



Learning Experience Design (LXD)

Research & Consulting

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# Heggerty Phonemic Awareness Curriculum (2022-2023) Grades K-1 Efficacy Study Review



*Third-Party, Expert ESSA Evidence-Level Review*

*by Rachel Schechter, Ph.D., founder of LXD Research*

## Study Report Reviewed

A Treatment-Only Study of the *Heggerty Phonemic Awareness Curriculum*: Final Report  
September 28, 2023

## ESSA (Every Student Succeeds Act) Evidence Level

This study provides Promising Evidence, ESSA Level 3, for the Heggerty Phonemic Awareness Curriculum

## Researcher

Magnolia Consulting:  
Holland Banse, PhD and Lisa Shannon, PhD

## Study Summary

Heggerty contracted with Magnolia Consulting, LLC, an external, independent consulting firm specializing in education research and evaluation, to study Heggerty Phonemic Awareness (PA) Curriculum during the 2022-2023 school year. The study focused on 16 kindergarten and first-grade teachers' implementation and perceptions of the program. It examined literacy outcomes for their students using DIBELS 8, focusing on phoneme segmentation fluency (PSF) and nonsense word fluency (NWF).

Heggerty recruited four classrooms from four different districts across the United States that already used Heggerty PA Curriculum and DIBELS 8. There was no treatment group, so the study uses a Level 3, correlational design that meets a Promising evidence rating. Students showed statistically significant gains in their PSF and NWF scores from Fall to Spring. Multilingual Learners (MLL) and students eligible for Free or Reduced-Price lunch (FRPL) also made meaningful progress. Effect sizes above one are considered large in treatment-only studies, and all raw score gains analyses in this paper had effect sizes over 1.3 (Guidelines for Interpreting Single Group Design Effect Sizes by Plotsky in 2014). This study provides evidence of a relationship between score gains and Heggerty inclusion, and additional studies would need to be conducted to better understand the unique contribution Heggerty made on growth.



## Product Description

The Heggerty Phonemic Awareness Curriculum is a supplemental literacy curriculum for early childhood and primary grades. The curriculum follows an intentional and systematic progression covering a range of phonological and phonemic awareness skills. Each whole-group lesson articulates a skill focus, provides detailed teacher language for the lesson, and includes associated hand motions developed to support students' learning of the focal skill. The curriculum's weeks of content vary by grade level and cover specific skills students are expected to learn in that grade. The kindergarten program is 35 weeks long and designed to last 10-12 minutes, while the first-grade program is 24 weeks long and designed to last 8-12 minutes. Teachers used online resources through the digital hub to access the curriculum and view resources to support implementation, including videos of all the hand motions.

## Study Sample and Usage Description

### Who was in the study?

Researchers collected the data from schools and surveyed the teachers. While most of the students in the sample were White (64%), the remaining included 10% Black or African American and 17% Hispanic or Latin American -- most were in Kindergarten (73%). One-third of students were Free or Reduced-Price lunch eligible (FRPL) and 16% were Multilingual Learners (MLL).

### How were they selected to be in the study?

Heggerty recruited four classrooms from four different districts across multiple regions of the United States that already used the Heggerty PA Curriculum and DIBELS 8. Teachers said they used Heggerty PA for about 15 minutes daily. It is unclear why relatively few students are in the analysis compared to the number of students in the recruited school sample.

## Main Research Questions

- How is Heggerty PA implemented? What are the teachers' impressions of the quality and utility of the program?
- Across grades, how did students' Phoneme Segmentation Fluency (PSF) and Nonsense Word Fluency (NWF) scores change over time?
- Across subgroups of students, MLL and FRPL, how did students' PSF and NWF scores change over time?
- How did students' scores on PSF and NWF in this sample compare to the national norms for the assessment (using percentile ranking)?

## Analysis Methods

The statistical analysis used in this study was the most rigorous option for educational research, multi-level modeling. In this approach, students are nested within their classrooms and schools to help account for any teacher and school-related effects on student growth.



## Main Research Findings

### Teacher perceptions of using the program

- Nearly all teachers reported that the materials were of *good* or *excellent* quality (93%) and *very effective* at developing various student skills (79%+ teachers for most skills). All teachers indicated they would recommend Heggerty PA to another teacher.
- Most teachers reported that they experienced no challenges using the program (75%+). For those who did, they indicated they had time constraints or would have liked to have had more training.
- Nearly all teachers (93%) reported they could implement all or most of a typical lesson.
- The report includes many details about teachers' impressions of the program, which would be helpful to review for all schools planning for their implementation.

### Kindergarten Highlighted Findings

- For Phoneme Segmentation Fluency (PSF), kindergarten students (N=207) made significant improvements across the year, with their spring scores 10 points higher than the first graders' fall scores (43 points vs. 32 points).
- Similarly, for Nonsense Word Fluency - Correct Letter Sounds (CLS), kindergarten students significantly improved throughout the year, with their spring scores 4 points higher than the first graders' fall scores (40 points vs. 36 points). CLS gains, on average, went from 9 letter sounds in the fall to 40 in the spring. Words Read Correctly (WRC) improved from 1 to 10 words.

### First Grade Highlighted Findings

- The first graders (N=44) also made significant and meaningful progress on PSF and NWF-CLS.
- For NWF-CLS, students (N=78) gained 49 letter sounds across the year (36 to 85).
- For NWF-WRC, students improved from 7 to 26 words across the year.

### Multilingual Learners and FRPL Students (across grades)

- MLL and FRPL students also saw similarly meaningful and significant growth from fall to spring on both measures. The sample size ranged from 39-94 students depending on the analysis.
- MLL and FRPL students made higher gains than their peers on some measures (PSF and NWF-CLS), suggesting that students in these categories who started below their peers closed achievement gaps and ended the year closer to their peers.



## Expert Questions & Recommendations

### What questions do our experts have for the authors?

- The study focused on a relatively small group of students, considering the program was used across four districts. How did the program impact other students in those schools, or how did the program compare to students in other schools in those same four districts (during 2022-2023)?
- What other programs were used for core reading instruction, and how might other products used by each teacher or school have contributed towards these results?
- Why were the sample sizes for the analyses relatively lower than the possible number of students in the four schools, especially for first grade?
- Why were only two assessments from DIBELS analyzed? We are interested to know the results for the overall composite scores and other subtests, pre-test to post-test.
- How many students moved from below the benchmark to on or above grade level?
- Considering the recovery from the pandemic, how did students in these schools compare to the national recovery trends in terms of grade-level attainment by Spring?

### What recommendations do our experts have for the next research study?

- To best understand how Heggerty PA contributed to the change in student growth, researchers should compare students who experienced Heggerty PA with students who received an alternative reading program that same school year. Ideally, these groups of students would be similar, and the amount of time provided to students for intervention would be comparable.
- To increase the rigor of the design, students, teachers, or schools would be randomly assigned to the intervention program condition.
- Percentile ranks are helpful as a reference for each student to monitor their progress toward grade level. As a group, measuring the mean percentile rank is less informative than knowing how many students moved categories from Well/Below Benchmark to On/Above Benchmark.

### Why does this review not include the Percentile Rank Results?

- The University of Oregon researchers created percentile ranks for teachers to understand where an individual student's score is situated compared to their peers. While DIBELS 8 includes information about "zones of growth," it does not have normed referenced growth measures.
- In this study, the fall average Kindergarten PSF raw score was 4 points corresponding to a percentile of 72. On the other hand, the spring average Kindergarten PSF raw score was 37 points corresponding to a percentile of 52. For reference, a score of 37 is considered above the 99th percentile in the fall. Most kindergarteners cannot successfully segment sounds on the first days of kindergarten, which warps the fall percentiles due to this floor effect, giving very low scores a high percentile ranking. Alternative scores, such as the overall composite score, should be used for main effects in literacy studies, especially in kindergarten.



## LXD Research ESSA Evidence Review

### Heggerty Phonemic Awareness (2022-2023), Grades K-1

LXD Research determined that this study provides moderate evidence for Heggerty Phonemic Awareness Curriculum for Kindergarten and Grade 1, according to Every Student Success Act (ESSA) levels of evidence provided by the U.S. Department of Education guidelines for the following reasons:

#### Criteria for Promising ESSA Level 3

- ✓ In correlational design, a study explores the relationship between two variables. This study explored fall scores and the spring scores.
- ✓ The dependent variable(s) include a quantitative measure of academic achievement.
- ✓ Statistical controls accounted for student differences, including learning in different classrooms and schools.
- ✓ At least one statistically significant, positive finding
- ✓ The study lasts at least 12 weeks, from program inception to posttest.
- ✓ The study has at least 2 teachers and 30 students per treatment.
- ✓ The study uses a form of a program that could, in principle, be replicated.

#### What would have been needed for What Works Clearinghouse to have approved this study with Promising evidence?

- A group of students who did not receive Heggerty PA, within the same district and statistically similar to the studied students, would serve as a comparison group to understand the impact of this curriculum on student skill growth.
- At least two schools from each district would be treatment and control groups.
- Analysis of student growth would account for student demographics.
- Overall reading achievement scores would be used and standardized across grade levels for multi-grade analysis.

# LXD Research Expert Reviewers

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Dr. Rachel Schechter founded Learning Experience Design (LXD) Research and an Edtech Trendsetter Award honoree for her contributions to the edtech industry. An international speaker and writer on literacy product efficacy, Dr. Schechter has published research for companies including Lexia, Houghton Mifflin Harcourt, Engage2Learn, Hatch Early Learning, Labster, and 95 Percent Group. Dr. Schechter has a Master's in Education from Harvard University and a Ph.D. in Child Development from Tufts University. Leading LXD Research, her team's guidance boosts the capacity for education leaders to buy research-proven products and edtech company leaders to measure, communicate, and accelerate learning outcomes for students of all abilities.

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Nathaniel Hansford is a teacher of 11 years, with a specialist in reading and in special education. He is the author of *The Scientific Principles of Reading Instruction* and *The Scientific Principles of Teaching*. He is the lead writer and editor for the popular education websites: *Pedagogy Non Grata* and *Teaching by Science*. Nathaniel Hansford, has conducted almost three dozen case studies, and multiple large meta-analyses, including the largest meta-analysis on phonics instruction in the last 10 years and the only large-scale meta-analysis on reading comprehension that controlled for measurement type. He is passionate about making academic research accessible for teachers.



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