



# MEETING NOTES

25th October 2023

## Introduction



### Karel van Delft (The Netherlands)

Chess teacher, journalist, psychologist  
Chess academy Schaakacademie Apeldoorn  
Science project manager at Chessable  
Author of Chess For Educators, New In Chess 2021



**chessable**

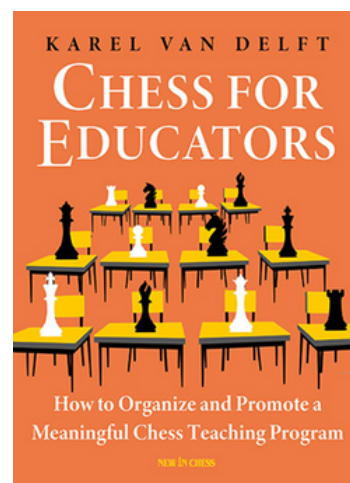
## Chess and personal development in sport, as educational tool

Under the right didactical circumstances chess can contribute to personal development:

- Social
- Emotional
- Cognitive
- Metacognitive

## Chess For Educators

- Didactics
- Science
- Special needs groups
- Alphabet methods



### Methods of research on the benefits of chess instruction

Lots of scientific researchers have devoted themselves to research on the possible benefits of chess instruction for the development of school children. These benefits consist of learning effects in cognitive, social, emotional and/or meta-cognitive areas. This chapter discusses articles by Fernand Gobet and Giovanni Sala on the right methods to carry out quantitative and experimental research. Also, we discuss a plea by GM Jonathan Rowson to teach and research from a holistic education paradigm.

Possible benefits could be the result of intrinsic characteristics of the chess game. Other benefits might occur as a result of the way in which chess instruction is given. It is possible that either both factors play separate roles, or both play a combined role – or, possibly, only one of them plays a role in certain situations.

Here, a distinction can be made between aspects of the chess game (for instance, rules, techniques, tactics, strategy) and the (cognitive) age of pupils, gender of pupils and transfer domains (areas on which chess might be able to exert positive learning effects).

## Ch. 19: Controversies: added value?



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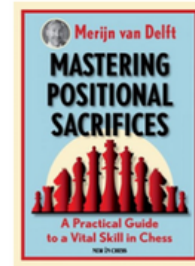
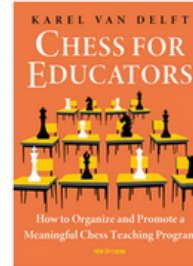
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## Developing Chess Talent [www.chesstalent.com](http://www.chesstalent.com)

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The PayPal button is only for buying ebook Developing Chess Talent.

## Contact

Schaakacademie Apeldoorn  
[karel@kvdc.nl](mailto:karel@kvdc.nl)

Chessable science team  
[karel.vandelft@chess.com](mailto:karel.vandelft@chess.com)



## Schaakacademie Apeldoorn

- Schaakacademie Apeldoorn
- Schaakschool Het Bolwerk
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- Persoonlijke training
- Schaken en autisme
- Leren schaken voor senioren
- Lezingen en workshops
- Boeken Schaakpsychologie
- Nieuwsbrieven
- Databank
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- Online training schaakpsychologie
- Online toernooien en Lichess
- Streamen
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### Schaakacademie Apeldoorn

- Wil je de nieuwsbrief ontvangen? Stuur een mailtje naar [karel@kvdc.nl](mailto:karel@kvdc.nl)
- Meer informatie: [www.chesstalent.nl](http://www.chesstalent.nl), [www.chesstalent.com](http://www.chesstalent.com) en [www.schaken-en-autisme.nl](http://www.schaken-en-autisme.nl)

### Nieuwsbrief Schaakacademie Apeldoorn 287 – 8 oktober 2023

De nieuwsbrief bevat berichten over Schaakacademie Apeldoorn en divers schaaknieuws.  
Redactie: Karel van Delft. Nieuwsbrieven staan op [www.schaakacademieapeldoorn.nl](http://www.schaakacademieapeldoorn.nl).  
Mail [karel@kvdc.nl](mailto:karel@kvdc.nl) voor contact, nieuwslijps ebook aan- en afmelden voor de nieuwsbrief.



### Inhoud

- Nieuwsbrief Schaakacademie Apeldoorn 287
- Les- en trainingsaanbod Schaakacademie Apeldoorn
- AMEVD Apeldoorn wint van De Waagtoren en staat eerste in Meesterklasse
- Schaakschool Het Bolwerk: Uitschakelen verdediging en analyse eigen partij
- Schoolchikken Schaakacademie: Chessmatoc, partij Euwe, Lichess, onderling schaken
- Schaken senioren: Gemiste winstansen
- Apeldoorns gymnasium in Voorburg
- OSBO PK 2023. Uitslagen eerste speeldag
- Call for participants: Chessable online test Decision making in chess
- TCEC 25 superfinale: Stockfish versus Leela Chess Zero
- Quote GM Noél Studer: Analyze Every Game you Play!
- Divers nieuws en wetenschap
- Training en lesgeven
- Kalender en sites





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## Chessable science team

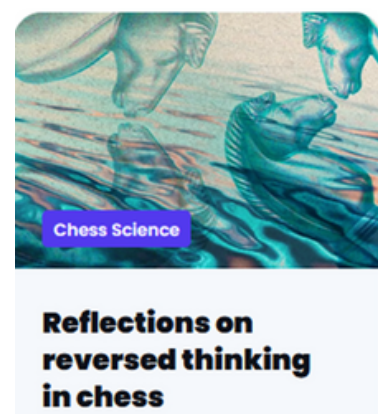
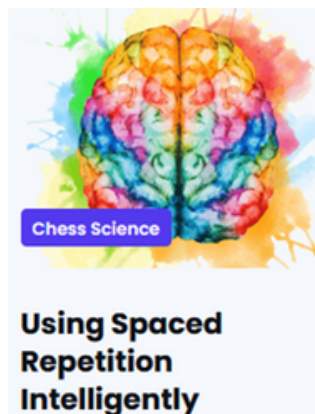
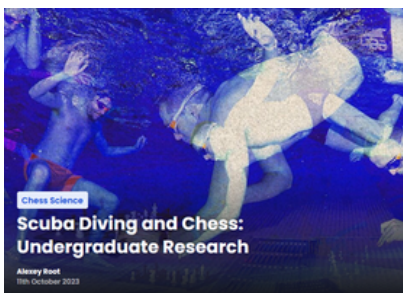
<https://www.chessable.com/science>

information + via green button four initiatives

The screenshot shows a navigation menu with the following sections:

- Research Help**: The Chessable science team is ready to help you! [Learn how](#)
- Featured Projects**: Find out how and who we already helped. [See projects](#)
- Chessable Research Awards**: Chessable gives money to competitively-selected chess research projects from university-based researchers. [Learn how](#)
- Blog**: Read more about our projects on the blog. [to blog](#)

## Chessable blogs and research





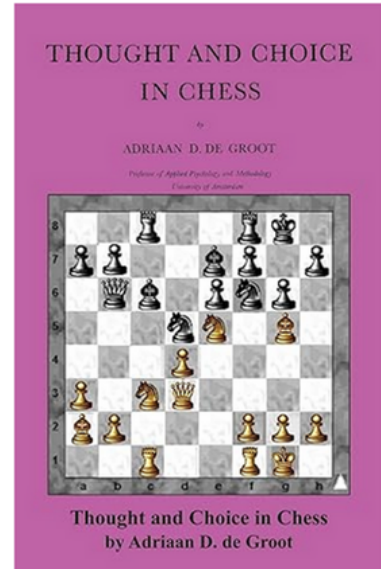
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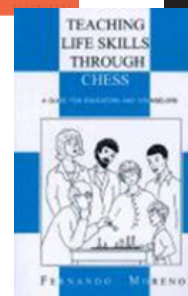
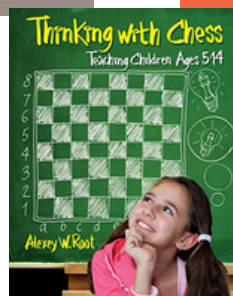
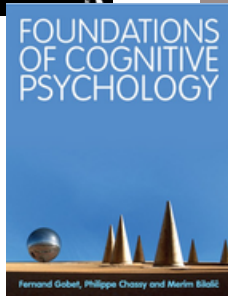
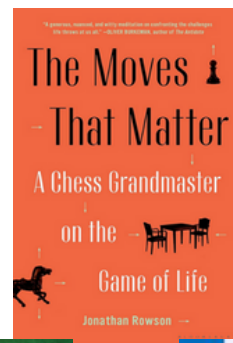
**Breakthrough:  
pattern recognition is the key**

free version in Dutch:

[https://www.dbnl.org/tekst/groo004denk01\\_01](https://www.dbnl.org/tekst/groo004denk01_01)



## Books





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## Science

- Describe
- Explain
- Predict
- Influence

### phenomena

Based on paradigm (Kuhn):  
framework of theories,  
methodologies and  
assumptions.  
Paradigm shift after scientific  
explanations don't work.

## Sources

<https://www.researchgate.net>

<https://scholar.google.com>

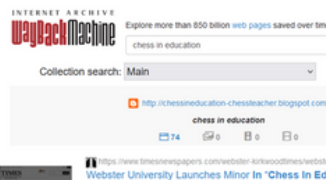
<https://archive.org>

<https://www.chess-science.com/en/author/fb>



chess in education

**Educational benefits of chess instruction: A critical review**  
E.Gobet, G.Camotelli - Chess and education ... 2006 - researchportal.murdoch.edu.au  
... chess is advantageous for general education. To do so, we subject research into the educational benefits of chess to ... educational research. First, we briefly review how psychology and ...  
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chess in education

**SOCIO-PSYCHOLOGICAL ANALYSIS OF FACTORS INFLUENCING CHESS EDUCATION**  
Article December 2022 - 129 Reads - 1 Citation  
Vahan Sargyan · Srbuhi Gevorgyan · Lilit Gevorgyan  
Armenia has adopted chess in primary school program since 2011, and different types of research have been conducted to evaluate the effectiveness of this implementation. One of the questions to be...

## Psychology

Everything the brain does is psychology

- thinking
- feeling
- behaviour

## Subdomains:

- social
- developmental
- cognitive
- personality
- brain functions
- methodology

**Many applications to chess**



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## **Psychology offers insights in Information processing and Self-management**

[http://chesstalent.com/documents/KVDC The seventeenth chess piece.pdf](http://chesstalent.com/documents/KVDC%20The%20seventeenth%20chess%20piece.pdf)

Attention, Brain functions, Calculation, Cheating, Coaching, Cognitive biases, Cognitive restructuring, Communication, Consciousness, Concept formation and categorisation, Cooperation, Concentration, Creativity, Decision making, Deliberate practice, Development, Emotions, Expertise, Goal setting, Heuristics, Intelligence, Intuition, Knowledge, Language, Learning, Memory, Metacognition, Motivation, Nature versus Nurture, Organisation, Pattern recognition, Perception, Personalities, Problem solving, Rationality (bounded), Reasoning, Resilience, Role models, Search strategies, Self-management, Self-reflection, Skills and competences, Social cognition, Social interaction, Stimulating culture, Storytelling, Teaching, Thinking processes, Transfer, Visualizing

**Nothing as practical as a good theory**  
(Lewin)

### **How to apply scientific knowledge to practice**

- Reflect with growth mindset
- Develop thinking and behaviour routines
- Tool: Keep a diary with your insights



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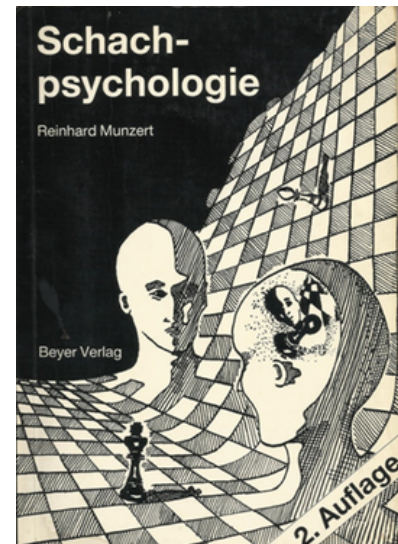
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## Diary

- Verbalize
- Reflect
- Active learning
- Repetition

Paul van der Sterren: IM – diary – GM

Useful for learners and teachers



## Chess thinking

- Mindset
- Pattern recognition
- Heuristics (rules of thumb)
- Calculation

## Transfer of learning: near and far

All learning is transfer:

Learn something and use it on another place at another time

- Near transfer: application is possible in similar areas
- Far transfer: application is not possible when areas are different

Different opinions about far transfer possibilities and chess.

- Gobet: No empirical evidence for added value chess in education

Based on positivism, only empirical sciences produce valid knowledge, used in natural sciences.

- Rowson: Paradigm shift necessary, holistic approach, goal shape thinking, formulate question chess in education differently.



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## Mediated learning

Comparison with life: To beat or not to beat



## Direct and indirect transfer

**Direct transfer**, connected to intrinsic characteristics of chess:

- concentration
- counting
- resilience
- reasoning
- anticipating

**Indirect transfer:** via intermediators

Via comparisons and questions

E.g. when teaching about first look what the opponent can do

- Ask: What do you do when you cross the street?

E.g. speaking about logical move order

- Ask: Do you first put on shoes or socks?

**'The brain in the curriculum'** of Dansk Skoleskak  
Inspired by Feuerstein, Haywood, Vygotsky

Both use transfer from one area to a very different area via a mediator (teacher)

**'Chess Teaches Life Skills'** of Chess Academy  
Apeldoorn





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## [Can Kabadayi \(Sweden\)](#)

Cognitive Scientist PhD  
Winner of the Chessable Community  
Author of the Year in 2022

## DIRECT INSTRUCTIONS / DISCOVERY LEARNING

### Discussion summary

#### **John Foley:**

The effectiveness of teaching chess depends on a balanced approach. There is no singular best method for teaching or facilitating chess, suggesting that sometimes a proactive role, involving explaining concepts and providing guidance, is necessary. Other times, allowing students to play and learn for themselves is essential. Combining these approaches highlights the importance of both theory and practice in chess education. A mix of instructive lectures and hands-on play is crucial for students to grasp principles like developing pieces and controlling the center. A well-rounded approach, incorporating guidance and independent play, allows students to receive advice, apply it, and enhance their understanding of chess

#### **Vince Negri:**

Expanding on the previous point, it is worth underscoring the significance of a blended teaching approach. Powerful teaching moments often occur when instruction is provided or when the teacher intervenes in response to questions that arise during the discovery process. At these moments, when a question emerges organically, the learner's brain is most receptive to receiving information. Timely interventions are important since these interventions can effectively advance the learning process and propel the student to the next level of understanding.



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## DIRECT INSTRUCTIONS / DISCOVERY LEARNING

### Discussion summary

#### John Foley:

The importance of "teachable moments," where a child's interest aligns with a specific chess position on the board, and a teacher is available to explain the nuances. This concept is the powerful core of effective teaching, referred to it as the "SMART method". The key is to concentrate on those instances when children express a genuine desire to learn, making these moments the focal point of the teaching approach. This approach aims to capitalize on the natural curiosity and readiness of students to absorb information when their interest is piqued.

#### Can Kabadayi:

The most important and interesting question seems to revolve around determining the most effective teaching method. Specifically, the debate centers on contrasting approaches like direct instruction versus discovery learning. This discussion extends beyond the realm of chess and delves into broader educational psychology. The primary concern is finding the optimal method that facilitates learning without overwhelming students.

How can we use chess as a tool to explore and answer this fundamental question?

Chess, being measurable and having quantifiable aspects, provides a unique opportunity to assess performance and quality. The idea is to engage beginners in a study that involves various teaching methods, acknowledging the challenges of potential biases from more experienced players.

### CONCRETE LOAD THEORY

The speaker leans towards a mixed approach, considering both direct instruction and elements of discovery learning. They highlight the concrete load theory, arguing that overwhelming students with discovery approaches may hinder effective learning. Direct instruction, involving providing the correct solution along with step-by-step explanations, is presented as a viable alternative backed by scientific evidence.



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## DIRECT INSTRUCTIONS / DISCOVERY LEARNING

### Discussion summary

#### PRODUCTIVE FAILURE

However, alternative viewpoints, such as the concept of productive failure, suggest allowing students to initially struggle with challenging puzzles, followed by instruction for better retention and learning. The mention of guided discovery introduces the idea of letting students explore with prompts and support, fostering inquiry learning and feedback mechanisms.

#### INDIVIDUAL-BASED ASSESSMENTS

The speaker envisions a project involving individual-based assessments, leveraging software, prompts, and guidances to compare different teaching techniques. Despite potential opposition citing the social aspects of chess learning, the focus on individual learning, especially in the post-COVID era, serves as motivation for this research initiative. The ambitious project aims to fill a gap in knowledge, as current chess courses lack scientific evidence supporting their recommended methods.

The complexity of the undertaking, citing the lack of existing research in this area. The proposal aims to contribute to the understanding of effective teaching methods, particularly tailored to different skill levels in chess.

#### THE CONCEPT OF TRANSFER

The proponents of the discovery learning approach argue that while direct instruction may yield short-term benefits, their techniques offer more enduring advantages. One key point they raise is the concept of transfer, asserting that discovery methods foster better transfer of knowledge across different domains and tasks.

In this perspective, the claim is that students exposed to discovery learning may be better equipped to apply their acquired knowledge to diverse scenarios, identifying deeper similarities between tasks.



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## DIRECT INSTRUCTIONS / DISCOVERY LEARNING

### Discussion summary

The term "transfer" is emphasized as the ability to carry over understanding and skills from one context to another. For instance, students engaging in discovery learning might grasp fundamental concepts that transcend specific instances, like solving a tactical puzzle, such as a pin in chess. While encountering that exact pin position again is unlikely, understanding the deeper principles allows the learner to apply this knowledge to different positions on the chessboard.

### THE ESSENCE OF LEARNING

In essence, the emphasis is on finding those underlying similarities between tasks, which is the essence of learning. It's about perceiving similarities in previously learned concepts and being able to apply that understanding to novel situations. The argument suggests that this deeper understanding, cultivated through discovery learning, leads to a more robust and adaptable form of knowledge that can be transferred across various scenarios.

### REASONING IS REAL LEARNING

Understanding should come first. If you really understood why that move is good.

The emphasis is on the importance of understanding the "why" behind each move and providing a rationale, rather than relying on rote memorization. The significance of answering "why" questions in chess coaching is to ensure deep understanding. This instructive method is for measuring the transfer of knowledge and proposes incorporating a conceptual understanding of different positions.

### CONCEPTUAL UNDERSTANDING

The session concludes with a discussion on the strategic nature of positions and their connection to conceptual understanding in chess.



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## DIRECT INSTRUCTIONS / DISCOVERY LEARNING

### Discussion summary

#### GUIDED DISCOVERY METHOD

The concept of the guided discovery method, emphasises its position between complete independence and direct instruction. In this method, learners navigate the position on their own, attempting to find the best moves, while receiving hints, small guidance, and prompts on the right side. The targeted audience for this approach is beginners, as suggested by the literature, who benefit from such support. The intention is to aid beginners until they develop the independence to solve problems on their own.

**THANK YOU FOR YOUR CONTRIBUTION!**

#### MISSION

Our Mission with the monthly Discussion Group Meeting is to connect educators who use chess as an education tool from all over the world to learn from each other and discuss different perspectives and experiences related to *Chess in Education*



**CONTACT US!**  
training@chessplus.net

## DIRECT INSTRUCTIONS / DISCOVERY LEARNING

Direct instruction and discovery learning are two different instructional approaches in education, each with its own set of principles and methods. Here are the key differences between the two:

	Direct instruction	Discovery learning
<b>Teacher Role:</b>	Teachers play a more active role as a guide and provides explicit instructions, models concepts, and guides students through the learning process.	Teachers create an environment for students to explore and discover concepts on their own. They place more emphasis on student autonomy.
<b>Learning Process:</b>	Learning is more structured and systematic. Teachers break down information into smaller parts and present it in a clear and organized manner. Students receive information and practice through guided activities.	Learning is more student-centered and open-ended. Students actively explore and experiment to discover concepts. The emphasis is on the process of inquiry and problem-solving.
<b>Guidance:</b>	Teachers provide explicit guidance, support, and feedback. The goal is to ensure that students grasp the correct concepts and skills from the beginning.	Students are encouraged to explore and make sense of information independently. The emphasis is on self-discovery, and guidance may be more indirect.
<b>Transfer of Knowledge:</b>	Knowledge is transferred from the teacher to the student in a more direct and efficient manner. The focus is on ensuring a clear understanding of specific content.	Knowledge is constructed by the student through personal exploration. The emphasis is on understanding underlying principles and fostering critical thinking.
<b>Time and Efficiency:</b>	Often considered more time-efficient, especially for introducing new concepts. It allows for a more structured and streamlined learning process.	May be perceived as less time-efficient, as it involves a more open-ended exploration process. It may take longer for students to reach conclusions through discovery.
<b>Learning Outcomes:</b>	Tends to be more effective when the goal is to ensure that students acquire specific knowledge or skills. It is often associated with mastery learning.	Emphasizes the development of problem-solving skills, critical thinking, and a deeper understanding of concepts. It may be more suitable for fostering creativity and independent thinking.

Both approaches have their strengths and weaknesses, and the choice between direct instruction and discovery learning often depends on factors such as the nature of the content, the goals of the lesson, and the characteristics of the learners. Many educators incorporate elements of both approaches, creating a blended or eclectic instructional approach.