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Teach Me to Read: Gains in Preschoolers’ Phonological Awareness Skills From Explicit Instruction

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Abstract
Research has shown a relationship between phonological awareness, early reading instruction, and later reading skills. Phonological awareness (PA) skills are taught through explicit instruction. When this instruction occurs before learning to read, advances appear in reading development, advances greater than those from other types of pre-reading intervention. The current study determined effects of low intensity PA treatment in typically developing preschoolers and preschoolers with language impairments. Pre- and post-test scores of children in Reading Explorers (RE) were compared. Results indicated scores for children with speech and language impairments and typically developing children improved. When compared with age-matched peers in a typical preschool curriculum, children in RE scored significantly higher following treatment.

1. Introduction
Phonological Awareness refers to an individual’s purposeful ability to attend to and manipulate the sound structure of a spoken word, outside of meaning. [1] [2] [3] [4] PA is an umbrella term, which includes syllable awareness, onset-rime awareness, and phoneme awareness. Furthermore, PA skills have been determined to predict later literacy [5] [6]. Without an understanding of PA, children struggle with early reading instruction. Specifically, children with speech and language impairments exhibit difficulty with phonological awareness skills [7] [8]. However, phonological awareness has been shown to be a teachable skill. As previous studies indicate, children demonstrate improvement following the explicit teaching of phonological awareness skills. [9] [10]. When investigating duration and intensity of instruction, previous research indicated five year olds receiving short duration (<36 weeks); high intensity (>2 hours/week) phonological instruction demonstrated more gain in phonological awareness, and reading/decoding than five year olds receiving a reading program without PA [2]. The purpose of this study was to examine the effect of low-intensity, short duration, phonological awareness intervention upon preschool-aged children, including typical children and children with speech and language impairments.

2. Experiment, Results, Discussion, and Significance
The RE program is a literacy-based playgroup for preschoolers and their parents/caregivers held at the Wichita State University Speech-Language-Hearing Clinic which involves a multi-sensory approach for emergent literacy skills. This program is a short duration, twenty-eight week program that includes one hour and thirty minutes of treatment once a week. A portion of the treatment is fifteen minutes of phonological awareness teaching that is considered to be low intensity. The Assessment of Primary Literacy Skills (APLS) [11] was administered pre- and post-treatment. The APLS assesses the following skills at the syllable level: rhyme detection/categorization, rhyme supply, syllable blending/segmentation, syllable manipulation, deletion, substitution, and transposition. Additionally, the following skills are assessed at the phoneme (sound) level: initial and final consonant categorization, phoneme segmentation and blending, phoneme manipulation, deletion, substitution, and transposition. Participants in this study consisted of children in the RE group and a typically developing group (TD). The RE group included 40 children, 21 males and 19 females ages 2:5-5:10. The TD group included existing data from a previous study with 91 children: 39 males and 52 females whose ages ranged from 3:0-5:11. [12]

In comparing scores of children in RE identified with speech and language disorders and children without identified speech and language disorders, both groups made gains from pre-test to post-test. Results of a repeated measures t-test showed a significant difference existed in the APLS scores of the children.

\[ t(53) = 17.09, p < .001 \]

In addition, the results of a paired sample t-test indicated there was not a significant difference in the gain scores between the two groups.

\[ t(52) = 1.11, \text{n.s.} \]
A data analysis was conducted to determine the difference between gain scores of boys and girls in the RE group and to compare the current study to previous research. An independent sample t-test indicated no significant difference between the gain scores of girls and boys,

\[ t (52) = 0.982, \text{n.s.} \]

which was inconsistent with results of previous research [4].

When examining the relationship between scores of the RE group and scores of a group participating in a typical preschool curriculum following intervention, scores were significantly higher for children in RE in the 4:6-4:11 age group:

\[ t (13) = 8.78, p < .001 \]

and the 5:0-5:5 age group: \[ t (30) = 8.264, p < .001 \]

There was not a significant difference between the children in RE in the 5:6 age group and the TD 5:6 age group

\[ t (6) = 1.235, \text{n.s.} \]

However, in the RE group in this age bracket, there were only seven participants, while there were fourteen participants in the TD group. Therefore, there may not be enough statistical power to detect a difference.

### 3. Conclusions

PA is one “piece of the pie” critical for later reading and literacy success, and instruction in PA has a positive influence on children. Furthermore, PA instruction that is short in duration and low intensity makes an immediate difference for both typically developing children and children with speech-language impairments. Working with children in short-duration, low intensity treatment is beneficial for school-based speech language pathologists with heavy workloads/caseloads [13]. One limitation of this study was the narrow geographical location of the sample group. Future research should investigate a larger sample from a variety of regions. Finally, future research will follow the current RE participants six and twelve months post treatment to determine whether children continue to “hold on” to PA skills and generalize them into reading in kindergarten.

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### 5. References


