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The Important Aspects of Teaching Chess

You can ask any teacher what kind of student’s he would like to see in the class. He will answer that he would like to see attentive, workable, industrious, disciplined students. All this qualities are vividly demonstrated by kids who study to play chess.

Process of comprehension of the game of chess is an exciting experience. While playing chess people dive into world of creativity, world of adventures and hazard, they experience amazing moments of life. This need of experiences gets deeply from the distant past, when our ancestors hunted and explored new lands and this need is programmed on a genetic level. Game of chess allows to accumulate the energy of these ancient instincts and to unload them with socially safe way, and also to train the attention, stamina and of course to develop an important personal qualities.

There is a point of view that you can teach children to play chess very easily. It is enough to explain the rules for children to sit down and begin to play. Chaos, noise, screams, argues in a classroom are guaranteed if you going to use this simplified method. It happens because ancient instincts are breaking free, so they have spontaneous nature. It turns out that this is not an easy thing – to control a class, when play activity is allowed to children. That’s why the I.G. Suhin’s method of teaching playing chess was prohibited in chess classes without hesitation. The class itself turned into endless process of solving chess tasks. Everyone felt good, except for children, but they explained to them: «It’s all for you. We develop your inner action plan. According to physiological age norm it begins to functioning fully only in the age of 12. But despite of the laws of nature we will train you at the age of 7-8». Yes, when you 7-8 years old you can’t argue with teacher. You will have to sit and strain your brain. Maybe this inner action plan will suddenly start to work, like they say.

Therefore, the developing of a method of teaching playing chess, when children would be passionate and disciplined is a very urgent problem. Such method could be developed only basing on the following obligatory conditions:

❖ *Training activities should be meaningful for a child.*

The compliance of this condition allows a child to be active subject of this session. If we want the education to be more meaningful for a child, we have to speak in a clear language with him, and we shouldn’t overload him with information, especially at the initial stage.

❖ *It's necessary to know the principles of the general evolution of formation of children's game chess thinking.*

The knowledge of the evolution of chess involves knowledge of the sequence of formation of skills and techniques of the chess game, where one step is the base for the next one. In general such evolution gradually changes. But some time or other the dialectical interruption of gradualness happens. There will be a jump either up or down. The transition to the next level takes place in the process of internal devaluation of achievements and lessons of the previous level. Firstly, devaluation could be positive. A child is aware of deficiency of his game's previous level and he wants to move on. However devaluation could also be negative. At some point he doesn't want to move on, so he either quit training or want to stay on a previous level. But unfortunately the state of plateau is not stable so the reduction will start sooner or later.

❖ *The level of exercise and its form of presentation should match the age abilities and individual abilities of children.*

In this case the competence of a teacher requires the skill to see signs of children's fatigue and signs of neurological disease.

This requires testing that can determine pupil's level of educability of playing chess for differentiation of academic load (author's article on www.virtualchess.ru). Pupil's level implies his location on the ladder of chess evolution. With the knowledge of exact characteristics of each stage of the evolutional ladder a teacher will always understand which skill and which purpose to offer to students for their further development.

For example, I taught children the rules of moving rooks and pawns. So now I want to know if children are ready enough to learn the reception of limit of figures. I tell them chess fairytail, which goes with different exercises. That allows children to be active on a class and to start training the reception of limit of the rook immediately.

Tasks for limit of the rook:

Instruction:

- Draw a big square on your paper. (There goes an activating question to children): - How many lines should we draw in this square to divide it into 3 horizontal stripes? (After that there is a next activating question): - How many lines should we draw in this square to divide it into 3 vertical columns?

So we divided the square into 9 cells. After that we draw a roof above the square and it turns to be a house. We tell children, those two friends - white rooks, live in this house. Then we draw one rook in the lower left corner, and another one – above the first one.

We tell kids that there is no ladder in this house and ask them to explain the reason for that. We praise children, who guessed that rooks don't need ladders because they cannot take the stairs.

We tell how well two friends live in this house. But they have a habit to turn on the light in every room on every floor and all entrances where they can directly be or go to. We call children in course and ask each one to draw a sun in rooms, which was lighted by the rook.

- One day the black rook joined the white rooks, it settled in the upper right corner. It was sullen and surly, and what is more important, it was afraid of lighted rooms. Kids, there is a suspicion that was a ghost. It cast a shadow on the one of the lighted room that was on the same floor and on the rooms that were in the same entrance where the black rook was.

We ask children for help to detect these rooms and mark them with a wavy line. We have also found the completely empty dark room, without a single ray of light. We will shade this room to show how dark it is. By the way, white rooks told us that they don't like new neighbor at all and they ask us for a help to relieve them of her presence.

We ask children: «How white rooks can get rid of black rook? » After listening children's answers you can help them with leading question: « What black rook is afraid of? In which room it cannot hide now?» Usually that is enough to figure out that black rook, like any ghost, afraid of lighted rooms. We should deprive it of asylum, which means we have to turn on the light with a safe way for the white rooks. Then deprived of asylum black rook will leave the house. For this purpose children have to show with an arrow in his picture how white rook should move to be on the same line with a dark room, but on different lines with black rook.

After all children tried to point with an arrow the right move, we ask them to flip the paper and to draw big square once again. We draw a new situation and offer children to solve it by their one. We should firstly indicate where all lighted rooms, rooms with a shadow are, and also when the darkest room is. Only thereafter we ask them to indicate with an arrow the way white rook should move to light the room.

This tale describes the algorithm of search and orienting activity in the task. During solving this problem children with different ability to analyze will reach one goal. Room markers will allow impulsive and hasty children to act meaningful, expedient and eliminate surface solutions; it won't allow to act at random.

I've been teaching chess for children foe 25 years. I've got quite rich and successful experience of teaching chess as a subject, so today I'd like to share it with you. I started my career with working as a teacher of chess and doing a university course of psychology. Then I spent some years working as a psychology advisor in a primary school, and went on working as a couch for beginners in a chess school in the evenings. Recently I've been working as a couch in a chess

school and teaching chess as a facultative subject for the first-year schoolchildren in a primary school.

To my mind to make teaching children successful one should know children and follow some principals:

An important condition for successful teaching of chess is the necessity to play chess at the chess lesson.

Children with complications in their development need to play chess more than other children. If we really want to develop all children, we will do our best to follow this principle.

The information about the playing pieces' and the pawn's moves, that a child gets at a chess lesson, must become for him a completely automatic skill. It's possible only if the pupils are able to practice this skill while playing either with each other or with a computer program. If a child, while solving a chess problem, is trying hard to remember how some of the playing pieces should move, his energy will be wasted, he won't be able to create any logical chains and, as a result, to solve the chess problem. For example, a child may know how the knight moves, but he can neither make an attack nor win a playing piece with the help of the knight.

The child will get stressed in the positions with the knight and is sure to have some difficulty understanding the logical chains which are offered to him by the teacher. If the teacher doesn't notice the difficulty, which such a child is having, in time, the child is likely to get bored, tired and to lose the motivation for studying chess.

But if the child gets a strong basis in the form of automatic skills, his energy will be released and will start to accumulate in order to heighten his motivation for getting ahead.

Human's eyes have two important abilities: to converge and to diverge.

The ability to converge is connected with the ability to see the squares on which the lines of the moves cross on the chess board.

The ability to diverge is the ability to see the pieces which are situated on such crossings. These abilities must be developed if we're teaching chess to children as a lot of children might not have developed them yet and so they can be at the stage of development. The development level of these two eyes' abilities define the level of the psychical functions' capacity. While playing chess children practice these functions first of all, as they have to follow the motion

patterns of the playing pieces. The most important thing here is that while playing chess children make their eyes work and do some following movements, and this results in the creation of new neuronal networks in the child's mind. The best age for it is 6-8 years.

Knowledge of the physiological evolution of visual perception in children is very important for the correct distribution of material in chess teaching.

The most elementary following movements of children's eyes are horizontal and vertical movements.

So it's most natural that we'll start our education with the rook.

Most of you are sure to have seen some children having difficulty while playing with the bishop, and it's not a coincidence – the human eye can't perceive angles as it moves in a circle. Only constant practice, contributing to the creation of a new neuronal network, can help to overcome such difficulties.

According to my experience it takes about 3 months to learn how the knight moves for those children who practice playing chess during the chess lessons. It goes without saying that it takes much more time for those children, who don't play chess often enough or who are taught according to the system the main method of which is problem-solving.

Only after you pupils have learned the moving patterns of the rest of the pieces it's high time to study how the king moves. The king can't be neither put nor left under a strike, so the child will have to deal with a lot of restrictions that are sure to slow dawn his development.

The next principle: the level of the tasks and the form in which they are presented must correlate with the age peculiarities of your pupils so that they are able to understand them and to be interested by them.

Following this principle you'll let a child become the doer (or "the actor") of this action. If you're trying hard to make the process of studying sensible for a child, you must speak according to the level of a child's understanding, trying not to overload him with a lot of information.

Simple doesn't mean boring.

It goes without saying, the pawn's moving patterns are very difficult to learn. There are plenty of rules about them. But it's essential to include the pawns into the game at an early stage of studying as we need them to create a very funny story line, that is adored by most of children.

The pawns are associated with children whose dream is to become the "grown-up" chess pieces, and, if they are lucky enough, to become the Queen. These grown-up chess pieces take care and look after the pawns as they are still "children". The essence of the main story line is that the chess pieces must send the pawns "to bed" in time, but to do this they have to catch up with them. The baby-pawns are eager to cheat the grown-ups. So they're trying hard to disfigure themselves as a Queen and to get rid of the boring child minders.

My motto is "Chess as an adventure".

A lot of interesting things happen in the chess kingdom: for example, fighting with ghosts and monsters to get the treasure. The princesses are eager to become queens, and sometimes all the pieces play football.

All this shows how hard children should work to get good skills and to be willing to move ahead.

All above mentioned principles fall into line with the most important principle of teaching children: ***to move ahead you should start with the level at which the child is situated now;*** **otherwise the underdeveloped lower level is sure to absorb the energy which is meant for the upper one.**

So it's necessary to know the characteristics of the levels of the general evolution in the process of forming the children's chess thinking.

The knowledge of the chess-pattern evolution suggests the knowledge of the sequence of forming chess skills and technics, where every level is a basis for another one.

Such evolution in general is characterized by a gradual change, but sooner or later one can observe the so called dialectical outbreak of this gradual process that results in the abrupt shift either upwards or downwards.

This shift for another level happens in the process of the inner depreciation of the achievements gained at the previous level.

This depreciation might be, first of all, a positive one. The child recognizes the insufficiency of the previous level of his playing style and wants to move ahead. Nevertheless such depreciation can be a negative one.

For some reason the child doesn't want to move ahead, so he either stops attending chess lessons or is eager to stay at the previous level. Unfortunately, this state isn't a constant one, so sooner or later the level of his proficiency starts to decrease.

One of the most important skills of the chess teacher is the ability to see whether his or her pupils are ready to shift to a new level. Children nowadays might fail to make headway in their chess thinking, preferring to enjoy the comfort of the long-ago achieved level. That's why it's the teacher who plays the main role in the process of shifting to a new level.

The description of the characteristics of the levels of evolution of the children's chess thinking.

Intuitive level

Staying at this level the child is supported by his sense perception or does everything off the top of his head, so he gets along without a preliminary analysis or calculation. The best criterion for a successful passing through this level is the child's ability to make attacking moves by both the pieces and the pawns automatically. Only after you are sure the child has acquired the skill of attack you can shift him to the rational level.

Rational level

The pupil knows a lot of orienting points and feels confident about the chess standpoint. His moves on the chess board are always preceded by calculation or analysis or at least one move ahead. At this level the child is able to define logical links, reason and consequence. The main criterion for the child's being at this level is his ability to remember chess theory.

Reflective level

Due to his memory the child is able to come back to any number of moves, changing their sequence for achieving his goal.

Problematic level

It's characterized by the child's ability to realize and overcome difficulties by defining its emotional component (for example, "I feel sad" or "I feel confused") as the main orienting point for transferring the energy into the rational direction ("All this emotional stress interferes with my interests. I must calm down").

The correlation between the levels of evolution of chess thinking and chess contents.

The intuitive level is characterized by the play pattern based on the principle stimulate-reaction, without long thinking. At this level main moving patterns of the chess pieces and the main rules are taught.

It's not recommended to skip through this level. There're a lot of problems at this level which must be solved to become the basis for a number of some other problems' solving.

1. *The motivating problem* is the most important one. The quality of its solving influences the successfulness of the future process of chess studying.

To solve such a problem children must rely on the method of thinking which is considered to be perfectly developed by the age when children start school. It's of course the so called eyes-mindedness. So we should choose an activity mostly preferred by children of this age – the socio-dramatic play.

Taking into consideration the main principle of the evaluative pedagogics – to start teaching from the level which is considered to be the strong point of the child, we get to work. We animate the chess pieces so that a child could see himself one of the characters of the chess kingdom, starting with playing short parts of chess games which involve a limited number of chess pieces (in accordance with the physiological evolution of the eye perception). Not like an ordinary competitive play, the socio-dramatic play makes the child in a definite role, that places on him some restrictions imposed by this role, which takes for granted taking into consideration the fact that otherwise there will be no play with his opponent. In this way the chess play acquires for the child some meaning from the very start and all his actions become more sensible, well-considered, and, as a result, more logical ones.

2. *Getting to know the chessboard*

A lot of chess teachers make one and the same mistake when they start the process of teaching from explaining the coordinate system on the chessboard and do it during the first or the second lesson.

It contradicts the evolutionary approach, the principle of gradual approach. For the children to acquire this skill successfully, they should be able to see the squares where the horizontal and vertical lines cross. So it's quite logical to start learning how to make a notation only when all the children feel confident at making a double attack on the neutral objects; this skill develops itself in the process of the self-governing play.

If we don't let the children play, then a half of them will have to shift to the rational level, missing the intuitive one.

They will feel it as a gap or an insufficiency for a long time. The motivation of such children will decrease at the very beginning of the chess studying.
So those teachers and the creators of chess programs who support this approach think more about the comfort for the adults than about the development and up-bringing of the children.
I really hope that at the beginning of the process of chess teaching there is a chess board in front of each child. Unfortunately some teachers prefer to put a certified chess book on the desk and are sure that it's enough for the process of studying. The main tendency of such a simplified method of teaching – is to take care of the comfort of the teacher, as it's more pleasant for him to listen to the rustle of the pages than to be disturbed with the noise made by the falling down chess pieces. The chess development of the child in such a case is not the main point. In fact **the natural logics of the development, which is described by P. Y. Galperin in his theory of the gradual development of thinking patterns, is being violated – the most important basic level of the intuitive-demonstrative thinking is missed.**

So we come to the conclusion *that those children who are at the intuitive level of education don't need any chess textbooks, especially at the beginning. What their teacher needs is a short book with the description of the methods of teaching children at this intuitive level.* **The computer chess program "Vertualchess"**, which has been worked out and put into practice by the author of this article, can be very useful for any teacher of chess (you can find this program **on T. A. Ogneva's site** www.virtualchess.ru).
It's very important to draw your pupils' attention to the difference between the arrangement of the vertical lines on the pupils' boards lying horizontally and on the teacher's board hanging vertically. The children must think it over and to try to find their solution. This question happens to be quite difficult to answer for a lot of them, and it's not evident for everybody that the movement along the lying vertical lines turns into the movement forward and backward.

Having realized this fact your pupils will start arranging positions on their boards, looking at the demonstrative board of the teacher, much faster. Describing all this, I recollected a case from my own life. Once a very famous chess Master asked me if he should start teaching chess at school. I replied that in this work he's sure to find a lot of pedagogics and psychology and just a bit of chess.

Trying to use the pupils' experience that they got while playing with incomplete sets of pieces, the teacher arranges on his board positions that look like those which they faced while playing with those sets. Then he asks them to make a winning move on their boards. Usually it is a problem for a pawn's promotion into the queen. You are sure to be surprised by the reasonable answers of your pupils.

The intuitive lever is considered to be completed when the children's ability to move the figures according to the rules has become an automatized one, in the meaning that the child doesn't have to recollect the rules according to which a piece or a pawn moves, but is confident while making moves on his board.

What we must remember is the fact that the main characteristic of the intuitive level is an impulsive style of playing.

So how to overcome this children's deficiency? Usually adults try to do it in the following way - they put on a horrible expression on their faces and say, lingering the sounds: "Thi-i-i-ink!".

AS for me, I do it this way: I prefer using the children's marking of the board, which I ask them to do before making a move. Instead of saying "Think!" I ask them: "Look at it carefully". At this level this is the most appropriate phrase for the children, as the ability to think in the process of playing, which they will have learn in the future, chess is yet laying ahead.

You pupils are sure to enjoy solving chess problems if you use visual materials.

A lot of problem solving methods in chess can be made visual ones. As for me, I use the method of marking the squares for this purpose. If I give my pupils a task to find a mate in one move, they don't hurry to look for the solution of the problem immediately. First of all they have to mark the free moves of the king with green color, and the square under attack - with red color. Then the pupils make a conclusion about which of the lines in the king's "home" is free. They are looking at the pieces position and decide which piece to use to attack the king so that all the free squares will be under attack. In the long run they make such a move that makes all the squares in the king's home red, so the children are sure that their solution of the problem was right.

This methodic develops your children's ability for analysis and reduces their impulsiveness. The pupils are getting used to looking for important orienting points in the position of the chess pieces on their own. As for the teacher, this method helps him or her to manage the lesson and to make all the children in his/her class work. The teacher should control the process of marking to make sure it's done correctly. It's as well a very convenient method of control for the teacher himself, as he can see the way his pupils work with his own eyes. The children are happy to discover that using this single method of marking they are able to solve much more chess problems. The knowledge and the competence of using this method are to become automatized and turn into a skill performed by a child mentally.

Only after your pupils have trained enough to make the marking correctly, you may start the methods of the verbal thinking, which is necessary to develop that function of your mind which is responsible for planning.

The visual thinking is the basis for both a better understanding of the process of playing chess and a shift for ***the rational level*** of studying it.
The verbal thinking plays here only the secondary role.
It helps a child to save his resources and to organize the work of his/her visual thinking more efficiently.
This helps to create new patterns of solving the chess problems in a faster way. The basis for it is a visual example.

If a child has practiced enough to solve problems for tactics, he has got such a vivid visual image of the chess board space that he is able, according to his own will, to use the patterns of problem solving without looking at the board and to solve the problems mentally, in his mind.

Using the methods of verbal thinking helps to organize the chess information on a particular way and becomes the basis of the child's memory on the condition that *he has found* these logical links *himself*. The personal activity of the child in the process of studying is directly connected with forming the so called chess memory and contributes to its better development.

At the initial level of studying chess one shouldn't try hard to remember something, but sometimes it's really necessary to recollect something.

If you have shown a child one of Paul Morphy's games, accompanying it with the tasks that must be done by the child on his own, he is sure to remember this game.

Of course, he will doubt his own ability to replay the game for the white and for the black from his memory, but if you encourage him, he is sure to succeed in fulfilling this task.

If your pupil is able to remember the chess information, then it's a signal for his readiness to shift to the new reflexive level in the kingdom of chess combinations.

The reflexive level lets the child switch from a visual level to the level if imagination, at which the pupil imagines in his mind what could happen on the board as a result of a certain series of moves.

At this level the cause-and-effect apparatus goes on to develop.

And only after completing the reflexive level there's a possibility to shift to the problem level.

The problem level is characterized by the tasks that are impossible to fulfill only with the help of visual methods. The problems of the problem level need defining the essence of the difficulties at the rational (but not emotional) level.

Finding out that the problem can't be solved by the visual and intuitive methods, the child usually starts to panic and informs his teacher about it ("It's difficult!", "It's impossible to solve!").

It's very important to have a talk with children and to congratulate them on the shift to a completely new level. At this level the children are expected to face difficulties.

Usually people try avoiding difficulties, but if they do so, there won't be any result, the development will stop. One should act in the opposite way: you should "approach" the difficulties, study them carefully and, what is most important, ask yourself: "What is the chess difficulty of this problem?". The recognition of the chess reason for the difficulty will let the children to make some questions, for which they are sure to find a number of possible answers. And one of them is sure to be right one. After fulfilling enough tasks of this kind, your pupils will get a priceless experience of overcoming difficulties, where the children's emotional state

will be the best orienting point for them. **They will learn not to submit to the emotions of sadness and despair, not to give up, but *to switch on their activity motivation*, which is based on the rational mechanisms. These skills will make the children more resistant to stress and will increase their viability in general.**

I hope that my reader, while making his chess-teaching programs, will use the evolutionary method of teaching, as well as all the rest of the principles which have been described in this article, at least – at the intuitive level. The above described methods and principles are *universal* ones. The awareness of these methods will increase the professional competence of every teacher and will make the process of teaching children useful and a good fun, without any unnecessary stress and authoritarianism. Your methods of teaching will gradually become more sparing and more informative.

You can find the detailed presentation of some of the questions which have been touched upon in this article on the site www.virtualchess.ru in the section "The author's articles". It's also recommended to download the computer program from this site. It is based on the evolutionary principle of teaching and the method of preliminary marking. You can find it in the section "About the program", at the bottom of it. If you have any questions you are welcome to ask them to the author by the e-mail virtualchess@yandex.ru.