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CHESS IN SCHOOLS

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School CNS Abcoude, Netherlands My experience is based upon teaching chess to children in primary and secondary schools as a volunteer in the age group from 7 up to 18 years old. From absolute beginners to aspiring tournament players in the regional and country school competitions. I am a FIDE School Instructor and Chess Teacher at the CNS school in The Netherlands, Abcoude.

Abstact

Chess is an educational tool with many possibilities for education. The game contributes to the cognitive, social, emotional and metacognitive development of children according to Karel van Delft, Youth chess trainer, Psychologist and Journalist. (www.chesstalent.com) This is partly due to intrinsic features of the game and partly due to chess teaching methods. The questions that are raised are, why are chess lessons taught in schools? What is the relationship between intelligence and chess? What is a good teaching method? Is chess useful because of its cognitive transference effects on other areas of learning or is it a great tool for developing social and emotional skills?

Chess is a metaphor for life. You analyse, make plans, make decisions and look for creative solutions (cognitive). You learn self management, collect, deal with challenges (emotionally). You discuss situations with others (socially). You learn to think through your behavior and situations. (metacognitive).

There is a distinction between playing games and solving propositions (diagrams). With games you have to think divergently. You have to come up with ideas yourself to achieve a good

result. Like with mini games. With diagrams you have to think convergently, find the right solution.

A distinction can be made between the various aspects of the game of chess, for example principles, tactics, strategy and for example the cognitive age of students, gender of students, transfer domains or areas where chess could possibly exert positive learning effects.

What I have noticed is that some effects require an incubation period and only occur after a minimal number of chess lessons. My experience is that the turnover point comes after 6 to 7 lessons.

I also have been able to personally observe the Hawthorne effect, where students in a chess class receive more personal attention and that motivates them in turn to learn and perform better in many fields and areas of life. I am a strong advocate to not only look at the traditional skills as learned in school, but also focus on the soft skills that help them further progress in their life.

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Discovered learning

That chess is popular with children in primary schools has been demonstrated by various examples such as has been shown in practice at Leonardo schools in the Netherlands. Research indicates that chess offers opportunities to teach children to think systematically, analytically and creatively (metacognition: learning to think) and to motivate them for education. Chess also offers opportunities for the development of social (through cooperation) and emotional (through experiences of success) qualities. How a teacher teaches and asks questions plays a major role in this.

How do you teach¹.

An important question is how do you teach? In practice in my country it shows that many teachers use the “Step Method” from Rob Brunia and Cor van Wijgerden. It is a great method, but was designed when digital tools like we know today, were not readily available. If you only use lessons and exercises of the Step Method, it is a bottoms up approach. I like to combine various methods with the framework as taught by the FIDE as the basis to write the lesson plans. All lessons and assignments are shared on the digital platform “Padlet”. I support the students remotely through digital tools through Chess Kids and Chess.com and they are invited to become part of a club. (Chess House Winstonia, <https://padlet.com/wilbertkieboom/xn2nrlj83gvm2fvg>) The club is important to stimulate passion for the game. I use the digital platforms to organize tournaments amongst students and provide experience to players of various levels. To stimulate the “Chess Image”, I use pictures on the Club wall (Padlet) and show movies to create a nice ambiance and aura around chess. I

recommend showing movies like “Knights of the south Bronx” from 2005, which is a television film about a teacher who helps students at a tough inner city school to succeed by teaching them to play chess. It was directed by Allen Hughes. I particularly like this movie as it also lets the student breath various aspects of the game such as simul and competition. Many students also wanted to try competition after seeing this movie. I use many examples and games and involve and challenge students to come up with solutions. The advanced group I show “The Queen of Katwe” to demonstrate what perseverance is all about. The Queen of Katwe is a 2016 American biographical drama feature film directed by Mira Nair and written by William Wheeler.

A point of attention in Chess in School is that the chess level of the children differs per class. The teacher however can divide the class into groups or teach at different levels simultaneously. It is important to let children discover a lot on their own. The method we use is to divide the students in two groups, beginners and more experienced. Each group first receives classical instruction and they are then asked to implement that in their games and exercises covering the particular topics that were covered in class. An internal competition is managed so to that the children play and practice with different students and are not always stuck with the same pairing. In addition it allows us to quickly distinguish the top talents. This was a specific request by the school so they could populate a school team.

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I have also been able to observe the Hawthorne effect, where students in a chess class receive more personal attention and that motivates them in turn to learn and perform better. A highly motivated chess teacher may be able to make his students enjoy the game so much that they study the game and develop study skills, motivation and self-discipline along the way that are useful in other areas of life and learning.

Do you realize the difficulty of knowledge you offer to children. Observe closely how children react during a lesson. If their attention wanes, you're doing something wrong. There is a distinction between playing games and solving propositions (diagrams). With games you have to think divergently. You have to come up with ideas yourself to achieve a good result. Like with mini games. With diagrams you have to think convergently, find the right solution. As with tactical tasks in the Step-by-step plan. Of course, teaching themes through diagrams provides basic knowledge with which you can come up with ideas yourself.

Don't just explain information to children via a demo board or a digital board. Have them try putting it on their own chess board in pairs. They can then also channel their physical energy. Depending on the child, it can do things independently or with guidance.

Use a practical diagram generator such as demoboard online. (www.demoboard.online)

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School Chess Model².

On your lessons decide whether you take the workshop approach or structured approach. Determine the calendar, day and time with a weekly hour, in our case half hour instruction and exercise and the other half internal competition.

Determine your objectives:

- 1) Knowledge, insight and skills,
- 2) Attitude, fascination,
- 3) Teaching how to play and study chess themselves

Determine group size and level of the players, preferably homogeneous. This can be done through questions, tests with diagrams and by dividing them into groups. If it is a group with different levels, create sub groups.

Discuss order and school rules. Know the specifics about the students, i.e. are there children with ADHD, highly gifted, medicine use etc.

Decide on the setup of the class room. In our case we use tables of 4 students, which easily allows for sub groups.

Decide on your lesson methodology. I use the FIDE approach as I like it and I am educated by the FIDE and stick to their framework.

For specific examples, diagrams and exercises I use the Step Method which is targeted at primary school level and works well. Equally determine your lesson plan and ensure that you have the proper support material, digital board, workbooks, print material. Decide on what you are going to cover per lesson and prepare accordingly. The lesson plan will help you to structure this.

Ensure that you have an active role for the children and evaluate the lessons together with the children. Listen to ideas, engage their involvement and use it for self reflection as an instructor.

As to the internal competition, use a laptop to assist with the pairing, ranking lists etc. There is a free program called Sevilla for PC and I personally use SWIPS on the MAC. (www.Swips.eu)

Stimulate to play chess at home, on chess sites and to participate in tournaments. I have created an online club for my students where they can practice against each other. I also take them for our own external tournaments to teach them to play over the board (OTB). Organizing

a match against other schools and consider participation in the school competition if the drive is there.

Research shows.

Research by McLeod and Gobet has shown that intelligence plays a limited role in the processing of chess skills. Exercise plays a much bigger role. Grabner finds that intelligence accounts for only 12 percent of adult playing strength. Moreno shows how chess can play a role in the social and emotional guidance of young people.

Laszlo Polgar believes that talent is cultivated. Large-scale RCT of the impact of chess on educational attainment by Boruch and Romano (2011), detected a substantial effect for primary school children in Italy and to another recent study by Gumedde and Rosholm (2015), which found a positive effect of chess on primary school children's achievement in Denmark (effect size 0.15).

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Table 1

CNS CHESS MODEL: CHECKLIST

1.	Chess in Primary Schools: CNS ABCOUDÉ, Netherlands
2.	Why: Chess would help to increase children's level of concentration, self-confidence and ability to think strategically. This would, in turn, lead to an improvement in their academic achievement.
3.	Who: Recipients of the intervention. Year 6,7 and 8 (age 7 to 12)
4.	What: Physical or informational materials used in the intervention. Chessboards, chess workbooks, chess software for whiteboard, hanging demonstration board, classroom tables/chairs.
5.	What: Procedures, activities and/or processes used in the intervention. Pupils are taught chess, as part of the school curriculum, by a trained chess tutor using the Chess House Winstonia curriculum. The Winstonia curriculum contains detailed 1-hour lesson plans that include mini-games and worksheets.
6.	Who: Intervention providers/implementers. The intervention was provided by the school itself, which has a long tradition in chess. There are chess games on the attic that date back to the early 50thies.
7.	How: Mode of delivery. Face-to-face whole class and workgroups delivery to children. Practice in pairs.
8.	Where: Location of the intervention. Within primary school CNS Abcoude.
9.	When and how much: Duration and dosage of the intervention. During the 2021/22 academic year. Children are to receive 30 chess lessons of 1 hour spread over the academic year. At the end of the curriculum there is a school tournament involving other schools out of the area,
10.	Tailoring: Adaptation of the intervention. The tutors were provided with the CSC curriculum as the foundation for lessons, but were allowed to adapt lesson plans to suit individual classes.

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