution No. 4387 on measures to radically improve the activities of the Romanovsky Institute of mathematics and

Resolution of PP-4708 on measures to improve the quality of education and development of research in the field of mathematics on May 7, 2020 and "on additional measures for the development of chess in the Republic of Uzbekistan"on August 9, 2018

These are the decisions of PP-3609 and PP-4954 of January 14, 2021 "on measures for the further development and popularization of chess and improving the system of training chess players".

President of the Republic of Uzbekistan on January 14, 2021

Appendix 1 to the resolution of PQ-4954 Chapter 2 of the "state program for the development of chess until 2025"Chapter 1 of the main areas of chess development is carried out in order to realize the first direction in the second phase of the work carried out in the framework of the subjects "physical education" and "mathematics" of students of grades 2,

According to the 36-hour plan, the transition to the chess training system is envisaged.

Chess pedagogy should not be directed only to the education of highly qualified chess players. One of its most important aspects is the study of the possibilities of using chess materials as a means of improving the content and methods of teaching other disciplines. This rule applies not only to high school, but also to other areas of the continuing education system.

Currently, in the process of training future military leaders from chess elements (the interconnection of the strategy and tactics of struggle!), designers at universities (spatial imagination!), scientific researchers(analytical thinking!), psychologists (the process of creativity!), physiologists (study of the optimal mode of mental activity!) and many are recommended for use in the training of other specialists in various fields of Science, Technology, Culture and art. As for school education, it is of particular importance to study the possibilities of chess as a means of teaching mathematics and "fundamentals of Computer Science and computer technology".

The use of chess materials in mathematics lessons requires an in-depth knowledge of chess and mathematics from the teacher, as well as high qualifications. High efficiency in this case also directly depends on the training of students.

In pedagogical research, the positive effect of intellectual games on the comprehensive development of schoolchildren, the development of useful skills and qualities has long been well studied. Games, interesting tasks and puzzles improve memory and thinking and help to better assimilate and consolidate the knowledge gained, as well as arouse great interest in the disciplines under study. The appointment of games, including chess, does not depend solely on their practical application. They express their tendency to creative activity more vividly.

Of course, this feature is important in teaching any subjects, but the emphasis on mathematical education is made due to the special closeness of these two areas of human activity, mathematics and chess. In this regard, the use of chess is important not only for general development, but also for obtaining accurate knowledge of mathematics.

The similarities between chess and mathematics have been studied by many scholars. Great mathematician A.Poincaré chess interpreted the game as one of the types of mathematical creativity. Discussing the issues of mathematical thinking, he often called chess a convenient model for studying the individual characteristics of thinking. Another well-known mathematician later-R.Hardy argued that chess is a mathematical game and psychology. In his opinion, chess is like "whistling mathematical tones." The founder of the theory of mathematical games, John von Neumann, looked at chess (visual model) as a visual model and likened them to final games with complete information. Hence, the game of chess has taken a solid place in the scientific classification.

In connection with the rapid development of computer and cybernetics in the second half of the 20th century, the game of chess attracted the attention of computer creators and software developers. Chess, a convenient model of the"big system", tested the capabilities of cybernetic devices. One of the founders of information theory is K.In his works, Shannon often referred to chess as a scientific object, he was the first to outline the principles of creating a chess program for a computer.

While cybernetics and programmers work directly with the chess model, playing chess through a computer is pedagogically important. Many basic concepts of cybernetics and programming – optimal algorithm selection, search methods, target tree, calculation and reduction of options, evaluation function and other tasks – can be explained to students more accurately using chess. The experience of working with schoolchildren shows that computer games, especially solving issues posed with the help of chess, are of serious interest to mathematics and computer science, and serve to spend their free time productively.

Various games, primarily chess, help the teacher to solve his important educational and educational tasks.

Chess develops theoretical, logical and abstract thinking, memory, geometric imagination, creative intuition, ingenuity, attention, skill in drawing up a plan and optimal decision-making in a difficult situation. Based on the experience of many teachers, it can be said that whoever plays chess well has also achieved a high level in mathematics.

When teaching the following areas of mathematics and informatics, applying to chess gives a satisfactory result. This is, first of all, algebra, combinatorics, geometry, graph theory, Probability Theory, history of mathematics, game theory, process research, artificial intelligence creation, computer algorithms and programming for electronic computing machines, etc.

REFERENKES

1. Махмудов А.Х., Джураев Р.Х., Якубов Ж.Н., Каримов К.А., Усмонова З.Б. Дидактические возможности шахмат в развитие творческого мышления школьников Издательство «Nodirabegim» Ташкент 2021. - 128 с.

2. Махмудов А.Х., Джураев Р.Х., Диагностика способностей к обучению шахматам учащихся начальных классов Издательство «Nodirabegim» Ташкент 2020. - 40 с.

3. Махмудов А.Х., Якубов Ж.Н., Камилова А.Б., Ахунжанов А.Т. Шахматы Первый год обучения Издательство «Nodirabegim» Ташкент 2021. - 96 с.

4. Ж.Н. Якубов Шахматни ўргатишда математика ва геометриянинг ўрни. Аниқ ва табий фанларни ўқитишнинг замонавий методологияси: муаммо ва ечимлар мавзусида Республика илмий-амалий онлайн конференция. – Т.Н.Қори Ниёзий номидаги ЎзПФИТИ Т 2021 й.26 апрель.

5. Б.С. Гершунский, А.Н. Костьев Шахматы – школе /. – М: Педагогика, 1991- 336 с.

6. Soboleva, E. V., Zhumakulov, K. K., Umurkulov, K. P., Ibragimov, G. I., Kochneva, L. V., & Timofeeva, M. O. (2022). Developing a personalised learning model based on interactive novels to improve the quality of mathematics education. *Eurasia Journal of Mathematics, Science and Technology Education*, *18*(2), em2078.

7. Жумақулов, Хуршид Кадыралиевич, and Мухсин Салимов. "О МЕТОДАХ ПРОВЕДЕНИЯ И СТРУКТУРЕ ПЕДАГОГИЧЕСКОГО ЭКСПЕРИМЕНТА." *Главный редактор* (2016): 80.

8. Х.Жумакулов, В.К.Жаров. О статической безграмотности выпускников педагогических вузов и не только. Международный гуманитарный научный форм "Гуманитарные чтения РГГУ-2019 "Непрерывность и разрывы: социально-гуманитарные измерения"". – Москва, 2019. –С. 119-123.

9. Esonov, M. M., and D. D. Aroev. "ON THE BASICS OF EDUCATION OF MATHEMATICAL THINKING IN THE MODERN COURSE OF GEOMETRY IN A COMPREHENSIVE SCHOOL." *European Journal of Research and Reflection in Educational Sciences* 9.3 (2021).

10. Ароев, Дилшод Давронович. "ИСПОЛЬЗОВАНИЕ ПОНЯТИЙ" АРИФМЕТИЧЕСКИЕ ДЕЙСТВИЯ НАД МНОГОЗНАЧНЫМИ ЧИСЛАМИ" В МАТЕМАТИЧЕСКИХ ИГРАХ." *Актуальные научные исследования в современном мире* 12-4 (2016): 16-18.

11. Ароев, Д. Д., and Г. М. Бабаева. "ABOUT THE IMPORTANCE OF INTERESTING EXERCISES IN MATHEMATICS LESSONS." *Экономика и социум* 2-1 (2021): 488-491.

12. АБДУНАЗАРОВА, ДИЛФУЗА ТУХТАСИНОВНА, МАНЗУРА СОБИРОВНА ПАЙЗИМАТОВА, and МИРСАИД МУХИДДИН УГЛИ СУЛАЙМОНОВ. "ПРОБЛЕМА ПОДГОТОВКИ БУДУЩИХ ПЕДАГОГОВ К ИННОВАЦИОННОЙ ПЕДАГОГИЧЕСКОЙ ДЕЯТЕЛЬНОСТ." *Молодежь и XXI век-2015*. 2015.

13. Расулова, Г. А., З. С. Аҳмедова, and М. Норматов. "МЕТОДИКА ИЗУЧЕНИЯ МАТЕМАТИЧЕСКИХ ТЕРМИНОВ НА АНГЛИЙСКОМ ЯЗЫКЕ В ПРОЦЕССЕ ОБУЧЕНИЯ." *Ученый XXI века* (2016): 65.

14. Расулова, Г. А., З. С. Аҳмедова, and М. Норматов. "EDUCATION ISSUES LEARN ENGLISH LANGUAGE IN TERMS OF PROCESSES." *Учёный XXI века* 6-2 (19) (2016): 62-65.

15. Расулова, Г. А. "МУЛЬТИМЕДИЙНЫЙ ЭЛЕКТРОННЫЙ УЧЕБНИК-СОВРЕМЕННОЕ СРЕДСТВО ОБУЧЕНИЯ." *Педагогические науки* 4 (2011): 65-66.