



BBBD Supports and Interventions



Using the *Building Blocks of Brain Development* to Support Students with Learning Disabilities

Peter Thompson, Ed.S., Ph.D.





Module 2.1

BBBD: Supports and Interventions

A Review of the BBBD and Its Use in Supporting Students on an IEP



Important Note

The information, concepts, and models provided in this presentation are intended to give practitioners a framework when conducting special education evaluations and employing interventions. It is emphasized that nothing in this presentation is meant to be directive or prescriptive.

Professionals are free to use some, or all of the information presented, but they are not required to do so in their practice. **Always consult with your special education director for clarity around district policies and expectations for special education evaluations.**



IMPORTANT 

Consideration of Terms

- The full and correct term is the *Building Blocks of Brain Development*© (BBBD)
- For this presentation, referred to many ways such as the BBBM or BBBD
- For this presentation, the BBBM or BBBD is used to describe brain function more than development



Learning Outcomes

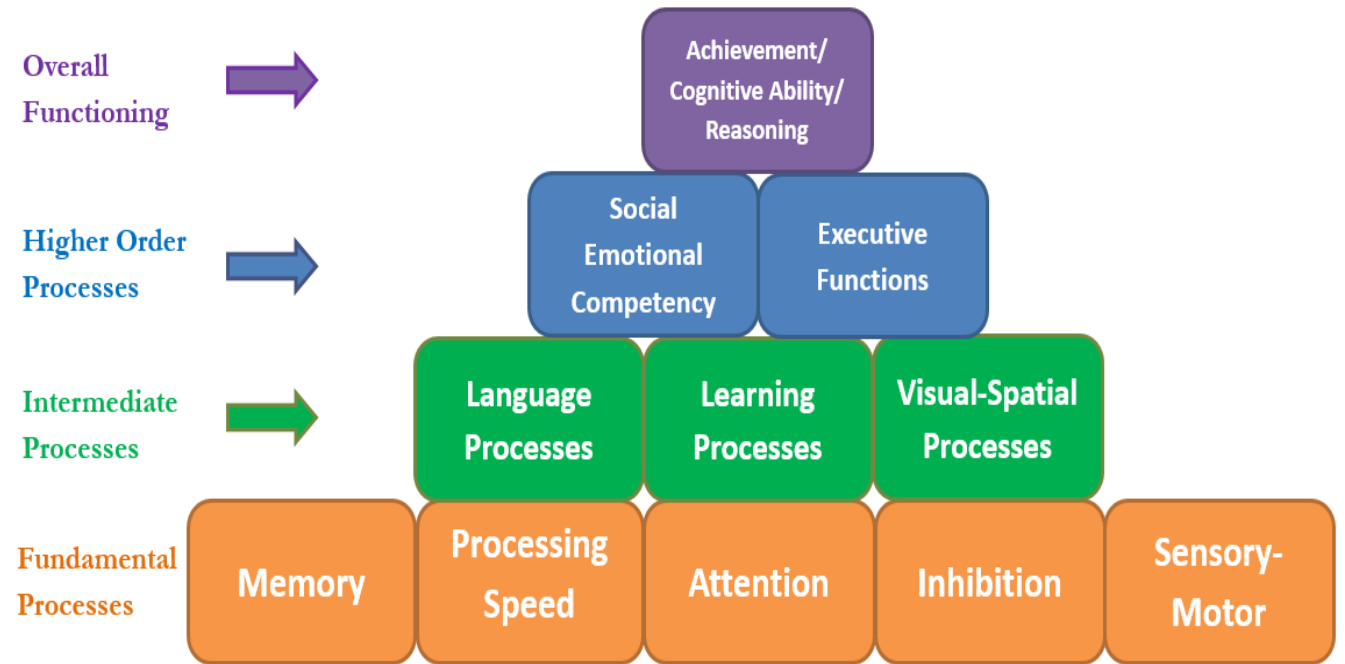
- Understand the essential components of the BBBD and its critical role in learning and identifying areas of need
- Learn the most effective supports associated with the *Fundamental Level of the Building Blocks of Brain Development*



Key Points

- All learning disabilities are brain-based disorders
- All levels are dependent on each other
- Most assessments should account for “Fundamental Processes”

Building Blocks of Brain Development ©



The Hierarchy of Neurocognitive Functioning © - created by Peter Thompson, Ph.D. 2013, adapted from the works of Miller 2007; Reitan and Wolfson 2004; Hale and Fiorello 2004.

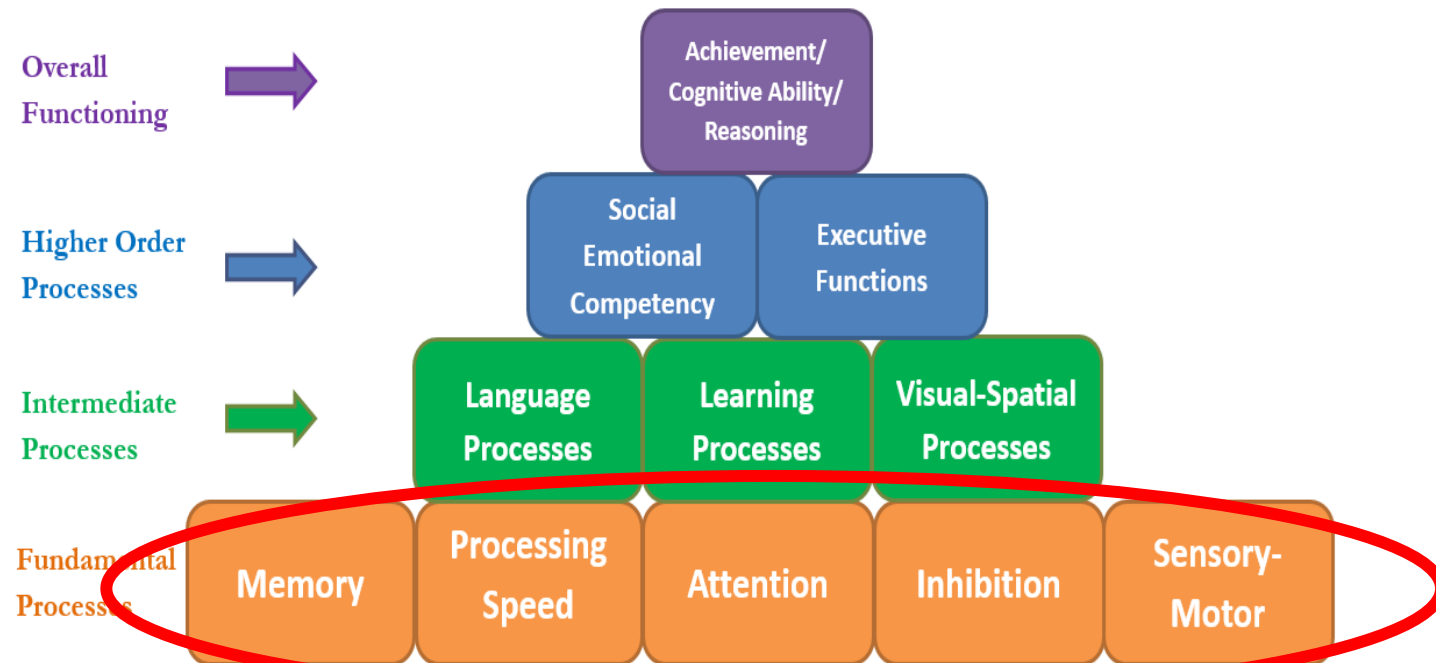
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Key Points

- Basic processes needed for reasoning and learning
- Fundamental level integrates with other blocks
- SLD typically involves a “crack” in one or more of the foundation blocks

Essential Fundamental Brain Processes



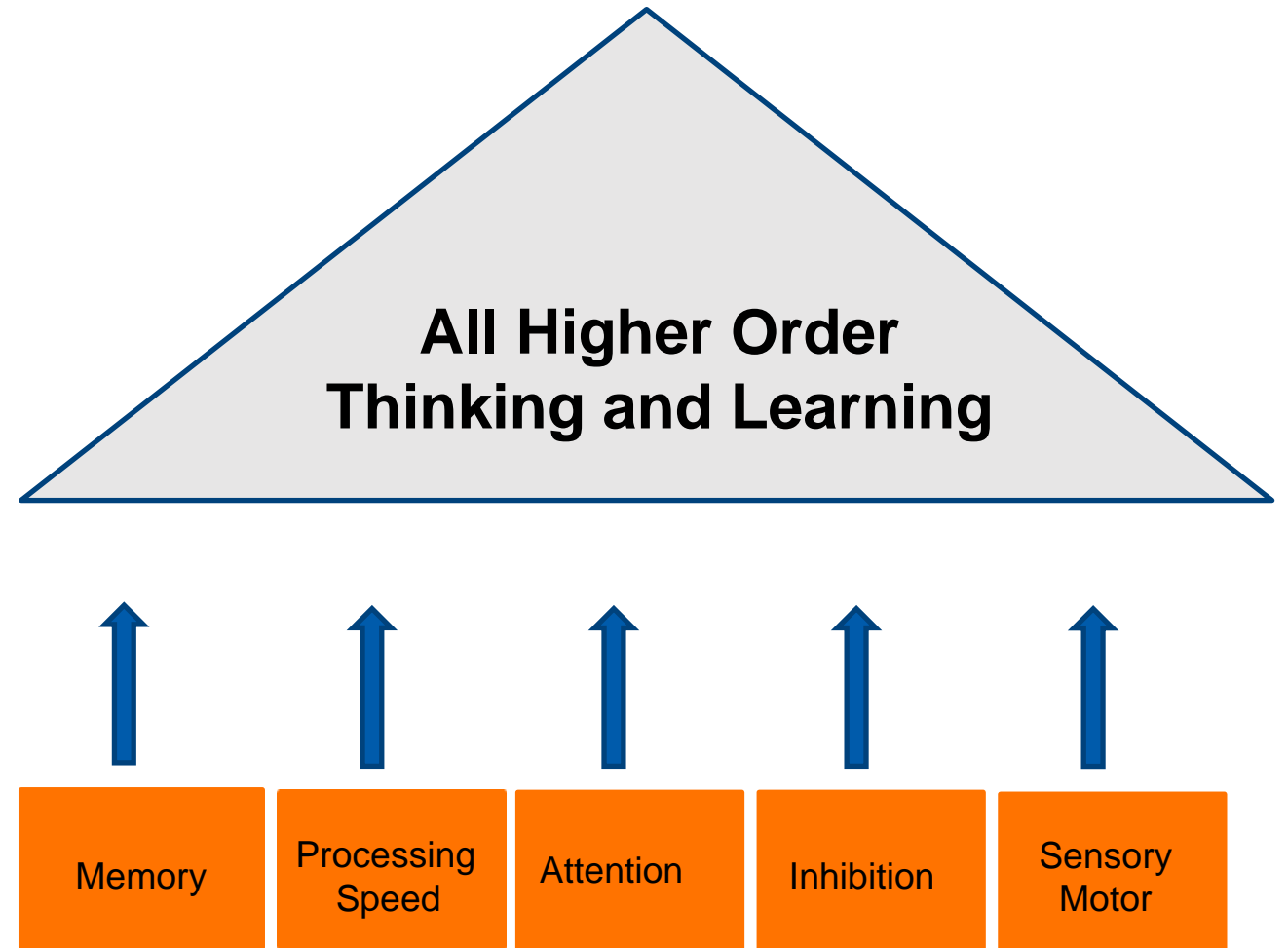
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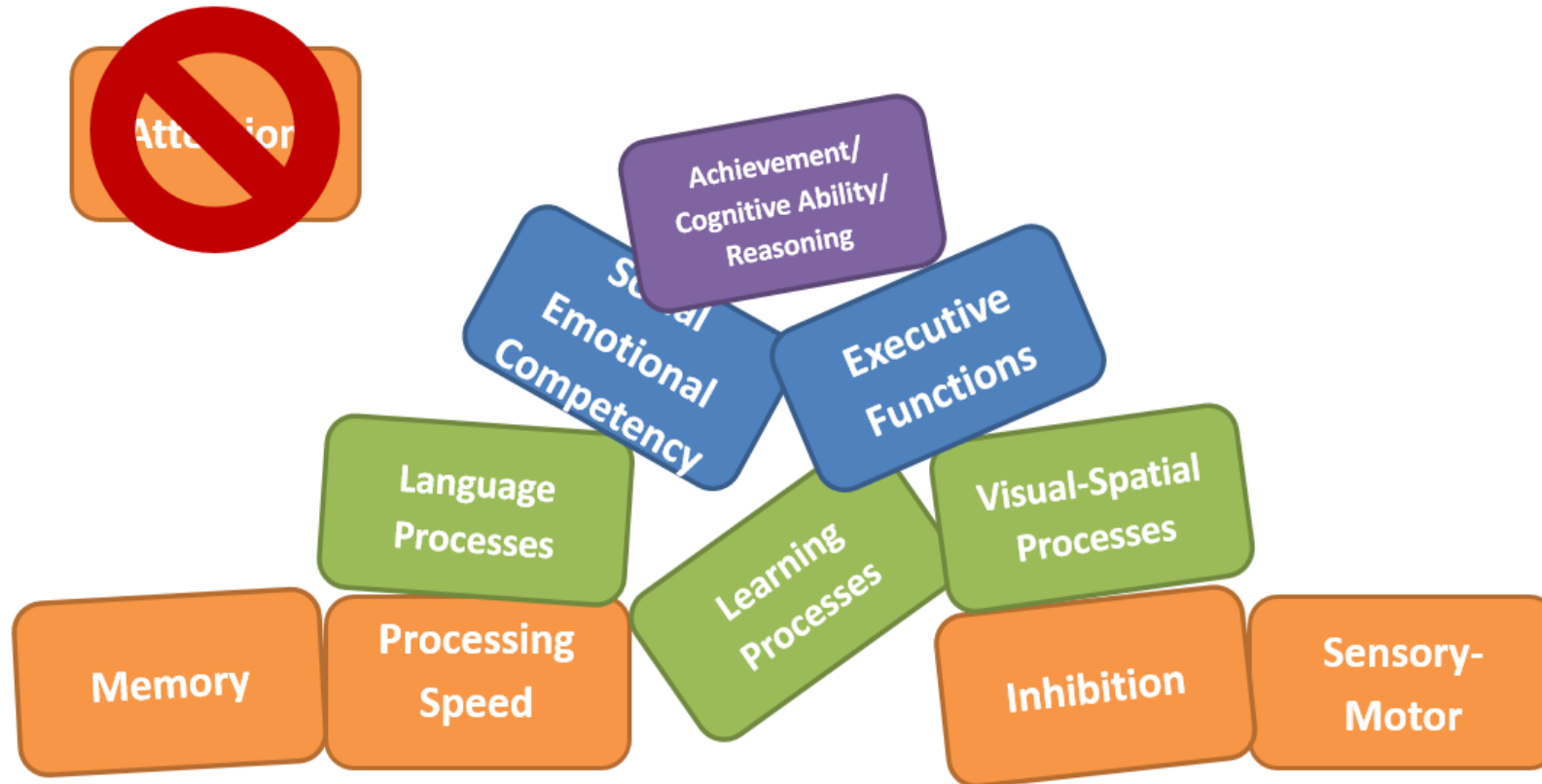


- **Memory**—Long term storage of knowledge and experience
- **Processing Speed**-Least specialized, but very sensitive; Indicates communication efficiency within the brain
- **Attention**-Allows for input-- “neurocognitive doorway”
- **Inhibition**-Control (Part of Executive Function)
- **Sensory-Motor**-Allows access to environment

The Basic Blocks Explained



What Happens When a Block(s) is Not Fully Functional

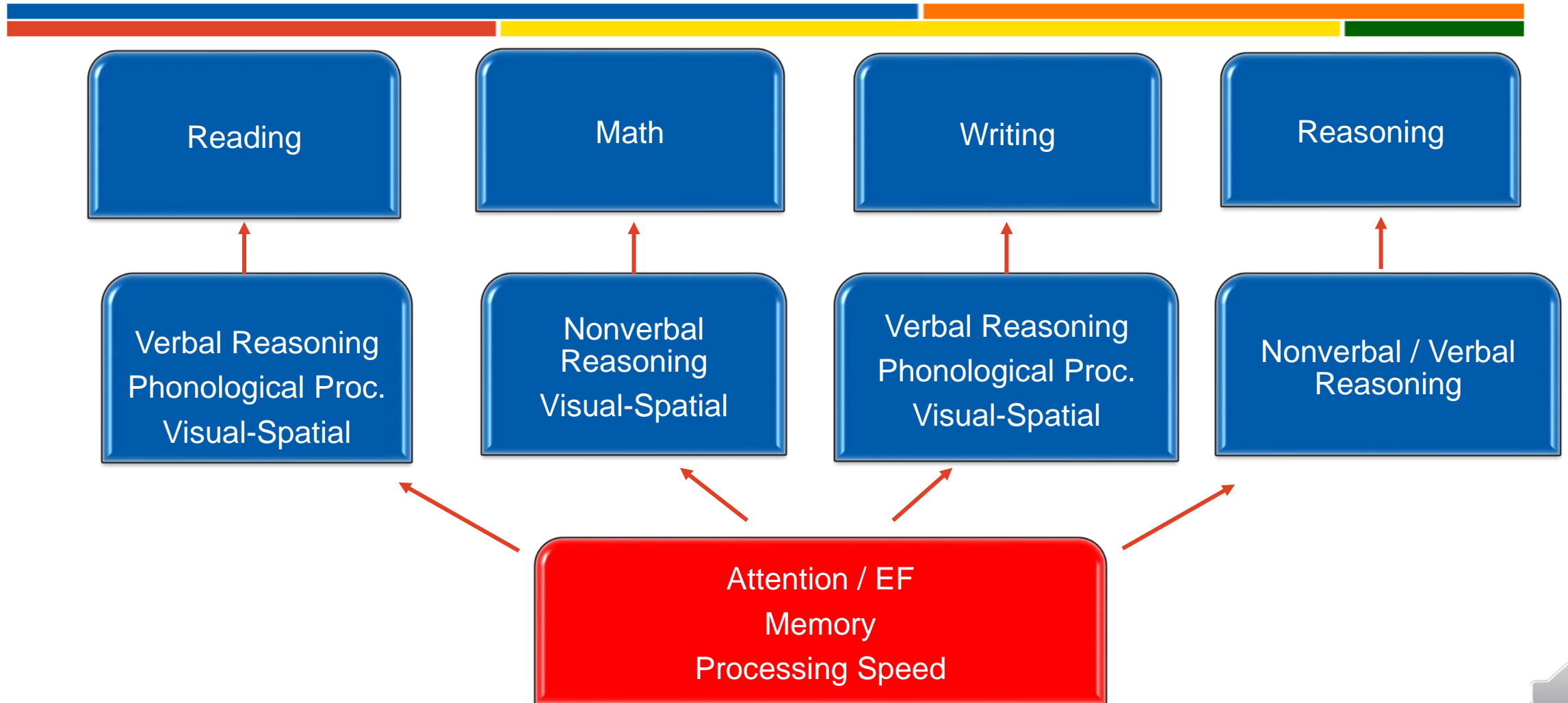


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Neuro-Cognitive Functions Underlie All Higher Order Academic Skill Domains



Special Ed Supports: 2 Broad Categories



Accommodations

Changes made to the instructional strategies, educational procedures, or environment in order to provide a student with access to information

Interventions

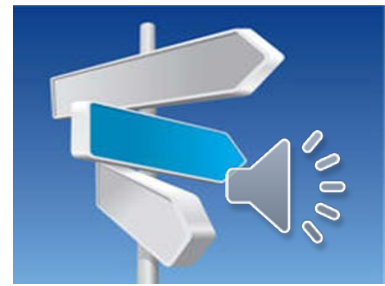
Targeted, systematic instruction to improve a specific skill



BBBD Guideposts

Accommodations and Fundamental Neuro-Cognitive Processes

- In some cases, brain plasticity allows for positive responses to specific interventions (e.g. phonological processes).
- However, many brain processes not as malleable, especially fundamental neurocognitive processes. Very limited success with remediation with some brain processes (e.g. SSN vs. Giftedness).
- Fundamental level typically employ accommodations.
- Keep expectations positive and elevated!

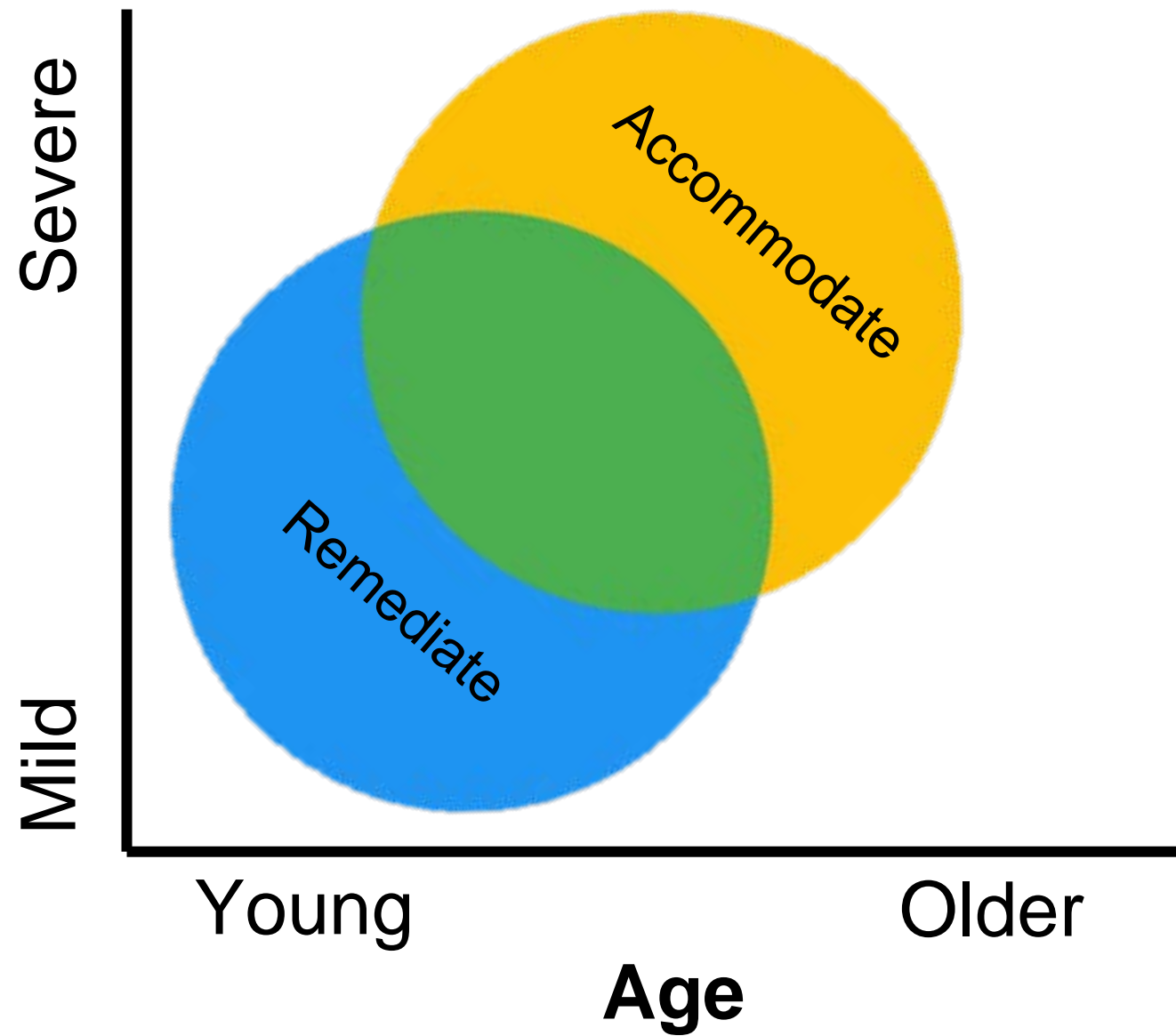


Cautions and Consideration

- There is only limited and varied scientific evidence for many “interventions” to remediate cognitive deficits—especially computer-based interventions.
- Some effective and valid interventions exist, but many still show only “near-effects” vs. “far-effects” (i.e. generalizable effects).



Accommodation/ Remediation Guidelines



Important Considerations Accommodations

- Be creative to devise pathways to support the student to “access the curriculum.” Find ways around the deficit area.
- Do not just employ accommodations, teach the “why” as well as advocacy skills to make accommodations effective.
- Goals can be written around teaching students to use accommodations to access the curriculum independently.



Summary

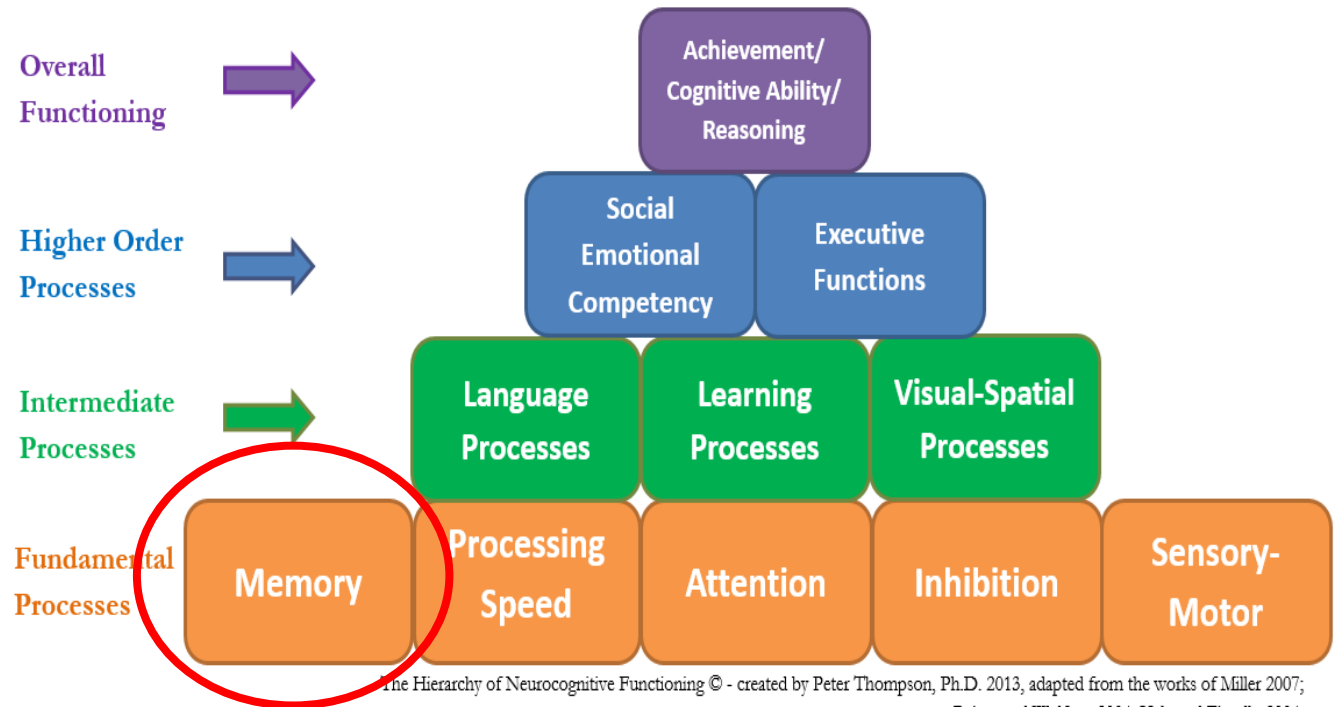
- The BBBD, while a simplified model of brain functioning, provides an effective broad framework to better understand the brain's critical role in all learning processes, which may lead to effective supports for the student.
- While some cognitive deficits can be moderated through interventions, many deficits are better served by accommodations, especially the fundamental level of the BBBD.
- Goals should be realistic and targeted to the student's needs based on the BBBD assessment results. Teach students to advocate and use their accommodations, which can be an IEP goal.



Building Blocks of Brain Development ©

Up Next:

First Building Block: Memory



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Thank You For Listening End of Module 2.1



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