Using BEA to Select Skill and/or Performance Interventions for Oral Reading Fluency

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Abstract

Brief experimental analysis (BEA), utilizes single case design methodology to "test drive" interventions in order to identify promising ones. This approach is especially useful when multiple interventions are available and may be used to inform the selection of interventions for use within the context of a comprehensive instructional package. This study utilized BEA to "test drive" three different types of interventions—skill, performance, and skill + performance—during a summertime reading clinic. Participants included 10 school-aged children who attended the clinic. Participants showed varying degrees of reading difficulty. Different interventions were used to determine which intervention was most effective during the summer. Findings indicate a value in using BEA to "test drive" interventions during the summer months, as summer months can be a time of skill loss for students who are already struggling academically. The results also demonstrate how BEA can be used within the context of a comprehensive instructional package for struggling readers during the summer.

Introduction

Summer months can be a time of skill loss for students who are already struggling academically, especially when compared to their peers (Schacter, 2003). Researchers studying this phenomenon have called for an expansion of high-quality summer programming (Alexander et al., 2001).

Despite many potentially effective programs, school professionals need more information about how to modify or augment these programs for students who still fail to make progress using a standard treatment approach.

Brief experimental analysis (BEA) involves single case design methodology to evaluate the effectiveness of interventions over a short time period for individual participants. These interventions can then be applied over a longer time period and results can be measured. Several studies have assessed short-term performance gains in reading fluency using BEA. In this study, we expanded the use of BEA by utilizing single case designs to determine the effectiveness of the indicated intervention over time when used within the context of a comprehensive reading instructional package delivered during a summer reading program. Results indicated that BEA can be used within the context of a comprehensive instructional package to "test drive" interventions for struggling readers during the summer.

Participants

Ten school-aged children (7 boys, 3 girls) in grades 1-5 who attended a summer reading clinic participated in the study. Participants were enrolled in Midwestern public schools and showed varying degrees of reading difficulty.

Procedure

Participants were randomly assigned to one of three experimental groups: (a) performance, (b) skill, and (c) performance + skill. Participants were assessed using Curriculum-Based Measures of Reading from the Formative Assessment System for Teachers (Christ et al., 2013). Scores reflect the number of words read correctly in 1 minute (WRCM). "Cold" time refers to the WRCM the student receives before the intervention, and the "Hot" time refers to the WRCM the student receives after the intervention.

Interventions

- **Performance**—The interventionist tells the student his or her WRCM and errors. The student records this on a graph. The interventionist tells him or her that if they beat their score they can pick a prize from the prize box.
- **Skill**—The interventionist reads a passage out loud and the student follows along silently. Then, the student reads the passage out loud three times for two minutes and receives corrective feedback as needed.
- **Performance + Skill**—The interventionist tells the student his or her WRCM and errors. The student records this on a graph. The interventionist tells him or her that if they beat their score they can pick a prize from the prize box. Then, the student reads the passage out loud and the student follows along silently. Then, the student reads the passage out loud three times for two minutes and receives corrective feedback as needed.

Measures

Curriculum-Based Measures of Reading from the Formative Assessment System for Teachers (Christ et al., 2013) were used to measure oral reading fluency. Scores reflect the number of words read correctly in 1 minute (WRCM). "Cold" and "Hot" time WRCM scores were assessed before and after each intervention. The "Hot" time refers to the WRCM the student receives before the intervention, and the "Hot" time refers to the WRCM the student receives after the intervention.

Results

<table>
<thead>
<tr>
<th>Student</th>
<th>Cold Baseline</th>
<th>Cold Tx Mean</th>
<th>Cold Range</th>
<th>Cold Final</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curt</td>
<td>103</td>
<td>105-117</td>
<td>103-133</td>
<td>127</td>
</tr>
<tr>
<td>Carley</td>
<td>116</td>
<td>116-170</td>
<td>116-170</td>
<td>142</td>
</tr>
<tr>
<td>Jenny</td>
<td>53</td>
<td>48-68</td>
<td>53</td>
<td>53</td>
</tr>
<tr>
<td>Eric</td>
<td>49</td>
<td>49</td>
<td>43-88</td>
<td>49</td>
</tr>
<tr>
<td>Canton</td>
<td>37</td>
<td>41</td>
<td>34-52</td>
<td>41</td>
</tr>
</tbody>
</table>

Discussion

- Our results extend the literature on BEA by comparing interventions targeting skill, performance, and skill + performance variables.
- Additional research could extend these results to other types of interventions and intervention packages other than Read Naturally.

Acknowledgments

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References


