



# Using BEA to Modify Packaged Reading Interventions for English Learners



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## Abstract

The purpose of this study was twofold. First, the study tested if Brief Experimental Analysis (BEA) could be used to empirically-select a reading fluency intervention for four English Learners (ELs). Second, the study investigated if the selected interventions would yield positive reading fluency outcomes when modified into a prepackaged reading intervention program for ELs. The study employed a multielement design with three conditions and an extended analysis to examine the effectiveness of the empirically selected intervention when implemented within the Read Naturally intervention program. Results indicated that the BEA was able to differentiate performance between the three interventions. However, three of the four participants did not exhibit gains in oral reading fluency when exposed to the empirically-selected intervention across three weeks. These results contribute to the existing literature on using BEA to support EL students and how can it be used within a packaged reading intervention.

## Method

### Participants.

- Four elementary school-aged children, 2<sup>nd</sup> through 5<sup>th</sup> grade, attending summer school because of low academic standing. They were referred by their EL teacher to a specialized reading intervention program.
- All were enrolled in medium-sized Midwestern city public school system.
- Two of the four primarily spoke Spanish in the home. The other two spoke predominantly Hmong in the home.
- All four of the participants qualified for free or reduced lunch through the school district. Two of the students were residing at a homeless shelter.

### Brief Experimental Analysis Intervention Conditions.

- **Listen Passage Preview (PP):** The student followed along silently as the interventionist read the passage aloud. The student then read the passage out loud, receiving corrective feedback as needed.
- **Word Preview (WP):** The interventionist began by reading the first word of the passage aloud as the student listened. The student was then instructed to read the same word. This procedure was continued until the whole passage was completely read.
- **Sentence Preview (SP):** The procedure begins with the interventionist reading the first sentence of the passage aloud as the student listened. The student then read the same sentence, receiving feedback as needed. This was repeated for the entire passage.

### Procedures

First, BEAs were conducted to empirically-select reading interventions for each participant. Interventions were alternately implemented and replications were done to determine the top two interventions. The top two interventions were alternated till there were three replications of a clear winner. Once an intervention was selected, the Read Naturally intervention was conducted. The Read Naturally intervention sessions were typically 45 minutes in length, 4 days a week, for approximately 3 weeks during the summer school session.

### Measures.

Oral Reading Fluency (ORF) probes were used to measure outcomes. ORF outcomes were measured by how many words a student could accurately read within 1 min. Data were collected at the beginning of each session using FAST probes.

## Discussion

Results suggest that BEA methodology empirically-selected reading fluency interventions for ELs. The BEA were able to differentiate performance between the three intervention conditions for all participants. However, the empirically-selected intervention was effective for only one participant when implemented in the extended analysis. Several conclusions can be drawn from these results. First, the length of the extended analysis (i.e., approximately three weeks) might not have provided participants enough time to develop skills and show positive gains in reading fluency. Furthermore, ORF data becomes more reliable after 6 weeks (Christ & Silbergliit, 2007). Second, the ORF interventions used in the current study, while empirically supported, might not produce long-term improvements in ORF for EL students. Finally, the BEA might have differentiated performance for each participant but the selected intervention might not have been the most appropriate intervention for the three EL students who did not respond to the extended analysis. Perhaps a more comprehensive reading fluency intervention was needed for those students. The study did have some limitations. Individual participant variables (e.g., homelessness, attention or motivational issues) might have influenced performance and, as stated above, the extended analysis might not have been long enough to produce expected gains. In conclusion, practitioners working with EL students should consider using BEA to select ORF interventions but other assessment approaches might be needed to best select an intervention approach. In addition, practitioners should always consider individual student variables when selecting an intervention. For example, students with more significant skill deficits might benefit from multiple intervention techniques selected from BEAs and other assessment sources (e.g., error analysis). Lastly, continued research will be important to help determine the effectiveness of BEA with EL students.

## Introduction

Reading is an essential skill for success, yet many children still struggle with reading in America. In 2011, 32% of 4<sup>th</sup> graders were reading below a basic level (NAEP, 2011). Children who are English Learners (EL) are even more likely to have difficulties with English reading proficiency resulting in a multitude of academic achievement issues (e.g., drop out, special education referrals, retention). On top of these challenges, there is a lack of research on evidence based interventions to support ELs. Brief experimental analysis (BEA) methodology is one approach that can be used to test various interventions or instructional models to determine which might benefit the individual's reading performance the most. BEAs were developed to address some of the common factors that can affect performance: motivation, modeling, practice, a task being done differently, and feedback (Daly, Witt, Martens, and Dool, 1997). The BEA procedure is used to empirically-select a promising intervention for the individual. A meta-analysis examining the research on BEA found that the average increase in oral reading fluency was approximately 30 words read correct per minute or a 73% increase over the baseline median (Burns and Wagner, 2008). BEA not only individualizes interventions but can be a beneficial tool to determine which interventions actually work before investing time on an intervention that may or may not benefit an individual.

## Results



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