

# EVIDENCE-BASED PRACTICE IN APHASIA REHABILITATION

Ohio Speech-Language & Hearing Association  
Annual Convention  
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## Purpose

- To review evidence regarding aphasia interventions for
  - Verbal expression
  - Written expression
  - Reading Comprehension
  - Auditory Comprehension

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## For Monday Morning...

- **You will have the following in your bag of tricks:**
  - 2 verbal expression intervention techniques
  - 1 written expression intervention technique
  - 1 reading comprehension intervention technique
  - 2 auditory comprehension intervention techniques
  - 1 idea to facilitate **personalization** of each interventions

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Organi zati on

- Overview
- Verbal Expression--Jennifer
- Written Expression --Aimee
- Reading Comprehension--Aimee
- Auditory Comprehension--Julie
- Summary
- Q & A

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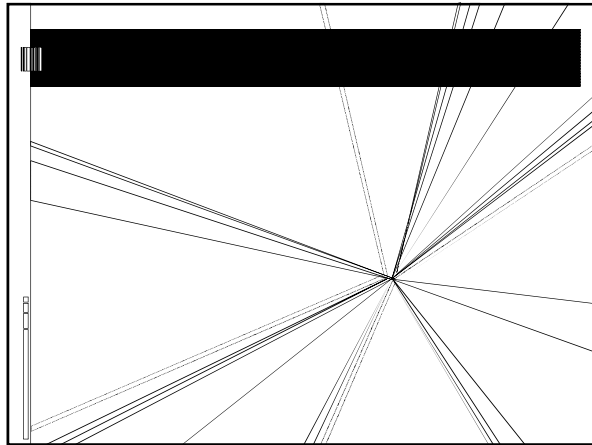
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Verbal Expressi on

**ANOMIA**

- Discourse?
- Confrontation/generative naming tasks?

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**Error Forms**

- Semantic in nature
- Phonological in nature

(Raymer, 2005; Hillis, 2001)

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**Target Words**

- Grammatical Categories
- Semantic Categories
- Frequency
- Imageability
- Length
- Familiarity/Personal Relevance

(Raymer, 2005)

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**CUING HIERARCHY**

- It's clothing
- You can button it
- It starts with /b/
- It sounds like "mouse"
- Written word: "Here is the word". Blouse "say blouse"

(Linebaugh, 1997, Raymer et al., 1993)

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### Phonological Treatments

- Semantic Category Rhyme Therapy (SCRT)
- BIKE →VEHICLE→HIKE



(Spencer et al., 2000)

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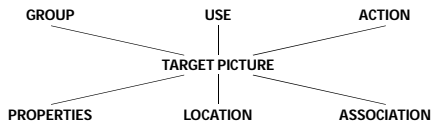
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### Semantic Treatments

- Semantic Feature Analysis (SFA)



(Boyle, 2001; Boyle, 2004; Coelho, McHugh, & Boyle, 2004; Kiran, & Johnson, 2008; Kiran, 2008; Rider, Wright, Marshall & Page, 2008)

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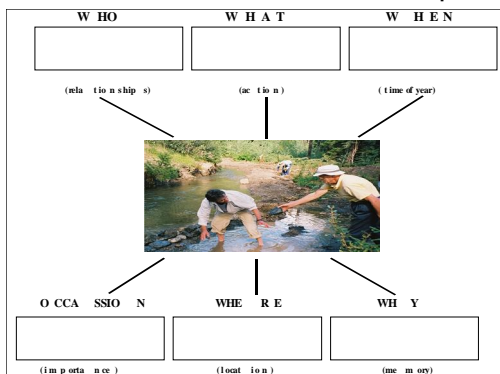
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### Personalization of Techniques



(Adapted from Boyle & Coelho, 1995)

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**SFA: Li mi tati ons**

- Word level data
- Tx Goal = discourse



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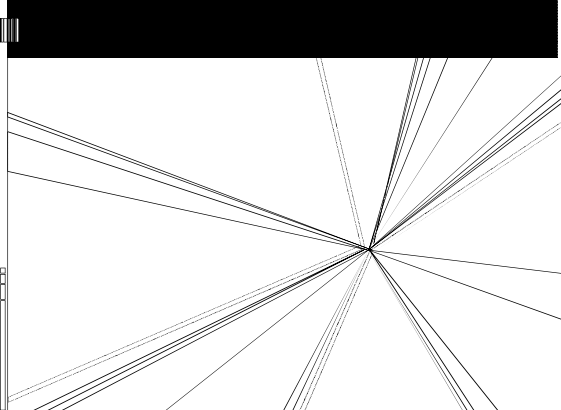
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**Anagram, Copy, & Recall Treatment (ACRT/CART)**

- Repeated copying of target words in response to pictured items
  - Confrontation spelling task
- If incorrect → ANAGRAM PUZZLE → COPY 3 times
  - Scrabble tiles
  - Clinician cues, if necessary
- Homework program
  - Consider 'errorless learning' principles

(Beeson, 1999; Beeson, Hirsch, & Rewega, 2002; Beeson, Rising, & Volk, 2003; Orjada & Beeson, 2005)

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1 copy

"Sleep. Can you write sleep."

SLEEP SLEEP SLEEP  
SLEEP SLEEP SLEEP  
SLEEP SLEEP SLEEP  
SLEEP SLEEP SLEEP

- **Target:** S L E E P
  - **CUE (SEE RIGHT)**
- **INCORRECT: Anagram\*\*:** P L S E E
- **COPY 3 times**
- **INCORRECT: Anagram + Foils\*\*:** P E B L S E F
- **COPY 3 times**

(Beeson, 1999; Beeson, Hirshc., & Reweaga, 2002; Beeson, Rising, & Volk, 2003; Orjada & Beeson, 2005)

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2 recall

"Sleep. Can you write sleep."

SLEEP SLEEP SLEEP  
SLEEP SLEEP SLEEP  
SLEEP SLEEP SLEEP  
SLEEP SLEEP SLEEP  
SLEEP SLEEP SLEEP

- **REMOVE** written work
- **RECALL**
- **INCORRECT:** present written model of the word.

(Beeson, 1999; Beeson, Hirshc., & Reweaga, 2002; Beeson, Rising, & Volk, 2003; Orjada & Beeson, 2005)

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**Homework**

- ✓ Check homework for accuracy each session
- ✓ Daily practice packet with picture and model
  - ✓ Mastered words
- ✓ Copy words 20 times
- ✓ Cover & test

(Beeson, Hirsch., & Reweaga, 2002; Beeson, Rising, & Volk, 2003)

SLEEP





COPY

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RECALL

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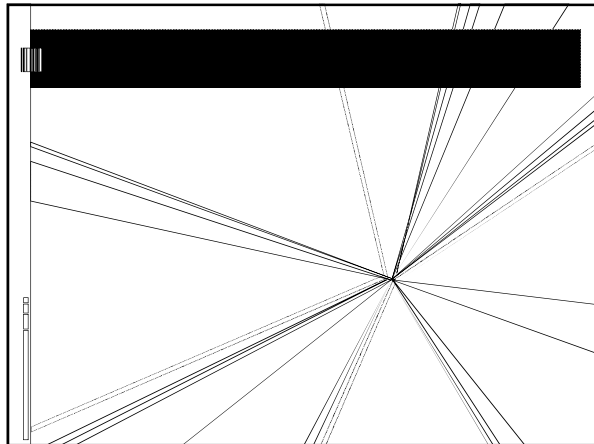
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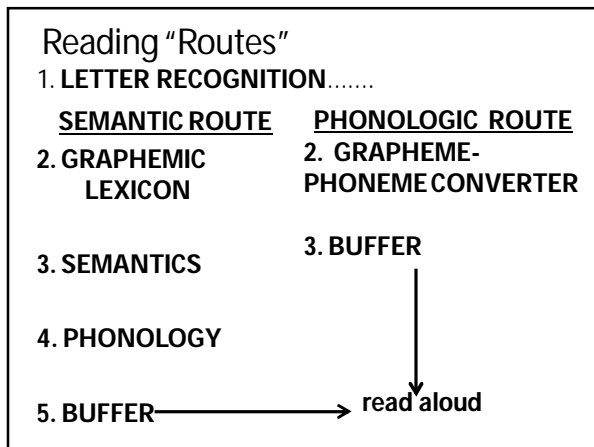
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- ORLA: 4 stages**
- Repeated oral reading
    - Chorally → independently
  - Stages at graded reading levels:
    - Sentences
      - Level 1: Simple 3-5 words; 1<sup>st</sup> grade
      - Level 2: 8-12 words; 3<sup>rd</sup> grade
    - Paragraphs
      - Level 3: 15-30 words; 6<sup>th</sup> grade
      - Level 4: 50-100 words; 6<sup>th</sup> grade
- (Cherney, Merbitz, & Grip, 1985; Cherney, 1995; 2004, 2007)

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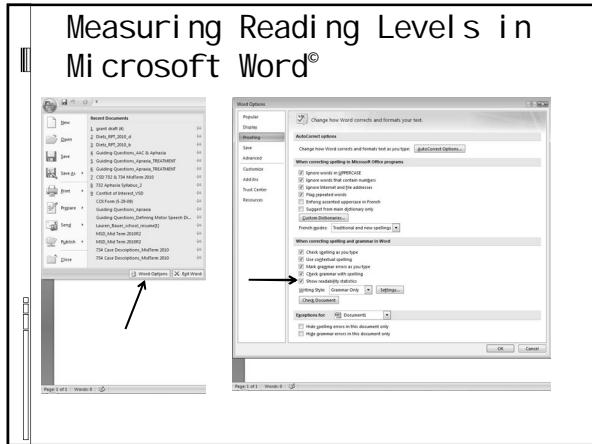
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## Measuring Reading Levels in Microsoft Word®




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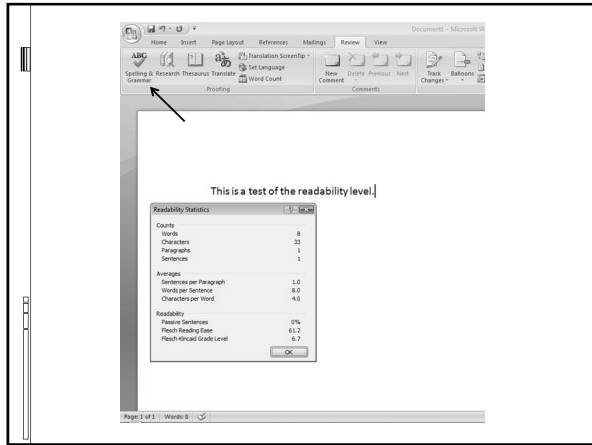
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(Cherney, Merbitz, & Grip, 1985; Cherney, 1995; 2004, 2007)

Garfield is sleeping on the pillow.  
•(4<sup>th</sup> grade)

- SLP READS TARGET
- CHORAL READING → PT POINTS TO WORDS
  - REPEAT
- SLP READ **WORD** FOR PT TO I.D.
- SLP POINTS TO WORD → PT READS

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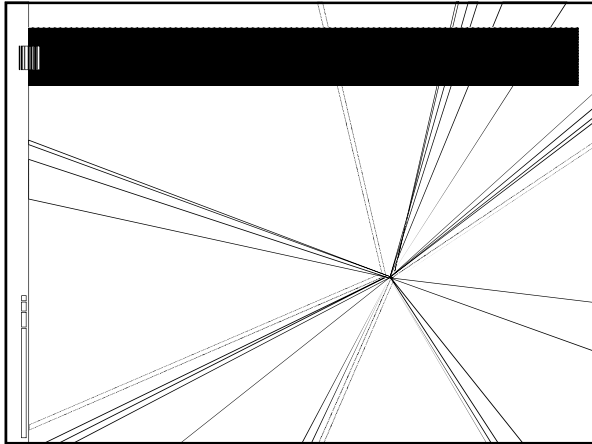
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Comprehension Approaches

- 'Bottom Up'
- 'Top Down'

1. Context based approach
2. Computer Applications

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Context Based Approach

**When:**

- Early
- Patients' deficits are severe

**Premise:**

- Use a conversational context to facilitate comprehension
- Uses a 'Top Down' Model

(Marshall, 2008)

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**Context Based Approach**

- **3 steps**

- 1) Identify and manipulate linguistic and temporal variables
- 2) Encourage the patient to take responsibility
- 3) Instruct family and caregivers

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**Context Based Approach**

- Consider the type of context presented
  - Auditory
  - Visual
- **Context** helps convey the main idea of a message through a top-down' method

(Marshall,2008)

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**Context Based Approach**

<b>Visual Stimuli</b>	<b>Auditory Stimuli</b>
<ul style="list-style-type: none"> <li>• Dimensionality</li> <li>• Size</li> <li>• Color</li> <li>• Context</li> <li>• Size and Form of written materials</li> <li>• "Aphasia Friendly"</li> </ul>	<ul style="list-style-type: none"> <li>• Syntax</li> <li>• Stress on Key Words</li> <li>• Slowing Rate of Speech</li> <li>• Use Scripts</li> </ul>

(Coelho, Sinotte & Duffy, 2008 & Brennan, Worrall & McKenna, 2005)

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### Context Based Approach and AAC

- Low-tech AAC Methods
  - Augmented Comprehension techniques
    - ✓ Writing Key Words
    - ✓ Yes / No
    - ✓ Drawing / Picture Supports
    - ✓ Gestures

(Beukelman, Garrett & Yorkston. 2007 & Garret & Huth, 2002)

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### Computer Applications

- What is it?
- Who benefits?
  - Mild-mod impairments in auditory comprehension
  - Individuals who can **Self-Monitor**

(Katz, 2008)

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### Computer Applications

- Parrot Software®
  - <http://www.parrotsoftware.com/>
- Bungalow®
  - <http://www.bungalowsoftware.com/>

How do these programs target auditory comprehension?

- ✓ Limitations

(Parrot Software. © 2007-2009; Bungalow Software Inc. © 1995-2010)

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## Computer Applications

- Wii™-Wii™ habilitation
- How do these games target auditory comprehension?

(Wii™-habilitation & Aphasia Groups, 2009)

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## Summary

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| <ul style="list-style-type: none"> <li>▪ Errors: semantic or phonological?           <ul style="list-style-type: none"> <li>▫ Helps guide treatment</li> </ul> </li> <li>▪ Speaking           <ul style="list-style-type: none"> <li>▫ SFA, SCRT</li> </ul> </li> <li>▪ Writing           <ul style="list-style-type: none"> <li>▫ CART/ACRT</li> </ul> </li> <li>▪ Reading           <ul style="list-style-type: none"> <li>▫ ORLA</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>▪ Listening           <ul style="list-style-type: none"> <li>▫ Wii®</li> </ul> </li> <li>▪ Make it personally relevant.           <ul style="list-style-type: none"> <li>▫ Pictures</li> <li>▫ Life goals</li> </ul> </li> <li>▪ Instruct communication partners</li> </ul> |
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**??QUESTIONS??**

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