



# Brief Experimental Analysis of Modeling Interventions for Oral Reading Fluency: Results from a Summer Program

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## Abstract

Brief experimental analysis (BEA) is an important tool used to guide intervention selection for learners who have failed to respond to standard reading instruction (Reschly, Coolong-Chaffin, Christenson & Gutkin, 2007). The purpose of this project was to examine how BEA procedures could be used to identify a potentially effective oral reading fluency intervention involving different types of modeling combined with practice. Participants were three elementary students who attended a summer reading program. An extended analysis examined the effectiveness of the indicated intervention over time when used within the context of a comprehensive reading instructional package. Results indicated that a promising intervention was identified for each participant and the effectiveness of each intervention varied by participant. The selected intervention led to large gains in words read correctly per minute across the reading program for the two participants who attended the majority of the sessions. The participant who attended fewer than half of the sessions did not make gains. These results extend the literature on BEA by comparing interventions that utilized different types of modeling combined with practice. The results also demonstrate how BEA-indicated interventions can be used within the context of a comprehensive instructional package for struggling readers over the summer.

## Introduction

Literacy skills are essential to success in education and later in life. However, many children struggle to develop into strong readers, and as such, reading difficulties are cited as the number one reason children are referred to school psychologists (Bramlett, Murphy, Johnson Wallingsford, & Hall, 2002). For example, during the 2007-2008 school year, 80% of all children referred for special education services received services specifically for reading (NCES, 2010). Unfortunately, summer months can be a time for significant skill loss for students who are already struggling academically, especially when compared to their peers (Schacter, 2003). The "summer slide" contributes to disadvantaged students falling further behind their more advantaged peers (Alexander, Entwisle, & Olson, 2001). Fortunately, effective early intervention can alleviate the unfortunate effects of poor reading skills. Brief experimental analysis (BEA) is a nascent tool that applies the principles and methods of experimental analysis and single-case design logic to "test drive" different interventions. Hence, in BEA, interventions are introduced in succession to individual participants for a brief time and their results are recorded. Based on the results of the BEA, practitioners select individualized interventions for students showing deficits in academic skills, namely reading (Daly, Witt, Martens, & Dool, 1997). Importantly, a burgeoning body of research supports BEA as an effective, reliable, and quick tool for identifying interventions that accord with students' individual needs (Andersen, Daly, & Young, 2013). The foremost benefit of BEA is the ability to evaluate the effectiveness of different intervention strategies before investing significant time and resources for full implementation (Martens, Eckert, Bradley, & Ardoin, 1999).

## Method

**Participants.** Three school-aged children (2 boys, 1 girl) who attended a summer reading clinic. Participants were enrolled Midwestern public schools and showed varying degrees of reading difficulty.

### Intervention.

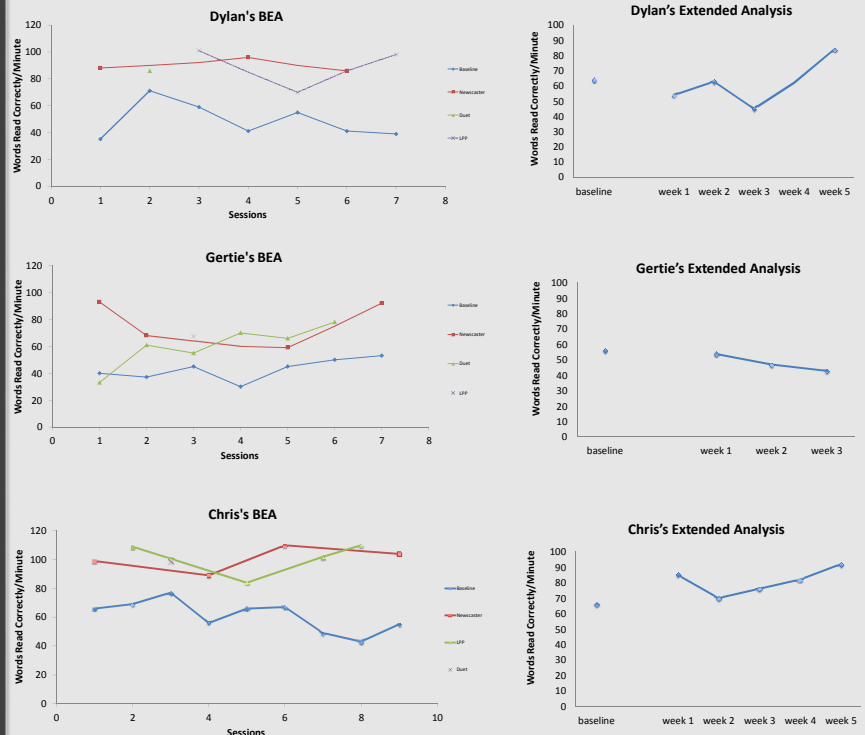
- **Listen Passage Preview-** The student follows along silently as the interventionist reads a passage aloud. Then, the student reads the passage out loud and receives corrective feedback as-needed.
- **Duet-** The student attempts to read the passage aloud, receiving corrective feedback as-needed. Then the interventionist and student read the passage together twice, alternating words (interventionist first, student second; student first, interventionist second). Then, the student reads the same passage aloud again.
- **News-caster-** The student reads the passage aloud with their best expression. Then, the interventionist reads the passage with their best expression three times while the student follow along. Then, the student and interventionist read the passage aloud in unison. Lastly, the student reads the passage aloud alone with their best expression.

### Procedure.

BEAs were conducted during students' initial meetings to select promising interventions. Once interventions were selected, they were implemented during extended analysis sessions conducted at UWEC's Academic Intervention Clinic (AIC), part of the Human Development Center (HDC). Undergraduates provided 45-minute sessions to students 4 days each week for approximately 4 weeks.

**Measures.** The outcome measures we used were Oral Reading Fluency (ORF) probes. Scores on ORF probes reflect the number of words read correctly in 1 minute.

## Results



## Discussion

The results extend the literature on BEA by comparing interventions that utilized different types of modeling combined with practice. Additionally, the results contribute to the reading intervention literature because we used a published curriculum, Read Naturally, in a novel setting- a 1:1 instructional format instead of independent work for the students. This offers information on how schools can adapt existing materials to better serve the needs of students. Potential limitations to our study include a small sample size- generalizability is considered a limitation of single-case designs. Another limitation is the research design in the extended analysis. It was an AB design comparing baseline performance (A) to the intervention phase (B). In such a design we cannot be confident that our intervention, and not a third variable, contributed to the student gains. This being said, we do know that since it was the summer, none of the students were receiving reading instruction at school. These findings demonstrate how BEA-indicated interventions can be used to provide supplemental instruction to struggling readers over the summer.

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