

Think Smart: PASS Neurocognitive *Interventions* for School and Life

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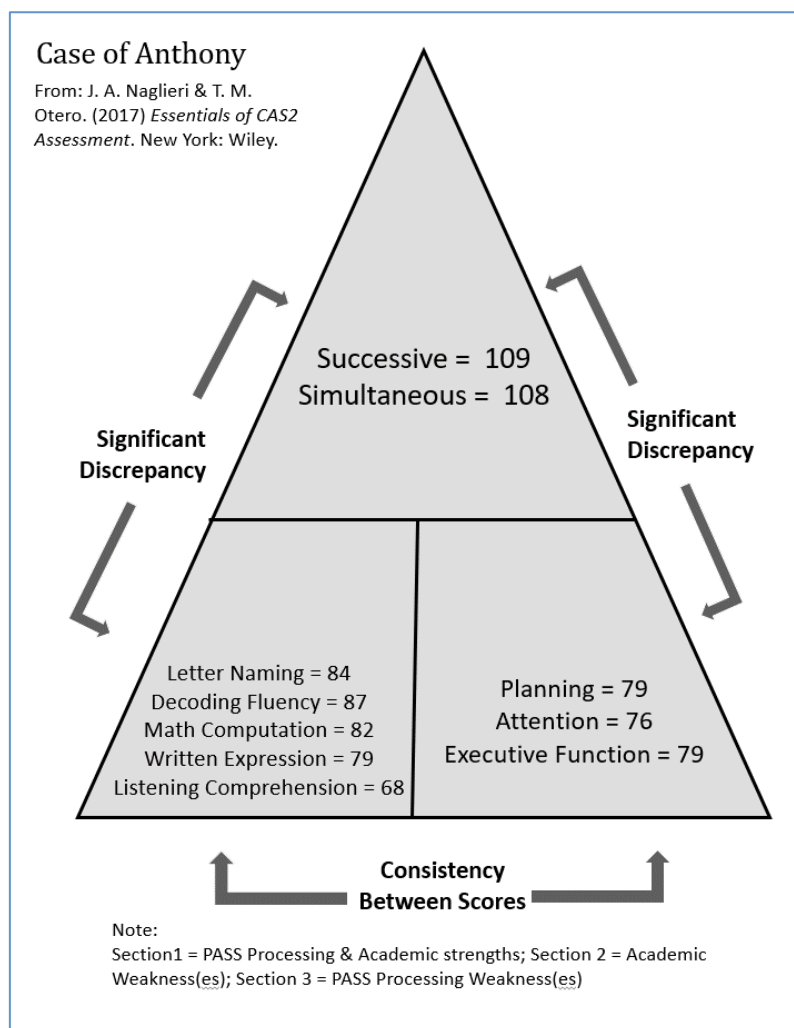
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Case #1 – Anthony (8-year-old, right-handed male of Mexican descent)

PASS Scale Comparisons

	Index Score	d value	Sig/ NS	Strength Weakness	% in sample
Planning	79	-14	Sig	W	12.9
Simultaneous	108	15	Sig		13.6
Attention	76	-17	Sig	W	8.1
Successive	109	16	Sig		15.2
PASS Mean	93				



PASS Strengths and Challenges: Intentional and Transparent Student Feedback:

The first step is to help Anthony understand the nature of his Attention and Planning challenges (from Naglieri & Pickering, 2010) and help him see how his brain works to support him in school and life and where he has challenges that he can work on

Strengths:

- Simultaneous Processing
- Successive Processing
- Any other personal qualities and strengths about Anthony

Challenges

- Note his challenge with **Attention**, resistance to distraction, and control of Attention
- Talk with Anthony about how attention affects his daily functioning
- Note his challenge with **Planning** which makes it challenging for him to get things done.

Encourage Motivation and Persistence (Mindsets)

- Explain that these deficits can be overcome with a growth mindset and persistence
- Share that he will be developing and learning strategies to help him
- Share that teachers and parents will also be supporting as he improves his motivation and persistence:
- Promote success via small steps.
- Ensure that Anthony experiences of success at school and at home

Build on Strengths and Remediate Challenges (Skill Sets)

Practical Instructional Modifications the Student, Teachers and Parents can collaborate on to support student success:

Use strategies for approaching learning tasks.

- a. Help Anthony to define tasks accurately.
- b. Assess Anthony's knowledge of problems.
- c. Encourage Anthony to consider all possible solutions.
- d. Teach Anthony to use a correct test strategy.
- a. Allow oral responses to tests.
- b. reading whenever possible**

Encourage Anthony to avoid the following:

- a. Excessive talking
- b. Working fast with little accuracy
- c. Giving up too easily
- d. Turning in sloppy disorganized papers

Teachers and parents should work with Anthony to develop specific problem-solving strategies.

- a. Model and teach strategies that improve attention and concentration.
- b. Help Anthony to recognize when he is under- or over attentive.

This type of instruction benefits students who have problems maintaining attention or who are overactive. These strategies may be particularly helpful for children who demonstrate low scores in Attention and children who show weaknesses in Attention along with problems with Planning.

Because a student who has a Planning weakness may have a particularly difficult time monitoring and controlling his or her actions, these strategies may be useful to provide structure and help the student follow specific plans to increase his or her self-control and focus of attention.

To encouraging positive self-control, Anthony can be directly taught to pay attention to and think about his behavior, followed by a sequential plan to determine his best options for responding given the context. Detailed information for this intervention can be found in Naglieri and Pickering (2010).

Additional Suggestions

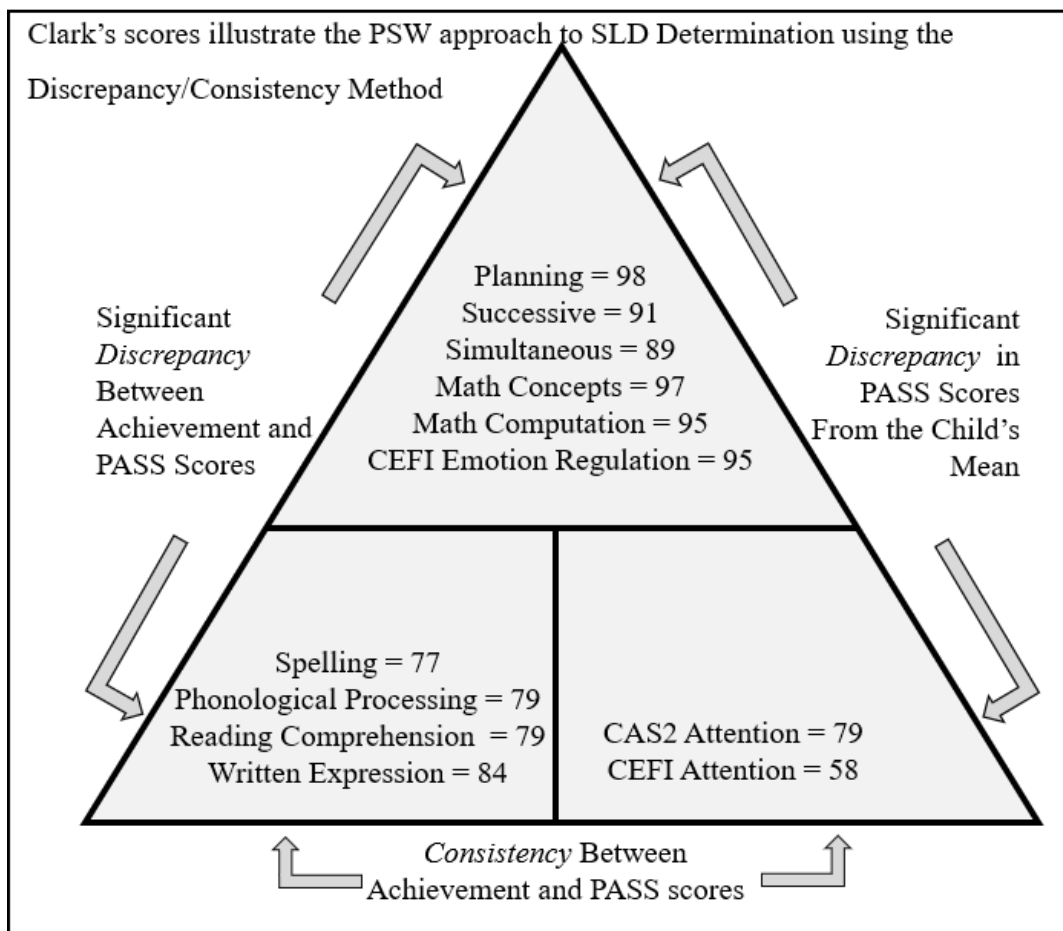
- Anthony may benefit from participating in social groups that focus on appropriate conversational skills, recalling the events from a story, and staying on-topic.
- Consider social work services or counseling within the school to target anxiety and worrisome thoughts and behavior.
- Practice coping skills when faced with challenging tasks or provided with constructive criticism.
- Consider peer buddy group or “lunch bunch” group to practice social skills (i.e., initiating conversation, cooperative play) and help Anthony build friendships despite being a new student this school year.
- Provide preferential seating next to a model peer to whom Anthony can ask questions or watch to know exactly how to follow instructions.
- Provide written instructions simultaneously with visual instructions.
- Provide verbal reminders and checks for understanding.
- Provide a model or example of work expectations.
- Use peer buddies or a small group within classroom to enhance Anthony’s understanding of material gone over and social cooperation.
- Provide a schedule on Anthony’s desk to help with daily routines and expected activities.
- To help with negative self-statements or frustration, emphasize what Anthony does well and provide specific praise.
- Allow Anthony to reflect on his strengths and have him write down three things he did well at the end of each day; allow his mother to reinforce these strengths with positive feedback or rewards.
- Consider a class-wide activity of providing compliments from peer to peer at the end of each day.

Encourage Independence and Self-Efficacy (Self-Assessment)

- Discourage passivity and encourage independence.
- Provide only as much assistance as is needed.
- Reduce the use of teacher solutions only.
- Require Anthony to take responsibility for correcting his own work.
- Help Anthony to become more self-reliant – ask him questions that lead him to determine solutions. (EX: Anthony, what do you plan can do in class today to help you pay attention?”)
- Have Anthony do frequent self-assessments on what’s working for him and what he needs to do differently.

Case #2 Clark an 8-year-old second-grade male

Cognitive Assessment System - 2			Difference from PASS Mean of: 89.3	Significantly Different (.05) from PASS Mean?	Strength (S) or Weakness (W)
PASS Scales	Standard Score	Percentile			
Planning	98	45	8.8	No	
Simultaneous	89	24	-0.3	No	
Attention	79	8	-10.3	Yes	W
Successive	91	27	1.8	No	



Summary

The results of this analysis suggest that Clark has a disorder in the basic psychological process of Attention as measured by the CAS2, which is consistent with a low Attention scale score on the CEFI and corresponds to specific areas of academic failure. His struggles with reading comprehension (especially literal recall); spelling and its impact on written language are also related to his difficulty with focus of attention and resistance to distraction. The Attention weakness is in contrast to his strength in Planning, which is associated with high scores in math concepts and applications, reading words aloud from a list, and math computation. These findings suggest that teachers should use Clark's strength in Planning, that is, the use of strategies, to overcome difficulties related to Attention. The following recommendations are offered.

PASS Strengths and Challenges: Intentional and Transparent Student Feedback:

It is very important that Clark be informed of his strength in using strategies (**Planning**) and how his good ability to think about how to do things can help him overcome his challenges when focus of thinking and resisting distractions (**Attention**) is required. This will be especially important when he is reading (particularly literal questions) and writing.

The informational handouts "How to Be Smart: Attention" and "How to Be Smart: Planning" from *Helping Children Learn* (Naglieri & Pickering, 2010) should be given to Clark when the results of this evaluation are explained to him.

Encourage Motivation and Persistence (Mindsets)

Special attention should be given to his mind-set about his own abilities, and emphasis should be placed on the view that he can do better if he thinks smart. The method described in the "Overcoming Problems with Inattention" sheet from that book should be used to guide his thinking about attending so that he can feel empowered to manage his attention. These same recommendations should be shared with his parents and teachers.

Build on Strengths and Remediate Challenges (Skill Sets)

Practical Instructional Modifications the Student, Teachers and Parents can collaborate on to support student success:

Improving Attention

- Break lessons and assignments into segments so that Clark can complete them.
- Simplify instructions and present them in segments that Clark can manage.
- Establish a cue that the teacher or parent always uses to help Clark recognize when attention is lost.
- Teach Clark to systematically and carefully look at materials before responding (e.g., look at all the options before choosing an answer).
- Decrease the amount of distracting information in the environment.
- Use materials that are interesting to Clark.

- Teach Clark to check work using calculators, spell checkers, and other helpful items.
- Encourage Clark to slow down and look carefully at how words are spelled, for example.

Making Instructions Easier to Process

- Make sure you have Clark's attention.
- Provide oral and written instructions.
- Give one instruction at a time and then repeat the instructions to Clark, if necessary.
- Have Clark repeat back the instructions to confirm that he understands what to do.

Structuring the Environment to Improve Attention

- Be clear and concise when discussing behavior changes with Clark. Avoid lengthy discussions of problematic behaviors.
- Develop a strategy and an action plan for how Clark can increase positive attention from others.
- Seat Clark at the front of the class near the teacher.
- Avoid open concept classroom layouts. A more enclosed, traditional classroom environment reduces distractions.
- Modify Clark's schedule so that more demanding classes are taught earlier in the day.
- Schedule activities and courses in a way that maximizes Clark's attention by alternating tasks that require a lot of attention (instruction classes) with other activities (physical activity) and breaks. It is best if the schedule is predictable so that Clark has consistency.
- Suggest strategies for reducing distractions and sensory stimulation, such as using headphones or earplugs.
- Provide only those materials that are necessary for the task and model this practice so that Clark will learn to focus and use only what is needed to complete his work.
- Assign a job or task during large-group activities or when Clark needs to be patient for his turn to keep him engaged throughout the activity.
- Decrease workload (e.g., break tasks up into smaller, more manageable parts) so that it aligns with Clark's attention level and abilities. Increase workload as Clark gains a greater attention span.
- Reduce the length of assignments to emphasize quality over quantity of work.
- Accommodate regular breaks during tasks that allow Clark to get out of his seat and move around.
- Allow extra time on assignments, quizzes, and tests.
- Consider restructuring tests to a format that best suits Clark's abilities (e.g., multiple-choice will reduce writing demand; some children do better giving answers orally, whereas other children like to use a word processor to type out their responses).
- Provide an unlimited amount of time to finish tests and provide breaks as necessary.
- Teach meditation, yoga, martial arts, or tai-chi, all of which require Clark to focus his attention.

Help Classroom Focus

- Have a peer assist in note-taking.
- Have the teacher ask questions to encourage participation.
- Enlist Clark to help present the lesson.
- Cue Clark to stay on task with a private signal—a gentle tap on the shoulder.
- Schedule a 5-minute period for Clark to check over work before turning in assignments.

When Observed Day-Dreaming in class

- Have the teacher use clear verbal signals, such as “Freeze,” “This is important,” or “One, two, three ... eyes on me.”
- Allow Clark to earn the right to daydream for 5 to 10 minutes by completing the assignment
- Use a flashlight or a laser pointer to illuminate objects or words to pay attention to.
- Illustrate vocabulary words and science concepts with small drawings or stick figures.

Settle Fidgety, Restless Behaviors

- If Clark taps his foot or pencil nervously in class or gets up out of his seat a lot, offer these suggestions:
- Allow him to run errands, to hand out papers to other students, clean off bookshelves, or to stand at times while working.
- Give Clark a fidget toy in class to increase concentration.
- Slot in short exercise breaks between assignments.
- Give Clark a standing desk or an air-filled rubber disk to sit on so he can wiggle around.

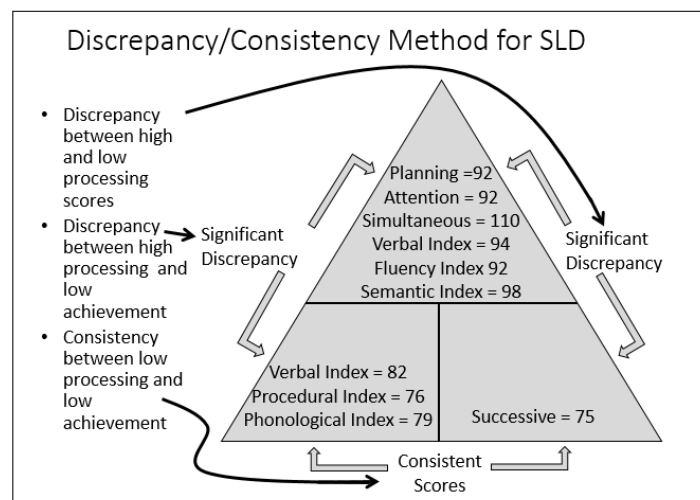
Encourage Independence and Self-Efficacy (Self-Assessment)

- Discourage passivity and encourage independence.
- Provide only as much assistance as is needed.
- Reduce the use of teacher solutions only.
- Require Clark to take responsibility for correcting his own work.
- Help Clark to become more self-reliant – ask him questions that lead him to determine solutions. (EX: Clark, your such a great planner, what’s your plan for staying focused and getting your math done today? How will you catch yourself not paying attention?)
- Have Clark do frequent self-assessments on what’s working for him and what he needs to do differently.

Case #3 Paul 9-years of age and in 4th grade

Cognitive Assessment System - 2			Difference from PASS Mean of:	Significantly Different (.05) from PASS Mean?	Strength (S) or Weakness (W)
PASS Scales	Standard Score	Percentile			
Planning	92	30	-0.3	No	
Attention	92	30	17.8	No	
Simultaneous	110	75	-.03	Yes	S
Successive	75	5	-17.3	Yes	W

This case illustrates how the Discrepancy/Consistency method provides a way to examine processing strengths and weaknesses as well as his academic skills for eligibility determination and to develop targeted interventions. As can be seen from the Table and DSM figure there was a significant discrepancy between Paul's Successive processing and the rest of his psychological



processing scores as measured by the CAS-2. In addition, the FAM indicated that his Procedural Index was a relative weakness, and FAR indicated that his Phonological Index was a weakness. Finally, there was a consistency between Paul's difficulties in the sequential aspect of mathematics (Procedural Index) and sequential aspects of reading (Phonological Index), and lower Successive Processing scores. The PASS basic psychological processes as measured by the CAS-2 provide evidence that there is a 'disorder in basic psychological processes' and likely SLD. Specific strategies to assist Paul in math may include learning how to chunk information, practice on number line fluency skills, playing math games such as the 24 game to develop greater procedural knowledge when problem solving, and utilizing mnemonic strategies to remember longer mathematical algorithms. See Naglieri and Pickering (2010) and Naglieri & Feifer (2017) for more information about interventions.

PASS Strengths and Challenges: Intentional and Transparent Student Feedback:

It is very important that Paul be informed that he has lots of areas of his brain that can support him in successful learning in school. He can use his strengths in using **Planning, Attention and Simultaneous Processing** to help him overcome his challenges to develop skills to help him be more effective with Successive Processing. He will need to develop strategies to help him do the successive processing required in reading, writing and math.

Encourage Motivation and Persistence (Mindsets)

- Explain to Paul these deficits can be overcome with a growth mindset and persistence
- Share that he will be developing and learning strategies to help him and that he has many strengths to support him along the way.
- Share that teachers and parents will also be supporting him as he improves his motivation and persistence:
- Promote success via small steps.
- Ensure that Paul recognizes the successes he has at school and at home

Build on Strengths and Remediate Challenges (Skill Sets)

Practical Instructional Modifications the Student, Teachers and Parents can collaborate on to support student success:

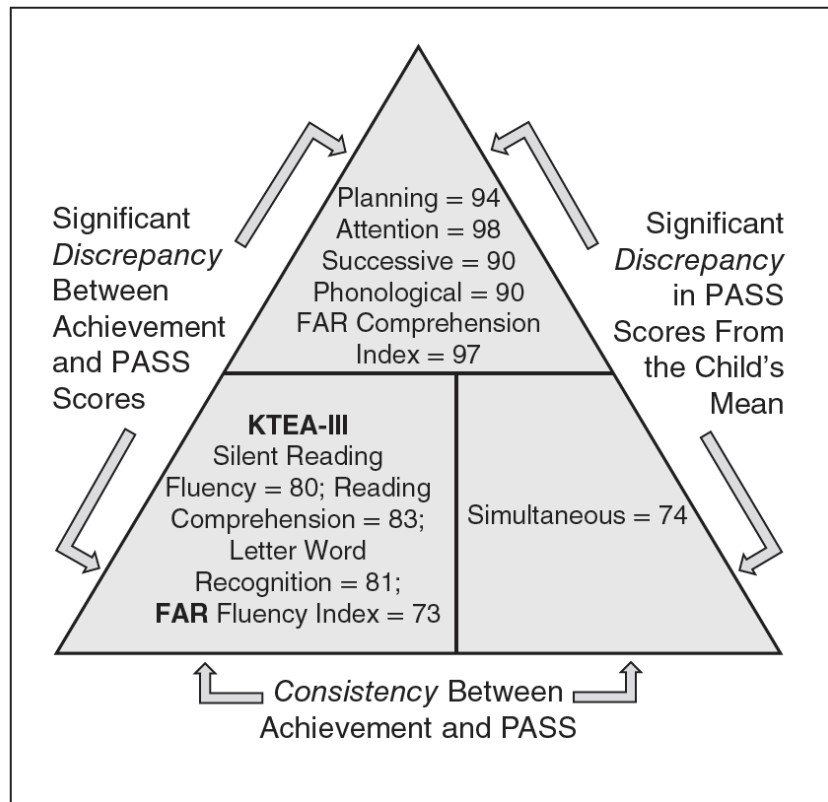
- Use student strengths to help develop steps for completing tasks in sequential order
- Say/sing, tap, move information that needs to be learned in sequential order. Students assess which way works best for themselves.
- Arrange items or repeat events from a story, math problem, or history timeline in order
- Follow specific, ordinal instructions
- Write out the steps of an everyday activity

Encourage Independence and Self-Efficacy (Self-Assessment)

- Discourage passivity and encourage independence.
- Provide only as much assistance as is needed.
- Reduce the use of teacher solutions only and invite Paul to use his strengths in Planning, Attention and Simultaneous processing to determine which strategies he can use to support himself.
- Help Paul to become more self-reliant – ask him questions that lead him to determine solutions. (EX: Paul, you've been trying some new strategies to help you remember the sequences in your math problems. How are they working for you?)
- Have Paul do frequent self-assessments on what's working for him and what he needs to do differently.

Case #4 – Nelson is a 9-year-old fourth-grade student

Cognitive Assessment System – 2 Extended Battery (12 Subtests)			Difference from PASS Mean of: 89.0	Significantly Different (.05) from PASS Mean?	Strength (S) or Weakness (W)
PASS Scales	Standard Score	Percentile			
Planning	94	34	5.0	No	
Simultaneous	74	4	-15.0	Yes	W
Attention	98	45	9.0	No	
Successive	90	25	1.0	No	



Nelson's Discrepancy/Consistency Method of SLD Results

Nelson's cognitive ability scores were mostly average with the exception of a significant weakness observed with his Simultaneous processing scale of the CAS2. This suggested he had considerable difficulty integrating separate elements of a problem into a conceptual whole. His poor Simultaneous processing ability is significantly hindering reading and written language skills. For instance, his spelling efforts were phonetically readable, but because of his inability to visualize the printed word form, they were often incorrect. In terms of his reading, his poor Simultaneous processing skills manifested through limitations with text orthography. This involves processing the entire printed word form rapidly and automatically, with limitations often leading to an overreliance on Successive processing, or sound-by-sound reading, and poor fluency skills. In addition, limitations with Simultaneous processing also hindered his ability to comprehend more abstract elements of the text. Nelson presented the academic and cognitive processing profile of a student with Surface Dyslexia.

PASS Strengths and Challenges: Intentional and Transparent Student Feedback:

It is strongly recommended that the clinician provide direct feedback to help Nelson better understand his unique strengths and weaknesses as a learner. The initial goal is to change Nelson's attitude toward school and himself by exploring further his mind-set about his own abilities. This can be facilitated using the "Measure of Mindset" checklist shown in Figure 5.2. Next, it is important to help Nelson know that his PASS strengths can be used to manage the PASS weakness in Simultaneous processing. This can be accomplished with the aid of the handouts that are intended for students in *Helping Children Learn* (Naglieri & Pickering, 2010) and that describe each of the four PASS abilities. The overarching goal is to change Nelson's view of himself by providing reassurance that with knowledge of strengths and needs, success is possible. Therefore, the clinician and his parents should engage in a demystification process whereby the reason for academic failure is described and, most important, how PASS strengths can be used to overcome the weaknesses. The following discussion illustrates how this might happen:

Nelson, it was such a pleasure to work with you and discover all of your learning strengths. Believe me ... there were a ton. You have a remarkable ability to approach learning with a plan in mind, and you stay attentive and focused to your assignment until the very end. I did notice that when you read, you sometimes focus a little too much on decoding the words and not letting your natural reading skills take over. You do a great job pronouncing each word, so we want to work with you on increasing your speed and fluency just a bit. One of the ways we are going to do this is by having you read a little more frequently at home each day. I also noticed that you give such a great effort when writing, but sometimes it can be hard to spell new words. One of the tricks to being a good speller is to close your eyes and see if you can see the word in your head. We have a few activities that should help you see words in your mind a little more clearly and that should really help with spelling. Nelson, the rest of your academic skills look really good,

and given your wonderful attitude and great effort you put forth each day, you will be a very successful student. It was really great to work with you.

Encourage Motivation and Persistence (Mindsets)

- Explain to Nelson that these deficits can be overcome with a growth mindset and persistence
- Share that he will be developing and learning strategies to help him and that he has many strengths to support him along the way.
- Share that teachers and parents will also be supporting him as he improves his motivation and persistence:
- Promote success via small steps.
- Ensure that Nelson recognizes the successes he has at school and at home

Build on Strengths and Remediate Challenges (Skill Sets)

- Practical Instructional Modifications the Student, Teachers and Parents can collaborate on to support student success:

Recommended Interventions for School

- Nelson would benefit from a targeted reading fluency intervention in order to increase text automatic recognition and fluency (e.g., Read Naturally, Great Leaps, RAVE-O, etc.).
- Nelson's orthographic processing skills were somewhat weak. Color-coding letter-various syllable and sound subtypes, particularly vowel diphthongs in phonetically irregular words, may be very helpful (e.g., *caution*, *dangerous*, etc.).
- Nelson may benefit from targeted writing activities to help reinforce letter and word recognition skills. Specific activities such as identifying which of three sight words is spelled correctly (e.g., *wuz*, *whas*, or *was*) may help to develop automaticity recognizing vowel patterns in words.
- Nelson should benefit from using graphic organizers, story maps, and other prewriting activities to assist him when organizing his thoughts when writing. In addition, he should have access to a word bank of words to assist him with spelling as well.
- Nelson might benefit from having access to a Franklin Word Speller and other technology devices and to assist with his overall spelling skills.
- In order to improve Simultaneous processing and facilitate text-visualization skills, have Nelson practice spelling words with white space in between each syllable in the word. Next, frame each letter in a box similar to the letter size. For example, the word fascinate would be written as fas cin ate. The visual space draws attention to the different word parts and the boxes provide organizational cues. A similar method that encourages children to put information into groups is found in Naglieri and Pickering's (2010) "Chunking for Spelling" intervention handout.
- Nelson's writing mechanics remain an area of concern, though he has good Planning and Attention skills. He may benefit from learning the COPS strategy, a directional proofreading strategy in which Nelson rereads his work four times prior to completion.

The first time he proofreads his passage to make sure he *capitalizes* the first word of each sentence, the second time is to make sure each paragraph is *organized* correctly, the third time is to check for *punctuation* errors, and the fourth time for *spelling* miscues.

Recommended Interventions for for Home

- Nelson should be encouraged to read a minimum of 20 minutes per day after school in order to develop more text familiarity and enhanced fluency skills.
- Nelson's parents may want to consider having a tutor work with him at home in order to improve his overall reading fluency skills.
- Nelson's parents may want to consider using a reading fluency program at home (e.g., Great Leaps).
- Nelson's parents may find the instructional methods described in the book *Helping Children Learn* (Naglieri & Pickering, 2010) to be useful. Especially appropriate are, for example, the handouts "Segmenting Words for Reading/Decoding," "Spelling, Word Sorts for Improving Spelling," and "Mnemonics for Spelling."

Encourage Independence and Self-Efficacy (Self-Assessment)

- Discourage passivity and encourage independence.
- Provide only as much assistance as is needed.
- Reduce the use of teacher solutions only and invite Nelson to use his strengths in Planning, Attention and Successive processing to determine which strategies he can use to support himself.
- Help Nelson to become more self-reliant – ask him questions that lead him to determine solutions. (EX: Nelson, what can you do to help understand the big picture of the story we are reading today? problems.)
- Have Nelson do frequent self-assessments on what's working for him and what he needs to do differently.