Brain Balance®

# Executive Functioning Skills and School Success

**The complete guide to understanding executive functioning skills, how they develop in the brain, and how to help your child lay the groundwork for success.**

## "Hand in your homework… Raise your hand… Pay attention… What did my teacher just say?… How do I get to my next class?… That noise is so distracting… Pay attention!… Wait, where did I put my homework?…"

### Parents, this is your child's brain in school.

Believe it or not, your child's brain is trying ***really hard*** to keep up in school! There are many underlying processes in the brain that contribute to classroom success, they're called executive functioning skills. Executive functioning skills are a set of cognitive processes that serve as the brain's command center, allowing individuals to plan, organize, initiate, manage time, pay attention, and adapt to changing circumstances. These skills are the foundation for effective self-regulation and goal-directed behavior, making them crucial for classroom success. Students with well-developed executive functioning skills are better equipped to focus on tasks, set and achieve academic goals, and navigate the complex demands of a classroom environment.

# *what are* Executive Functions?

There are many school-day responsibilities that involve properly developed executive functioning skills. Kids, teens, and adults alike rely on these skills all the time, without even realizing it. These skills not only facilitate academic achievement but also lay the groundwork for future success in various aspects of life.


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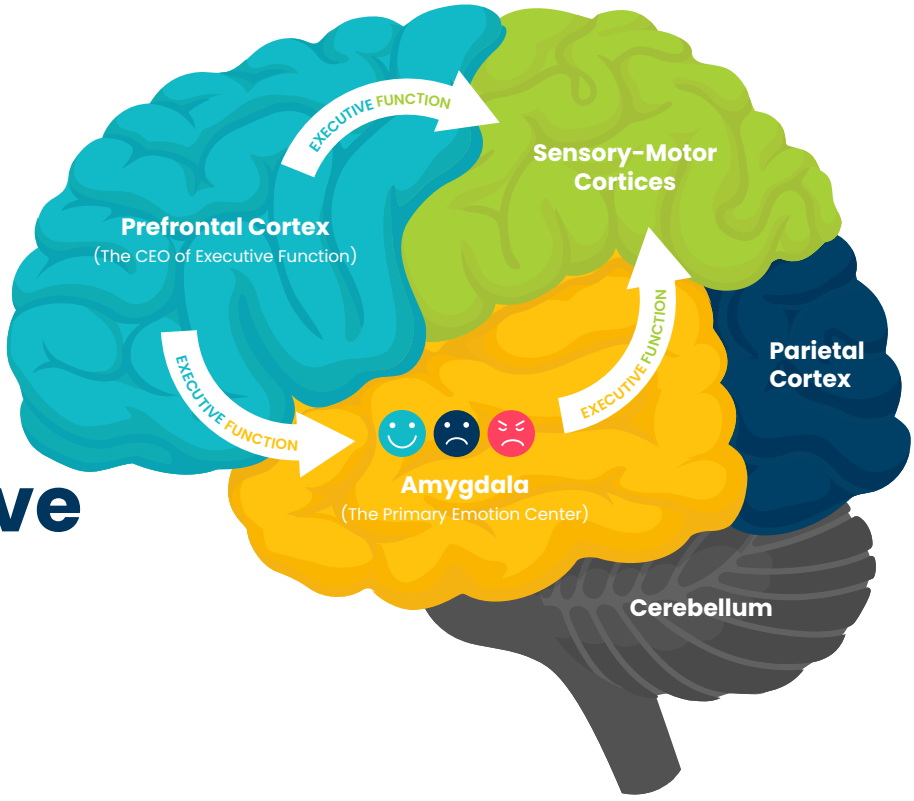
## How do executive functioning skills develop?

Our ability to learn and apply executive function skills is dependent on foundational development.

Executive functions develop in the brain, primarily in the frontal lobe, specifically the prefrontal cortex. This development begins at birth with basic movements and sensory functions, such as crawling, tracking with the eyes, and auditory processing, forming the foundation for higher-level, goal-oriented actions. This process is termed “bottom-up development” and leads to a well-coordinated frontal lobe that interacts extensively with other brain regions.

# *the brain* and Executive Functions




For instance, the thalamus acts as the relay station to process sensory information and connect that information to other aspects of the brain, which are curricula crucial for decision-making, reasoning, and emotional control.

Think of the frontal lobe as the conductor of an orchestra. In essence, the frontal lobe acts as the conductor of the orchestra. The conductor’s effectiveness relies on the quality of sound it receives from musicians. If the tone or the sound is off its effectiveness relies on the quality of information it receives from other brain areas, highlighting the importance of proper development in these foundational systems for optimal executive function.

The frontal lobe can be likened to the conductor of an orchestra in the brain, orchestrating and coordinating various cognitive processes and behaviors just as a conductor directs musicians to produce harmonious music. The different brain regions responsible for specific functions can be thought of as individual sections or instruments in the orchestra, each playing its part in creating a symphony of thoughts, actions, and emotions.

However, just as an orchestra's performance can be affected if the conductor is out of sync or lacks critical information, the brain's functioning can be disrupted if the frontal lobe doesn't receive accurate or timely input from other brain regions. Information sharing within the brain relies on the timely and accurate transmission of signals between different areas.

If there are developmental issues or disruptions in the lower brain systems and sensory input (akin to the orchestra sections), the information provided to the frontal lobe (the conductor) may be faulty or limited. This can lead to a breakdown in decision-making and coordination, akin to a dissonant or discordant performance in an orchestra. For optimal brain functioning, it's essential that all brain regions communicate effectively, just as an orchestra performs best when the conductor and musicians are in perfect harmony.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## When Executive Functioning Skills are Lagging Behind

When executive function skills are lacking, it often indicates that there are challenges or dysregulations in specific areas of the brain responsible for these functions, primarily the frontal lobe, and its various interconnected regions. If these foundational brain systems are disrupted, it can impede the maturation of executive functions. Factors like environmental toxins, sedentary behaviors, excessive screen time, and prenatal stress reactions can contribute to these disruptions.

For years, scientists thought that learning difficulties such as Attention Deficit and Hyperactivity Disorder (ADHD) corresponded to specific areas of the brain. But this latest research suggests something entirely different. Scientists from the **University of Cambridge** found that learning difficulties don't correspond to particular regions of a child's brain, as previously thought, and poor connectivity between brain "hubs" is more likely to cause these difficulties.[1]

Cambridge researchers discovered that no particular area of the brain caused learning difficulties. Instead, they found that weak connectivity between different regions of the brain may be the reason why some children struggle.

The study revealed that the brain is organized in hubs, like a transit system or a social network. The severity of the learning difficulties was strongly associated with the connectedness of brain hubs, suggesting that the connectivity between these hubs plays a key role in **passing information between different areas of the brain.**

[1]https://www.brainbalancecenters.com/blog/learning-difficulties-due-to-poor-connectivity

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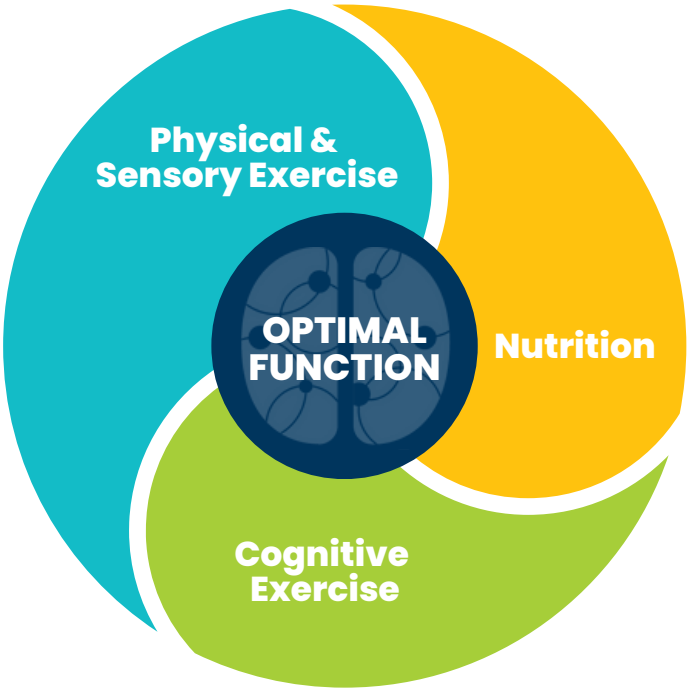
## When Coping Strategies and Skill Building Strategies are not Enough

If you've tried various strategies to help your child build these important executive functioning skills, but still find your child needs excess help to stay organized and keep up with daily tasks, you may want to consider supporting their brain development with a program like Brain Balance.

The Brain Balance program is uniquely designed to strengthen connections between areas of the brain and improve the foundation of development. The program is an integrative, whole-body approach that incorporates cognitive exercise, physical, and sensory exercise, and nutrition methods and combines them into one optimized approach.




**A growing body of evidence shows the Brain Balance Program positively impacts the following key areas of brain health for children and adolescents:**[1]

- **Emotionality**
- **Academic Motivation**
- **Behavior**
- **Reading & Writing**
- **Social Skills**

In separate, independent studies, parents, clinicians, and teachers have all reported a decrease in hyperactive behaviors, a decrease in disruptive behaviors, and an improvement in attention abilities in children and adolescents after completion of the Brain Balance Program.[1]

✓ **Parents** ✓ **Clinicians** ✓ **Teachers**

**There is hope and a better way forward. Contact our support team to get started.**

[1]https://www.brainbalancecenters.com/brain-balance-program-research-and-results

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