How Do Speech and Language Difficulties Impact Learning?
Gloria Maccow, Ph.D., Assessment Training Consultant

Disclosures

Financial
Gloria Maccow is an employee of Pearson.

Non-Financial
There is no relevant non-financial information to disclose.

Course Content
• Focuses primarily on Bridge of Vocabulary, CELF-5, EVT-2, OLAI-2, and PPVT-4.
• No other similar assessments will be discussed during this presentation.

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Today’s One-Hour Agenda

I. Language and Learning
II. Language Weaknesses and Classroom Performance
III. Resources and Strategies to Facilitate Language Development in the Classroom

Learning

What is learning?

How do we know learning has occurred?

Learning and Memory

In our schools and classrooms, we expect children to learn and remember.

(See, e.g., Squire, 1987)
Components of Language

Oral Language

Phonology
Pragmatics
Morphology
Semantics
Syntax and Grammar

Language: Code and Rule-Governed System

Language: Code and Rule-Governed System

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Language: Code and Rule-Governed System

Cognitive Bases of Language (Piaget)

Information Processing

(Santrock & Yussen, 1992)
Language is One of Multiple Cognitive Skills

Demands of Cognitive Tasks

Comprehension and Production

Receptive (Comprehension)
Children must understand words and sentences to perceive and process information.

Expressive (Production)
They must use words to show they can retrieve information from memory.
Modes of Communication

<table>
<thead>
<tr>
<th></th>
<th>Oral</th>
<th>Written</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receptive</td>
<td>Listening Comprehension</td>
<td>Reading Comprehension</td>
</tr>
<tr>
<td>Expressive</td>
<td>Oral Expression</td>
<td>Written Expression</td>
</tr>
</tbody>
</table>

What do these data suggest about learning?

<table>
<thead>
<tr>
<th>Composite/Subtest</th>
<th>Std. Score/Scaled Score</th>
<th>%ile Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Language Memory</td>
<td>85</td>
<td>16</td>
</tr>
<tr>
<td>Following Directions</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Formulated Sentences</td>
<td>8</td>
<td>25</td>
</tr>
<tr>
<td>Recalling Sentences</td>
<td>11</td>
<td>63</td>
</tr>
</tbody>
</table>

(CELF-5: Age 13:3)

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### Oral Language and Achievement: Special Group Study KTEA-3

<table>
<thead>
<tr>
<th></th>
<th>Language Disorder</th>
<th>Matched Control Group</th>
<th>Diff.</th>
<th>P value</th>
<th>Standard Difference</th>
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</thead>
<tbody>
<tr>
<td>Reading</td>
<td>83.4</td>
<td>103.7</td>
<td>20.36</td>
<td>&lt;.01</td>
<td>1.60</td>
</tr>
<tr>
<td>Math</td>
<td>82.2</td>
<td>102.2</td>
<td>19.98</td>
<td>&lt;.01</td>
<td>1.57</td>
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<tr>
<td>Written Language</td>
<td>82.7</td>
<td>101.7</td>
<td>18.95</td>
<td>&lt;.01</td>
<td>1.30</td>
</tr>
</tbody>
</table>

### Building Blocks of Learning

<table>
<thead>
<tr>
<th></th>
<th>Concepts</th>
<th>Symbolic</th>
<th>Conceptual</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reading</strong></td>
<td>phonology</td>
<td>decoding</td>
<td>comprehension</td>
</tr>
<tr>
<td><strong>Writing</strong></td>
<td>orthography</td>
<td>encoding</td>
<td></td>
</tr>
<tr>
<td><strong>Math</strong></td>
<td>motor</td>
<td>calculating</td>
<td></td>
</tr>
</tbody>
</table>

### Reading: Two Major Parts

<table>
<thead>
<tr>
<th>Symbolic</th>
<th>Conceptual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pronouncing written words (decoding).</td>
<td>Comprehending written words and text. A major correlate of comprehension is vocabulary size.</td>
</tr>
</tbody>
</table>

Grades K-3: Need Vocabulary to Learn and Develop Reading

Grades 4 and above: Use Reading to Learn and Develop Vocabulary
Language and Literacy

Early development of reading depends critically on whether the receptive phonological component of the *aural* system and the expressive phonological component of the *oral* system are developing in an age-appropriate manner (Berninger, 2007).

Reading Requires:

- Encoding
- Segmenting
- Phonological Awareness
- Grammar
- Vocabulary and Conceptual Knowledge
- Expressive Language
- Verbal Working Memory
- Inhibition, Monitoring, Shifting Set

Phonological Awareness

Children are ready to read when they can . . .

- Hear the way words sound
- Identify rhyme and alliteration
- Blend sounds
- Recognize onset and rime
- Identify sound units in words
Connecting Written Language to Oral Language

Phonological Recoding

See
Dog

Say
Dog

(Joseph, 2006)

Receive and Perceive

Coding Word Forms in Verbal Working Memory (Berninger, 2007)

Morphological

Autonomous Orthographic Lexicon

Phonological

Orthographic

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Specific Reading Disability (Shaywitz, 2003)

A weakness in oral language can adversely affect learning to read, which, in turn, will affect reading to learn.

Verbal Interactions and Oral Language

If children have been offered fewer opportunities to hold conversation, they may:

- have limitations in the grammar they control
- have difficulties comprehending oral and written language
- have limited control of some of the most common sentence structures used in storybook English
- be unable to anticipate what may happen next in sentences (Gentile, 2003)
Lexical Knowledge

Children learn word meanings through conversations with other people.

- They often hear adults repeat words and use new and interesting words.
- The more words they hear, the more word meanings they learn.

(National Reading Panel Report, 2000)

Differences in Vocabulary Acquisition

(Adapted from Hart & Risley)

Kindergarten Readiness

(Klein & Knitzer, 2007)
What do the data suggest about language and learning?

<table>
<thead>
<tr>
<th>Receptive Vocabulary</th>
<th>Expressive Vocabulary</th>
<th>Diff.</th>
<th>Sign. of Difference</th>
<th>Base Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>SS = 94</td>
<td>SS = 73</td>
<td>21</td>
<td>.01</td>
<td>&lt;1%</td>
</tr>
</tbody>
</table>

(PPVT-4; EVT-2)

Which Subsystem of Language?

Clinician: I'd like you to tell me about some words. Here's something that you may have for breakfast: orange juice. What's orange juice?
Child: Dough nut.
Clinician: See if you can guess. What color is orange juice?
Child: Ahnge. N you dink i.
Clinician: That's good. Tell me some more about orange juice.
Child: Duh noh.
Clinician: Let's try another. What's sugar. Tell me what sugar is.
Child: Yukky.
Clinician: Yukky? Why?
Child: Can I eat this yer tee.

Just turned 6 years old; Kindergarten

Are Semantic Knowledge and Syntactic Knowledge Enough?

“My parents said it was raining cats and dogs. I’m hoping for a German Shepherd.”

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Metalinguistic Awareness

(Grade 6: Autism Spectrum Disorder)

<table>
<thead>
<tr>
<th>Test Scores</th>
<th>Scaled Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metalinguistics Profile</td>
<td>5</td>
</tr>
<tr>
<td>Making Inferences</td>
<td>3</td>
</tr>
<tr>
<td>Conversation Skills</td>
<td>7</td>
</tr>
<tr>
<td>Multiple Meanings</td>
<td>5</td>
</tr>
<tr>
<td>Figurative Language</td>
<td>4</td>
</tr>
</tbody>
</table>

(CELF-5 Metalinguistics)

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III. Resources and Strategies to Facilitate Language Development in the Classroom

Developing Language Competence

Reading
Writing
Oral Language

(The Connection Between Oral and Written Language)
(ASHA, 2001)
Contributions of SLPs

Direct Services
- Develop language competence for students with communication disorders.

Collaborative Services
- Contribute to literacy efforts of the school district for all students.

(ASHA, 2001)

To Improve Learning Outcomes, Instruction and Intervention Should Facilitate Development of . . .

- Listening Ability
- Language
- Lexical Knowledge
- Phonological Awareness

Oral Language

Reading and writing instruction alone is not enough to equalize the language gaps of many children struggling to acquire language.

Effective, targeted intervention can create a direct connection and explicit curriculum that links language and literacy development.

(Gentile, 2011, 2003)
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Proficiency in Literacy

Interactions in Oracy
Instructional Curriculum

TEXT
EXPlicit CURriculum
Reading Skills
Writing Skills

TALK
Teacher-Student Interactions

(Gentile, 2011, 2003)

Language and Learning

Culturally and Linguistically Diverse Students

<table>
<thead>
<tr>
<th>BICS</th>
<th>CALP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Interpersonal Communication Skills (BICS) are language skills needed in social situations.</td>
<td>Cognitive Academic Language Proficiency (CALP) refers to formal academic learning.</td>
</tr>
</tbody>
</table>

Provide explicit, meaningful, and structured conversation and listening opportunities about academically important content. (Mather & Goldstein, 2008)

Language and Learning

The Human Sentence (Gentile, 2011)

**Objective**
Students will practice constructing and listening to elaborated sentences.

**Materials**
- Student notebooks
- Pencils
- A few objects/items
The Human Sentence

Procedures
1. Ask the students to choose a topic or object they would like to talk about. They can use background knowledge or a prior learning experience from the curriculum. This will be the subject of their sentence.
2. Give the selected object to one student and say: You can be the first part of our sentence. You will be [name of the object/subject]
3. Ask for a related detail about the subject and solicit a volunteer to represent that part of the sentence. For example: What does a ---- do?
4. Prompt for another related detail about the subject or the first detail, and solicit another volunteer to represent the third part of the sentence. For example: When do ---- ---- ----?
5. Finally, ask for one last related detail and assign another student to represent the final part of the sentence. For example: Why do ---- ---- ---- ----?
6. Say: Before we start the "Human Sentence," let's all say it together. Have the students say each part of the sentence, starting with the subject from step 2 and adding each detail chosen in steps 3–5.
7. Line up the four students so they are facing the rest of the group/class in sentence order, from left-to-right. Stand behind the first student and say: We're going to make a "Human Sentence." When I touch your shoulders, you say your part of the sentence.
8. Move down the line behind the students touching the shoulders of each student to speak their part of the sentence. Repeat the process until the students are fluent in their responses. Then invite the entire group/class to join in the repeating of the sentence.
9. Ask the students to write the sentence in their notebooks.
The Human Sentence

**Shared Interaction**
Alter the students' positions within the Human Sentence. This requires them to pay attention, listen carefully to one another, work flexibly, and take responsibility for different parts of the sentence. You can also transform the sentence by turning it into a negative, question, command, or exclamation. This requires reciting the sentence using a shift in intonation.

**Independent Reading and Writing**
Ask students to write all four transformations of the original Human Sentence in their notebooks.

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Direct, Explicit Instruction in Vocabulary

Skills and concepts targeted in the activities include:
- Listening, speaking, reading and writing
- Language processing of nouns, verbs, adjectives, and prepositions
- Antonyms and synonyms
- Categorization
- Word parts (prefixes, suffixes, and roots)
- Rhyming
- Compounds
- Onomatopoeia
- Meaning and usage
- Storytelling
- Word play

(Montgomery, J. K., 2007)

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Word Web
Guided Practice Activity

**Objective:** The student will name items related to a theme.

**Evidence Base:** Using a list of words to develop a map of relationships is an effective method to learn and remember categories (Hutjens, Diamond, & Gaffnich, 2000).

**Directions:**
1. Before the lesson, print out six copies of the blank word web provided on the CD-ROM. Depending on the student's writing ability, you may complete the word webs or ask the student to complete them.
2. Introduce the activity and demonstrate how to use the word web. For example, write the theme “airport” in the center of the word web and say, “Let's talk about airports. Tell me some things that go with airports or that you might find at an airport.”
3. Supply one or two responses to get the student started, or use prompting questions such as, “What kind of machine might be at an airport?”
4. Reinforce sensible responses and write them in the lines that extend from the center of the word web. Query nonverbal responses.
5. Repeat the activity using the other themes listed below.

**Group Modification:** Ask students to take turns naming items related to the theme. You may either complete a single word web as a class or ask each student to complete his or her own word web.

(Bridge of Vocabulary)
Matching Beginning Sounds
(from Preschool Activity Cards, Pearson Early Learning)

PURPOSE/SKILLS
To provide the experience of listening to and matching initial sound in words; to perceive sounds and initial phonemes; to begin associating sounds and words.

MATERIALS
Self-adhesive notes, marker

VOCABULARY
listen, sound, letter, first, same, different

LITERATURE SUGGESTION
Read Can I Keep Him? by Steven Kellogg or any book that features animals children can name.

Structure of the Lesson

1. Warm Up with a simple introduction
2. Experience a fun activity
3. Enrich the experience
4. Assess children’s learning
What and How to Assess

**OBSERVATION ASSESSMENT**

+ Child says the initial sound clearly and finds an object that has the same initial sound as his/her name.

+/- With help, the child says the initial sound and finds an object that has the same initial sound.

- Child says a sound other than the initial sound of his/her name and/or finds an object with a different initial sound.

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**OBSERVATION ASSESSMENT**

- Child says a sound other than the initial sound of his/her name or finds an object with a different initial sound.

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In Summary . . .

Ability to access language fluently facilitates comprehension.

Lesson Plan From:
New York: Pearson Early Learning.
Questions

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References and Resources


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References and Resources


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• Complete the
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  • ASHA Participant form
  • Evaluation form
• Forms are found in the reminder email sent by sherry.lokken@pearson.com

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