Spoken Production of Novel Words with Accompanying Picture Symbols Across Language Skill Proficiencies of Young Children

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Spoken Production of Novel Words with Accompanying Picture Symbols Across Language Skill Proficiencies of Young Children

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Department of Special Education and Communication Disorders

Background

Late Talkers (LTs):
• Under age of 3 with language delay
• Fewer than 50 words; no/few 2-word phrases
• Not secondary to other conditions (e.g., autism, hearing impairment)

Typically divided into two subgroups:
• Expressive-only (ELTs) vs. Expressive-Receptive (RLTs)

Rapid word-learning skills:
• Limited word knowledge or word-learning skills of LTs even though they may be predictive of future outcomes (Ellis Weismer & Evans, 2002)
• May redefine how language is being conceptualized; no ‘real’ ELT grouping (see Leonard, 2009)
• Expressive delay does not occur in isolation; ‘something’ causing it
• All children fall along a spectrum of underlying language deficits (see Rescorla, 2002, 2005, 2009)

Picture symbol use:
• Used to scaffold vocabulary development (Beukelman & Mirenda, 2013), but not commonly used with LTs (Bauman Leech & Cress, 2011)
• No previous study has systematically explored the use of picture symbols for novel word productions with LTs identified as ELT or RLT

Aim of current study:
• Post-hoc analysis to further investigate types of spontaneous productions of novel words by group; all previously coded as “spontaneous verbal productions” in original study (DeVeney, 2012)

Research Question

What differences, if any, were seen among typically developing children (TD), late talkers with expressive-only language delay (ELT), and late talkers with expressive-only and receptive language delay (RLT) in verbally producing novel language delay (ELT), and late talkers with expressive-only and receptive language delay (RLT) in verbally producing novel words by group; all previously identified as ELT or RLT

Methods

Participants:
• 9 children (7 males, 2 females) ranging in age from 2:0-2:7 (M = 25.87 months; SD = 1.37)
• Identified as TD, ELT, or RLT based on initial assessment results (3 per group)

Experimental Materials:
• Target novel non-words: 8 consonant-vowel-consonant words unfamiliar to children (e.g., “geem,” “hep”)
• Unfamiliar toy referents: Each novel word paired with unfamiliar toy (e.g., silver and red spaceman toy was called “kobe”)
• Picture symbol: Each unfamiliar toy also had a 2½ inch picture symbol associated with it

Experimental Sessions
• Direct Imitation
• Prompted
• Unprompted

Experimental Design:
• Single subject design with a baseline and follow up session (Kazdin, 2011)

Post hoc analysis procedures:
• Re-coded all “spontaneous verbal productions” as:
  • A) unprompted spoken word productions
  • B) prompted spoken word productions
  • C) direct imitation of spoken word productions

• Reached over 90% agreement with faculty advisor on training tapes

• Videotapes of entire data set (including baseline, word-training sessions, and follow up) randomly divided among 2 coders; each will re-code 20% of each others’ data for inter-observer reliability

• Current status: 100% of data re-coded to date; 20% re-coded across participants

Conclusions

In original study:
• Picture symbols facilitate spoken target novel word productions for ELTs. Overall, the ELT group produced as many different target novel words as the TD group. This finding was surprising given the nature of the identified language delay.
• The spoken productions of the TD group and the ELT group contrasted with the spoken productions of the RLT group.

Post hoc analysis:
• ELT group performance continued to look similar to TD group performance
• RLT group demonstrated differences in unprompted spoken productions when compared to the TD and ELT groups
• ELT performance on unprompted and prompted productions lends support to Leonard (2009) theory that there is some receptive component to expressive language delay

Clinical Implications

Picture symbols facilitate verbal expression
• Not commonly used for ELTs
• Have available, not ask for use of specifically
• More research/clinical documentation needed

Limitations & Future Directions

Limitations:
• Small number of participants
• Small, limited sample of words
• Limited number of word training sessions
• Scheduling differences

Future directions:
• Group design/replication
• Facilitating effect of picture symbols on verbal expression

Acknowledgements

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Selected References


Table 1: Description of Experimental Sessions

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Table 2: Number of Novel Words Produced

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Table 3: Limited vocabulary

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Table 5: Language delay

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