

Executive Chess

The Chess Friends

The Man Benjamin Frederick, The Myth Sarang Sankrithi, and The Legend Vivaan Sankrithi

<https://www.chessfriendsbooks.com/blog>

Get their new book, *Q&A Chess: Tournament Edition* here (published 9-15-2025): <https://a.co/d/hMYdF7B>



*The Myth Sarang + The Man Benji + The Legend Vivi = The Chess Friends.
Photo credit: Sasha Frederick (Benji's Mom).*

Howdy! It's the Chess Friends! Many coaches, parents, and friends in the chess world talk about how chess can grow Executive Functions, the mental skills that help us successfully navigate learning and life. But when we study rook endgames, or look for mate-in-threes, or play in a blitz tournament, we don't think about all that brain stuff or math homework. We play and study chess because we love it! How can *that* help with Executive Functions?

Executive Functions is a loaded concept, usually tackled by neuroscientists

and psychologists. What does this concept even mean for us? In this article, we answer this question, relating Executive Functions to our experiences in both chess and life.

When we researched this topic, we came across a nice article in the *Annual Review of Psychology* (<https://doi.org/10.1146/annurev-psych-113011-143750>) that groups Executive Function skills into three core functions: **Working Memory**, **Cognitive Flexibility**, and **Inhibitory Control**. In this article, each of us reflects on one of these skills, suggesting how chess can

improve them. Our friend Peshka joins us, and, in preparation for Thanksgiving, demonstrates how to use these essential mental processes in the kitchen! Let's get started!

The Myth Sarang: Working Memory

Working memory is how your brain can get and store information, and access and use that information. In one of my college neuroscience courses, I learned that most people can only remember three distinct things at the same time, and when

they try to add a fourth, they may lose one of the original three. In my experience, it doesn't have to be that way, and that's largely thanks to the power of chess and brain training. You may have seen many strong chess players playing blindfold games, even blindfold simul, where they are able to play pretty good chess against many people at once, without moving any physical pieces. I'll show you how to build the memory to get there!

In chess, it is possible to remember opening patterns many moves deep, middle game tactics, and super long endgame calculations. For example, with my coach, I can have conversations 60 plies (note 1.e4 c5 is two plies) deep, without moving a single piece on the board. How did this happen? Chess-wise, I started training my brain over the board with vision exercises: we would put a tricky position on the board with a friend or coach and discuss as many moves as possible without moving any pieces. If you do this consistently, you will create a mental map of the chess board and see patterns and make plans mentally. That way, when it comes to game time, you can analyze critical positions very deeply before making a move. It's totally fine

WORKING MEMORY



if you can only see a few plies deep to start. It takes a lot of practice to grow your memory! You can also try blindfold chess and look only when you need. As you do more, you will need to look less!

There are also brain training apps like Impulse and New York Times Games that help with your pattern recognition and

efficiency. Some of my favorite ones for young learners are Tower of Hanoi with more and more disks, Simon says, and matching card games. Just make sure you focus on speed of calculation in addition to accuracy. As you train your brain, you will see marked improvement in more interesting games like Bridge and Chess. If you're able to remember every card that was dealt perfectly and who has what, you will play cards much better! Likewise in chess, if you remember positions and patterns that you've studied and are able to mentally calculate lines that lead to those positions, you will become a much better player!

One caution as you build your working memory is to use technology carefully. When you're analyzing a chess game on a computer, it's very easy to move the pieces on an analysis board. This actually works against you when you're playing a real OTB game and want to calculate everything mentally, because your mind is so used to digitally analyzing and moving. I have a cell phone now and it's easy for me to store contacts. Before my cell, I had everyone's phone number memorized. Now I just store them in my contacts. Though I now have a GPS on my phone to help navigate my parents, I have built a mental map of everywhere I have gone, complete with timestamps that account for traffic, and do my best to use it rather than the GPS.

The Legend Vivaan: Cognitive Flexibility

Cognitive flexibility is how the brain can change its thinking quickly and react creatively to unexpected situations. I like being creative in chess and in life! In chess, I think about ideas that my opponent won't expect me to play in addition to the best moves I've studied. Depending on how my opponent reacts to my plans, I am able to quickly switch between crazy attacks and lockdown defense and never worry if they see my plan or not, because I can always change it! I can also go through many plans very quickly in my brain and anticipate lots of different paths so I am rarely surprised.

An important concept that goes along with Cognitive Flexibility is *Neuroplasticity*. This is how the brain can change, and it is something you can improve with practice! The best way to improve your neuroplasticity and cognitive flexibility is to experiment with

lots of things and not stick to a script. For example, I love cooking and cook almost every day. I never follow recipes. I see what my parents make and then deviate in fun and creative ways to make the food even better! Sometimes it tastes amazing and sometimes it doesn't taste very good. That's great because you tried something new and learned from the experience! The key to improving your cognitive

COGNITIVE FLEXIBILITY



flexibility is trying everything and seeing what works and not worrying about failure. People are often afraid to fail and that stops them from being creative or improving by trying lots of things.

Another example is tennis and table tennis, two sports I love. I enjoy trying new serves, new spins, and new techniques every time I play. I also like to play lefty whenever I can, even though I'm righty. Well, I'm ambidextrous, meaning I can use either hand for whatever. This is another example of cognitive flexibility, where we can train ourselves to use both hands effectively! Kids have the greatest neuroplasticity and ability to grow our brain function, but adults have it too, so it's never too late to train your brain! You don't have to take my word for it. Check out this recent review in the *Brain Research* journal! (<https://www.sciencedirect.com/science/article/pii/S0006899325002021>)

Circling back to chess: yes, you need to learn your openings, you need to learn your tactics, and you need to learn your endgames, and, as you get better, some deeper positional ideas! That said, never

lose your creativity and always come up with fun new ideas to try! If you're the type of person who worries about rating, try these ideas online or OTB in practice games or in any setting where you can truly experiment and play freely. If for any reason, you feel unable to play free, it makes it very hard to be creative and flexible. Good luck!

The Man Benji: Inhibitory Control

Inhibitory Control is how you can stay in charge of your impulses, thoughts, and actions, and maintain your focus without being distracted. Just like with Working Memory and Cognitive Flexibility, chess can also help with Inhibitory Control. With Working Memory, sure we need to memorize openings and be able to convert winning positions in our sleep. But when we are playing, we can't be on auto-pilot. Our opponent might set up a trap or a stalemate trick! So, we should stay mentally alert and focused in all situations. Likewise, it is great to be creative in chess, and to spot interesting ideas. But it doesn't mean we should play those ideas right away, no matter how brilliant they might seem at the moment. We need to answer questions: *What would be my opponent's response? Can they counter-attack? Do I have a better option?*

"When you see a good move, look for a better one," as Emanuel Lasker, the second World Chess Champion, famously said.

Another big thing about Inhibitory Control is being able to control your thoughts. In chess, when we find ourselves in a bad position, we can fall down the rabbit-hole of sinking thoughts: *"How did I get myself into this mess?"* or *"I'm so bad at chess, I shouldn't even be here."* Those thoughts are unhelpful and often lead to resigning. Instead, we can use our Inhibitory Control to suppress these thoughts, and think more productively: *Can I set up some traps? How can I complicate the position?* Staying on task and focusing on what's in front of you will help you find counterplay and hopefully have fun playing new ideas.

The same can be applied to situations when you are completely winning. Say you got yourself into a winning position. You are excited, thinking everything is going great, and you start getting

overconfident. Overconfidence can negatively affect your focus, and that's never a good thing, as you might mess up and blunder. You have to stay cool and finish the game in style.

It was also Emanuel Lasker who said "The hardest game to win is a won game." No wonder he still holds the longest tenure as Chess World Champion, a whopping 27 years, from 1894 to 1921! He was not only a chess player but also a mathematician and a philosopher, and he probably knew a lot about Executive Functions, though the term didn't gain popularity until the 1970s!

Even though it's good to control your impulses, there are some chess situations

INHIBITORY CONTROL



where you should trust your instincts. In a blitz game, or in time trouble, you can let it go, trust your chess training, and just go with it!

We use Inhibitory Control in many life situations, outside of chess! Say I see a scrumptious looking chocolate bar on the table. Thanks to my Inhibitory Control function sharpened by chess, instead of instantly devouring that bar, I might stop and think about whether that would really be a good idea.

Another example would be playing video games or online blitz games. We've all been there: it's late in the night, and you are blitzing nonstop. You should call it a night, really, but you want to get that 20 rating points back you lost this evening, so you keep playing, losing

100 points more in addition to losing a good night's sleep! Instead of doing that, remember about your brain power and use its Inhibitory Control function, unplugging early and going to sleep!

It's a cool thing being able to control your thoughts and channel your energy into a productive and stable state of mind! Playing chess can help you get practice with focus, fighting back instead of draining in negative thinking, and staying on the road of reaching your goal!

To summarize, here are...

The Chess Friends Tips to Improve Executive Functions

- Do chess vision exercises: analyze positions mentally and verbally without moving any pieces and grow your depth of calculation by tracking your ply count. **#workingmemory**
- Practice blindfold chess as deep as you can to create a mental map of the chessboard and chess pieces. **#workingmemory**
- Play with brain training apps and try to memorize every card dealt in card games, calculating odds as you play. **#workingmemory**
- Try routine things like memorizing phone numbers, addresses, and navigation, without technology like contacts and GPS. **#workingmemory**
- Think of moves that maximize the chances of the opponent making a mistake. **#cognitiveflexibility**
- Anticipate several paths your opponent may take and come up with creative ideas in each one before making your move. **#cognitiveflexibility**
- Move away from the script. Once you've mastered the fundamentals, try some new things and breakaway from conventional thinking. **#cognitiveflexibility**

- Experiment often and don't be afraid to fail.
#cognitiveflexibility
- Stay focused during your chess (and not only chess) studies by setting specific times for training and turning off notifications.
#inhibitorycontrol
- Reward yourself when you finish a task with a blitz game, or with that scrumptious looking chocolate bar (ok, maybe a half of it). *#inhibitorycontrol*
- Follow the advice of the great Emanuel Lasker: When you see a good tactic, or move, slow down and think about your opponent's response and other candidate moves.
#inhibitorycontrol
- When triggered, don't react immediately and calm down first. Maybe count to ten before speaking, or breath in and out to clear your brain from that first impulse response.
#inhibitorycontrol

That's all for now! We hope you enjoy improving your Executive Functions, chess, and life!

Three Cheers, Fellow Future Master Chess Friends!

The Man Benji
The Myth Sarang
The Legend Vivi



FROM THE CHESS FRIENDS

Orlov Chess Academy
IM Georgi Orlov
2540 US Chess

Offers time-tested program,
challenge and quick progress!

Chess Camps, Tournaments
Chess Classes, Private Lessons

info@chessplayer.com
www.chessplayer.com
(206)-387-1253





Chess4Life™
© Chess4Life LLC. All Rights Reserved.

CHESS CLASSES
include individual progress tracking!

START TODAY
WITH A FREE ASSESSMENT
LESSON ON CHESS4LIFE.COM


CLASSES OFFERED
Online & In-Person