

**DEVELOPMENT OF THE ABILITY TO ACT "IN MIND" –
FUNDAMENTAL PROBLEM OF THE EDUCATIONAL SYSTEM**

**Igor Sukhin, Russia, Moscow, Institute for Theory and History of
Pedagogics, Russian Academy of Education, Senior Scientific Associate,
Ph.D. in Pedagogics**

Thanks to specialists' efforts in many countries, chess is being more extensively introduced into the system of education. Even though there have been talks of chess being vital to general education schools for quite some time, and a lot of experience has been accumulated in the field of teaching chess as a school subject in different countries, only recently have those words become action in the world. *It is no wonder than the first country to adopt chess as an obligatory subject in primary school was the Republic of Armenia, whose government created the most favourable conditions for promoting chess in general education schools.*

I have been following the development of nationwide chess education in the Republic of Armenia, and I invited Armenian specialists to international chess education conferences in the cities of Satka (2011) and Khanty-Mansiysk (2013). It was a pleasure to see them accept those invitations and hear them talk about the early stages of nationwide chess education in the Republic of Armenia. Obviously, the Republic of Armenia has accumulated a lot of experience as of today, which makes it especially interesting to take a closer look at it.

In 2012 I.G. Sukhin's monograph **"School Subject "Chess" as a Tool of Developing Thinking: History, Methodology, Scientific Research and Experience of Implementation"** was published in Germany. The monograph is devoted to the school subject "Chess" and covers a wide range of scientific and practice-oriented problems related to its promotion in the educational systems of different countries. The paper is focused on a *detailed scientific explanation of the necessity of introducing chess in the system of pre-school and school education.* It goes to prove that developing children's *ability to act "in mind" is central to building up a chess course in school.* There is a system of didactic tasks designed and presented by the author, which makes it possible to achieve this goal. The choice of the optimum format of a chess lesson is also underpinned. The monograph traces the history of this school subject *from 1815 to spring 2012* when the European Parliament adopted the "Chess in School" declaration. The paper provides a terminological and conceptual framework, reveals the results of scientific research, and considers the major issues of didactics [1].

I post true and accurate information about what has been done and what is currently being done in the direction of "Chess and Education" on the **Nationwide Chess Education Website** – <http://chess555.narod.ru> [2] – on an ongoing basis. Today it is important to talk about what has been done in this field in Russia over the last 20 years. The thing is that although *chess became an optional subject in Russian primary schools long ago (since 1994, to be precise), for some reason this fact remains practically unknown abroad.*

One of the obstacles which used to prevent chess from becoming a full-fledged school subject was the lack of scientific foundation for teaching a chess course in general education schools. The approach to this issue varies from country to country. Let me tell you about the scientific foundation of a chess course in Russia. In 1993 the Russian Ministry of Education suggested that I should develop a course for primary school "Chess For School".

The first question to arise was as follows: What is the scientific platform for developing it? The basis was formed by the studies of the followers of the Soviet psychologist *L. Vygotsky* [3], *P. Galperin's theory of shaping mental activities stepwise* [4] and *Ya. Ponomarev's studies on the stages of developing an internal action plan – the ability to act "in mind"* [5]. As a result, as far back as 1994 the Russian Ministry of Education approved my program for primary school "**Chess, First Year**" [6] (which served as a basis for the future 3-year Federal Course "**Chess for School**"), as well as the textbook "**Chess, First Year, or Where Black and White Squares are Full of Mystery and Wonder: Textbook for Primary School, First Year of Study: Part 1 and Part 2**" [7], teacher's book "**Chess, First Year, or I Learn and Teach**" [8] and other materials for the first year of study. In 1994 my program for primary school "Chess, First Year" was published in pedagogical press [6], and since 1994 chess has become an optional subject in Russian primary schools. Later materials for the second and third year of the course "Chess for School" were developed [9].

As of today, we have a scientifically grounded Federal Course "Chess for School", provided with programs, textbooks, teacher's books, problem books, workbooks and testbooks (with a total of 22 books) [9].

The main purpose of the "Chess for School" course is the phased development of children's ability to act "in mind". In the 1960s it was found that the only intellectual ability which cannot be reduced to a mere accumulation of knowledge and skills and which develops in the course of learning is the ability to act "in mind". This ability is one of the most important indicators of the overall development of human psyche; it is an indissoluble unity of imagination, attention, memory and thinking, which consists in the human ability to operate with the substitutes of real objects in mind (without performing any large-scale actions with them in space). Development of the ability to act "in mind" is important to all

kinds of human activity because each of them requires that one should perform a certain sequence of operations.

It is known that the ability to act "in mind" should be specifically developed, and its development is a slow process, involving long mental education of children and finishing at the age of about 12 years. Most intensely this ability develops at a young age, but in conventional systems of education it is not purposefully and consistently shaped. For this reason, the ability to act "in mind" only reaches its optimum level of development in 5 % of people. *A clearly structured process of teaching the basics of chess to children is the most appropriate tool that allows us to develop the ability to act "in mind".* **All the components of the "Chess for School" course have been specifically developed to achieve this global objective.**

Let's take a quick look at the major books of the course.

1–2. Textbook **"Chess, First Year, or Where Black and White Squares are Full of Mystery and Wonder: Textbook for Primary School, First Year of Study: Part 1 and Part 2"** [7]. It is the first chess textbook in world practice that has been specially created for primary school. The textbook contains the most basic chess material which is further reinforced with a big number of unique didactic games and tasks. Even though the textbook was created for the first grade of primary school, it can be used at the initial stage of learning in the other grades of primary school, as well as in the pre-school kindergarten group. It is due to the fact that each type of didactic tasks and games includes problems of varying complexity.

3. Teacher's book **"Chess, First Year, or I Learn and Teach"** [8]. This book is the first-ever manual for primary school teachers who do not have much knowledge in the field of chess. This teacher's book is designed to be used with the textbook for the first year of study "Chess, First Year, or Where Black and White Squares are Full of Mystery and Wonder". The manual gives a detailed description of the techniques and methods to be applied to each class. Every chapter-class begins with an explanation of essential chess information for the teacher. A big number of fun tasks and exciting didactic games to be found in the manual will enable the teacher to turn each class into a special occasion for the children.

4–5. Workbooks **"Chess, First Year, or Where Black and White Squares are Full of Mystery and Wonder"** [10]. The workbooks contain fun tasks which will help the child to learn the basics of chess. Using the workbooks, the child will be helping the Absent-Minded Artist to correct his mistakes and solve different riddles.

6. Testbook "**Chess, First Year, or Where Black and White Squares are Full of Mystery and Wonder: Testbook**" [11]. Each of the 15 tests contains 16 questions (tasks) to be answered (done) in 10-15 minutes and is given on a separate sheet.

7. Problem Book "**Chess, First Year: Problem Book: One-Move Checkmate: 1500 Positions with a Small Number of Pieces**" [12]. The ability to declare checkmate on the opponent is the foundation of chess art. However, in the mass of chess literature, the most important stage of learning – one-move checkmate problems – has been undeservedly ignored. The collected volume contains 1500 problems: 1242 clearly structured three-, four- and five-piece positions-patterns, covering all typical mating setups for the relevant number of pieces, and a practice-oriented section which consists of 258 study positions.

Similar study packs have been created for the second and third year of study [9]. Let me emphasize that the "*Chess for School*" course has been specially developed to be taught by primary school teachers and kindergarten instructors. For this purpose, I have given advanced professional training courses in Moscow, Khanty-Mansiysk Autonomous District, Republic of Sakha, Republic of Tyva, Zabaykalsky Region, Tomsk, Kurgan, Chelyabinsk, Kaluga, Samara, Kemerovo, Penza and other regions of Russia. All in all, over 1000 primary school and kindergarten teachers had been trained in those courses by 2014. The new educational technology of teaching has been called "**Technology of Developing the Ability to Act "in Mind", Using Chess Material**" or "**Igor Sukhin's Chess Problem Technology**".

Practice has shown that *the chess problem technology of teaching used in the "Chess for School" course ensures almost 100% positive motivation in children*. After attending the advanced professional training course, the best teachers train colleagues from their regions to work with the "Chess for School" materials based on the acquired knowledge.

The books which are part of the Russian course "Chess for School" have not been published abroad yet since the "Dukhovnoye Vozrozhdeniye" Publishing House does not give its permission. However, my other chess books were published in Spain – in 1992 with the foreword of the world champion *Garry Kasparov* [13], in the USA – in 2007 with the foreword of the world champion *Vladimir Kramnik* [14] and in 2008 with the foreword of the world champion *Susan Polgar* [15], as well as in Germany [1] and Turkey [16]. In 2011 my "Chess Camp" Series, which consists of seven books, was **recommended by the US Chess Federation** [17].

To conclude, I would like to stress the following. In my opinion, *to write a high-quality chess course for primary school, the author should not only scrutinize a big layer of chess literature but should also study textbooks on other subjects of the school curriculum in detail*. I was

lucky enough to conduct such research and by 1st August 2014 the total circulation of my books had amounted to 1.7 million copies. Only half of them are about chess [18], while the other half are devoted to related fields – fun mathematics, logic, reading, language puzzles, speech therapy, etc. [19].

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SUMMARY

The article is devoted to the school subject "Chess" and covers a wide range of scientific and practice-oriented problems related to its promotion in educational systems. The paper is focused on a detailed scientific explanation of the necessity of introducing chess in the system of pre-school and school education. It goes to prove that developing children's ability to act "in mind" is central to building up a chess course in school. The article talks about the Federal Russian Course "Chess for School", which has been under development for twenty years, as well as the programs, textbooks, manuals, problem books and workbooks that are its integral parts.