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The Integrated Cross-Battery Process Assessment Report

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What is cross-battery process assessment

• Cross battery is not theory or test driven.
• It is a methodology—the way we conduct our assessment.
• It is based on a practice of drawing subtests from a variety of instruments for very specific purposes (purposeful assessment).
• It requires the examiner to use subtests that are reliable and valid for the age/grade of the student. Using overall battery reliability is not sufficient.
• It is individualized for the student and the referral questions.

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What is an integrated report?

• Rather than each professional producing and presenting a report specific to their area of expertise, one report is written and presented to include findings from any assessment conducted in response to referral questions. In addition, recommendations are combined in such a way as to present a holistic approach to intervention.
Which processes do you assess?

- Depends on your theoretical model to some degree.
- Should be based on current research about the relationships between cognitive processes and academic performance/behavior.
- Are specific to the student and his/her presenting problems.
- Should be focused and efficient, yet comprehensive enough to evaluate all areas of suspected disability.
Cognitive processing components for learning

- Attention (including selective, sustained, and shifting attention)
- Short-term Memory (including visual and verbal)
- Working Memory (including visual, visual-spatial, verbal, and executive)
- Long-term Storage and Retrieval
- Processing Speed
- Phonemic Awareness and Phonological Processing
- Visual Processing
- Auditory Processing
- Successive/Sequential Processing
- Simultaneous Processing
- Executive Processing (including Planning)
- Fluid Reasoning (including both verbal and nonverbal reasoning)
Process approach to assessment

- Based on scientific method:
  1. Identify the problem
  2. Formulate hypotheses (why you think the problem exists)
  3. Test hypotheses
  4. Draw conclusions
  5. Make recommendations and monitor results

- Places emphasis on the why behind the score.

- Requires a good understanding of what a subtest actually measures and what factors contribute to a low score.

<table>
<thead>
<tr>
<th>Skill Area</th>
<th>Example of Processing Hypotheses</th>
</tr>
</thead>
</table>
| Basic Reading | 1. Weakness in phonology.  
2. Weakness in orthography.  
3. Weakness in long-term retrieval, especially rapid automatic naming.  
4. Weakness in working memory.  
5. Weakness in sequential processing. |
| Reading Comprehension | 1. Weakness in executive functions.  
2. Weakness in working memory.  
3. Weakness in processing speed (related to fluency).  
5. Weakness in visual-spatial processing. |
2. Weakness in sequential processing.  
3. Weakness in working memory.  
5. Weakness in visual-spatial processing. |
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<table>
<thead>
<tr>
<th>Skill Area</th>
<th>Example of Processing Hypotheses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Written Expression</td>
<td>1. Weakness in working memory. 2. Weakness in processing speed. 3. Weakness in executive functions. 4. Weakness in language functions. 5. Weakness in encoding (related to both phonology and orthography).</td>
</tr>
</tbody>
</table>

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You’ve done the testing and gathered the data, now...

*Let’s write the report*

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**Writing integrated reports**

- A comprehensive evaluation may involve numerous professional evaluators (SLP, Ed DX, LSSP, OT, PT, Reading Specialists, Dyslexia Evaluator, etc.) but should result in a single, integrated report.
- It is easier to produce an integrated report when you start with an integrated assessment plan that includes a timeline.
- Someone must be responsible for the final product.
What’s the Difference

Psychometrists report scores

Diagnosticians interpret scores

A few general Do’s and Don’ts

1. Don’t forget that the purpose of the report is to interpret results, not report scores. Tables of scores are your work-in-progress, not your report.
2. Do write a report that clearly identifies and answers every referral question.
3. Do write a report that uses language that is familiar to the intended readers. Omit jargon and acronyms.
4. Don’t reveal test items.
5. Do organize the report so that a reader can quickly locate clearly identified sections.
6. Do include recommendations that are linked to assessment data and specific to the student.

Problems with cut and paste

Failure to proofread and catch common errors:

– Gender transformation
– Name change or no name (XXX)
– Test descriptions generic and not accurate for the student you tested
– Clerical errors such as typing in the wrong score, percentile rank, confidence interval, name of range, date of administration, etc.
– Misspelled words, especially student names
– A test or procedure is described in the report, but not listed in sources of data OR listed in sources of data, but not described in report
Organizing the Report
See handout

Section I. Reason for referral and referral questions

• Should come from the referral source
• Essentially includes 3 general questions:
  – Why has the student not responded as expected to interventions?
  – Is this a student with an educational disability that contributes to his/her underachievement?
  – What needs to change so that the student can be more successful (meet standards) in school?
• Should also include specific questions related to the concerns that drove the referral.
Blake was referred in January of second grade by the campus Student Assistance Team for a Full Individual Evaluation. His parents and teachers are concerned about his exceptionally slow academic progress in reading in spite of almost 5 months of increasingly more intensive interventions. This report will address the following questions:

1. What are likely reasons for why Blake has not responded as expected to increasingly more intensive phonologically-based reading interventions?
2. Does Blake have an educational disability that is compromising learning?
3. What needs to change so that Blake can be more successful in school?

Section II. Background information

A. Family history
B. Birth and developmental history
C. Health history
D. School history
E. Previous test results

Including other test results

• What other test results do we want?
• How do we get them in the format we want them (we have to know what testing has been done and how results are reported)?
• How far back should we go?
• What about previous individual assessment data (especially protocols)?
• We will report a summary of the findings.
Recalling Stats 101

- Standard scores
- Scaled scores
- Percentile rankings
- Stanines
- T-scores
- Z-scores
- Grade and age equivalent scores
- Growth value scores

There’s also an app for that...

PAR Toolkit (Free)
What about grade- and age-equivalent scores?

- In 1985 the American Psychological Association recommended that GE and AE scores no longer be used. In fact, they specifically asked test publishers to no longer report them. Most test manuals clearly state the problems associated with their use.
- Unfortunately, in some states/districts, their use is still a requirement.
- They should never be used to show progress or lack of progress!
- If not required, do not use them.

Section II. RtI data

- May put under School History
- Should include:
  - Who
  - When
  - What
  - How
  - Data to document results
    - How student responded against target (goal) (a goal of being on grade level is too broad)
    - How student responded in comparison to others receiving similar intervention

Blake was identified as being at-risk for reading difficulties in September based on the results of the Texas Primary Reading Inventory (TPRI) where his scores placed him in the bottom 20% of second graders.

- He was moved to a lower reading group with 4 other students who worked with their classroom teacher, Ms. Jones, an additional 20 minutes per day, for 6 weeks, using core curriculum worksheets and activities with an emphasis on decoding words.
- At the beginning of this intervention, Blake was able to read 5 of the decodable grade-level words on a teacher-prepared list. At the end of 6 weeks, he could read 10 of the 50 words. The average gain for others in the group was 25 words.
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- As a result of his slow progress, Blake was referred for afterschool tutoring which he attended twice weekly for 30 minutes each session with Mr. Payne, the campus reading coach. The Bridge reading program lessons on decoding vowels was used for the next 6 weeks. Progress monitoring was accomplished with pre- and post-testing.
- After 6 hours of intervention, Blake’s score from the pre-test increased by 5 points on the post-test. Other students in his tutoring group improved by an average of 30 points.
- On the mid-year administration of the TPRI, Blake’s scores placed him in the bottom 10% of second graders.

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Sample RtI Report

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Integrating Section I and II information

- Use previous test results* and teacher information to determine the specifics of the student’s academic difficulties.
  1. “struggles in reading”; “not on grade level”; “lowest reader in the class”; “fails his reading tests”
  2. “unable to decode words with more than 2 phonemes”; unable to read grade level passages orally at the expected 2nd grade rate; cannot answer questions related to main idea or sequencing events when reading 2nd grade passages”

- These two sections help us identify specific areas of concern which will guide our generation of hypotheses.

* don’t just report test scores
Areas of Concern worksheet

<table>
<thead>
<tr>
<th>Developmental History</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication/Language</td>
<td></td>
</tr>
<tr>
<td>Mom reports he talked later than siblings.</td>
<td></td>
</tr>
<tr>
<td>Learning/Behavior</td>
<td></td>
</tr>
<tr>
<td>Slow to learn names of colors, shapes, and letters in preschool.</td>
<td></td>
</tr>
<tr>
<td>Cognition (general)</td>
<td></td>
</tr>
<tr>
<td>Has trouble recalling and following multi-step directions. Works very slowly on paper and pencil tasks.</td>
<td></td>
</tr>
</tbody>
</table>

Formulating hypotheses

- Once referral information has been reviewed (Sections 1 and 2), it is time to formulate hypotheses to explain why the student has not met expectations.
- You will have a number of hypotheses and they will guide your assessment plan.
- Your assessment plan will identify who will be involved in assessment, what tests will be given, and a timeline for completion.
- Your hypotheses are not included in your report but they underlie everything you do and report.
Assessment plan

- Underachievement is not a disability.
- The plan must link the identified areas of concern to the potential cognitive processes that may be contributing to the deficits.
- The plan includes those subtests that are most appropriate for testing your hypotheses.

Section III. Assessment instruments and procedures

- List all procedures (e.g., classroom observation, teacher interview, parent rating scale, review of previous test results, etc.)
- List source of subtests administered (and by whom)
  - WJ III: reading subtests (administered by Ed Dx)
  - NEPSY II: selected subtests (administered by LSP)
  - CELF-IV: selected subtests (administered by SLP)
- Include a statement about the reliability and validity of your results.
  - The selected standardized tests were administered to Blake in three sessions over a period of two days. He was engaged and responsive during testing and put forth good effort. Results are considered a valid and reliable measurement of Blake's skills and abilities.

Section IV. Evaluation results: Observations

- Include relevant classroom observations (may be quantitative as well as qualitative data).
- Include relevant observations during testing especially when they impact subtest scores.
- Report objectively and specifically.
  1. Susie was frequently off-task while classmates completed worksheets.
  2. While classmates worked independently on assigned math problem solving worksheets for 15 minutes, Susie left her desk 4 times to ask the teacher a question.
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Section IV. Evaluation results: Student, parent and teacher information

• Information can be both quantitative and qualitative but should be reported objectively (even when it may have been provided subjectively).
• If reporting scores, be sure you explain what they represent (e.g., a high score on a behavior rating scale may indicate a problem).
• Stay focused on reporting information that is relevant to your objectives.

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Karl's teacher describes him as lazy and defiant.

Luke's mother reports that he walked at 6 months and spoke in sentences at 12 months.

Caleb's teacher says that if his grades continue to fall, he will not be promoted to third grade.

Janie failed the 3rd grade STAAR in reading.

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Format for Section IV - Evaluation results for subsections C - K

• Presenting Concerns
• Current Levels of Functioning
• Summary

• You may not test all areas, but the headings should be included in your report with a comment as to why it was not assessed. You can also include reported strengths.
Section IV. Evaluation results: Academic achievement

- District policy may determine which areas you will assess.
- Using co-normed ability/achievement tests is no longer relevant.
- Use grade-based norms for achievement.
- It usually is not adequate to give only a general achievement battery. Plus, this can result in excessive testing.
- Using drill-down subtests, error analysis, and keen observation help us interpret test results by identifying the nature of the achievement problem.

Why do we care about the details?

Presenting concerns

Joey has a reading problem.
Joey has a problem decoding words quickly.

Current levels of functioning

Joey has a problem decoding multi-syllable words with automaticity (in 3”).
Joey has a problem decoding multi-syllable words that include short vowel sounds for i and u with automaticity (in 3”).

Joey’s reading teacher, Miss Pena, reports that he is not reading on grade level.

Joey’s reading teacher, Miss Pena, is concerned that he is unable to read grade level text orally with accuracy and fluency.
Another example

Presenting concerns
Kerri’s math teachers have expressed concerns related to her failing grades and long-term difficulties in math and lack of expected progress in spite of interventions that began in second grade. Her language arts teacher notes that she struggles with reading comprehension and writing, but that she has responded well to instructional strategies used in the classroom. She is currently passing all subjects except math.

Three Ways to Report Current Level of Achievement Functioning

Current level of functioning (Joey)

1. Report Test Scores

<table>
<thead>
<tr>
<th>Subtest</th>
<th>Standard Score</th>
<th>Percentile Rank</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Word Reading</td>
<td>98</td>
<td>45</td>
<td>Average</td>
</tr>
<tr>
<td>WR Speed</td>
<td>25</td>
<td>Low average</td>
<td></td>
</tr>
<tr>
<td>Phonological Decoding</td>
<td>99</td>
<td>99</td>
<td>Average</td>
</tr>
<tr>
<td>PD Speed</td>
<td>10</td>
<td>Below average</td>
<td></td>
</tr>
<tr>
<td>Oral Reading Fluency</td>
<td>83</td>
<td>13</td>
<td>Below average</td>
</tr>
<tr>
<td>Oral Reading Accuracy</td>
<td>95</td>
<td>37</td>
<td>Average</td>
</tr>
<tr>
<td>Oral Reading Rate</td>
<td>78</td>
<td>7</td>
<td>Below average</td>
</tr>
<tr>
<td>Reading Comprehension</td>
<td>84</td>
<td>15</td>
<td>Below average</td>
</tr>
</tbody>
</table>
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2. Describe test scores

Word Reading measures the ability to read words aloud. Joey earned a standard score of 105, at the 63rd percentile ranking, well within the average range. His ability to read the words within 3 seconds placed him at the 25th percentile, at the lower limits of the average range.

Pseudoword Decoding measures the ability to apply phonetic skills to decode nonsense words. Joey earned a standard score of 103 (59th percentile), in the average range. His ability to read the words within 3 seconds was below average at the 10th percentile ranking.

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3. Interpret test scores

The goal of reading is to gain information, and good readers read with both accuracy and fluency. When Joey was asked to read grade level text silently and answer questions about what he had read, his scores fell within the below average range. Although he was able to answer questions about the main idea and some details correctly, he could not draw conclusions, or make accurate inferences or predictions. This performance is consistent with previous test results and information from his teachers.

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To better understand his reading difficulties at the text level, he was also administered subtests to evaluate his ability to read text aloud with accuracy and fluency and to read words in isolation with automaticity. When asked to read grade level passages aloud, Joey read more slowly than the average third grader, re-read words multiple times, lost his place, and had little recall or understanding of what he read.
When Joey was asked to read words quickly from a list, he was able to correctly pronounce them as well as grade-mates; however, when automaticity of word reading was calculated (based on his ability to read a word within 3 seconds), his performance fell significantly to a low average level. When asked to apply his phonetic skills to quickly decode unfamiliar words, he was able to correctly decode but at a rate that placed him in the bottom 10% of third graders. In other words, Joey may be able to read the words, given enough time, but his reading rate is so slow and laborious that he loses meaning. He must also hang on to the information for a longer period of time, which places greater demands on his memory.

Identify the nature of the problem

- Is the primary comprehension difficulty due to:
  - Phonologically-based deficits
  - Orthographically-based deficits
  - Lack of automaticity and fluency
  - Something else (TBD with cognitive subtests)
- The nature of the difficulty should drive the differentiated intervention:
  - Phonologically-based deficits require code-based instruction that may be top-down or bottom-up depending on the age/grade of the student.

May need to add a measure of phonology

- CTOPP
- DRA
- Additional subtests from other achievement or cognitive batteries

Or I may already have this information from another source.
A few orthography measures

- Test of Silent Word Reading Fluency
- PAL 2 Orthographic Coding (non-readers)
- PAL 2 Word Choice
- TOWRE–2 Test of Word Reading Efficiency
- A norm-referenced spelling dictation test

Summary

In a single paragraph, summarize the relevant data in terms of referral questions.

An academic deficit does not a disability make.

BUT, it clarifies where I need to go next, so as to assess the processes most likely to be linked to the deficit.
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Sensorimotor functions
Presenting concerns
Current levels of functioning
Summary
Attention
Presenting concerns
Current levels of functioning
Summary
Visual-spatial processes
Presenting concerns
Current levels of functioning
Summary

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Section IV. Sensorimotor functions

• Vision and hearing screening
• More in-depth vision/hearing assessment
• Motor abilities (fine-motor, gross-motor, grapho-motor. Including handwriting)

• If there are no areas of concern (go back to your Areas of Concern worksheet), include a statement like:
  No concerns related to Susie’s sensorimotor functions have been identified, therefore further assessment in this domain was not conducted.

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Section IV. Attention

• Why have a separate section just for attention?
• Assess attention using rating scales (parent, teacher, student), structured observations, and performance-based standardized tests.
• Need to identify the nature of an attention problem:
  – Selective attention
  – Sustained attention
  – Switching attention
Presenting concerns

Phillip’s parents and teachers report that he has a short attention span, has difficulty listening to and following multiple directions, and often makes careless mistakes. He is easily distracted and does not complete tasks. He needs frequent redirection at home and at school to stay focused. He loses his place when reading or when copying information from the board. At the same time, he becomes so engrossed when playing video games that he ceases to be aware of anything going on around him.

Your data

- Parent and teacher rating scale (BASC-2)

<table>
<thead>
<tr>
<th>Respondent</th>
<th>T-score</th>
<th>Percentile Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mother</td>
<td>70</td>
<td>98</td>
</tr>
<tr>
<td>Math teacher</td>
<td>67</td>
<td>95</td>
</tr>
<tr>
<td>Reading teacher</td>
<td>70</td>
<td>98</td>
</tr>
</tbody>
</table>

Use a common metric when reporting. For example, convert T-scores to standard scores. Use PAR Toolkit for quick conversion. Explain what the high score represents.

NEPSY-II Subtest

<table>
<thead>
<tr>
<th></th>
<th>Scaled Score</th>
<th>Standard Score</th>
<th>Percentile Rank</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auditory Attention Total Correct</td>
<td>9</td>
<td>95</td>
<td>37</td>
<td>At expected level</td>
</tr>
<tr>
<td>Auditory Attention Combined Score</td>
<td>9</td>
<td>95</td>
<td>37</td>
<td>At expected level</td>
</tr>
<tr>
<td>Response Set Total Score</td>
<td>6</td>
<td>80</td>
<td>9</td>
<td>Borderline</td>
</tr>
<tr>
<td>Response Set Combined Score</td>
<td>5</td>
<td>75</td>
<td>5</td>
<td>Below expected level</td>
</tr>
<tr>
<td>AA vs RS Contrast Score</td>
<td>5</td>
<td>75</td>
<td>5</td>
<td>Below expected level</td>
</tr>
</tbody>
</table>
**Slide 64**

<table>
<thead>
<tr>
<th>NEPSY-II Subtest</th>
<th>Scaled Score</th>
<th>Standard Score</th>
<th>Percentile Rank</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Response Set</td>
<td>6</td>
<td>80</td>
<td>9</td>
<td>Borderline</td>
</tr>
</tbody>
</table>

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**Current Level of Functioning**

Because of the scope of reported attention concerns, Phillip’s attention was assessed using selected subtests from the NEPSY-II to evaluate three types of attention: selective, sustained, and shifting. The Auditory Attention and Response Set subtest is broken down into two parts. The first (AA) assesses selective auditory attention or the ability to focus on relevant verbal information while ignoring unrelated distractions over time. He performed as well as others his age, indicating that his selective and sustained auditory attention on simple, repetitive tasks is at the expected level.

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The second task (RS) required Phillip to touch a specific shape, while ignoring other choices, every time he heard a target word. His below expected scores indicate that when the selective attention task becomes more cognitively challenging, the additional load on working memory and executive control worsens sustained attention to a significant degree. As a result, he was unable to effectively hang on to the information over time.

His below expected AA versus RS Contrast Score reveals that Phillip has more difficulty than his peers on tasks that overload his working memory, and that provoke impulsive reactions, as seen in the dramatic increase in the number of errors. It is also likely that the quick presentation time contributed further to cognitive overload, so that over time, his performance on the RS task also declined considerably.
Phillip was also asked to shift his attention and demonstrate cognitive flexibility as he quickly responded to a target word, such as blue, by touching a non-matching shape, such as a yellow square. He had to remember 4 different stimulus and word combinations, while inhibiting an immediate response or a response based on a different rule from the previous task. His impulsive responding and difficulty switching from one rule to the next resulted in a high number of commission and inhibitory errors. Children with deficits in shifting attention may have inconsistent performance on daily tasks so that they may be able to demonstrate a skill in isolation, but not when it is combined with other skills. Often these errors are characterized as careless.

Summary

- Work with a partner for the next 10 minutes to summarize the section for Attention.
- Write your summary in a way that would help a parent understand your findings.

Section IV. Visual-spatial processes

- Ability to copy information (near and far-point) with and without time constraints
- Ability to produce legible handwriting (with attention to letter formation, size, spacing, and use of margins and indentions)
- Ability to reproduce visually-presented designs (with and without time constraints) by drawing or using manipulatives (with and without STM and LTM requirements)
- In math, often see problems understanding place value, use of the number line, measurement, fractions, and learning to tell time.
According to his teacher, Max is slow to copy information from the board and makes errors that interfere with his ability to use the information correctly. He also has near illegible handwriting especially under time pressure or when the writing task is lengthy. Mr. Sanders also reports that Max often makes arithmetic errors because he lines up digits incorrectly when calculating, and seems to have difficulty visualizing fractional parts.

Where should we go next?

- What specific subtests might you include in your assessment to address these concerns?
- What kinds of data might you collect?
- What follows the Presenting Concerns section in your report?
- What should your test results explain?

Language processes
Presenting concerns
Current levels of functioning (may include receptive and expressive language, articulation, fluency, voice quality, pragmatics)
Summary
Memory and learning processes
Presenting concerns
Current levels of functioning
Verbal memory and learning
Visual memory and learning
Integrated verbal-visual memory and learning
Summary
Executive functions
Presenting concerns
Current levels of functioning
Summary
Section IV. Language processes

- Home Language Survey and any bilingual assessment data
- Subtests that assess vocabulary (expressive and receptive), verbal comprehension and reasoning
- Screening subtests that measure listening comprehension and oral expression (achievement)
- Measures of written language
- Comprehensive assessment by SLP that may include evaluating articulation, voice, fluency, and pragmatics as well as a language sample

Presenting concerns

- Sasha was referred for an evaluation in the fall of her kindergarten year due to concerns in the area of articulation of speech. She was identified as a student with a speech impairment due to a severe articulation disorder. She has received speech therapy through special education services in the public schools since that time. This evaluation was completed to evaluate whether Sasha continues to meet criteria for services and whether speech therapy continues to be warranted.

Yes or No

Presenting concerns

In spite of two years of speech therapy provided by the campus SLP, Sasha continues to have difficulty 1) understanding and using language to learn new information through listening or reading, 2) learning and using content-specific vocabulary, and 3) expressing her ideas in written form. She also continues to make articulation errors resulting in decreased intelligibility.
Current levels of functioning

Receptive and Expressive Language:

<table>
<thead>
<tr>
<th>Subtest</th>
<th>Standard Score</th>
<th>Percentile Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listening Comprehension</td>
<td>88</td>
<td>21</td>
</tr>
<tr>
<td>Oral Expression</td>
<td>80</td>
<td>10</td>
</tr>
</tbody>
</table>

Oral and Written Language Scales (OWLS)

The OWLS is an assessment of receptive and expressive language skills. The Listening Comprehension scale measures the student’s understanding of spoken language. Sasha’s performance fell at the lower limits of the average range. She missed items that required the understanding of multiple meaning words and the use of non-literal language. This is consistent with her teacher’s concerns about her difficulties in both listening and reading comprehension when text becomes more complex or when questions focus on drawing conclusions, making inferences or predictions, or acquiring new vocabulary.

The Oral Expression scale measures the student’s understanding and use of spoken language. Sasha was asked to look at a picture, listen to information from the examiner, and then answer a question, complete a sentence, or create one or more sentences. Her performance was below the average range and lower than most children her age. Specifically, she had difficulty with helping verbs (the girl and boy is running rather than are running), using irregular past tense verbs (watched the ball instead of caught), and in formulating compound and complex sentences.
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**Current levels of functioning**  
**Articulation:**

<table>
<thead>
<tr>
<th>Sound Used/Provenance</th>
<th>Example</th>
<th>Sound Errors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial phoneme production</td>
<td>Rabbit</td>
<td>/w/ for /r/ in all blends; /w/ for /w/ in blends, green for green, wabbit for rabbit, /w/ for /r/ in all blends,</td>
</tr>
<tr>
<td>Medial phoneme production</td>
<td>Carrot</td>
<td>/aw/ for /ar/ in final phoneme production, kaw for carrot, /aw/ for /ar/ in final phoneme production,</td>
</tr>
<tr>
<td>Final phoneme production</td>
<td>Carrot</td>
<td>/aw/ for /ar/ in final phoneme production, kaw for carrot, /aw/ for /ar/ in final phoneme production,</td>
</tr>
</tbody>
</table>

Now what?

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**Section IV. Memory and learning processes**

- Need to assess the memory system which consists of STM, LTM, and Working Memory.
- Must identify (and describe in report) the nature of any memory problem.
  - Requires more specific assessment such as including measures of Visual WM, Spatial WM, Verbal WM and Executive WM.
  - May need to separate LTM acquisition from LTM retrieval.
  - May need to determine if there are differences in performance based on source of input (visual, verbal, tactile/kinesthetic) or requirements for output (verbal, point, draw).

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- Need to identify those conditions under which the student is more/less likely to achieve success.
- Include measures of learning in your battery. Include tests with immediate and delayed recall and recall with and without interference.
  - Verbal List Learning subtests/tests (e.g., NEPSY II List Memory)
  - Visual List Learning subtests/tests (e.g., DAS II Recall of Objects)
  - Paired associative learning subtests (e.g., K-ABC Rebus and Atlantis).
- These tests provide critical information about appropriate accommodations and modifications as well.
Presenting concerns

Clint’s teachers and parents express concerns that he is unable to benefit optimally from various instructional opportunities because they believe his poor attention, impulsivity, and problematic behaviors interfere with learning. Specifically, he has not mastered multiplication facts in math, struggles to understand and answer questions about what he has read, and fails to demonstrate what he has learned if he must write about it. At the same time, Clint is able to verbally demonstrate knowledge and understanding on a wide range of topics.

Memory and Learning Processes

<table>
<thead>
<tr>
<th>Test: Subtest</th>
<th>Standard Score</th>
<th>Percentile Rank</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>DAS II: Recall of Digits Forward</td>
<td>112</td>
<td>79</td>
<td>Above average</td>
</tr>
</tbody>
</table>

Verbal Short-term Memory

<table>
<thead>
<tr>
<th>Test: Subtest</th>
<th>Standard Score</th>
<th>Percentile Rank</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEPSY II: List Memory and List Memory Delayed</td>
<td>95</td>
<td>37</td>
<td>At expected level</td>
</tr>
</tbody>
</table>

Verbal Long-term Memory

<table>
<thead>
<tr>
<th>Test: Subtest</th>
<th>Standard Score</th>
<th>Percentile Rank</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>DAS II: Recall of Digits Backward</td>
<td>104</td>
<td>61</td>
<td>Average</td>
</tr>
</tbody>
</table>

Verbal Working Memory

<table>
<thead>
<tr>
<th>Test: Subtest</th>
<th>Standard Score</th>
<th>Percentile Rank</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEPSY II: Word List Interference Recall Score</td>
<td>110</td>
<td>75</td>
<td>At expected level</td>
</tr>
<tr>
<td>NEPSY II: Word List Interference Recall Score</td>
<td>100</td>
<td>50</td>
<td>At expected level</td>
</tr>
</tbody>
</table>
### Slide 85

<table>
<thead>
<tr>
<th>Test: Subtest</th>
<th>Standard Score</th>
<th>Percentile Rank</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>DAS II: Recall of Designs</td>
<td>82</td>
<td>12</td>
<td>Below average</td>
</tr>
<tr>
<td>NEPSY II: Memory for Designs - Immediate Total Score</td>
<td>85</td>
<td>16</td>
<td>Borderline</td>
</tr>
<tr>
<td>NEPSY II: Memory for Designs - Immediate Content Score</td>
<td>105</td>
<td>63</td>
<td>At expected level</td>
</tr>
<tr>
<td>NEPSY II: Memory for Designs - Immediate Spatial Score</td>
<td>85</td>
<td>16</td>
<td>Borderline</td>
</tr>
</tbody>
</table>

### Slide 86

<table>
<thead>
<tr>
<th>Test: Subtest</th>
<th>Standard Score</th>
<th>Percentile Rank</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>DAS II: Recall of Objects - Delayed</td>
<td>94</td>
<td>34</td>
<td>Average</td>
</tr>
<tr>
<td>NEPSY II: Memory for Designs - Delayed Total Score</td>
<td>85</td>
<td>16</td>
<td>Borderline</td>
</tr>
<tr>
<td>NEPSY II: Memory for Designs - Delayed Content Score</td>
<td>95</td>
<td>37</td>
<td>At expected level</td>
</tr>
<tr>
<td>NEPSY II: Memory for Designs - Delayed Spatial Score</td>
<td>80</td>
<td>9</td>
<td>Borderline</td>
</tr>
</tbody>
</table>

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#### Visual and Visual-spatial Working Memory

<table>
<thead>
<tr>
<th>Test: Subtest</th>
<th>Standard Score</th>
<th>Percentile Rank</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>DAS II: Recall of Sequential Order</td>
<td>102</td>
<td>54</td>
<td>Average</td>
</tr>
</tbody>
</table>

#### Verbal-Visual Associative Learning

<table>
<thead>
<tr>
<th>Test: Subtest</th>
<th>Standard Score</th>
<th>Percentile Rank</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>K-ABC II: Atlantis-Immediate</td>
<td>80</td>
<td>9</td>
<td>Below average</td>
</tr>
<tr>
<td>K-ABC II: Atlantis-Delayed</td>
<td>75</td>
<td>5</td>
<td>Below average</td>
</tr>
<tr>
<td>K-ABC II: Rebus-Immediate</td>
<td>100</td>
<td>50</td>
<td>Average</td>
</tr>
<tr>
<td>K-ABC II: Rebus-Delayed</td>
<td>95</td>
<td>37</td>
<td>Average</td>
</tr>
</tbody>
</table>
Current Levels of Functioning

Verbal Memory and Learning

To evaluate short-term verbal memory, Clint was given the DAS II Recall of Digits Forward. His score at the 79% percentile ranking and his use of verbal rehearsal are consistent with his identified verbal strengths. His average verbal working memory abilities (61st percentile) also allowed him to mentally store and re-order a number series on the DAS II Recall of Digits Backward subtest. To determine the effects of verbal interference, he was administered the NEPSY II Word Interference subtest where he heard two consecutive series containing a maximum of 5 unrelated words. He repeated each list after hearing it. His Repetition score (75th percentile), which is at the Expected Level, is based on his ability to register rote verbal information or word span into short-term memory. His Interference score (50th percentile), reflects his ability to recall the recently encoded word lists in spite of having to recall intervening lists. Clint has an average ability to retrieve up to 5 words from verbal short-term memory and to hold the memory traces in an activated state called working memory.

The NEPSY II List Memory subtest takes these abilities to the next level as he hears a list of 15 unrelated words five times and must recall as many words as possible after each presentation. Although the benefit of verbal repetition (i.e., to what degree is he able to learn verbal information through rote memorization) is average for his age, his learning of a larger amount of verbal information is somewhat fragile. For example, if while learning a new word list, another similar word list is introduced, Clint's recall of the first list is reduced to a much greater degree than his peers showing the same level of initial learning (i.e., to the lower limits of the average range). After a 25-minute time delay, when he was engaged in other tasks, Clint could only recall 6 words from the original 15 in comparison to the 10 words he recalled pre-interference. He was more susceptible to the combined effects of time delay and interference than peers. This performance is similar to what Clint experiences when he must learn large quantities of verbal information at a time, or successfully juggle two or more verbal learning tasks simultaneously.
Report continues with

• Visual Learning and Memory
• Integrated Visual-Verbal Learning and Memory

Summary of Memory and Learning Processes

It is easiest for Clint to learn new information if it is presented verbally with repetition and time to rehearse. He can learn visually presented information as well as other his age if demands to recall visual spatial details are limited and he has time to recode the information verbally and use his primary learning strategy, verbal rehearsal. When Clint talks to himself or repeats information over and over, he is tapping into his stronger verbal learning system to compensate for his weaker visual learning abilities. He will be even more likely to depend on this strategy when performing multi-digit operations. When overwhelmed by a large amount of visual and verbal information that must be learned simultaneously, Clint becomes impulsive, makes errors, and may withdraw from the learning opportunity. If the verbal information is more abstract or he has trouble linking it to something he already knows, he has difficulty encoding the paired information into short-term memory, resulting in less information available for learning. He also loses or forgets new information over time when interrupted or asked to do an intervening task. As a result, he may learn partial or incorrect information.
Section IV. Executive functions

• Includes assessment using parent and teacher rating scales, classroom and testing observations, and performance-based assessment as indicated.
• Do not repeat information on attention or executive working memory.
• If there are no concerns, discuss your observations and state why you did not conduct additional testing.

Laundry list of executive functions

1. Attention
2. Persistence
3. Cognitive flexibility
4. Organization
5. Self-monitoring
6. Initiation
7. Goal-setting
8. Inhibition
9. Planning
10. Temporal orientation
11. Metacognition
12. Executive working memory

Cognitive flexibility includes ability to use alternative solutions, see differing points of view, and adapt to change.
Section IV. Speed and efficiency of cognitive processing

- The subtests you use to assess a specific process matters. For example, you have a referral related to reading fluency, but when you give 2 Gs subtests (i.e., Visual Matching and Decision Speed from WJ III), the scores are within the average range. Does this rule out a fluency deficit? What might be more appropriate processing speed subtests when the referral is related to reading fluency?

Section IV. Social, emotional, and behavioral functioning

- This section may come from the LSSP if there are specific concerns that resulted in assessment.
- If not, then make your statements based on the information you have and why you did not do additional testing.
- May include behavioral assessment, including a FBA, an evaluation of social competencies, or a psychological assessment.

Section V. Summary of evaluation results in context of referral questions

- Identify pattern of strengths and weaknesses – PSW is not a specific calculation or a specific procedure. It is a way of organizing data from a comprehensive evaluation and an adequate referral process in order to make well-informed decisions.
- Present a body of compelling evidence not just a restatement of the summaries from different sections.
- Must link results to identified problems.
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Thanks, Gail

Student meets criteria for the educational disability condition of XXX.

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Section VI. Recommendations

• Integrate all of the recommendations into one section of the report. Revise, as needed, to produce a cohesive document.
• Avoid using boiler-plate, generic checklists for recommendations.
• Be specific enough that a teacher or parent could implement your recommendation. If you don’t have time in the ARD to explain, set up another meeting to discuss or have a handout that fully explains.

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How To Avoid More of the Same

1. An assessment should include recommendations related to “what needs to change” whether the student qualifies for special education or not.
2. Recommendations should be based on assessment data and be specific for that student.
3. Those recommendations should contribute significantly to the Individual Intervention Plan.
4. The plan should clarify who is responsible for implementation.
Recommendations

• General
  – Mr. & Mrs. are encouraged to share this report with Peter’s pediatrician. Medical intervention may be appropriate to address findings related to attention and impulsivity deficits.

• Specific to Behavior
  – Peter is less likely to be inattentive, off-task and impulsive if he has an assigned desk located out of the classroom traffic pattern, with easy access to his teacher. During group learning activities, he may need more structure and supervision, a well-organized team leader, or be paired with classmates with whom he is less likely to socialize.

Specific to Content

• Math: It is critical for Matt to learn his multiplication facts to a level of automaticity and continue to practice addition and subtraction facts so as not to lose automaticity. The use of flash cards, math minutes, and access to the multiplication fact chart has yet to accomplish this goal. He may profit more from approaches that utilize his verbal learning strengths such as learning facts set to music or rhyme, or by talking about patterns that occur with certain number combinations. Free computer assisted activities specific to learning sets of math facts can be found on websites such as www.mathfactcafe.com

Intervention Plan

Learning Environment
  What environment best supports learning for this student?

Instructional Practices
  What are the most effective ways to teach this student?

Remediation
  What skills that support learning does the student need to acquire?
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### Intervention Plan

<table>
<thead>
<tr>
<th>Learning Environment</th>
<th>Instructional Practices</th>
<th>Remediation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. John needs to sit out of the traffic patterns in the classroom. He needs to sit within 5 ft of visually presented information during instruction. 2. During group work, he needs to be in a group of no more than 4, with a strong, organized leader. 3. During independent reading, John needs to be able to read aloud quietly.</td>
<td>1. John will benefit from multiple repetitions of new information. He will profit from an initial visual presentation followed by a verbal explanation. 2. He needs guided practice to develop skills rather than independent homework. 3. Provide no more than 2 verbal directions at a time.</td>
<td>1. John would benefit from activities to increase his short-term memory of verbal information through the use of games. 2. He needs to increase reading fluency with repeated readings of the same text. 3. He needs to increase math fluency with frequent 1-minute exercises of fact retrieval using both oral and written formats.</td>
</tr>
</tbody>
</table>

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### Section VII. Resources

- For parents
- For teachers
- For student
- Don’t recommend something you haven’t checked out.
  - *I think you can download it.* Provide enough information that they can find it.

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### Just checking…

- How is a cross-battery process report different from the typical eligibility report?
- Why is it important to clearly state referral questions?
- What do you do when there are no concerns specific to a processing domain?
- On what should recommendations be based?
- What is one thing you may do differently as a result of this workshop?