A Comprehensive Model for Specific Learning Disability Evaluations

COLORADO
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Using the *Building Blocks Brain Model of Development* to Understand and Assess Learning Disabilities
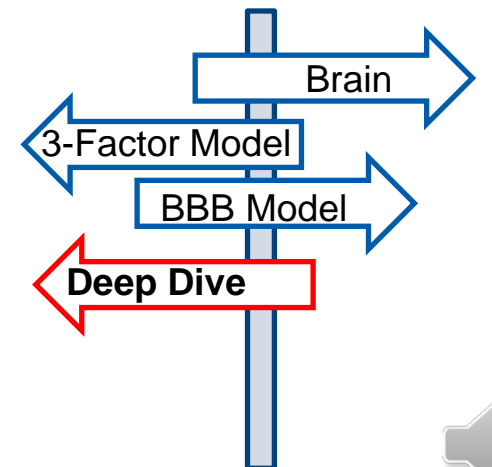
Peter Thompson, Ed.S., Ph.D.

Module 2.2 Guidepost 4

The Building Blocks Brain Model

A DEEPER DIVE: Memory

Brain

3-Factor Model

BBB Model

Deep Dive

Important Note

The information, concepts, and models provided in this presentation are intended to give practitioners a framework when conducting special education evaluations. It is emphasized that <u>nothing in this presentation is meant to be directive or prescriptive.</u> Professionals are free to use some, or all of the information presented, but they <u>are not required</u> to do so in their practice. **Always consult with your special education director for clarity around district policies and expectations for special education evaluations.**
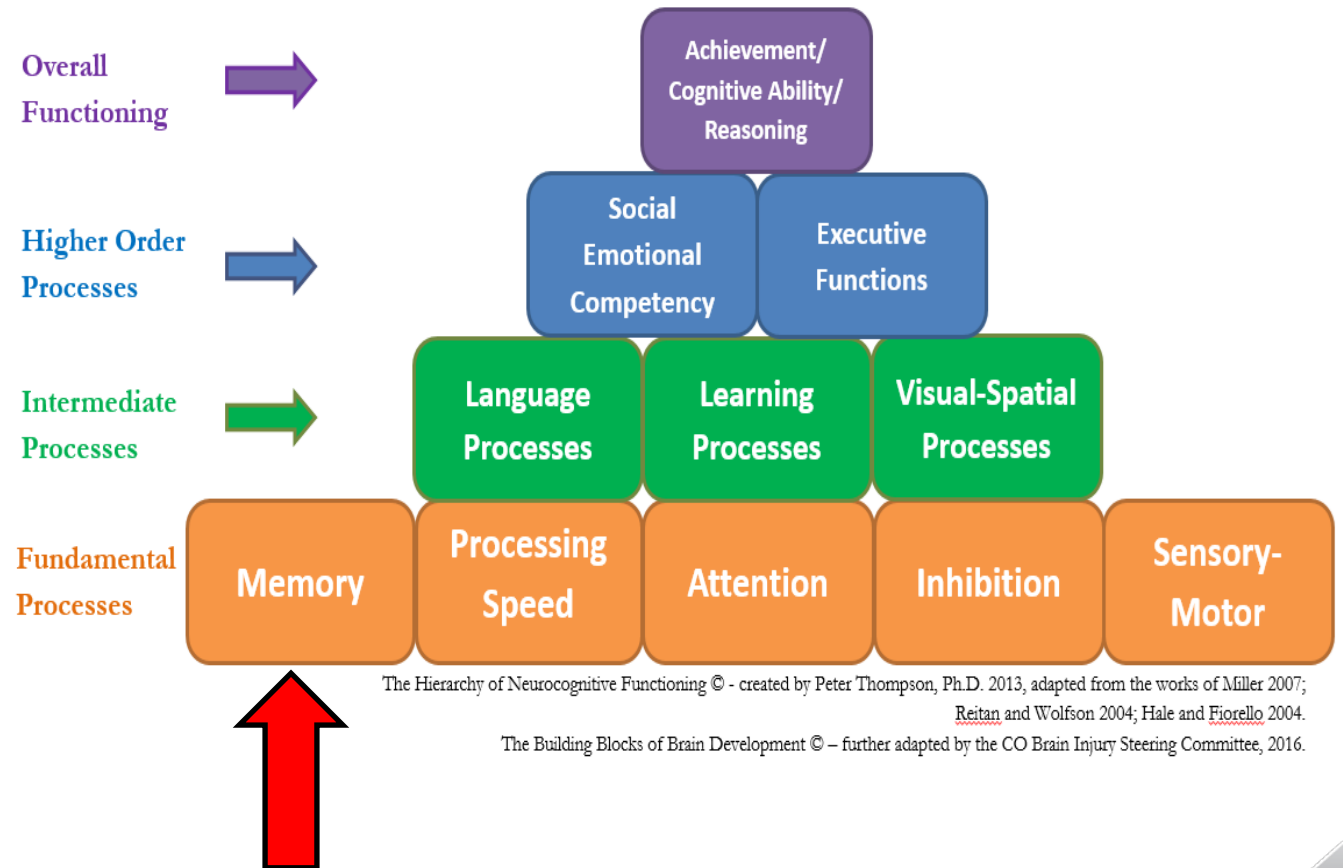
IMPORTANT

Learning Outcomes

- Why is memory critical for _all_ learning?

- Behavioral and academic "Look-Fors"

- How to properly assess memory

## Key Points: Memory's Impact in Learning Disabilities

- **Memory is the storage room for experience and knowledge**

- **Important: Various types of memory**

- **Without memory, the application of what is learned will NOT take place**
- **Understanding, comprehension, will be hampered**

Building Blocks of Brain Development©

Overall Functioning →	Achievement/ Cognitive Ability/ Reasoning
Higher Order Processes →	Social Emotional Competency / Executive Functions
Intermediate Processes →	Language Processes / Learning Processes / Visual-Spatial Processes
Fundamental Processes	Memory / Processing Speed / Attention / Inhibition / Sensory-Motor

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.

The Building Blocks of Brain Development © – further adapted by the CO Brain Injury Steering Committee, 2016.

Memory and Impact on Learning

- Neurocognitive Perspective: "Learning" takes place in the brain when we merge what we "know" with new information.

- Existing paradigm into new information-which is why we activate "prior knowledge" as an effective teaching technique.

- Memory is "what we know"--letters, sounds, facts, sequences-- all necessary parts of learning, especially reading, math, and writing.   Memory is essential for all learning!

Cerebral Hemispheres

Right hemisphere   Left hemisphere
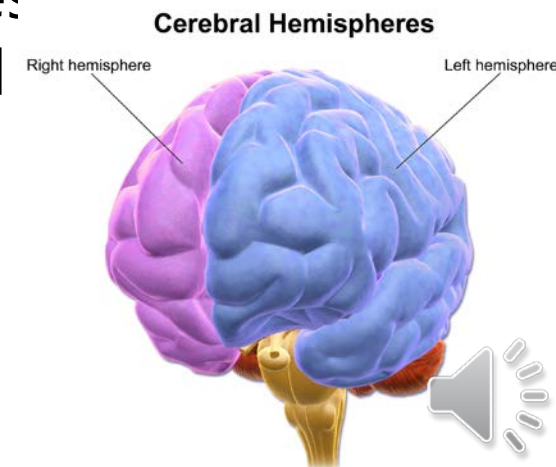
Memory: 3 key Aspects to Consider in SLD Evaluations
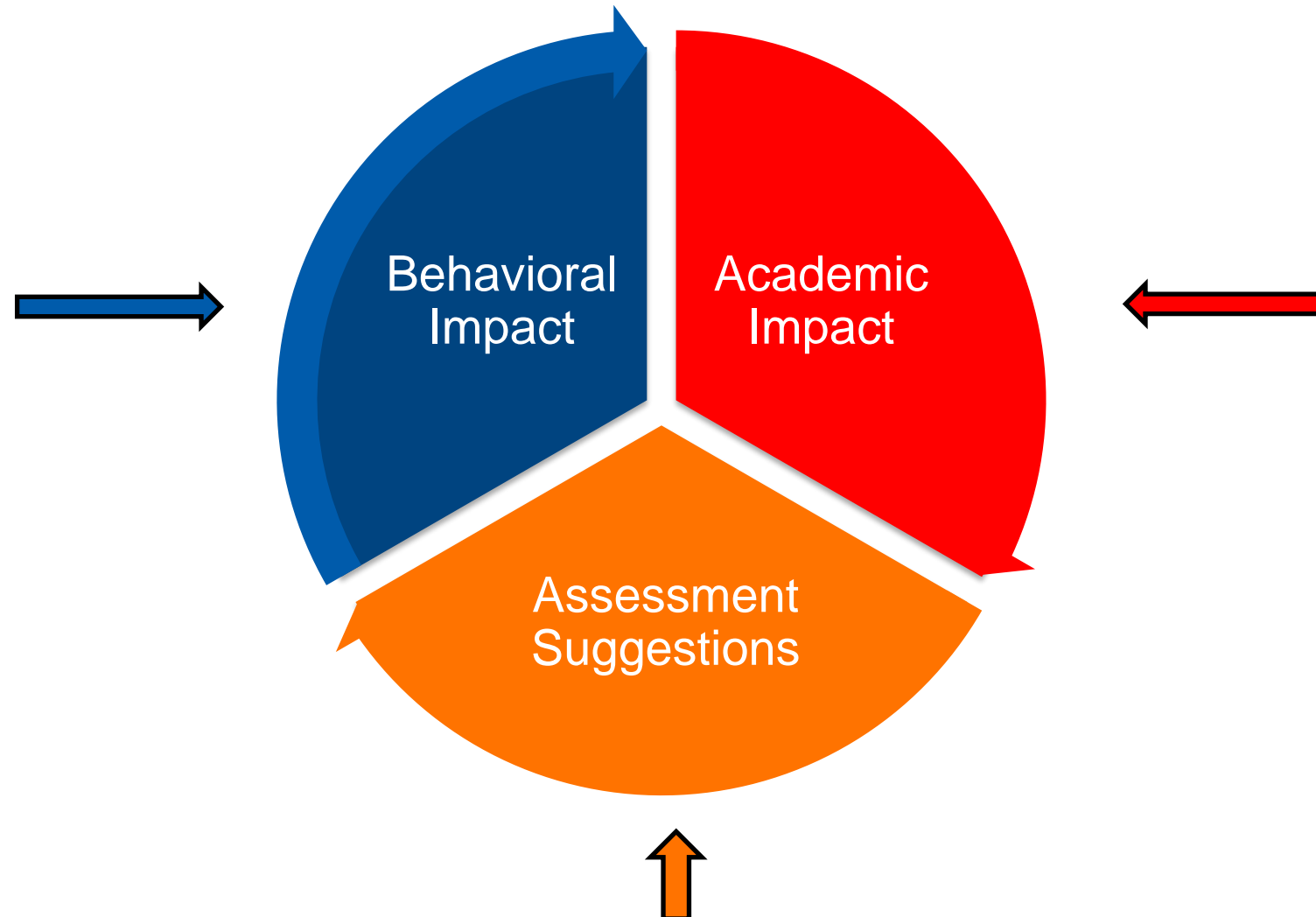
Behavioral Impacts (Look-Fors)

- Appear to have attitude / defiance issues
- Can't repeat what was recently said
- Doesn't remember recent events
- Disorganized
- Forgets to turn in assignments

Behavioral Impacts (Look-Fors) Cont.

- Gets lost frequently and easily
- Learned helplessness
- Looks spacey, scared, nervous
- Repeatedly asks the same question
- Doesn't bring materials to class

Academic Impacts (Look-Fors)

- Can't retell a story, low comprehension
- Difficulty retaining new skills
- Difficulty with multi-step directions/multi-step problem
- Difficulty with spelling
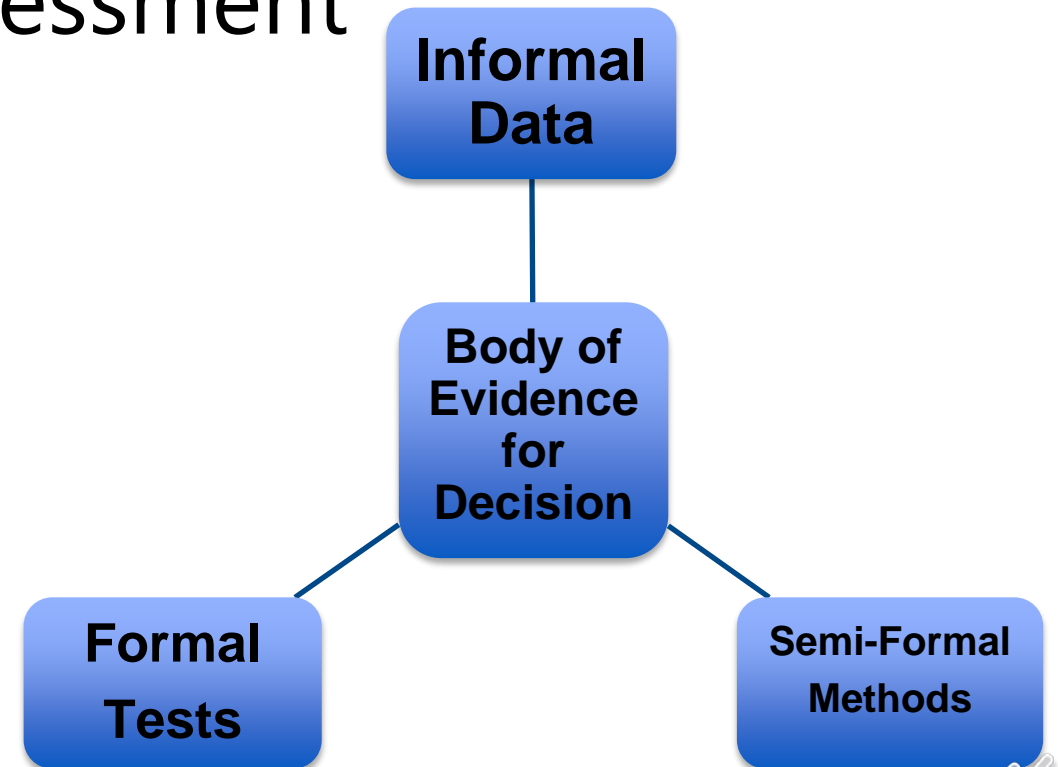- Fails tests despite of studying
- Forgets assignments / homework

Academic Impacts (Look-Fors)cont.

- Forgets lectures and learning experiences

- Forgets people and names

- Inconsistent performance

- Splintered learning / low grades

Assessment Suggestions: Memory

- ## Use 3-Factor Model for Assessment
  1. Formal
  2. Informal
  3. Semi-Formal

Informal Data

Body of Evidence for Decision

Formal Tests

Semi-Formal Methods

Thompson-Sousa Model (2013 / 2020)

Formal Methods: Memory

- WRAML-2 (Wide Range Assessment of Memory and Learning)
- TOMAL-2 (Test of Memory and Learning)
- WMS (Wechsler Memory Scales)
- NEPSY-2 Memory Section
- *DAS-2: Selected Subtests
  - Recall Designs
  - Recall of Obj (Immed and Delay)

Informal Data

Body of Evidence for Decision

Formal Tests

Semi-Formal Methods
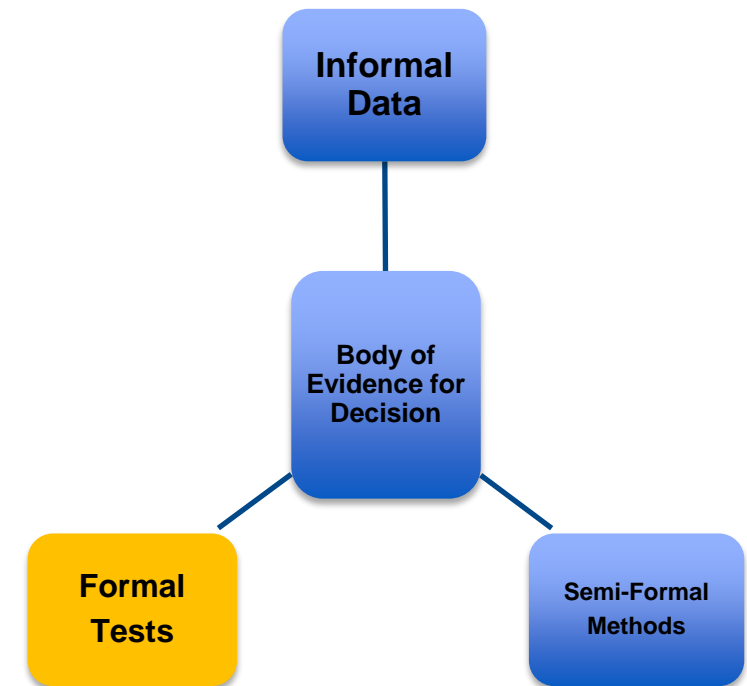
Informal Methods: Memory

- Parent, student, staff interviews
- Records review-social / family history
- Medical history -TBI/multiple cx/anoxia
- Observations-multiple settings
- Work samples

Informal Data

Body of Evidence for Decision
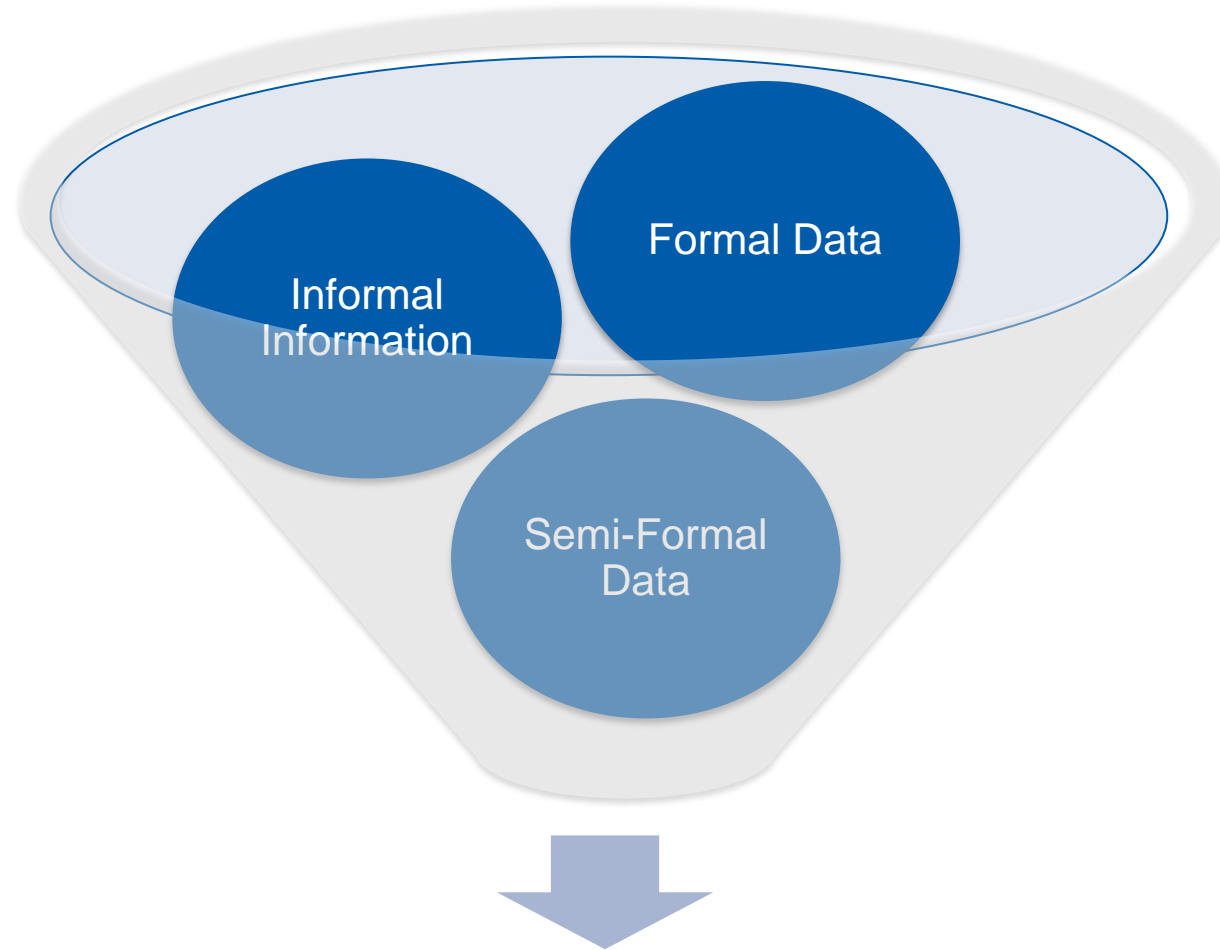
Formal Tests

Semi-Formal Methods
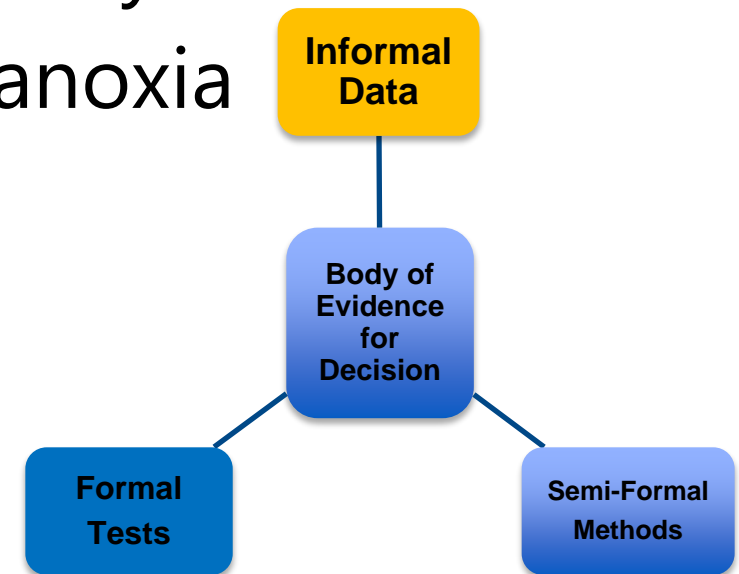
Semi-Formal Methods: Memory

- Memory rating scales (Self-created, Not normed)
- NEF section on memory (from CDE)
- Structured interview (student / staff)
- Structured / standardized observations

Informal Data

Body of Evidence for Decision

Formal Tests

Semi-Formal Methods
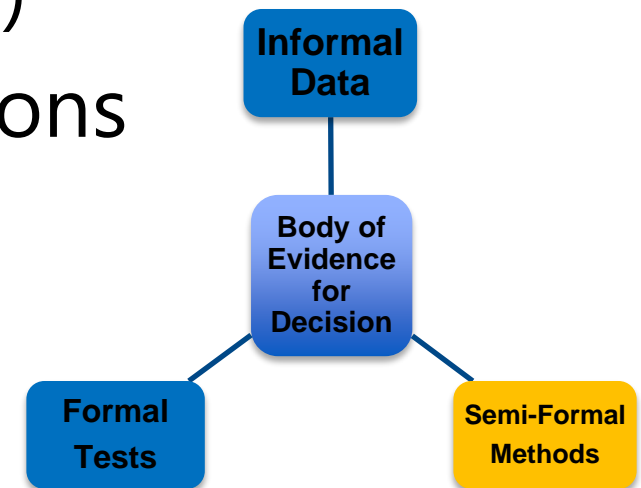
Summary
Fundamental Level

1. Memory is critical because it encapsulates a student's knowledge and experiences. Without memory, application of what is taught cannot be done.

2. Look for behavioral and academic impacts. Memory can look like defiant behaviors, when it is not.

3. Assess memory with the 3-Factor model.
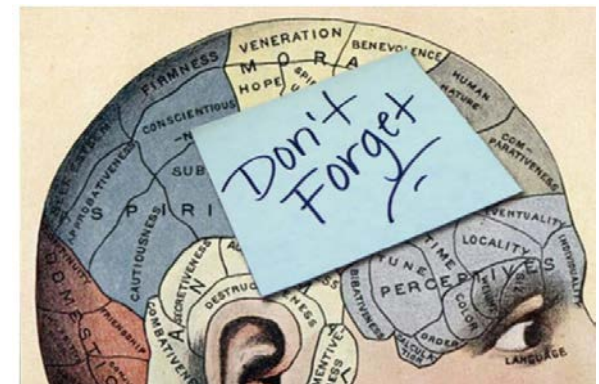
Thank You for Listening
End of Module 2.2

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