

Four-Year-Old Pre-kindergarten Students' Alphabetic Knowledge - Full-Day Program

A cohort comprised of 413 four-year-old preschoolers was used in this study. Students attended one of four district-operated preschool programs in the Putnam City School District (PCS), in Oklahoma and the Franklin County School District (FCSD), in Tennessee during the 2015-2016 and 2016-2017 school years.

Demographics

Grade Level	Preschool (Full Day Program)			Ethnicity	%		
	PCS	FCSD	Total		PCS	FCSD	Total
Population	413			African American	22	11	16
Boys/Girls	48% / 52%				3	2	2
Assessment Instrument	Z-BRA3				47	82	66
Reduced-cost Lunch	68%				25	5	14
ELL	%				3	0	2
	PCS	FCSD	Total		0	2	0
	21	2	10				

Methodology and Test Instrument

The *Zoo-phonics Basic Reading Assessment, 3rd edition (Z-BRA3)* was used to assess alphabetic knowledge of lower- and uppercase letters (letter shapes, names, and sounds, Alliterative Animal Names and Body Signals) in the fall during the first two weeks of class and in the spring prior to the end of the school year.

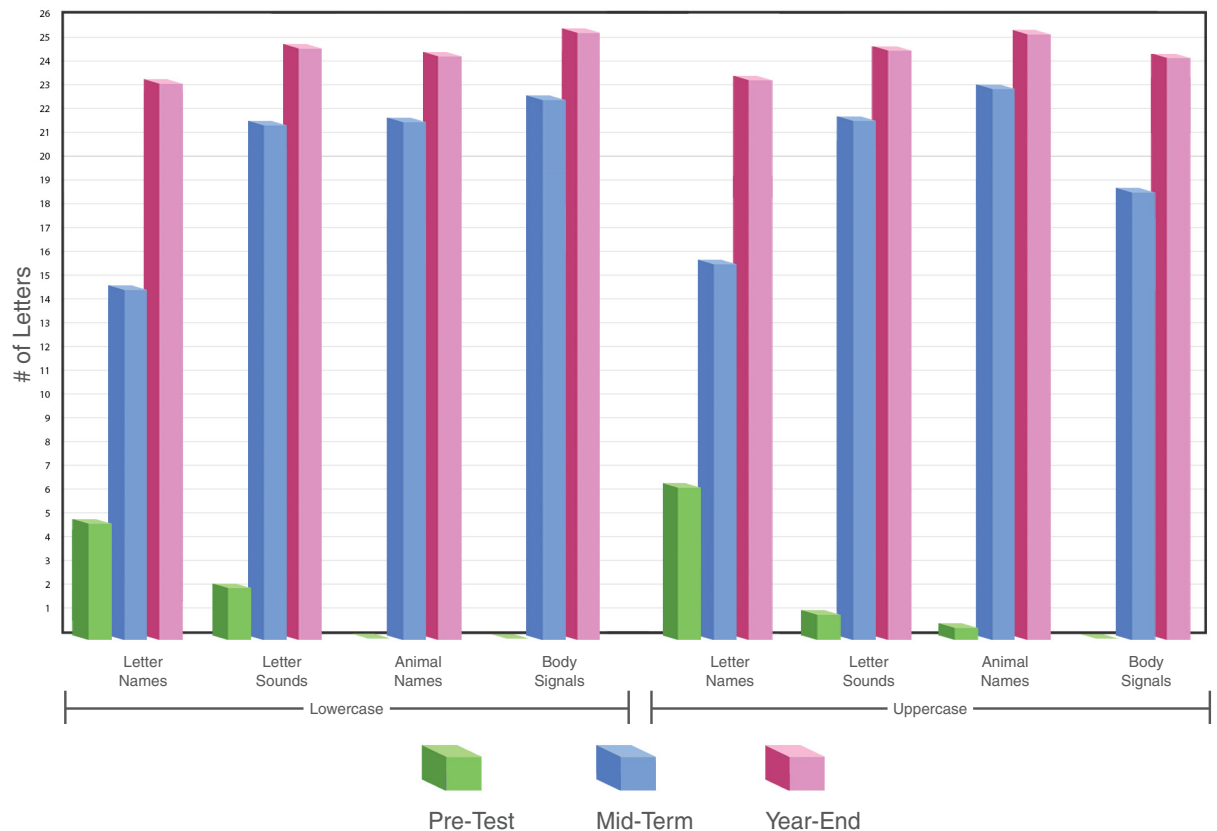


Figure 1. Lowercase and Uppercase Alphabetic Proficiency, Full-day Preschool, 4-Year-Olds

Preschool Full Day Program - 4-year-olds

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 two school years were aggregated for analysis.

Findings

A significant pattern emerged showing consistent growth in both lower- and uppercase letter shapes, names, sounds, Alliterative Animal Names and Body Signals, demonstrated in mid-term (January) mean scores. The mean scores for lowercase letters were 23 letters names and 25 letter sounds. Similarly, students recognized 23 uppercase letter names and 25 letter sounds.

The Zoo-phonics methodology emphasizes lowercase letters and letter sounds over uppercase letters and letter names and only begins to teach these latter skills when mastery of lowercase letters and sounds have been reached. Lowercase letters are used 95% of the time in text and the sounds are needed for segmenting and sounding out words in early literacy experiences.

Any early proficiency differences on these variables essentially disappeared by January and at the end of the school term. Even though many of these students had no prior exposure to both Zoo-phonics lower- and uppercase alphabets, near mastery of all alphabetic skills was evident for this cohort both early in the year (January) and at the end of the school year. Notably, the speed in which lower- and uppercase letter knowledge was learned in the first four months of school. This allowed children to utilize this new information with more advanced literacy skills.

Conclusion

The use of the *Zoo-phonics Multisensory Language Arts Program* in a full-day preschool program resulted in strong and rapid learning of the lower- and uppercase alphabets for all children. Significantly, most students reached high levels of proficiency while also gaining more advanced literacy skills including sound blending, segmenting needed for early reading, spelling and writing, although these skills are not assessed in this study.

These preschool students were fully prepared to enter kindergarten with strong alphabetic and phonemic awareness skills. This study demonstrated that all children, regardless of Socio-Economic Status (SES) and other demographic characteristics, can learn and utilize the lower- and uppercase alphabets quickly and easily in a novel, fun, physical and playful way.



For more information view the full study at:

<http://www.zoo-phonics.com/research>



E3 RESEARCH
AN INDEPENDENT
RESEARCH STUDY

Full Day Program - 4-year-olds
Preschool

Zoo-phonics®
The Multisensory Language Arts Program