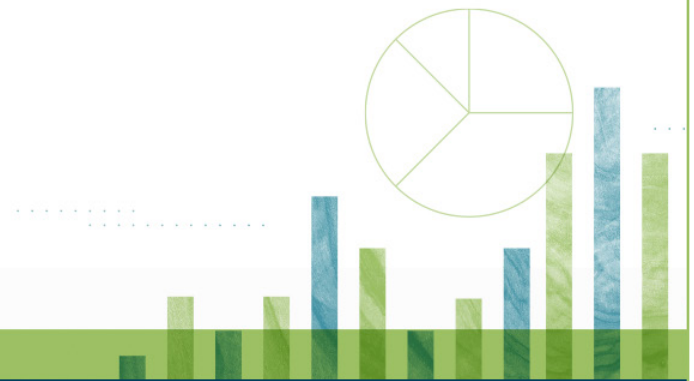




# Liberty Elementary SCHOOL (DISTRICT NO. 25) Research Study

The Impact of *Reading Horizons Discovery*<sup>®</sup>  
on K-3 Literacy Outcomes

Liberty Elementary School District No. 25  
2022-2023 Academic Year



Where reading momentum begins

## Introduction

During the 2022–2023 academic year, Liberty Elementary School District No. 25 in Buckeye, Arizona, implemented the *Reading Horizons Discovery*® (*RH Discovery*) curriculum, which features the Reading Horizons® (RH) method based on the science of reading, with 1,293 students across 64 classrooms in grades K–3.

The RH method delivers engaging, explicit, and systematic phonics instruction through a multisensory approach based on Orton-Gillingham principles. Instruction is cumulative and organized in a sequence that enhances learning and simplifies teaching. Each sound of the English language is explicitly taught along with the letter(s) representing the sound. Five Phonetic Skills are taught to help students recognize short and long vowel patterns in words and syllables. Two Decoding Skills are presented to show students how to decode multisyllabic words.

The multisensory approach used with the RH method enhances learning and memory by simultaneously engaging auditory, visual, and kinesthetic modalities during instruction. A unique marking system is employed to draw student attention to the features and patterns of English and give visual cues for pronunciation. Throughout instruction, students are provided with engaging activities to practice and apply the skills learned. *RH Discovery* was designed to teach the RH method to kindergarten to third-grade students. Finally, RH supports districts using its software-embedded assessments (e.g., Spelling and Word Recognition Assessment and Check-Ups) and tools to evaluate the impact of *RH Discovery* on student growth.

Liberty Elementary School District No. 25, Reading Horizons, and Learn Platform collaborated to evaluate the impact of implementation and student performance as measured by the Reading Horizons Implementation Integrity Rubric (RHIIIR) and Acadience achievement scores (published by Voyager Sopris Learning), respectively.

Learn Platform found that outcomes increased for some classrooms from the beginning to the end of the

year. There were five statistically significant effects (three desirable and two undesirable) of teacher-level variables on student learning. Of note, implementation integrity showed a moderate effect (Cohen's  $d = .31$ ) on outcomes for kindergarten students, controlling for demographics.

## Methodology

### PURPOSE

During the 2022–2023 academic year, Liberty Elementary School District No. 25 collaborated with Reading Horizons to study the implementation of RH and explore the relationship between the implementation of the RH method and student learning outcomes in grades K–3.

1. Was teacher participation in professional learning associated with student literacy outcomes?
2. Was the implementation of *RH Discovery* associated with student literacy outcomes?

### STUDY DESIGN

This study employed a one-group, pre-post quasi-experimental design. This study took place in five elementary schools in Liberty Elementary School District No. 25 in Arizona during the 2022–2023 school year. Analyses included 64 teachers and 1,293 students from kindergarten through third grade. Researchers used Acadience achievement assessment scores (i.e., Phonemic Segmentation Fluency, Correct Letter Sounds (CLS), Letter Naming Fluency (LNF), and Oral Reading Fluency (ORF) subscales) as the student achievement outcome. Researchers also conducted multilevel models examining whether differences in *RH Discovery* implementation predicted student outcomes. Researchers used fall 2022 and spring 2023 teacher surveys and classroom observations to investigate professional learning participation and program implementation. Analyses included descriptive statistics, correlations, partial correlations, and multilevel models. Researchers examined *RH Discovery* implementation and relationships between teacher professional learning, program implementation, and student literacy outcomes.

## Measures

**Professional learning participation**—Researchers used a teacher survey to assess professional learning participation. Teachers completed the survey in fall 2022 and spring 2023 on their participation in Reading Horizons professional learning and implementation.

**Implementation integrity**—Researchers used classroom observations of *RH Discovery* lessons using the Reading Horizons Implementation Integrity Rubric (RHIIIR). The rubric contains five indicators that measure implementation integrity across four levels of practice: Emerging, Exploring, Engaging, and Empowering. To measure implementation of the RH method, classroom observation scores across all five indicators of the RHIIIR were averaged. A total of 54 teachers had classroom observations. The average teacher observation score was 2.33 (SD = 0.75) on a scale from 1 (“Emerging” instruction) to 4 (“Empowering” instruction). Twenty-four percent of teachers had observation scores at or above a three (“Engaging” instruction).

**Student performance**—Researchers used the Acadience Reading standardized assessment as the student literacy achievement outcome. Specifically, the Phonemic Segmentation Fluency (PSF), Correct Letter Sounds (CLS), Letter Naming Fluency (LNF), and Oral Reading Fluency (ORF) subscales were reviewed.

## Overview Of Program Implementation

Liberty Elementary School District No. 25, Arizona, has seven K–8 schools serving 4,250 students and 224 teachers. The population is 53 percent White, 4 percent Black or African American, 37 percent Hispanic or Latino, and 3 percent Two or More Races. Approximately 53.37 percent of families are low income. During the 2022–2023 school year, Liberty Elementary School District No. 25 implemented the direct instruction curriculum and software for the second consecutive year. They supported their implementation by providing Reading Horizons’ in-person professional learning to all teachers, with some also receiving coaching. All seven elementary schools implemented *RH Discovery* in grades K–3 as their Tier 1 phonics curriculum. A typical Tier 1 (full class) lesson occurred in the whole class for approximately 30 minutes daily from August through May.

## Results

### Question 1: Was teacher participation in professional learning associated with student literacy outcomes?

Researchers examined how many different professional learning supports educators used during the 2022–2023 school year (Figure 1). The most common support reported was initial training from a Reading Horizons facilitator, reported by 98 percent of educators (n = 42). The next most used supports, participation in Reading Horizons coaching and general use of online resources, were reported by 77 percent (n = 33) and 70 percent (n = 30) of educators, respectively. The least common support was software training, which was attended by one third of participants (33 percent, n = 14). Additionally, educators reported using professional learning modules (56 percent, n = 24) and videos (44 percent, n = 19).

Nearly all teachers completed initial training with a Reading Horizons facilitator. Most also participated in 1 or more coaching days and/or used self-paced training resources.



Figure 1. Teacher participation in Reading Horizons professional learning (n = 43)

The association between participation in Reading Horizons-facilitated professional learning was statistically significant in Grade 3 ( $p < 0.05$ ), such that students in classrooms where teachers completed more Reading Horizons-facilitated professional learning had higher Acadience Composite and Oral Reading Fluency scores (Figure 2).

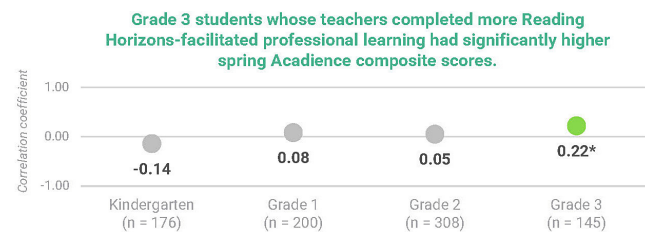


Figure 2. Association between RH-facilitated professional learning participation and Acadience composite scores

Analysis of the association between teacher participation in self-paced professional learning and student literacy outcomes found mixed results. There was a positive, statistically significant relationship between greater self-paced professional learning and Acadience Composite scores for Grade 3 students ( $p < 0.05$ ), but the association was significantly negative among kindergarten and Grade 2 students (Figure 3).

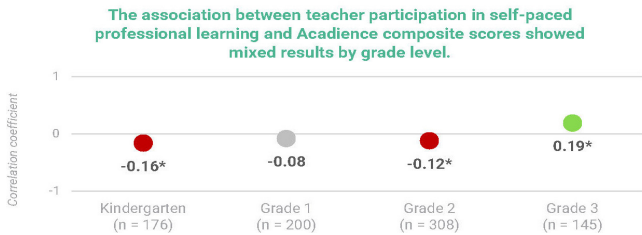


Figure 3. Association between RH self-paced professional learning and Acadience composite scores

**Question 2: Was implementation of RH Discovery associated with student literacy outcomes?**

Researchers conducted multilevel models examining whether students in classrooms where teachers had a medium or high observation score compared to teachers with low observation scores. These models included fall Acadience achievement, English learner status, special education status, and free or reduced price lunch status as covariates. Kindergarten students in classrooms with high observation scores performed better on their end-of-year Acadience composite compared to classrooms with low observation scores (Figure 4). Grade 3 students were not included in these analyses due to insufficient observation score data.

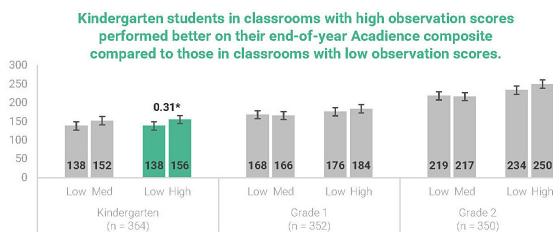


Figure 4. Comparison of spring 2023 Acadience student scores between teachers with low, medium, and high observation scores

This effect size of 0.31 for kindergarten students means that if a comparison student were placed in a high implementation classroom, they would have been expected to perform 12 percentile points higher than they did. These results indicate that kindergarten

students in Liberty schools are likely to perform better if placed with a teacher who implements with integrity.

**Conclusions**

Teachers participated in professional learning activities to build the knowledge needed to impact practice. Overall, 98 percent of teachers participated in an initial Reading Horizons-facilitated training and 77 percent participated in one or more coaching days. Most teachers also used some form of self-paced training resources. Researchers conducted a series of partial correlations controlling for fall Acadience achievement, English learner status, special education status, and free or reduced price lunch status to investigate the relationship between teacher participation in RH Discovery professional learning opportunities and student outcomes in spring 2023. Participation in RH Discovery-facilitated professional learning was significantly associated with higher spring Acadience composite scores and Oral Reading Fluency subscale performance for grade 3 students. For kindergarten, there was a statistically significant negative relationship between teacher participation in Reading Horizons facilitated professional learning and Correct Letter Sounds and Letter Naming Fluency subscales. Participation in online self-paced RH Discovery professional learning had a statistically significant positive effect on spring Acadience composite scores among grade 3 students, but the relationship was significant and negative in kindergarten and grade 2.

Researchers conducted regressions and multilevel models while controlling for fall Acadience achievement, English learner status, special education status, and free or reduced price lunch status as covariates to investigate whether implementation of RH Discovery was associated with student outcomes. Kindergarten students in classrooms with high observation scores performed better on their end-of-year Acadience composite compared to those in classrooms with low observation scores.

This study provides results to satisfy ESSA evidence requirements for Level III (Promising Evidence) given the study design and positive, statistically significant findings.