



Introduction

- Armbuster, Lehr, and Osborn (2003)
National Reading Panel: 5 building blocks-phonemic awareness, phonics, fluency, vocabulary and text comprehension
Phonological awareness: broad term encompassing awareness of rhymes, words, syllables, and onsets and rimes as well as phonemes
Phonemic awareness: ability to notice, think about, and manipulate the phonemes in spoken language, including phoneme manipulation including substitution and deletion phoneme blending, phoneme segmentation
Phonics: relationship between written letters and phonemes

Gabig (2009)

- Phonological Awareness: participants with autism: scored below average on both measures of phonological awareness whereas the, typically-developing group scored within normal limits
Phonemic Awareness: participants with autism scored more than one standard deviation below average on the elision task of phonological awareness and low average on the sound blending task

Fallon, Light, McNaughton, Dragon, and Hammer (2004)

- Visual supports used for activities related to matching initial sounds in words, sound blending, and sound-letter correspondence
All 5 participants reached criterion on matching initial sounds in words
4 of 5 participants generalized skills to book reading contexts

Purpose

The purpose of this study was to investigate the effectiveness of visual supports on phonics and phonemic awareness for a child who presents autism disorder.

Methods

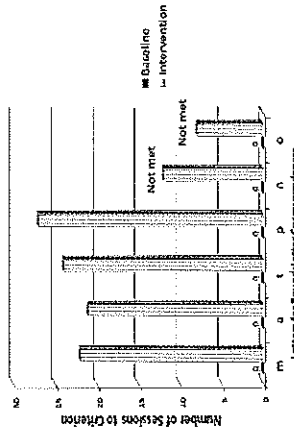
- Participant
7 year, 1 month old female
Diagnosed as presenting autism
Materials
Light and McNaughton (2006)
Accessible Literacy Learning (ALL) Curriculum
Sound-letter correspondence (Phonics)
Sound blending (Phonemic Awareness)
Baseline
Baseline data collected on two behaviors across one trial or until a stable baseline was met
Treatment
Began with letter-sound correspondence
Script developed to include the steps from the ALL program
Training criteria: 2 correct responses out of 3 trials across 3 consecutive sessions
Baseline probes for second behavior (i.e., sound blending) until criteria was met on first behavior
Procedures for baseline used were same as letter-sound correspondence
Data collected every third session
Once 3 letters met criteria, sound blending treatment began

Methods

- Data Analysis
Baseline behavior compared with treatment for same behavior
Baseline and treatment from letter-sound correspondence compared with baseline of sound blending
Reliability
Point-to-point reliability was 100% for baseline data and 100% for intervention data

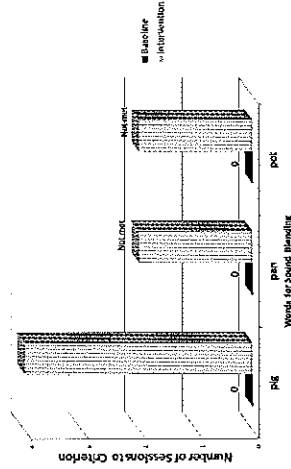
Results

Figure 1. Baseline and Intervention Data for Sound-Letter Correspondence Showing Total Number of Sessions Required to Meet Training Criterion*



*Note: Inconsistent responses during most sessions until sound-letter correspondence learned and criterion met; similar pattern noted on all sound-letter associations

Figure 2. Baseline and Intervention Data for Sound Blending Showing Total Number of Sessions Required to Meet Training Criterion**



**Note: More consistent responses during most sessions; less abstract since line drawn symbols used to represent word

Discussion

Use of visual strategies when teaching letter-sound correspondence is an effective treatment strategy. Current supported results of Fallon, Light, McNaughton, Dragon, and Hammer (2004)

- Participant learned to identify 4 of 6 letter-sound correspondences introduced
Only two sounds introduced at a time
Participant inconsistent in responses during sessions but gradually learned to identify letters when provided the sound
Participant had trouble identifying letter when four were shown on card and she had to point to letter; modified task so that four letters were presented horizontally on a choice board and she selected letter and put it in an envelope attached to box
Participant performed more consistently on sound blending, which may have been related to use of line drawn symbols
Due to time restrictions only one word met training criterion

Visual supports allow participants with limited language the ability to participate in phonemic awareness tasks

Further research with a variety of individuals who present autism spectrum disorders should be completed

Conclusions

Contributed to research regarding the use of visual supports for teaching phonics to a child who presents autism; however, more time needed to:

- Meet training criterion for sound blending
Advance to higher levels of the program to initiate reading

References

Armbuster, B. B., Lehr, F., & Osborn, J. (2003). Put reading first: The research building blocks for teaching children to read. Jessup, MD: National Institute for Literacy.
Fallon, K. A., Light, J., McNaughton, D., Drager, K., & Hammer, C. (2004). The effects of direct instruction on single-word reading skills of children who require augmentative and alternative communication. Journal of Speech, Language, and Hearing Research, 47, 1424-1439. doi: 10.1092-4388/04/4706-1424
Gabig, C. S. (2009). Phonological awareness and word recognition in reading in children with autism. Journal of Communication Disorders Quarterly, 31, 67-85. doi: 10.1177/1525740108328410
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