INTRODUCTION

Research has found that difficulties with spelling are linked to dyslexia (Lohvansuu, et al., 2021; O'Brien et al., 2019). As such, spelling assessment may provide critical information helpful in screening for reading difficulties and for instructional planning. In particular, the assessment of spelling in the early stages of reading development (e.g., kindergarten) may provide information about student application of phonemic awareness and alphabetic principle skills to reading and reading-related tasks (Clements et al., 2013).

Purpose and Research Questions

The purpose of this study was to evaluate the utility of a new spelling assessment, Acadience® Spelling, for use in kindergarten and first grade. Research questions were:

1. What are the descriptive statistics and distributions of Acadience Spelling Correct Spelling Sequences (CSS) and Correct Spelling Words (CSW) scores at each grade and time of year?
2. What is the relationship between performance on Acadience Spelling and Acadience Reading measures?

METHOD

Participants

Data used for this research consisted of Acadience Spelling and Acadience Reading scores for students in grades K-2 entered into Acadience Data Management from 2018-2019 to 2021-2022. There were two inclusion criteria:

- Students assessed with Acadience Spelling (n = 360)
- Students attending the same schools but who were assessed with Acadience Reading and not Acadience Spelling at an analyzed benchmark period (n = 1,150)

Data were collected from 37 schools in 10 states. Student race and ethnicity information aggregated at the school level from NCES (Broughman et al., 2019; Chen, 2021) was available for 35 of the schools (see Figure 1).

Acadience Reading K-6

The Acadience Reading measures collected in this study were First Sound Fluency (FSF), Letter Naming Fluency (LNF), Phonemic IC Fluency (PIF), NFIC Word Fluency (NWF), Oral Reading Fluency (ORF), and the Reading Composite Score (RCS). Additional information on the design specifications of Acadience Reading measures and the formulas for calculating the RCS are available at the Acadience Reading K-6 Technical Manual (Quad et al., 2019), available at www.acadiencelearning.org.

DATA ANALYSES

Data analyses included descriptive statistics, distributions of Acadience Spelling scores, and concurrent and predictive correlations between Acadience Spelling and Acadience Reading.

RESULTS (Continued)

Descriptive Statistics

Summarized statistics are presented in Table 1 for CSS and CSW, the RCS by status of Acadience Spelling assessment, and the Acadience Reading component scores of students who were assessed with Spelling.

- Acadience Spelling scores increase across grades and time points.

- Overall, students assessed with Acadience Spelling had lower RCS compared to students attending the same schools who were not assessed with Spelling.

- The sample was high performing, with most Acadience Reading scores in the 80 or Above Benchmark and Above Benchmark ranges.

Acadience Reading K-6 Measures of Students Assessed with Acadience Spelling

Table 3

<table>
<thead>
<tr>
<th>Grade Level</th>
<th>Reading Composite Score</th>
<th>CSS</th>
<th>CSW</th>
<th>ORF</th>
<th>NWF</th>
<th>CLS</th>
<th>PPBR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kindergarten</td>
<td>5th of Year</td>
<td>76</td>
<td>156.5</td>
<td>62.7</td>
<td>90</td>
<td>70</td>
<td>85</td>
</tr>
<tr>
<td>Kindergarten</td>
<td>6th of Year</td>
<td>79</td>
<td>167.5</td>
<td>72.5</td>
<td>100</td>
<td>80</td>
<td>95</td>
</tr>
<tr>
<td>First Grade</td>
<td>1st of Year</td>
<td>82</td>
<td>179.5</td>
<td>82.5</td>
<td>110</td>
<td>90</td>
<td>105</td>
</tr>
<tr>
<td>First Grade</td>
<td>2nd of Year</td>
<td>85</td>
<td>189.5</td>
<td>92.5</td>
<td>120</td>
<td>100</td>
<td>115</td>
</tr>
</tbody>
</table>

Acadience Reading and Spelling Validity

Table 4

<table>
<thead>
<tr>
<th>Grade Level</th>
<th>Concurrent Validity of Acadience Spelling with Acadience Reading</th>
<th>Acadience Reading Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kindergarten</td>
<td>CSS</td>
<td>CSW</td>
</tr>
<tr>
<td>Kindergarten</td>
<td>5th of Year</td>
<td>76</td>
</tr>
<tr>
<td>Kindergarten</td>
<td>6th of Year</td>
<td>79</td>
</tr>
<tr>
<td>First Grade</td>
<td>1st of Year</td>
<td>82</td>
</tr>
<tr>
<td>First Grade</td>
<td>2nd of Year</td>
<td>85</td>
</tr>
</tbody>
</table>

DISCUSSION

Results from this study provide initial evidence to support the use of Acadience Spelling from the middle of kindergarten through the end of first grade. We found that Acadience Spelling scores are sensitive to increasing spelling skill over that time span. Additionally, the validity coefficients appear to be consistent with those reported in previous CBM Spelling studies (Deno, et al., 1980; Marston, 1982). Acadience Spelling is moderately strongly related to concurrent and future overall reading performance, which is important because difficulties with spelling are often observed in students with dyslexia (Good et al., 2019; Chen, 2021) and spelling is frequently cited as a necessary component of dysexecutive screening.

Limitations

- The measures were administered under uncontrolled conditions. However, the data examined in this study do represent the way these measures are used in practice.

- The data collected may not be representative of national or local demographics and performance. Both of these factors potentially limit the generalizability of the results.

- Students assessed with Acadience Spelling had lower RCS compared to students who were not assessed with Spelling, indicating potential restriction in range.

- This study included data gathered during the COVID-19 pandemic and did not differentiate between mode of administration (i.e., remote vs. in-person). It is possible there may be differences in scores as a result of these factors.

Future Research

- Replicate these analyses with a larger, more diverse sample of students

- Evaluate results when the sample is limited to data from schools that used Acadience Spelling as a universal screening standard

- Examine the contribution of Acadience Spelling in predicting future reading outcomes relative to other Acadience Reading measures

- Develop cut points for risk

- Explore the reliability of the Acadience Spelling assessment and obtain user feedback

REFERENCES

Kelly A. Powell-Smith, Ph.D., Amy N. Warnock, B.S.

J. Brett A. Morgan, Ph.D., Rachel A. Morgan, Ph.D.