E3 RESEARCH

AN INDEPENDENT RESEARCH STUDY

Head Start - Preschool

4-year-olds

Four-Year-Old Head Start Students' Alphabetic Knowledge - Half-Day Program

Head Start - Preschool 4-year-olds

A cohort of 538 four-year-old preschoolers who attended the Audubon Head Start/Preschool Program in Ohio County School District, Hartford, Kentucky were used in this study. Students attended half-day classes between two and five days a week and attended the Head Start/Preschool Program during the 2014-2015, 2015-2016 and 2016-17 school years. Because many children in this Program live in rural areas, some did not attend their schools with regularity.

Demographics

Grade Level	Preschool	Ethnicity	%
Population	538	African American	2
Boys/Girls	52% / 48%	Asian	1
Assessment Instrument	Z-BRA3	Caucasian	90
Reduced-cost Lunch	100%	Latino/Hispanic	7
ELL	1%	Other	0

Methodology and Test Instrument

Teachers conducted the pre-test during the first two weeks of school (September). Additional assessments were conducted at mid-term in January and at the end-of-the-school-year in late May. Students were assessed on alphabetic knowledge of lower- and uppercase letters (letter shapes, names, and sounds, Alliterative Animal Names and Body Signals). All students enrolled in the Head Start/Preschool Program were included in the study. Teachers, aides, and principals agreed to use the *Zoo-phonics Multisensory Language Arts Program* with fidelity.

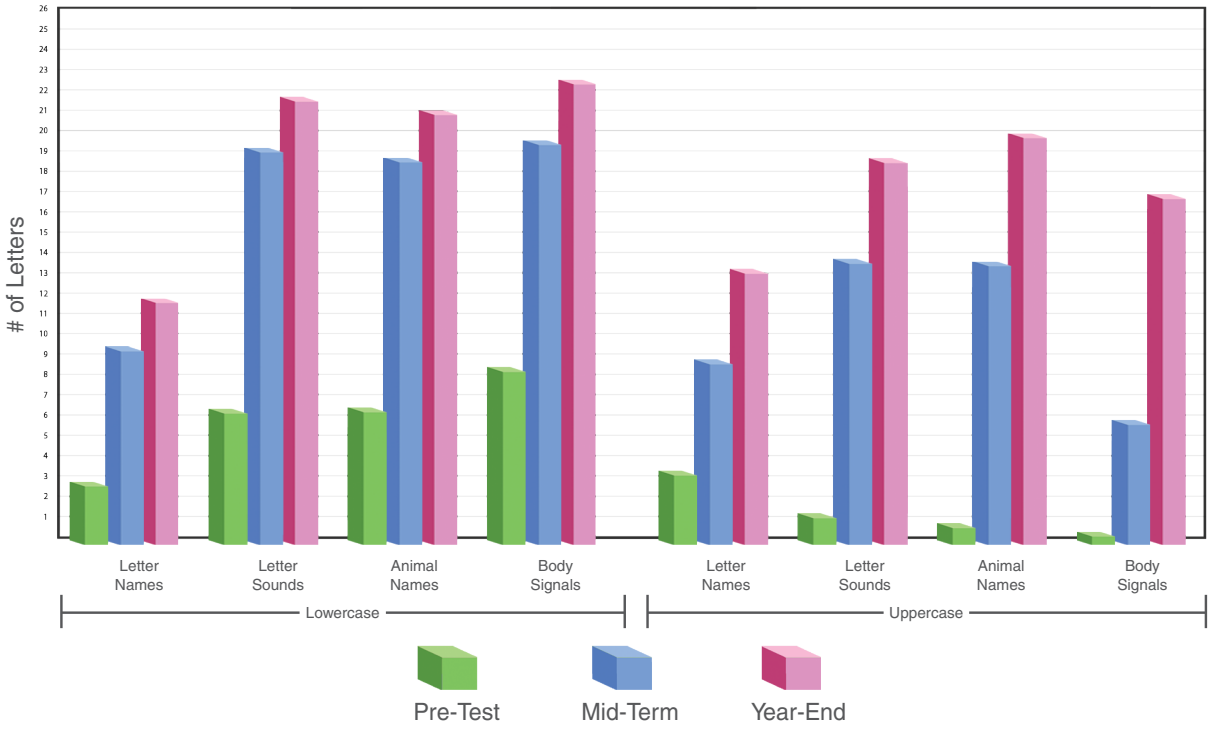

Figure 1. Lowercase and Uppercase Alphabetic Proficiency for 4-Year-Old, Half-day Preschoolers

Zoo-phonics®
The Multisensory Language Arts Program

Analysis

A General Linear Model with Repeated Measures was used to determine proficiency levels and gains between assessment periods for all cohorts. The significance level for all tests was set at $p \leq .05$.

- Descriptive statistics were used to compare proficiency levels within each cohort and subsequently disaggregated into gender groups.
- T-tests were used to measure the differences between pre- and post-mean scores for each variable. Gains are reported by cohort and related gender groups.
- Data from three school years were aggregated for analysis.

Findings

Significant growth occurred initially in lowercase letter names, sounds, Alliterative Animal Names and Body Signals, and, later in the year, in uppercase letter skills. The mean scores for lowercase letter sounds, Alliterative Animal Names and Body Signals showed a significant increase of about 15 letters by the end of the school year. Letter names also showed a significant increase of about 11 letters. In Zoo-phonics, lowercase letter shapes and sounds were stressed over letter names and uppercase letters because lowercase letters are used 95% of the time in text. Sounds are needed for sound blending, segmenting, reading, spelling and writing. The uppercase alphabet was introduced subsequent to near-mastery of the lowercase alphabet. Students gained an average of about 17 uppercase letters in sounds, Alliterative Animal Names and Body Signals during the course of the year. Student scores were notably stronger each successive year because of improved teacher proficiency and the large inclusion of students who received Zoo-phonics as three-year-olds in their preschool Head Start Program.

The preschool students in this study showed strong growth in the alphabetic domain, demonstrating that the letter shapes and sounds of the lowercase alphabet can be learned easily and quickly, even in a half-day program. Strong associations among letter sounds, Alliterative Animal Names and Body Signals provided a consistent base for rapid recall and strategies for early reading without a total reliance on letter name-sound memorization, as is taught in other programs. Acquiring alphabetic knowledge prepared preschool children for more advanced academic concepts earlier, preparing them for kindergarten. These concepts included initial, ending and medial sounds, rhyming, sound segmenting and blending, reading of words, and word building.

Conclusion

We concluded that the use of the *Zoo-phonics Multisensory Language Arts Program* in a half-day preschool program (including Head Start students) resulted in strong and rapid learning of the alphabet for all children. Significantly, students also gained skills including sound blending, segmenting and early reading at an earlier age than offered through many traditional preschool programs. This study demonstrated that all children can learn the lowercase and uppercase alphabets quickly and easily in a fun, novel, playful and physical way.

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For more information view the full study at:
http://www.zoo-phonics.com/research

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