

Research Journal of Pharmaceutical, Biological and Chemical Sciences

Preparing Young Qualified Chess Players With The Help Of Computer Chess Programs And Internet Resources.

Mikhaylova IV^{1*}, Alifirov AI¹, Fomina SN¹, and Shukshina LV².

¹Russian State Social University, st. V. Pika, 4, Moscow, Russia, 129226

²Moscow State University of Food Production, st.Vrubel, 12, Moscow, Russia, 125080.

ABSTRACT

It is well known that chess is one of the most popular sports in the world. The system of chess lessons, identifying and developing individual abilities, shaping the progressive orientation of the individual, contributes to the overall development and upbringing of the young generation. Therefore, in many countries of the world, chess is included in the school curriculum. It is clear that the future of chess is determined by the development of children's chess. However, many issues of training chess players in childhood and adolescence are little studied at the moment. For example, there are practically no studies and science-based technologies for training young athletes using chess programs and the Internet, despite the appearance in Russia of the necessary material and technical basis for the introduction of new information technologies into the system of sports training of chess players. In practice, the overwhelming majority of young chess players finish active classes in chess at the age of 15-16, reaching the level of the 1st grade or candidate master of sports. This impedes the further improvement of the sportsmanship of chess players. The existing literature on chess touches upon the issues of traditional training of young chess players to the level of candidate for master of sports, the new chess computer technologies that have appeared recently, based on the use of computer chess programs and Internet resources, are not used. Given this, there is a need to find ways to enable athletes of middle and senior school age to comply with the standards of the master and international master of sports in chess, characteristic of the zone of first great success at the stage of sports improvement. This would save many talented highly skilled athletes for chess and would contribute to the further development of chess. In this regard, an attempt was made to improve the system of training young highly qualified chess players in connection with the use of new teaching aids based on chess computer programs and Internet resources. The introduction of new computer technologies into the learning process will increase the overall level and intensity of the learning process, increase the productivity of training in mastering strategic and tactical chess material. The above arguments determine the relevance of the use of innovative tools in the process of training young highly skilled chess players. The cumulative effect of components of chess computer technology can be viewed as an action of an "artificial" assistant chess trainer. Obviously, this can increase the motor density and the individualization of the training, and operatively carry out the "athlete-trainer" connection with the leading organizing and controlling role of the trainer-teacher.

Keywords: athlete training, chess player training, computer technology, chess training system, chess.

**Corresponding author*

INTRODUCTION

The development of an organism is closely associated with a change in the external environment and a reaction to these changes by the organism [1,2]. Due to the adequate interaction of the environment and the organism, it is possible to maintain health and improve various functions, including brain functions [3,4]. Currently, the development of brain activity is given special attention [5,6]. One of these methods is considered chess [7,8]. Now they are a very common sport that effectively develops and trains brain activity [9,10].

Training highly skilled athletes is one of the most important problems of modern sports science [11]. This is due to the high status of sports in the modern life of the world community [12,13]. Athlete training is a multilateral process of expedient use of the entire set of factors (means, methods and conditions), allowing to influence the development of an athlete in a targeted manner and ensure his readiness for sports achievements [14-17]. For the effectiveness of the training process today requires the use of new technical means of training, the accumulation of theoretical and practical material on the training of young chess players [18,19]. This makes it possible to reach a qualitatively new level of organization of the educational process [20]. Naturally, fundamentally new forms of the training process could appear only in connection with fundamentally new discoveries and innovations in the life of mankind [21,22].

Computer learning technology is considered as learning based on the final results of activity, and it is given the character of a sustainable, purposeful and effective cognition process [23,24]. It must be borne in mind that chess computer programs are only a means and an intermediary between a coach and an athlete, and the preparation process is managed only within the model chosen by the coach during the training stages [25]. Information technology and information tools in physical culture include computer, audio and video programs, printed materials [26]. The following principles are known for the use of computer technologies in the system of training chess players: 1) The principle of innovation, when special training courses contain materials for studying various aspects and possibilities of using computer technology in the educational process [27]; 2) The principle of modeling is the use of special training courses that combine theoretical knowledge of the practical use of the results in training sessions [28]; 3) the principle of maintenance - the use of methods of teaching theoretical and practical sections using computer technology [29]; 4) the principle of monitoring - the use of computer technology to monitor the level of knowledge and skills [30]; 5) the principle of information support - obtaining the necessary information with the help of specialized information computer technologies [31,32].

Taking into account these principles, the special training of young chess players at the present stage undergoes significant changes in form and receives additional opportunities [33,34]. Such a powerful tool appeared in the technical arsenal of chess players, such as a personal computer, which makes it possible to most effectively realize many functions of collecting, organizing, storing chess information (games, fragments, positions for analysis), tactical analysis of selected positions of the highest quality at a level inaccessible to a biological chess player in depth [35,36]. The intensity of classes on solving training and control tasks has increased, with verification of numerous branches and options, with an emphasis on the most important subtleties and nuances in these branches. Increased motor training density [37,38]. The possibilities of presenting educational material have expanded, the ranking in terms of complexity and thematic focus has significantly increased. There was an opportunity for productive work on the development of the counting abilities of young chess players, the basis of their chess growth [40-42]. Using a computer significantly reduces the immediate routine load on the teacher during the training process. This allows the coach to provide effective assistance to more students simultaneously [43].

The purpose of the research is to develop a methodology for training young qualified chess players, built on the use of computer chess programs and implement it in the pedagogical process.

MATERIAL AND METHODS

The study was conducted in 2007-2008, recruited a control group (24 people) and an experimental group (24 people). Two experimental groups participated in a parallel analytical experiment - an experimental group of students from the specialized youth school of the Olympic reserve — the Shakhmat club of them. T. V. Petrosyan (Moscow) and the control group of students - the specialized youth school of the Olympic reserve

No. 3 (Nizhny Novgorod). This experiment was conducted over two years, where two methods of training young athletes were compared - standard and experimental. This experiment took place in five stages, the control was carried out using a series of tests on five time sections. In the course of this experiment, a distinction was revealed in the dynamics of the development of strategic thinking, technical and tactical skills, theoretical and practical skills of the chess game of young chess players included in the experimental groups.

In the experimental, the following chess computer programs and didactic tools were used: 1) Information retrieval system "Chess Assistant". 2) Teaching chess computer programs: "Alexander Alekhin", "Mikhail Tal", "Emanuel Lasker", "José Raul Capablanca", "Strategy 3.0", "Chess University". 3) Game programs: "Fritz" and "Hiarcs" of various release versions. 4) Chess Internet portals: International Chess Club (ICC) and game portal (Playchess). The athletes of the control group of the specialized youth school of the Olympic reserve No. 3 in Nizhny Novgorod were trained using textbooks, as well as methodological and informational and theoretical literature.

RESULTS AND DISCUSSION

In the course of the natural science experiment, domestic and foreign software (computer programs) were used. Many programs are universal and can be used to study any stage of the chess struggle. Let us present in more detail the features of working with these programs in the course of a natural science experiment.

1) Information retrieval system "Chess Assistant". allows you to quickly and accurately explore the debut of the young athlete. For a chess player who strives for improvement, the debut is of great importance. However, it is necessary to study opening patterns systematically and skillfully so as not to harm your creativity. We note a number of serious points that were taken into account when studying the opening theory in training cycles. The search for the party according to the debut version - it was proposed to consider the interpretation of the option by a strong grandmaster with stable good results. To do this, it is enough to study five to ten games. Additionally, study the games played by opponents of different qualifications. For example, players with a rating of 2,300 units are FIDE masters against players having a rating of 2500 units are FIDE grandmasters. This technique makes it possible to study the obvious tactical and strategic mistakes in such parties. Studying a variation, the coach creates lines of variations in special bases for debuts or inserts notes into the student's played games. At the same time, computer analysis of control positions is being used. It should not be limited to working with a computer. Having found an interesting position on a tree and having looked at parties, it is necessary to find those from them which are commented in books or magazines.

2) A package of educational chess programs. Since the teaching took place in the computer class, the basic program for improving sportsmanship was the chess computer program for teaching the art of chess tactics CT-ART 3.0. It contains the principle of "move by move". It is very good, because it simulates a real chess game, although young athletes, as the author's practice has shown, use it not always effectively. By virtue of psychology, a person is somehow unable to think for a long time, looking at the monitor, so that learning positions are decided most often "by eye". To overcome this drawback, it is necessary to solve part of the tasks, placing positions on ordinary tournament chess. This desire needs to be overcome in oneself and work out in training with full calculations, as in a tournament game.

3) A package of chess games. Consider the methodical techniques chosen by the experimenter, when using game chess programs of various versions of Tiger in the training process. Students improved in practice with strong chess programs and analyzed all the stages of a chess game, using the capabilities of this game program. For example, in the opening, the program made a move unknown to the student or coach. We recommend the inclusion of a special program option - "chess tree". The "tree" will switch to the current position and show the student what moves were made in this position with grades and statistics. Thus, it not only develops the student's positional sense, but also saves time when learning new debuts. It also reduces the likelihood of errors when building a debut repertoire. Table 1 shows the dynamics of the increase in the results of intermediate testing by sections of technical and tactical training in the experimental group.

Table 1: The results of the testing in the experimental group

Complex computer chess programs on the sections of technical and tactical training	Intermediate stages of testing				
	I	II	III	IV	V
«Debut»	40.6	43.7	46.6	57.5	61.8
«Mittelspiel»	41.0	46.4	48.5	57.0	60.4
«Endgame»	35.6	42.5	48.9	57.2	59.5
«Tactics»	38.3	43.1	49.1	60.8	62.5
«Strategy»	36.4	43.1	47.5	58.9	61.6

It should be noted that if the test results exceed the current skill level of the athlete, then there are grounds for achieving new, higher tournament results, which should be confirmed by participation in the nearest tournaments. If the percentage of points scored during testing is lower than the qualification level, then participation in the competitions should be temporarily suspended, theoretical training should be improved, and a series of training sessions in the Strategy chess training program should be conducted.

CONCLUSION

Based on the results of the research, we can conclude that as a result of the experimental factor (the use of computer technologies in training and competitive activities of young athletes, which were realized through an artificial assistant coach), in the second year of training, there was a positive trend in the level of preparedness of young highly qualified athletes. It can be noted that mastering the skills and skills of playing the endgame in the experimental group took place somewhat faster (3-6 months) than in the other stages of playing the chess game. In addition, the results of a parallel experiment do not contradict the phenomenon of delayed transformation, which was discovered earlier in the course of a natural science experiment.

REFERENCES

- [1] ZavalishinaSYu. (2019) Functional Activity Of Vascular Hemostasis In Calves Of Plant Nutrition. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 10(1) : 1957-1961.
- [2] Bikbulatova AA.(2018)Functional Features Of Microcirculatory Processes In Obese Women Against A Background Of Long Daily Wearing Of Corrective Clothing. Research Journal of Pharmaceutical, Biological and Chemical Sciences.9(6) : 785-793.
- [3] Vorobyeva NV, Medvedev IN. (2018) Physiological Features Of Platelet Functioning In Calves Of Holstein Breed During The Newborn. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 9(6) : 129-135.
- [4] ZavalishinaSYu. (2018) Functional Features Of Hemostasis In Calves Of Dairy And Vegetable Nutrition. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 9(6) : 1544-1550.
- [5] Safiulin EM, Makhov AS, Mikhailova IV (2016) Analysis of the factors impeding the development of skill and the number of chess players with the defeat of the musculoskeletal system during the initial sports training. Theory and practice of physical culture. 4: 33-35.
- [6] ZavalishinaSYu. (2018) Functional Activity Of Primary Hemostasis In Calves During The First Year Of Life. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 9(6) : 1575-1581.
- [7] Vorobyeva NV, Mal GS, ZavalishinaSYu, Glagoleva TI, Fayzullina II.(2018)Influence Of Physical Exercise On The Activity Of Brain Processes. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 9(6) : 240-244.
- [8] Mal GS, Vorobyeva NV, ZavalishinaSYu. (2019) The Biological Value Of The Motor Activity Of A Living Organism. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 10(1) : 332-340.
- [9] Gribovskaya IA, Mal GS, Tatarenkova IA, Belogurova AI, Smahtin EM, ZavalishinaSYu.(2019)Effect Of Genetic Polymorphism Of Cytokine Genes On The Drug Response Of Statins In Conditions Of Respiratory Infections. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 10(1) : 1177-1183.
- [10] ZavalishinaSYu. (2019) Functional Features OfHemocoagulation In Newborn Calves Undergoing Acute Hypoxia On The Background Of Corrective Action. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 10(1) : 1596-1601.

- [11] ZavalishinaSYu. (2019) Physiological Features Of Vascular Hemostasis In Cows Beginning To Lactate. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 10(1) : 1618-1623.
- [12] ZavalishinaSYu. (2019) Physiological Features Of The Rheological Properties Of Erythrocytes In Calves During The Dairy-Plant Nutrition Phase. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 10(1) : 1814-1820.
- [13] Bikbulatova AA.(2018)Creating Psychological Comfort In Women Who Wear Corrective Clothing For A Long Time. Research Journal of Pharmaceutical, Biological and Chemical Sciences.9(6) : 1112-1121.
- [14] Skoryatina IA, Medvedev IN. (2019) Correction of aggregation level of basic regular blood elements in patients with hypertension and dyslipidemia receiving rosuvastatin and non-medicinal treatment. Bali Medical Journal. 8(1) : 194-200. DOI:10.15562/bmj.v8i1.648
- [15] Makhov AS, Medvedev IN. (2019) The Physiological Response Of The Body To The Practice Of Physical Therapy After Spinal Cord Injuries. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 10(1) : 118-124.
- [16] Makhov AS, Medvedev IN. (2019) The Functional State Of Human Sensory Systems On The Background Of Regular Exercise. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 10(1) : 183-188.
- [17] Mal GS, Vorobyeva NV, Medvedev IN. (2019) Physiological Significance Of The Active Muscle Activity Of The Body. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 10(1) : 366-371.
- [18] Makhov AS, Medvedev IN. (2019) The Functional State Of The Joints In Conditions Of Regular Ordered Muscle Activity. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 10(1) : 594-599.
- [19] ZavalishinaSYu. (2019) Functional Platelet Activity In Heifers In Growing. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 10(1) : 1723-1727.
- [20] Makhov AS, Medvedev IN. (2019) Regular Muscular Activity In Maintaining The Optimum Of Human Physiological Parameters In Conditions Of Increased Mental Stress. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 10(1) : 625-629.
- [21] ZavalishinaSYu. (2019) Functional Features Of Vascular-Platelet Interactions In Pregnant Cows. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 10(1) : 1677-1683.
- [22] Makhov AS, Medvedev IN. (2019) Dynamics Of Functional Parameters In The Post-Stroke Period On The Background Of Active Muscular Activity. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 10(1) : 650-654.
- [23] Alifirov AI, Mikhaylova IV, Fomina SN, Fedchuk DV, Bakulina ED. (2018) The Development Of Intellectual Features Of Students Using A Chess Game. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 9(6) : 106-112.
- [24] Makhov AS, Medvedev IN. (2019) The Physiological Significance Of The Formation And Maintenance Of Correct Posture. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 10(1) : 685-688.
- [25] OshurkovaJuL, Medvedev IN. (2018) Functional Features Of Platelets In Newborn Calves Ayrshire Breed. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 9(6) : 313-318.
- [26] Medvedev IN. (2019) Functional Features Of Erythrocytes In Calves Of Vegetable Nutrition. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 10(1) : 1848-1852.
- [27] Makhov AS, Medvedev IN. (2019) Physiological Changes In The Locomotor System During Massage Effects. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 10(1) : 755-760.
- [28] Makhov AS, Medvedev IN. (2019) Basics Of Physiotherapy In Diseases Of The Musculoskeletal System. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 10(1) : 801-805.
- [29] Makhov AS, Medvedev IN. (2019) The Functional State Of The Body With Vascular Dysfunction On The Background Of Regular Physical Exertion. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 10(1) : 869-873.
- [30] Alifirov AI, Chepik VD, Baymurzin AR, Zhalilov AV. (2019) Features Of Psychophysical Training In The Cadet Cossack Corps. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 10(1) : 442-448.
- [31] Makhov AS, Medvedev IN.(2019)The Problem Of Flatfoot And Approaches To Its Solution. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 10(1) : 905-910.
- [32] Makhov AS, Medvedev IN. (2019) Functional Features Of The Nervous System In The Context Of Regular Physical Education. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 10(1) : 961-966.
- [33] Medvedev IN. (2019) Weakening Of Platelet Activity In Patients With A High Degree Of Arterial Hypertension In The Metabolic Syndrome Who Received Complex Treatment. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 10(1) : 1000-1006.

- [34] Medvedev IN.(2019)Functional Readiness Of Platelets In Young People Who Regularly Visited The Section Of Unarmed Combat In Their Youth. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 10(1) : 1381-1385.
- [35] Medvedev IN. (2019) Functional Activity Of Platelet Hemostasis Of Amateur Soccer Players Aged 26-35, Who Regularly Trained In Adolescence. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 10(1) : 1426-1430.
- [36] Medvedev IN.(2019)Physical Features Of Platelet Activity During Low Physical Activity. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 10(1) : 1468-1473.
- [37] Medvedev IN. (2019) Physiological Response Of Intravascular Platelet Activity In Adolescents With High Normal Blood Pressure To Regular Exercise. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 10(1) : 1516-1520.
- [38] Medvedev IN.(2019) Platelet Functionality Of Candidates And Masters Of Sports In Athletics Of Youth And First Adulthood. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 10(1) : 1543-1548.
- [39] OshurkovaJuL, Medvedev IN. (2018) Physiological Indicators Of Platelets In Ayrshire Calves During The Dairy Feeding Phase. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 9(6) : 171-176.
- [40] VatnikovYuA, ZavalishinaSYu, Seleznev SB, Kulikov EV, Notina EA, Rystsova EO, Petrov AK, Kochneva MV, Glagoleva TI. (2018) Orderly muscle activity in elimination of erythrocytes microrheological abnormalities in rats with experimentally developed obesity. Bali Medical Journal. 7(3): 698-705. DOI:10.15562/bmj.v7i3.739
- [41] ZavalishinaSYu, VatnikovYuA, Kubatbekov TS, Kulikov EV, Nikishov AA, Drukovsky SG, Khomenets NG, ZaykovaEYu, Aleshin MV, Dinchenko OI, Glagoleva TI. (2018) Diagnostics of erythrocytes' early microrheological abnormalities in rats with experimentally developed obesity. Bali Medical Journal. 7(2): 436-441. DOI:10.15562/bmj.v7i2.740
- [42] UshaBV, ZavalishinaSY, VatnikovYA, KulikovEV, KuznetsovVI, SturovNV, KochnevaMV, PoddubskyAA, PetryaevaAV, GlagolevaTI. (2019) Diagnostics of early dysfunctions of anticoagulant and fibrinolytic features of rats' vessels in the course of metabolic syndrome formation with the help of fructose model. Bali Medical Journal. 8(1) : 201-205. DOI:10.15562/bmj.v8i1.923
- [43] Zavalishina SY, Vatnikov YA, Kulikov EV, Kubatbekov TS, Vilkovytsky IF, Petrov AK, Tishchenko AL, Drukovsky SG, Zharov AN, Grishin VN, Glagoleva TI.(2019) Effect of a combination of arterial hypertension and insulin resistance on hemostasis activity.Bali Medical Journal.8(1): 211-215. DOI:10.15562/bmj.v8i1.1151