PLS-5 and CELF Preschool-2: Case Studies
Adam Scheller, Ph.D.

Disclosures

- Dr. Scheller is an employee of Pearson (financial), publisher of the PLS-5 and CELF P:2. No other language assessments will be presented in this presentation.

Agenda (1:00-2:00 PM Eastern)

- 1:00 to 1:10 pm Purpose and design of the PLS-5 and CELF Preschool-2
- 1:10 to 1:20 pm PLS-5 and CELF Preschool-2 test format and impact on child performance
- 1:20 to 1:40 pm PLS-5 Case Studies
- 1:40 to 1:55 pm CELF P:2 Case studies
- 1:55 pm Q and A

Learning Outcomes

At the completion of the webinar participants will be able to:

1. Describe two differences between PLS-5 and CELF Preschool-2 test purpose and design.
2. Describe one reason why test formats differences can result in different scores.
3. Describe 2 differences in the type of data collected by each test.
4. Describe a referral question that would guide choosing one test over the other.

PLS-5 can be used to...

- Ages birth to 7:11
- Determine presence of a language delay/disorder.
  - Determine whether child has receptive or expressive language delay/disorder, or combination of both
- Determine eligibility for early intervention or speech/language services.
PLS-5 can be used to...

- Identify both receptive and expressive language skills in the areas of:
  - Attention, gesture, play, vocal development, social communication, vocabulary, concepts, language structure, integrative language, and emergent literacy.
- Identify a child’s language strengths and weaknesses to develop appropriate interventions.

1 month norms for 2:6 – 2:11

- Children transitioning from EI to school services often referred for testing at age 2:11.
  - 6 month norm interval potentially inflated scores
  - With 1 month interval, child is being compared to his/her 1 month age group rather than 6 month age group
- Score will (likely) differ if you derive Standard Scores using 6-month or 1-month interval
  - Best Practice: use same interval consistently for all children in this age range
  - Specify if that you are using 1-month norm intervals.
Scoring and Interpretation

Record Form

<table>
<thead>
<tr>
<th>Year</th>
<th>Month</th>
<th>Day</th>
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<tbody>
<tr>
<td>Test Date</td>
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<td>06</td>
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<tr>
<td>Birth Date</td>
<td>2008</td>
<td>08</td>
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<tr>
<td>Chronological Age</td>
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Scoring and Interpretation

<table>
<thead>
<tr>
<th>Auditory Comprehension</th>
<th>Time 1</th>
<th>GSV</th>
<th>Time 2</th>
<th>GSV</th>
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<tr>
<td>Raw Score</td>
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Scoring and Interpretation

<table>
<thead>
<tr>
<th>Expensive Communication</th>
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<tbody>
<tr>
<td>Raw Score</td>
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Scoring and Interpretation

<table>
<thead>
<tr>
<th>Time 1 Standard Score</th>
<th>GSV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time 2 Standard Score</td>
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Scoring and Interpretation

<table>
<thead>
<tr>
<th>Total Language Score</th>
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<tbody>
<tr>
<td>Raw Score</td>
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Scoring and Interpretation

<table>
<thead>
<tr>
<th>Growth Scale Values: Interpretation Scenarios 1 &amp; 2</th>
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<tbody>
<tr>
<td>Scale</td>
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<tr>
<td>Auditory Comprehension</td>
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<td>Expressive Communication</td>
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<tr>
<td>75</td>
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<tr>
<td>GSV Time 1</td>
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<tr>
<td>482</td>
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<tr>
<td>Standard Score Time 2</td>
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<tr>
<td>75</td>
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<tr>
<td>GSV Time 2</td>
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<td>515</td>
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Growth Scale Values: Interpretation Scenario 3

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<th>Scale</th>
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<th>GSV Time 1</th>
<th>Standard Score Time 2</th>
<th>GSV Time 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auditory Comprehension</td>
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<td>460</td>
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</table>
### Growth Scale Values: Interpretation Scenarios 4 & 5

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<tr>
<th>Scale</th>
<th>Standard Score Time 1</th>
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<th>Standard Score Time 2</th>
<th>GSV Time 2</th>
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<tbody>
<tr>
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<tr>
<td>Auditory Comprehension</td>
<td>85</td>
<td>482</td>
<td>72</td>
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</tr>
</tbody>
</table>

### Scoring and Interpretation

#### Supplemental Measures
- Articulation Screening Raw Score
- Typical
- Further evaluation indicated
- Further evaluation strongly indicated
- Language Sample Checklist
  - Reinforces PLS-5 results
  - Differently from PLS-5 results
- Home Communication Questionnaire
  - Reinforces PLS-5 results
  - Differently from PLS-5 results

### Index Scores
- **Receptive Language Index (RLI)**
  - A measure of listening and auditory comprehension skills
  - Derived by summing the scaled scores of three receptive subtests

- **Expressive Language Index (ELI)**
  - A measure of overall expressive language skills
  - Derived by summing the scaled scores of three expressive subtests

### Index Scores (cont.)
- **Language Content Index (LCI)**
  - A measure of semantic development
    - Vocabulary
    - Concept development
    - Comprehension of word associations and relationships
    - Comprehension of simple and complex sentences

- **Language Structure Index (LSI)**
  - An overall measure of the ability to interpret and produce word and sentence structure

### CELF P:2 Sensitivity/Specificity Example:
- 1.0 SD Cutoff (MS = 85); Lang. Disorder (~10% prevalence)

<table>
<thead>
<tr>
<th>Language Disorder (.85)</th>
<th>No Language Disorder (.82)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive Test Results</td>
<td>850</td>
<td>800</td>
</tr>
<tr>
<td>Negative Test Results</td>
<td>150</td>
<td>8,200</td>
</tr>
<tr>
<td>Total</td>
<td>1,000</td>
<td>9,000</td>
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</table>
CELF Preschool–2 Assessment at Each Level...what level?

1. Identify whether or not there is a language disorder.
2. Describe the nature of the disorder.
3. Evaluate early classroom and literacy fundamentals.
4. Evaluate language and communication in context.

CELF-P:2 Case Study 1

- Male, age 3 years, 7 months
- Previously diagnosed with a mixed receptive/expressive language disorder at age 3 years, 6 months
- At time of evaluation he was receiving services from SLP, OT and PT

Level I – Core Language Index

- Core Language Index = 69 (confidence interval of 62 to 76 at 90% conf. int.)
  - Sentence Structure = 4
  - Word Structure = 3
  - Expressive Vocabulary = 7

Core Language Index

- Does child have a language disorder?
  - Evidence to support decision

Level II – Nature of the Disorder

- Receptive Language Index = 73
- Expressive Language Index = 73
- Language Content Index = 79
- Language Structure Index = 67

Level II – Nature of the Disorder

- Receptive Language vs. Expressive Language (scores are identical and there is not a statistically significant difference)
- Language Content vs. Language Structure (12 point difference is significant at the .05 level and frequency is 9.9%)
Level II – Nature of the Disorder

- Receptive and expressive skills are commensurate with one another
- Mixed receptive/expressive Disorder present
- Language content is a relative strength compared to language structure
- Language content and language structure are both delayed

Level III – Early Classroom and Literacy Skills

- Recalling Sentences in Context (< 1st to 24th percentile)
- Pre-Literacy Rating Scale (Did not meet criterion)

Level III – Early Classroom and Literacy Skills

- Scores in both areas are low
- Recommendations

Level IV – Language and Communication in Context

- Pragmatic profile not administered
- Why?

CELF-P:2 Case Study 2

- Female, age 6 years, 1 month
- Just starting first grade
- Previously diagnosed with a moderate-to-severe language disorder at age 5 years, 4 months using the TOLD-P,3
- Currently identified with a CD and LD
- Receiving services from LD teacher, SLP and OT

What would you recommend?
Level I – Core Language Index

• Core Language Index = 63 (confidence interval of 56 to 70 at 90% conf. int.)
  • Sentence Structure = 4
  • Word Structure = 3
  • Expressive Vocabulary = 4

Core Language Index

• Does child have a language disorder?
  • Evidence to support decision

Level II – Nature of the Disorder

• Receptive Language Index = 83
• Expressive Language Index = 65
• Language Content Index = 79
• Language Structure Index = 65

Level II – Nature of the Disorder

• Receptive Language vs. Expressive Language (18 point difference is statistically significant at the .05 level and the frequency is 4.1%)
• Language Content vs. Language Structure (12 point difference is significant at the .05 level and frequency is 6.6%)

Level II – Nature of the Disorder

• Receptive skills > Expressive Language
• Receptive language is a relative strength
• Primarily expressive problems
• Language content is a relative strength compared to language structure
• Language content and language structure are both delayed

Subtest Scores

• Sentence Structure = 4
• Word Structure = 3
• Expressive Vocabulary = 4
• Concepts and Following Directions = 7
• Recalling Sentences = 5
• Word Classes – Receptive = 11
• Word Classes – Expressive = 8
• Word Classes – Total = 9
Level III – Early Classroom and Literacy Skills

- Basic Concepts (Did not meet criterion)
- Recalling Sentences in Context (< 1st to 4th percentile)
- Phonological Awareness (Did not meet criterion)
- Pre-Literacy Rating Scale (Did not meet criterion)

Level III – Early Classroom and Literacy Skills

- Scores in all areas are low
- Strength in using content of what she hears and weakness in the area of mastery of the linguistic rules for structure (morphology and syntax)
- Weakness in recalling sentences may be related to deficits in the area of language structure

Level IV – Language and Communication in Context

- Descriptive Pragmatics Profile (Met criterion)

Appendix

When to choose:

PLS-5 vs. CELF P:2

Correlations: CELF Preschool-2/PLS-5
What is the referral question?

Which early speech and language skills has the child acquired? What are the gaps in developmental language skills? Is this preschooler able to handle the language demands of the classroom? Which specific language skills is this preschooler missing?

At what ages can children be tested to obtain normed scores?

Birth through 7.11
3;0 through 6.11

What is the test purpose?

Identify a child with a language delay or disorder that interferes with communication. Screen children for possible articulation delays. Identify a language delay or disorder that has a negative impact on classroom success.

What information about the child’s language does this test provide?

A broad overview of developmental language skills (verbal and nonverbal) in language domains affecting communication. For younger children, caregivers provide information about the child’s communication abilities in the home. In-depth assessment of semantics, morphology, and syntax, with checklists used to assess pragmatics and emerging literacy.

Which tool provides the most information about the child’s level of language ability?

PLS-5 can be used to assess children with moderate to severe delays. Provides more detailed information about a child's language skills when the child:
- Is functioning at a pre-linguistic level, at a 1- or 2-word level, or using sentence structures far below the level of age peers.
- Exhibits deficits across multiple language domains.
- Is placed in supported classroom environments (e.g., early childhood settings) with or without adaptations.
- Has difficulty participating in regular education settings due to very limited communication skills or social interaction skills.

CELF Preschool 2 can be used to assess children with mild to moderate delays. Provides more detailed information about a child’s language skills when the child:
- Uses morphological and syntactic forms somewhat below the level of age peers.
- Exhibits deficits in 1-2 language domains (e.g., morphology or semantics).
- Has difficulty mastering curriculum requirements in regular education classrooms or at home.
- Has difficulty participating in classroom activities due to pragmatic social interaction skills.

Which speech and language skills are tested?

Provides a broad survey of pre-linguistic skills through emergent literacy skills, including:
- Attention to environment and people
- Gestures
- Play
- Verb development
- Social communication
- Vocabulary
- Concepts
- Morphology
- Syntax
- Integrative language skills (e.g., analogies, references)

In-depth assessment of preschool- and early school-aged language skills in the areas of:
- Vocabulary
- Comprehension
- Following directions
- Verbal relationships
- Morphology
- Syntax
- Pragmatics
- Phonological awareness
- Pre-literacy
How is this test structured?

Two scales: Auditory Comprehension and Expressive Communication

How do I elicit language behaviors?

Interactive, play-based tasks using manipulatives, and simple picture pointing and question-answering formats. There are two to six items per task.

What languages are available?

English Edition
Spanish Edition (dual language format for bilingual children)

How similar is the normative group to my population?

Year normative sample collected 2012
Race: Ethnicity
- 53.7% White, 46.3% Non-white
- 40.3% Parent Education 12 years or less
- 39.4% Parent Education 13+ years
*May not sum to 100% due to rounding

Why do PLS-5 and CELF Preschool-2 sometimes result in different scores?

- The two tests are normed on two different normative populations eight years apart. Demographic characteristics have shifted significantly since the publication of CELF preschool-2 in 2003.
- PLS-5 is a play-based assessment for children at the younger age, and provides many more verbal cues and supports than CELF-preschool-2. CELF-preschool-2, while child-friendly, has more structured tasks and provides fewer cues and supports.
- PLS-5 provides credit for interpersonal communication-based tasks. CELF Preschool-2 normative scores are based on subtests focusing on semantics, morphology, and syntax.
Questions?
For customers in the USA
1-800-627-7271
www.PearsonClinical.com
www.speechandlanguage.com

For Canadian customers,
1-866-335-8418
www.PearsonClinical.ca