### CASE STUDY

**Addressing the Needs of Struggling Readers Through Structured Literacy at The Freedom School in St. Louis**

#### SUMMARY

Located in St. Louis, Missouri, The Freedom School had a significant portion of their students who were a year or more below grade-level in the area of reading. Due to these difficulties, many students were not able to access grade-level materials for learning. In order to begin meeting the needs of their students, The Freedom School sought out more explicit and targeted forms of reading instruction — their answer was to use *S.P.I.R.E.* with their struggling readers.

<table>
<thead>
<tr>
<th>Total Students</th>
<th>Students Eligible for Special Education Services</th>
<th>Students Identified as Struggling Readers</th>
<th>Economic Disadvantage</th>
</tr>
</thead>
<tbody>
<tr>
<td>97</td>
<td>30%</td>
<td>60%</td>
<td>75%</td>
</tr>
</tbody>
</table>


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**OVERVIEW**

<table>
<thead>
<tr>
<th>School Name</th>
<th>The Freedom School</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>St Louis - Missouri</td>
</tr>
<tr>
<td>Grade Levels</td>
<td>PreK-5</td>
</tr>
</tbody>
</table>
Scope & Focus

The Freedom School in St. Louis, Missouri, sought to address the needs of their struggling readers — those who fell within Tier 2 or Tier 3 status within a Response to Intervention or Multi-tiered Systems of Support framework. Their target population included students who receive external (pull-out) services for reading intervention, as well as those who were able to be served in the inclusive setting by their general education teachers. Given these needs, they selected S.P.I.R.E. as their go-to reading intervention.

Implementation

As part of The Freedom School’s implementation of the S.P.I.R.E. program, they engaged in universal screening three times during the 2017-2018 school year and continued this screening during the 2018-2019 school year. The selected assessment battery included the aimsweb® Plus - Test of Early Literacy Measures and the Qualitative Reading Inventory, Fifth Edition (QRI). These measures were administered to all students and then used to identify those students who were at-risk of not meeting grade-level reading benchmarks (specifically those students who met Tier 2 and Tier 3 status). Once students were selected for intervention services, they were connected with an external reading intervention group (pull-out services) or inclusive reading intervention with their classroom teacher. Students were then administered the S.P.I.R.E. placement test to determine their starting position within the S.P.I.R.E. reading program.

Evaluation

In order to evaluate the effectiveness of the S.P.I.R.E. program, with regards to Beulah’s targeted reading instruction population, paired samples t-tests, effect size, and Wilcoxon signed-rank tests were utilized. Specifically, pre- and post-S.P.I.R.E. outcomes were evaluated for all participants to determine if S.P.I.R.E. had any discernible impact on student performance. 18 total students were identified as S.P.I.R.E. program participants and presented with viable data.

Oral Reading Fluency (ORF) accuracy and student text level on the QRI were used as the analysis measures within the present study. To be included in the study sample, all participants needed to present with contiguous data for the fall and spring administrations of these particular assessments.

Further, to gain an understanding of the implementation, impact, ease-of-use, and accessibility of professional development materials within the S.P.I.R.E. reading program, an 18-item, four-factor survey (S.P.I.R.E. Implementation Survey) was completed by six respondents at The Freedom School. Results were reported through the mode (most frequent responses) for each item and factor, given the ordinal nature of Likert-type scale responses.

“We are a school that often has an inverted tier structure and we have seen tremendous growth from our struggling readers since implementing the S.P.I.R.E. reading program.”

Chris Rensink
Assistant Head of School

“We.S.P.I.R.E. is a huge reason my struggling readers are successful in reading. It takes time to implement, but it is time well worth it.”

Kimberly Balek
First Grade Teacher
Response options included strongly disagree, disagree, neutral, agree, or strongly agree for each item. Items were then combined via mode for the designated factor.

Results

Overall, results suggest statistically significant (p < .05) differences between pre- and post-S.P.I.R.E. ORF accuracy and QRI text level outcomes. Specifically, the mean difference in ORF accuracy growth was an improvement of 18.33 percentage points, suggesting that students who were delivered the S.P.I.R.E. reading program were able to correctly read an average of 18.33% more words when presented with an unfamiliar grade-level text. See Table and Diagram 1.

Further, a statistically significant difference was observed with regard to student text level improvements on the QRI measure, which is summative in nature (p = .001), indicating a true location (or text level shift) that is not equal to 0 and different in nature in terms of rank position relative to a participant’s text level indication (V = 105).

“S.P.I.R.E. has changed our non-readers into readers and our struggling readers into developing readers. Our school-wide literacy initiative utilized S.P.I.R.E. in Tier II and Tier III intervention. Since starting this initiative our school-wide test scores have sky-rocketed and our students are excited to learn.”

Kelsey Ross
Resource Coordinator

As part of the present case study, an implementation survey was provided to the staff at The Freedom School. Six school personnel responded to the survey invitation, including administration, teachers, and school support personnel.

Overall, S.P.I.R.E. Implementation Survey results indicated a mode response of “agree” or “strongly agree,” which corresponded with response values of 4 and 5, respectively. Ease-of-Use and Impact were the factors with the highest reported mode values (strongly agree = 5), followed by Implementation and Professional Development (agree = 4). See Diagram 2 on page 3.

Table 1: Paired Samples t-Test: Oral Reading Accuracy

<table>
<thead>
<tr>
<th>Measure</th>
<th>M</th>
<th>SD</th>
<th>M</th>
<th>SD</th>
<th>n</th>
<th>95% CI for Mean Difference</th>
<th>d</th>
<th>t</th>
<th>df</th>
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</thead>
<tbody>
<tr>
<td>ORF Accuracy</td>
<td>70.67</td>
<td>14.30</td>
<td>89.00</td>
<td>9.91</td>
<td>18</td>
<td>10.76</td>
<td>1.20</td>
<td>5.11**</td>
<td>17</td>
</tr>
</tbody>
</table>

*p < .05. **p < .001

A comparison of mean ORF accuracy improvements from the fall of 2017 to the spring of 2018.
Mode responses for the items that load to each designated factor (Ease-of-Use, Impact, Implementation, & Professional Development). Overall, the strong agreement was most frequently indicated for the Ease-of-Use and Impact factors and agreement was most frequently indicated for the Implementation and Professional Development factors.

Results (continued)
Response patterns with regards to the Implementation factor indicated respondents agreed (response value = 4) that S.P.I.R.E. fit into the constraints of their literacy programming, it is organized into a teacher-friendly format, the training materials and resources prepared staff to deliver the S.P.I.R.E. reading program, and S.P.I.R.E. was easy to integrate into their preexisting literacy curriculum programming. Further, respondents indicated "strongly agree" (response value = 5) when asked whether training materials and resources were easy to access. See Appendix Diagram 3.

Further, with relation to Ease-of-Use specific items, respondents indicated a mode response pattern of "strongly agree" (response value = 5) on the ability to follow the 10-step lesson sequence, complete the S.P.I.R.E. placement test, the lesson pacing being appropriate, and the ease of navigating the S.P.I.R.E. teacher’s guide. See Appendix Diagram 4.

In terms of the Impact factor, respondents indicated "strongly agree" response patterns (response value = 5) with regards to S.P.I.R.E. having a positive impact upon their struggling readers and that S.P.I.R.E. meets the needs of their struggling readers. See Appendix Diagram 5.

Finally, when presented with items related to professional development, respondents indicated "strongly agree" (response value = 5) when asked whether the S.P.I.R.E. professional development prepared the staff member for achieving fidelity implementation with the S.P.I.R.E. reading program. Further, when asked whether the staff member felt better prepared to deliver multi-sensory reading techniques, respondents indicated "agree" (response value 4). See Appendix Diagram 6.

Conclusions
Given the scope of the present case study, including paired sample t-tests for significance, effect size, Wilcoxon signed-rank testing, and implementation survey, the S.P.I.R.E. reading program demonstrates statistically significant improvements to oral reading accuracy and text level. This suggests that not only does exposure to the S.P.I.R.E. program improve early literacy skill development (alphabetic principle and phonemic awareness), but also addresses vocabulary and comprehension (as evidenced by summative improvements with regard to QRI text level growth). These outcomes, coupled with the reported survey responses on the topic matter of ease-of-use, implementation, impact, and professional development, suggests the S.P.I.R.E. reading program is a viable and effective intervention for addressing the needs of struggling readers.
APPENDIX

DIAGRAM 3  S.P.I.R.E. Implementation

- It was easy to fit S.P.I.R.E. into the time constraints of your literacy programming.
- S.P.I.R.E. is organized into a teacher-friendly format.
- S.P.I.R.E. training materials and resources effectively prepared me (my staff) to deliver the program.
- S.P.I.R.E. training materials and resources were easy to access.
- S.P.I.R.E. was easy to integrate into your preexisting literacy curriculum.

DIAGRAM 4  S.P.I.R.E. Impact

- Growth within S.P.I.R.E. has aligned with growth in other areas (such as mathematics and social-emotional well-being).
- S.P.I.R.E. has had a positive impact upon your struggling readers.
- S.P.I.R.E. meets the needs of your struggling readers.
- The skills students learn in the S.P.I.R.E. program will persist with them throughout their schooling.
APPENDIX (continued)

**DIAGRAM 5 S.P.I.R.E. Ease-of-Use**

- I am able to differentiate S.P.I.R.E. to the needs of my students.
- It is easy to follow the sequence of the S.P.I.R.E. 10-step lesson.
- It was easy to complete the S.P.I.R.E. Placement Test with my students.
- The lesson pacing of S.P.I.R.E. is appropriate for my students.
- The S.P.I.R.E. Teacher's Guide (or online scripting if iSPIRE) is easy to navigate.

**DIAGRAM 6 S.P.I.R.E. Professional Development**

- The S.P.I.R.E. professional development prepared me well for achieving fidelity with S.P.I.R.E.
- You (or your staff using S.P.I.R.E. or iSPIRE) are better prepared to deliver intensive reading instruction using multisensory techniques.