Autism with Hyperlexia: Improving Reading Comprehension with a Systematic Approach

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LITERACY SPEAKS!

Literacy Speaks! is a hierarchical, orthography-based system that allows a speech-language pathologist (SLP) or reading specialist to address an individual’s need. The system targets:
- Alphabetic letter recognition
- Sound-letter correspondence
- Incorporation of target sounds into words
- Exposure to sight words (30)
- Combination of target and sight words into phrases/sentences
- Target and sight words in books, and
- Carryover of sound and literacy skills.

The Complete Kit: Literacy Speaks!

PROJECT INNOVATION

Research has shown that children with autism respond to the use of technology in learning.

Literacy Speaks!® materials were presented on an iPad running PowerPoint:

Phrase example:
Initial /w/

my

wand

CHARACTERISTICS OF Q4

✓ 13-year-old boy
✓ Autism diagnosis
✓ Academic placement: Autism Classroom
✓ Receives services addressing speech, language, and pragmatics during school year
✓ Hyperlexia
✓ Hearing within functional limits

PRE-TESTING

Comprehensive Test of Phonological Processing (CTOPP) &
- “very poor” phonological awareness
- “poor” phonological memory
- “very poor” rapid naming

Gray Oral Reading Tests (GORT-4) & “very poor”

Single Word Intelligibility Test 35%

Northern Speech Services, per author Kelli Richmond, provided a complete Literacy Speaks!® kit to Dr. Raupp for completion of this project.

Beyond this, neither Ms. Perkowski nor Dr. Raupp have any disclosures or conflicts of interest.

DESCRIPTION OF SESSIONS

Intervention consisted of twelve 30-minute sessions over three weeks (4x/week). Each session picked up where the previous one left off.

Procedure for each phrase (focus on word-based intervention to add fraction at word’s end):
- Sound/letter isolation:
  - Show printed representation of the letters. Once >50% on this or (subsequent levels) when probed, move to next level.
- Target sounds in words:
  - Locate target letter in text shown, phonological awareness skills (i.e., segmentation, blending).
  - Introduce picture that represents target word (drawing of wand) to ensure participant’s knowledge of the written word (wand) coincides with its phonological conception.
- Target word in phrases:
  - Introduce sight words (e.g., want, my, see), practice (e.g., see + wand).
- Target word in sentences:
  - Add sight words (or other words learned in different cycle) and punctuation.
- Target word in short e-books:
  - Multiple readings promote fluent reading.
  - Comprehension questions read aloud and shown with visual support.

Originally had 2 answer choices for concrete questions about a single page of the story. By end of intervention, had 4 answer choices for more abstract questions about entire story.

OUTCOMES

By the end of the experimental period, Q4 was:
✓ Answering concrete and abstract comprehension questions by selecting from among a group of 4 possible options.
✓ Using new vocabulary words (e.g., iris, shed) as soon as he learned them.
✓ Allowing researchers to attempt sound elicitation (i.e., /g f v/).

REFERENCES


R wrinkles, L fingers, P from left, T from right.

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References