



A publication of Dr. Kathryn Keithly, LEP & Carol Murphy, MA, CCC-SLP

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# Multiple Intelligences- The Brain

by Dr. Kathryn Keithly

I love multiple intelligences because it gives everyone the chance to be smart, in non-academic areas and even in subjects where their learning struggles are not impacted. With all of the struggling students I have tested and worked with, it amazes me how ingenious they are.

The goal of *neuro-psychological-educational testing* is to provide a profile of learning patterns and multiple intelligences- ways of learning and knowing. The picture of the brain and its various parts above is a rough idea of where the multiple intelligences are located in the brain. These depictions are not exact and overlaps do

occur, but it generally shows where types of thinking reside. It makes sense then, that if a student has a weakness in a particular area, that student might improve if direct **cognitive learning therapy** strategies are targeted from the *assessment*. It is important to remediate the weaker areas while providing strategies to learn *in the student's strong learning area*.

## The Brain, Cognitive Learning Therapy & Learning Disabilities

Definition
<ul style="list-style-type: none"> <li>• <b>Cognitive approaches to learning</b> are concerned with how information is processed by learners (Gillian Gunderson, 2009)</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Cognitive theories</b> view students as active in "an internal learning process that involves memory, thinking, reflection, abstraction, motivation, and meta-cognition" (Ally, 2008).</li> </ul>

## Research Information Cognitive Learning

What is Cognitive Learning Therapy? *Cognitive remediation or learning therapy* for learning typically targets the following neuropsychological functions: **attention** and concentration, **memory**, planning, monitoring one's work or behavior, and making adjustments based on feedback. Remediation is used to help children and adults cope with learning disabilities. Learning disabilities can interfere with progress in reading, in understanding and communicating through spoken language, in writing, in arithmetic, in understanding nonverbal information such as telling time or understanding visual information, and in comprehending social interactions and cues. Difficulties with concentration, problem-solving,

organization, identifying errors, and using feedback effectively are also areas that can be addressed through cognitive remediation.

1. What is the difference between cognitive **learning** therapy and cognitive **behavior** therapy?

Both Cognitive Learning Therapy (CLT) and Cognitive Behavior Therapy (CBT) use brain patterns to guide the therapist in helping the client make useful changes in thinking and behaving. CLT focuses on learning, while CBT focuses on behavior. A trained professional can utilize



aspects of both because they are related to *overall neuro-patterns*.

*Cognitive-behavioral therapy is a psycho-social intervention that is the most widely used evidence-based practice for improving mental health. CBT focuses on the development of personal coping strategies that*

*target solving current problems and changing unhelpful patterns in cognitions, behaviors, and emotional regulation. It was originally designed to treat depression. (Wikipedia)*

## Ask Dr. Katy!

Email: [Katy@kmpsyched.com](mailto:Katy@kmpsyched.com) to ask a question. It will be answered in the next newsletter's column.



In an article about treatment approaches for learning disabilities, the authors tried to identify the instructional components across 180 intervention studies that best predicted effect sizes for students with learning disabilities. Interventions included instructional components related to sequencing, drill-repetition-practice-feedback, segmentation of information, technology (structure presentation medium), controlling task difficulty (e.g., scaffolding), modeling problem-solving steps, presenting cues to prompt strategies use, supplementing teacher instruction (e.g., homework), small interactive groups, and directed response/questioning of students. The results supported the overwhelming influence of cognitive (learning) strategy and direct instruction models for remediating the academic difficulties. But the results also suggested that combining all these strategies at various points yields the best outcomes. (H. Lee Swanson, *Instructional Components That Predict Treatment Outcomes for Students With Learning Disabilities: Support for a Combined Strategy and Direct Instruction Model*

Learning Disabilities Research & Practice , on line June, 2010 - Issue 3, pp 129-140)



Depending on the student's learning skill pattern and viewing that pattern in terms of the Seven Intelligences profile, may provide the best choice in cognitive learning therapy choices. The above interventions therefore can be utilized when presented in that student's best learning style. For example, if a student is good athletically (body smart, kinesthetic) but has difficulty with phonics, and *drill repetition* is used, it might be good to have that student "feel" phonics cards made with felt, while saying the sound. The way to help navigate difficult learning is to use the student's strengths to present information and then practice that information choosing a researched strategy also using the student's strength.

**Cognitive therapy also attempts to strengthen the weaker skills by reframing.**

***Research-based Developmental Screening can be the first step in helping to look at learning patterns and the red flags of difficulty and therefore point parents and teachers in the right direction to avoid guessing.***

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