

## **A Comprehensive Approach to Correcting Academic Difficulties Causes Dramatic Shift in Motivation, Executive Function, and School Success**

Chase felt like a failure. He knew that college was not in his future. It took him hours and hours to get his homework done and in spite of years of tutoring, he was failing several classes in high school. His parents had known for a long time that Chase had attention and focus issues, but knew they needed to pursue help when he reported that he felt stupid and couldn't understand what the teachers were saying.

When Chase was tested at Stowell Learning Center, motivation, confidence, and self-esteem were major concerns for his parents along with reading, writing, spelling, math, listening, comprehension, and memory.

An evaluation of basic academic skills and underlying processing skills showed that there was a reason for the difficulties Chase was experiencing in school. Scores for attention, executive function, and processing skills including memory, reasoning, processing speed, and auditory and visual processing ranged from very low to below average.

Dyslexia testing showed dysphoneidesia (difficulty connecting sound and symbol in order to use phonics for reading and spelling and difficulty visually recognizing whole words for reading and recalling the visual image for spelling). Neuro-timing deficits explained the signs of disorientation seen in Chase's reading.

Using the Learning Skills Continuum as a guide, the following Cognitive Learning Therapy Plan was created for Chase to develop the underlying foundational skills that he needed to improve his attention, reading, writing, spelling, and math, and to learn to his potential.

### **Step 1 (6-week Intensive)**

**Objective:** Improve processing speed, attention, and regulation. Improve motivation, sense of urgency, and task completion. Reduce visual disorientation and increase reading fluency.

#### **Programming Recommendations:**

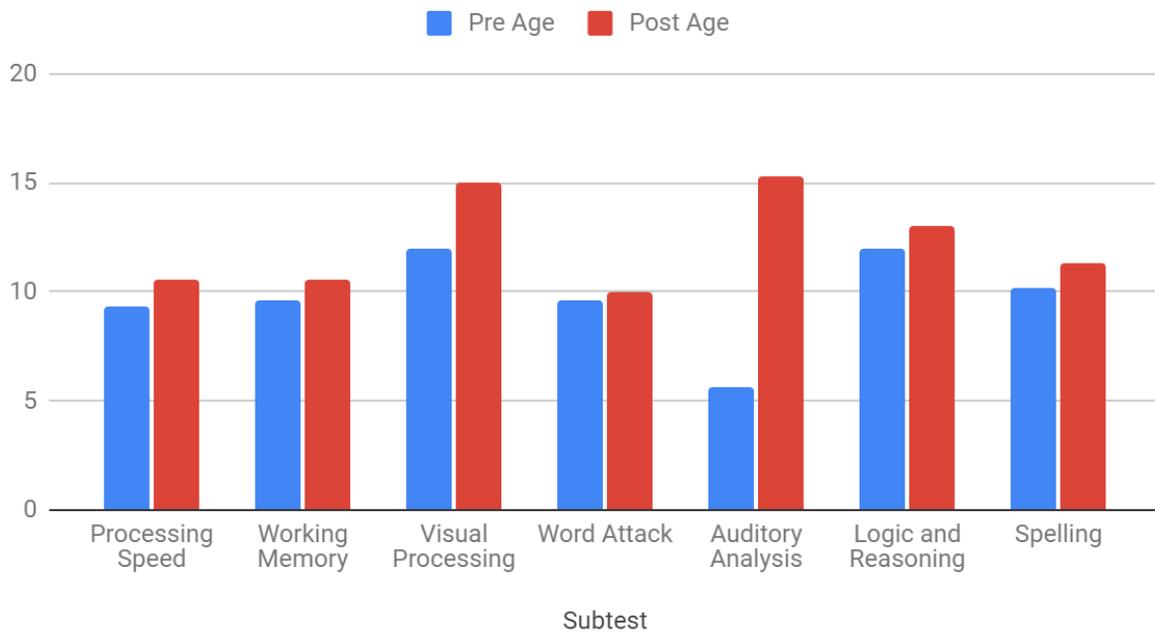
- The Listening Program - Level One (TLP-Online)
- Attention, Memory, and Processing Skills - Cognitive (AMPS-C)
- Perception Attention Therapy (PATH)

Chase completed a 60-hour intensive program, working 2 hours daily for six weeks to improve cognitive processing skills and neuro-timing. Retesting at the end of the intensive showed the following changes:

## **Gibson Cognitive Test Battery**

Scores on the Gibson are reported by age. Please note: 18 is the maximum age reported since performance at this level is similar to that of an adult and 5 is the minimum age reported.

### Gibson Cognitive Test Battery



<u>Pre Age</u>	<u>Post Age Score</u>	<u>Subtest</u>
9-3	<b>10-6</b>	PROCESSING SPEED – ability to perform relatively easy mental tasks quickly.
9-6	<b>10-6</b>	WORKING MEMORY – ability to store, retain, and retrieve information.
12-0	<b>15-0</b>	VISUAL PROCESSING – ability to picture, manipulate, organize, comprehend, and think with visual information.
9-6	<b>10-0</b>	WORD ATTACK – to know and apply the sound codes in order to pronounce unknown words.
5-6	<b>15-3</b>	AUDITORY ANALYSIS – the brain’s ability to blend, segment, discriminate, and analyze speech sound within a spoken pattern
12-0	<b>13-0</b>	LOGIC AND REASONING – to reason and solve spatially defined problems which require high level conceptual abilities.

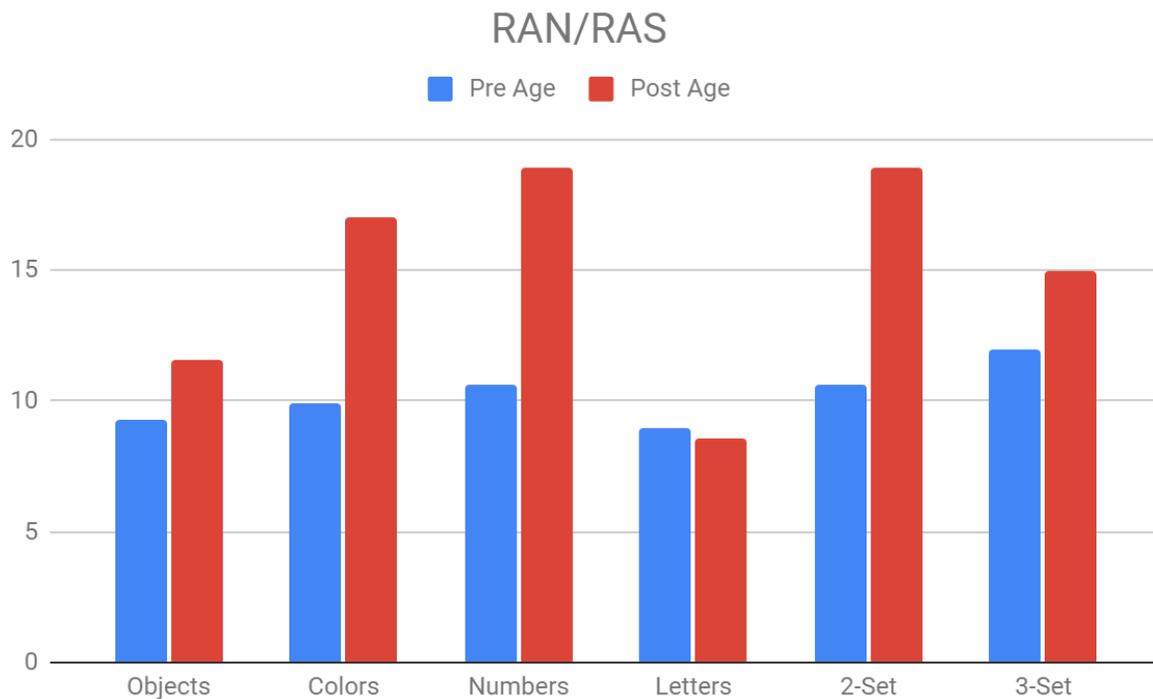
10-2

11-3

SPELLING – to determine the level of spelling mastery.

**RAN/RAS - Rapid Automatized Naming and Rapid Alternating Stimulus Tests**

The RAN/RAS tests provide important information about possible weaknesses in underlying skills related to reading fluency and comprehension. They measure an individual’s ability to see a visual symbol, such as a letter or color, and to accurately and rapidly name it. This provides information about the efficiency with which a student retrieves information from long-term or permanent memory. Efficient retrieval of known information is necessary for learning, communication, and effective academic performance.



**Composite Scores**

**Age Score**

**Grade Score**

**Percentile**

	Pre	Post	Pre	Post	Pre	Post
Objects	9-3	<b>11-6</b>	5.4	<b>7.4</b>	14th	<b>27th</b>
Colors	9-9	<b>17-0</b>	4.7	<b>12.2</b>	14th	<b>61st</b>

Numbers	10-6	>18-9	7.2	<b>12.2</b>	32nd	<b>53rd</b>
Letters	9-0	<b>8-6</b>	7.0	<b>5.4</b>	37th	<b>32nd</b>
2- Set Letters & Numbers	10-6	>18-9	7.0	> <b>12.7</b>	35th	<b>58th</b>
3-Set Letters, Numbers, & Colors	12-0	<b>15-0</b>	7.0	<b>10.2</b>	39th	<b>53rd</b>

Session notes indicated that Chase progressed very rapidly and showed much greater confidence, energy, and motivation. His grades at school improved. The understanding of what had been holding him back seemed to lift a weight from his shoulders. His engagement, motivation, and belief that he could do well sky-rocketed.

Chase began Step 2 of his Cognitive Learning Therapy plan after his intensive. He attended 4.5 hours a week (1.5-hour sessions 3 days a week) for 7 months.

## Step 2

**Objective:** Continue to reduce visual disorientation and increase reading fluency. Improve phonemic awareness, listening and spelling skills. Improve comprehension and logic and reasoning skills.

### Programming:

- The Listening Program - Level One (TLP-Online)
- Continue Perception Attention Therapy (PATH)
- Auditory Stimulation and Training - Reading, Spelling, Comprehension (AST-R/S/C)

Step 2 retesting showed the following results:

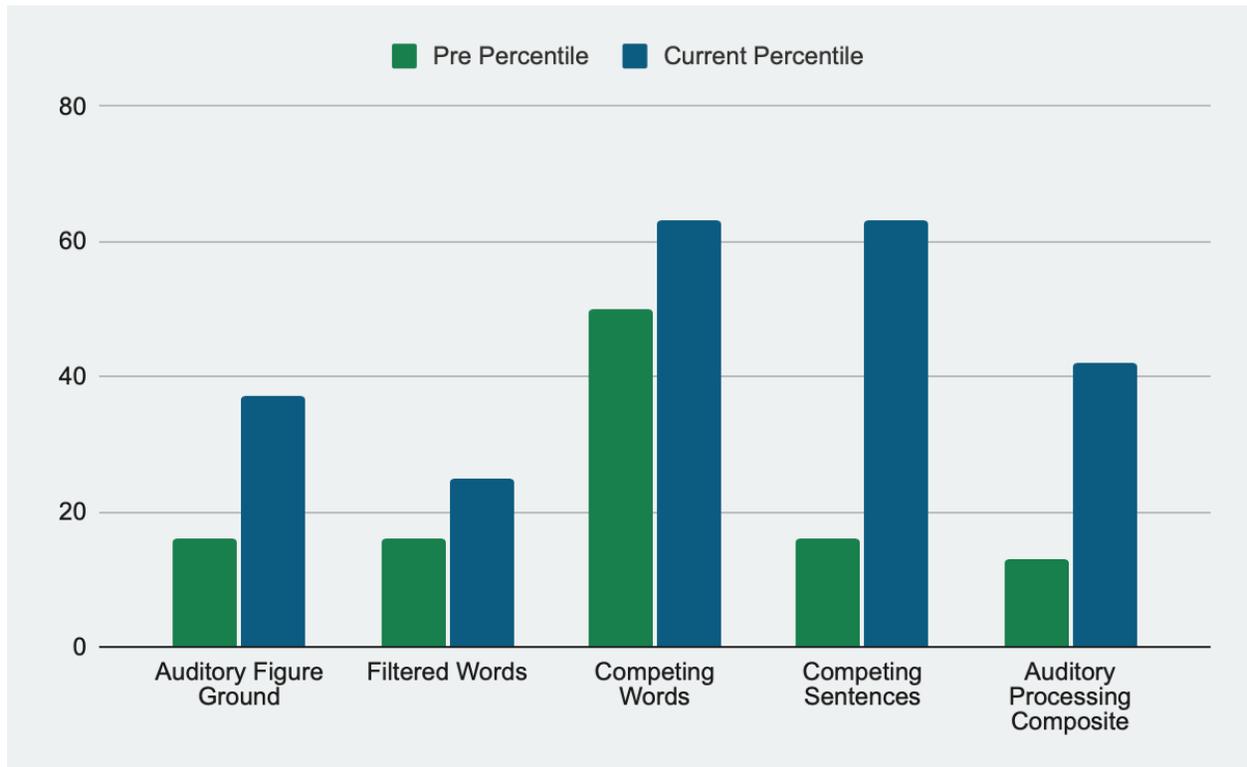
### SCAN-3 for Adolescents and Adults: A Test for Auditory Processing Disorders

The results of the SCAN-3 can identify a central auditory processing disorder (CAPD). This test provides information about an individual's strengths and weaknesses in auditory processing abilities. Scores are reported in functional levels; percentiles, which can be compared to an average of 50; and a composite standard score, which can be compared to an average of 100.

#### Diagnostic Score Summary

SUBTEST	PERCENTILE (PRE)	PERCENTILE (POST)	FUNCTIONAL LEVEL (PRE)	FUNCTIONAL LEVEL (POST)	STANDARD SCORE (PRE)	STANDARD SCORE (POST)
<b>Auditory Figure Ground</b>	16 <sup>th</sup>	<b>37<sup>th</sup></b>	Low Normal	<b>Normal</b>	----	----
<b>Filtered Words</b>	16 <sup>th</sup>	<b>25<sup>th</sup></b>	Low Normal	<b>Normal</b>	----	----
<b>Competing Words</b>	50 <sup>th</sup>	<b>63<sup>rd</sup></b>	Normal	<b>Normal</b>	----	----

<b>Competing Sentences</b>	16 <sup>th</sup>	<b>63<sup>rd</sup></b>	Low Normal	<b>Normal</b>	----	----
<b>Auditory Processing Composite</b>	13 <sup>th</sup>	<b>42<sup>nd</sup></b>	Low Normal	<b>Normal</b>	83	<b>97</b>

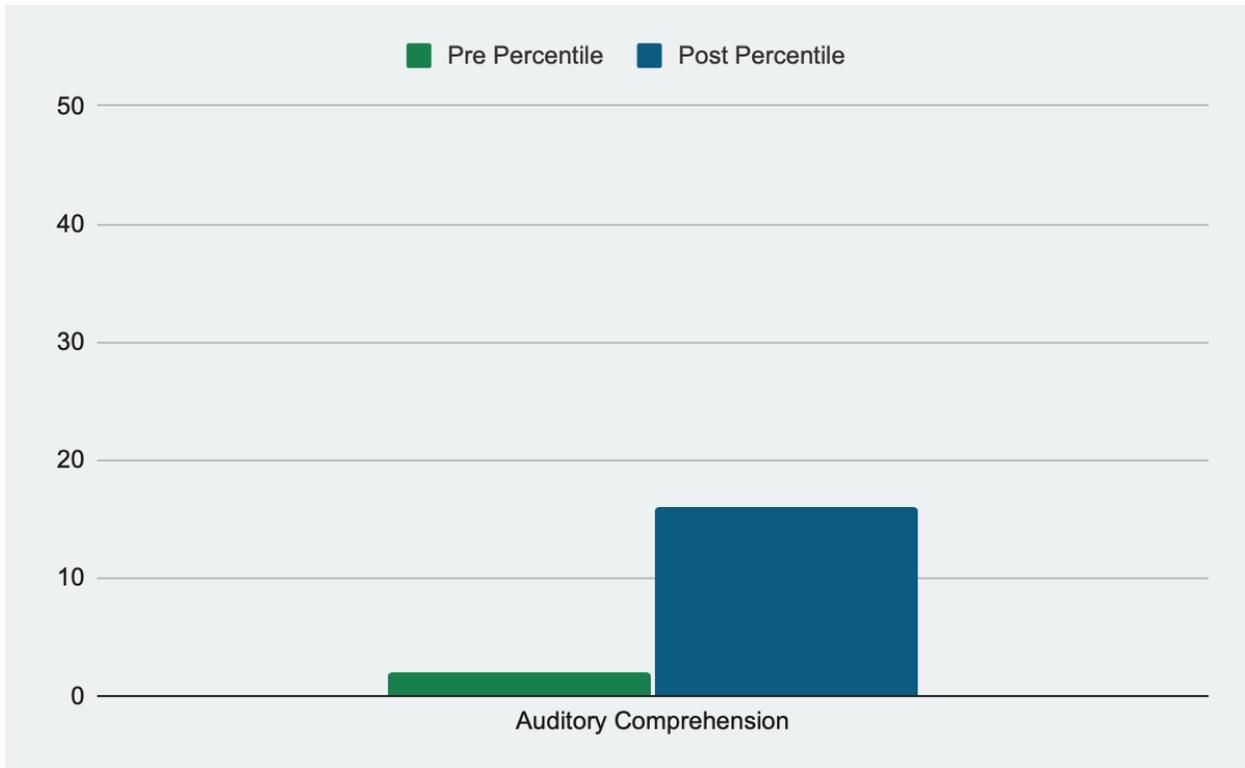


### Test of Auditory Processing Skills – 4 (TAPS-4)

The TAPS-4 provides information about auditory and language processing and comprehension skills across three intersecting areas: phonological processing, auditory memory and listening comprehension.

These areas underpin the development of effective listening and communication skills, and are critical to the development of higher order language skills, including literacy skills. Scores are reported in age equivalent, percentiles which can be compared to an average of 50, and standard scores which can be compared to an average of 100. Selected subtests have been used in this evaluation.

	AGE SCORE (PRE)	AGE SCORE (POST)	PERCENTILE (PRE)	PERCENTILE (POST)
<b>Auditory Comprehension</b>	8-0	<b>9-11</b>	2 <sup>nd</sup>	<b>16<sup>th</sup></b>

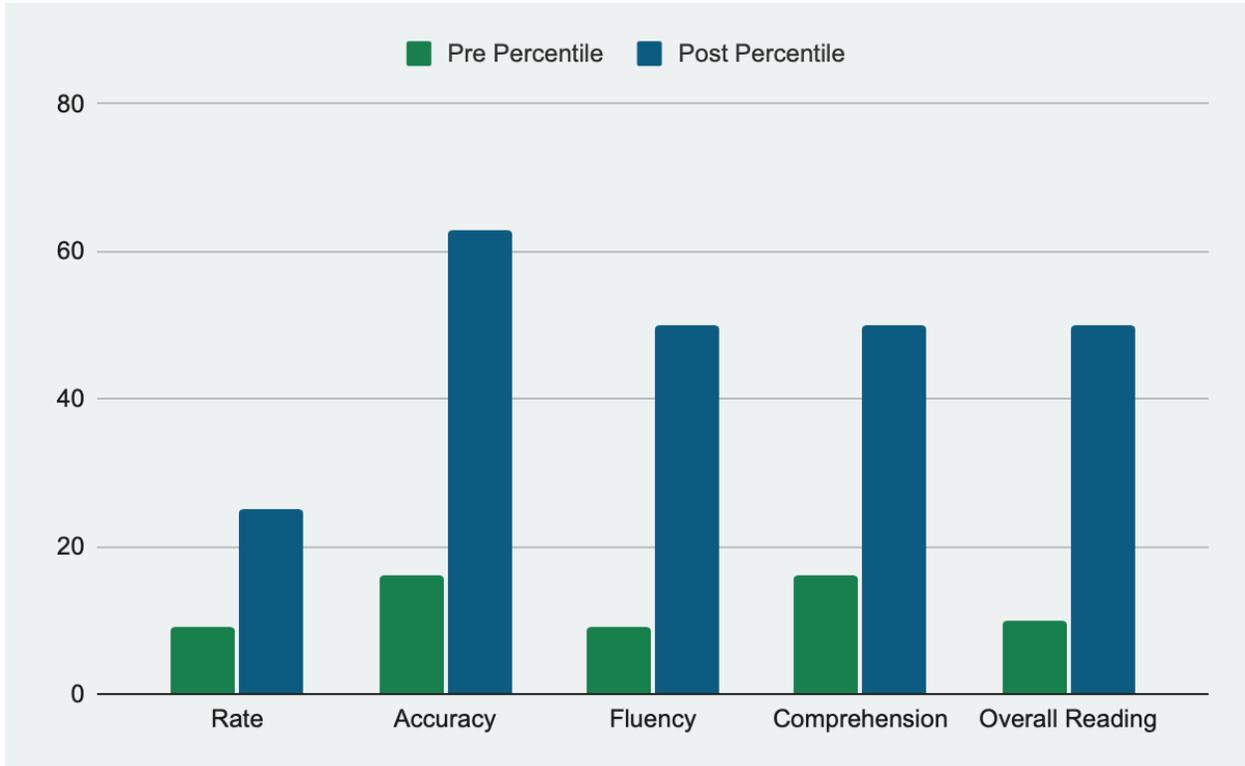


### Gray Oral Reading Test - V (GORT-5)

This test provides information about a student's oral reading fluency, accuracy, passage comprehension, and primary word attack strategies. Scores are reported in grade scores; percentiles, which can be compared to an average of 50; a standard score, which can be compared to an average of 100.

The Reading Fluency score is derived from the reading rate and the number of errors. Information about the student's use of phonics, sight words, and context clues can be gathered through observation and error analysis.

	GRADE SCORE (PRE)	GRADE SCORE (POST)	PERCENTILE (PRE)	PERCENTILE (POST)	STANDARD SCORE (PRE)	STANDARD SCORE (POST)
<b>Rate</b>	4.4	<b>7.0</b>	9 <sup>th</sup>	<b>25<sup>th</sup></b>	----	----
<b>Accuracy</b>	4.2	<b>12.2</b>	16 <sup>th</sup>	<b>63<sup>rd</sup></b>	----	----
<b>Reading fluency</b>	4.2	<b>9.4</b>	9 <sup>th</sup>	<b>50<sup>th</sup></b>	----	----
<b>Comprehension</b>	4.4	<b>11.0</b>	16 <sup>th</sup>	<b>50<sup>th</sup></b>	----	----
<b>Overall Reading</b>	----	----	10 <sup>th</sup>	<b>50<sup>th</sup></b>	81	<b>100</b>



### Gray Silent Reading Test (GSRT)

The GSRT provides information about an individual’s silent reading comprehension. Students silently read short passages of increasing difficulty and answer written multiple choice questions. Scores are reported in grade scores, percentiles which can be compared to an average of 50, and standard scores which can be compared to an average of 100.

	AGE SCORE	GRADE SCORE	PERCENTILE	STANDARD SCORE
Silent Reading Comprehension	>18.0	>12.7	95 <sup>th</sup>	125

### Behavior Rating Inventory of Executive Functioning (BRIEF)

Executive function refers to a person’s purposeful, goal-directed, problem solving behavior. This is the function that helps people guide and direct their attention and behavior.

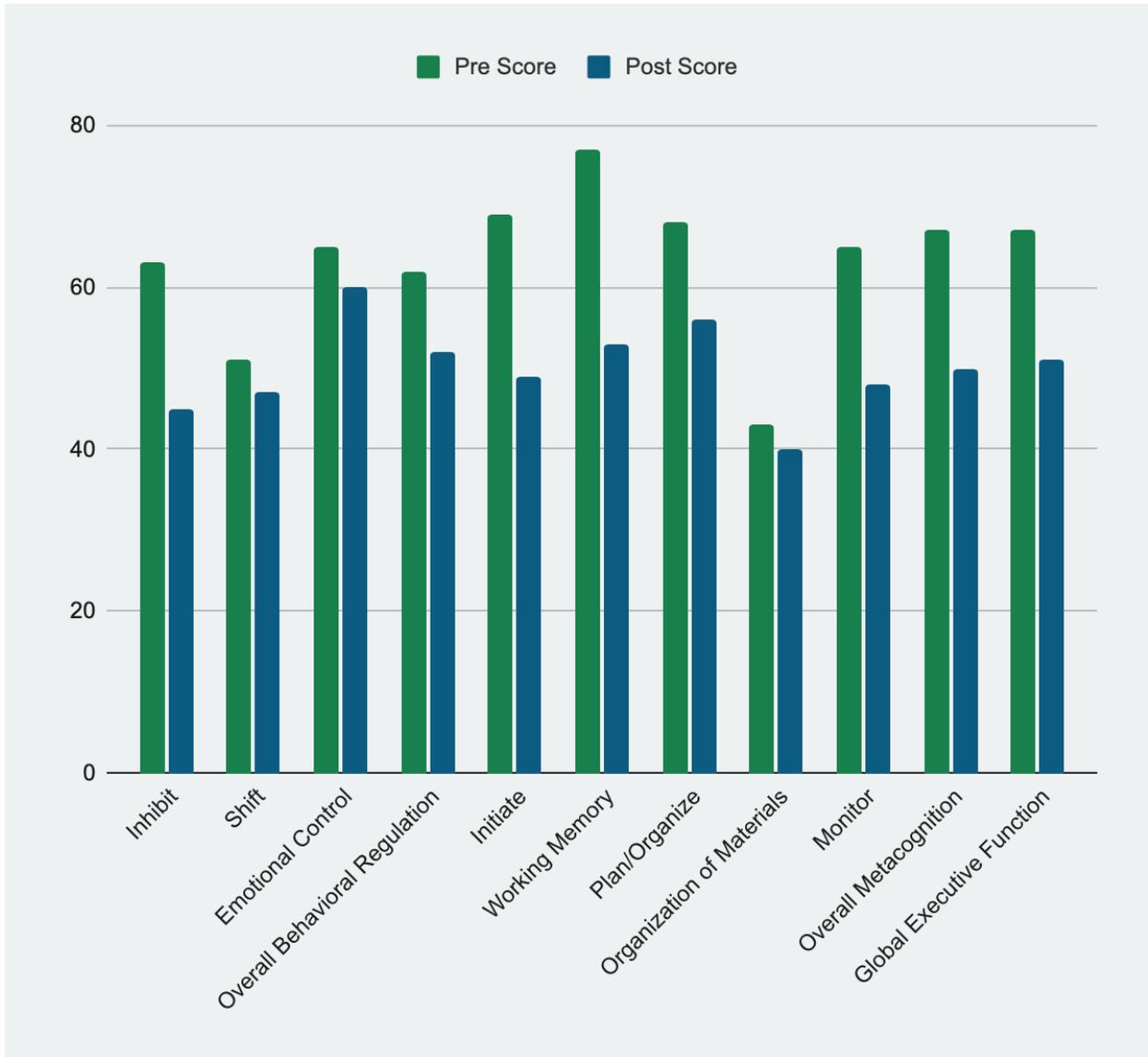
It is highly involved with reasoning, self-awareness, flexibility, organization, self-monitoring, memory capacity, behavior regulation, and the ability to multitask.

The BRIEF is a questionnaire that is filled out by the parent and/or teacher, and the BRIEF-SR is the self reporting version that is filled out by the student. This is a helpful tool in understanding a child or adolescent’s executive function skills, what areas need development, and how much outside support the student currently needs.

Scores are reported in T-Scores which can be compared to an average of 50. **Scores above 65 indicate areas of challenge with the higher the score, the more significant the challenge.**

**BRIEF filled out by parent**

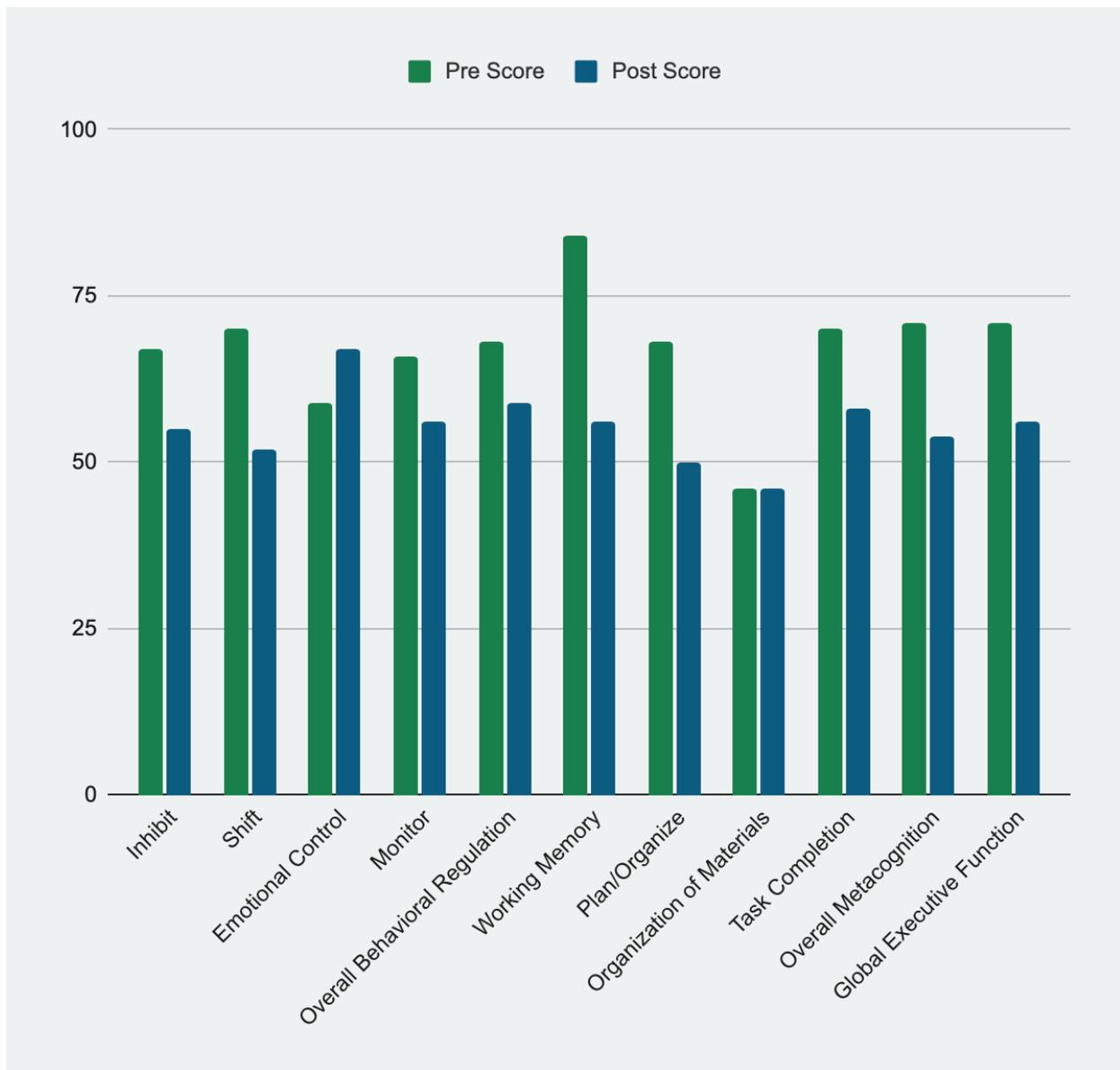
CLINICAL SCALES / INDEXES	T-SCORE (PRE)	T-SCORE (POST)
Inhibit ( <i>impulse &amp; behavior control</i> )	63	<b>45</b>
Shift ( <i>transitions from one thing to another</i> )	51	<b>47</b>
Emotional Control	65	<b>60</b>
<b>Overall Behavior Regulation</b>	62	<b>52</b>
Initiate ( <i>independently begins tasks or generates ideas</i> )	69	<b>49</b>
Working Memory	77	<b>53</b>
Plan/Organize	68	<b>56</b>
Organization of Materials	43	<b>40</b>
Monitor ( <i>self-checks work &amp; keeps track of own behavior</i> )	65	<b>48</b>
<b>Overall Metacognition</b>	67	<b>50</b>
<b>Overall Executive Function</b>	67	<b>51</b>



**Please note:** A lower score is better on this test. The normal range is below 65 with 50 being average.

**BRIEF-SR filled out by student**

CLINICAL SCALES / INDEXES	T-SCORE (PRE)	T-SCORE (POST)
Inhibit ( <i>impulse &amp; behavior control</i> )	67	<b>55</b>
Shift ( <i>transitions from one thing to another</i> )	70	<b>52</b>
Emotional Control	59	<b>67</b>
Monitor ( <i>self-checks work &amp; keeps track of own behavior</i> )	66	<b>56</b>
<b>Overall Behavior Regulation</b>	68	<b>59</b>
Working Memory	84	<b>56</b>
Plan/Organize	68	<b>50</b>
Organization of Materials	46	<b>46</b>
Task Completion	70	<b>58</b>
<b>Overall Metacognition</b>	71	<b>54</b>
<b>Overall Executive Function</b>	71	<b>56</b>



**Please note:** A lower score is better on this test. The normal range is below 65 with 50 being average.

Chase's parents' goals for him were to enjoy learning, like school again, have long term goals for himself, and feel confident in his academic abilities.

Chase met all of his parents' goals and more. His self-awareness increased dramatically. Initially, he felt overwhelming frustration in most high-demand areas of his life (i.e. school and home). Before he started 10<sup>th</sup> grade (about halfway through his cognitive learning therapy, he could identify what needed improvement and strategize solutions with ease. His sense of confidence improved. He was motivated and engaged when faced with challenges and experienced less self-doubt.

Chase's parents saw a huge shift when school started. He completed homework more quickly and independently. He began to see possibilities and spontaneously started talking about college - something he had never considered for himself before. Chase is now a young man who takes care of himself and recognizes the importance of school.