

Applying Brief Experimental Analysis to Empirically Select Interventions that Improve Oral Reading Fluency

Allison K. Gehring and Dr. Michael Axelrod

University of Wisconsin-Eau Claire, Psychology Department

Introduction

- Learning to read is challenging for many students.
- Less than half of the county's fourth, eighth, and twelfth grade students read at or above the proficient level (National Center for Educational Statistics, 2003).
- The earlier below average readers receive reading interventions the more their reading might improve.
- Teachers typically select interventions based on personal preference and recommendations from others.
- This method is not the best because it does not account for student differences and learning limitations.
- Finding effective methods to empirically select academic interventions might help educators engage in effective data based decision making.
- Brief Experimental Analysis (BEA) is one approach that allows educators to compare the effects of various reading interventions (Burn & Wagner, 2008).
- The purpose of this study was to evaluate BEA as a tool to identify effective reading interventions for two second grade students.

Method

Participants and Setting

- Two second grade students who were identified as below average readers
- The study was conducted in an elementary school in a medium sized, Midwestern city
- The study was conducted during the school's after school program

Dependent Measure

- Correct words read per minute (CWRM): Students read instructional level passages for one minute and the number of words read correctly was calculated.

Conditions

- Repeated Reading (RR): Students read the same passage three times, and on the third time data were collected
- Listening Passage Preview (LPP): Student had the passage read to them first, and then the student read the passage for one minute and data were collected
- Sight Words (SW): Student read sight words before reading the passage, and then the student read the passage for one minute and data were collected
- All combinations were also included in the analysis (e.g., RR + LPP, RR+ SW, LPP+SW, RR + LPP + SW)

Procedure

- Step 1: Collected baseline data
- Step 2: Implemented conditions
- Step 3: Compared conditions: chose the condition that produced the highest number of correct words read per minute (CWRM)
- Step 4: Extended Analysis: The condition that produced the highest number of CWPM was chosen and then implemented during the remainder of the study
- Step 5: Collected follow up data

Results and Discussion

- For Shari, BEA identified Sight Word + Listening Passage Preview + Repeated Reading as the most effective condition.
- Shari's CWRM more than doubled from baseline to follow up (baseline mean = 31, follow up mean = 78).
- For Vanna, BEA identified Sight Word + Repeated Reading as the most effective condition.
- Vanna's CWRM almost doubled from baseline to follow up (baseline mean = 11.67, follow up mean = 22.67).
- These results suggest that the empirically selected condition had a strong positive effect on each participant's oral reading fluency.
- This study implies that BEA can be an effective and efficient method of selecting interventions that have the potential to improve student reading.
- Teachers might consider using BEA to empirically select interventions for students who are below average in reading when compared to their peers.
- Limitations of this study include the participants' grade, the study's duration, and the participants' exposure to reading instruction outside of the study.

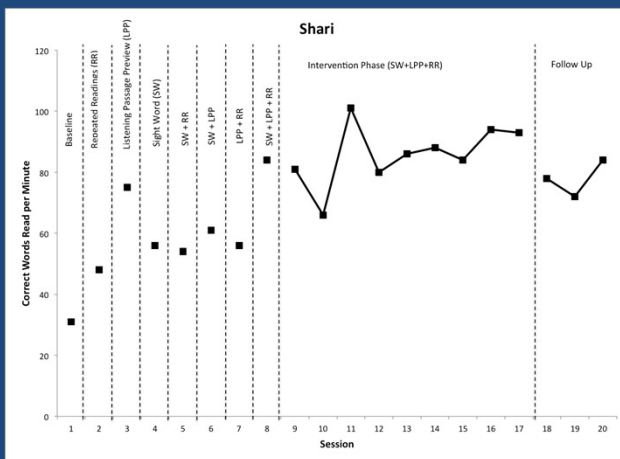


Figure 1. Shari's oral reading fluency measured by CWRP across baseline, BEA, extended analysis, and follow up conditions.

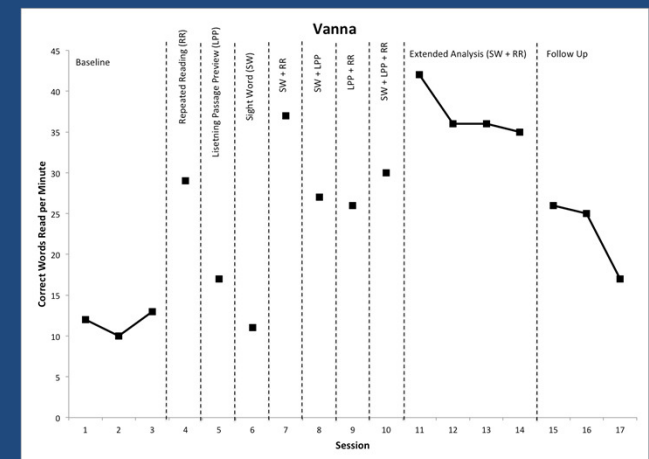


Figure 2. Vanna's oral reading fluency measured by CWRP across baseline, BEA, extended analysis, and follow up conditions.