

The efficacy of Reading Doctor software for supporting code-based school-entry reading readiness among preschoolers with Developmental Language Disorder

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Background: Reading Doctor (RD) is an evidence-based suite of apps designed to enhance reading readiness or remediate code-based reading problems through the use of systematic and explicit synthetic phonics instruction. Currently, little is known about the efficacy or appropriateness of RD for supporting code-based reading readiness among preschool-aged children with Developmental Language Disorder (DLD).



Aim: This study investigated the efficacy of three RD apps (Letter Sounds 1 Pro, Blending Sounds 1 Pro, and Spelling Sounds 1 Pro) on raising letter-sound aptitude, phoneme awareness, and early decoding among children with heightened risk for reading difficulties due to DLD.

Method: Twenty-four 4-year-old children with DLD, identified through baseline speech-language assessments, in their final term of preschool, participated in this study. In the experimental condition, 14 children participated twice a week in three RD apps across an 8-week period. In the control condition, ten children with DLD engaged in their usual preschool program inclusive of teacher-delivered small group activities related to letters and sounds taught in a non-systematic and non-explicit fashion.

Results: No significant between-group differences were identified prior to the implementation of RD. Following instruction, preschool children in the experimental condition performed significantly higher in phoneme blending ($p < .001$, $d = 1.86$), phoneme segmentation ($p = .011$, $d = 1.15$) and letter-sound recognition ($p < .001$, $d = 1.92$) than children in the control condition. In terms of number of correct phoneme-grapheme conversions during early decoding attempts, children who received RD significantly outperformed those who continued with the usual preschool program ($p = .025$, $d = 1.08$).

Conclusion: Initial (pilot) evidence suggests that RD software, when purposefully facilitated by SLP students and preschool educators, can support code-based reading readiness among preschool children with DLD prior to school-entry. The software may serve as an evidence-based, and time-efficient, adjunct to existing preschool interventions and curriculums.

