



E9 RESEARCH  
AN INDEPENDENT  
RESEARCH STUDY

# Head Start - Preschool 3-year-olds

**Zoo-phonics®**  
The Multisensory Language Arts Program

## Three-Year-Old Head Start Students' Alphabetic Knowledge Study

This study was conducted using 188 Head Start three-year-olds enrolled in the 2014-2015, 2015-2016 and 2016-2017 school years. All enrolled students participated in the study regardless of ability or language. All students attended the half-day Audubon Head Start/Preschool in Ohio County School District, Hartford, Kentucky. Because many children in this Program live in rural areas, some did not attend their schools with regularity.

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### Demographics

Grade Level	Preschool	Ethnicity	%
Population	188	African American	2
Boys/Girls	56% / 44%	Asian	1
Assessment Instrument	Z-BRA3	Caucasian	90
Reduced-cost Lunch	100%	Latino/Hispanic	7
ELL	1%	Other	0

### Methodology and Test Instrument

Students were assessed using the *Zoo-phonics Beginning Reading Assessment, Version 3 (Z-BRA3)* in the first two weeks of school, at mid-term in January, and at the end-of-the-school year, in late May. Teachers, aides, and principals agreed to use the *Zoo-phonics Multisensory Language Arts Program* with fidelity.

Children were asked to identify lowercase letters by letter shape and name, letter sound, the Zoo-phonics Alliterative Animal Names, and Body Signals. Uppercase letters and letter names are not taught to this age-group and capital letters were not tested at this time.

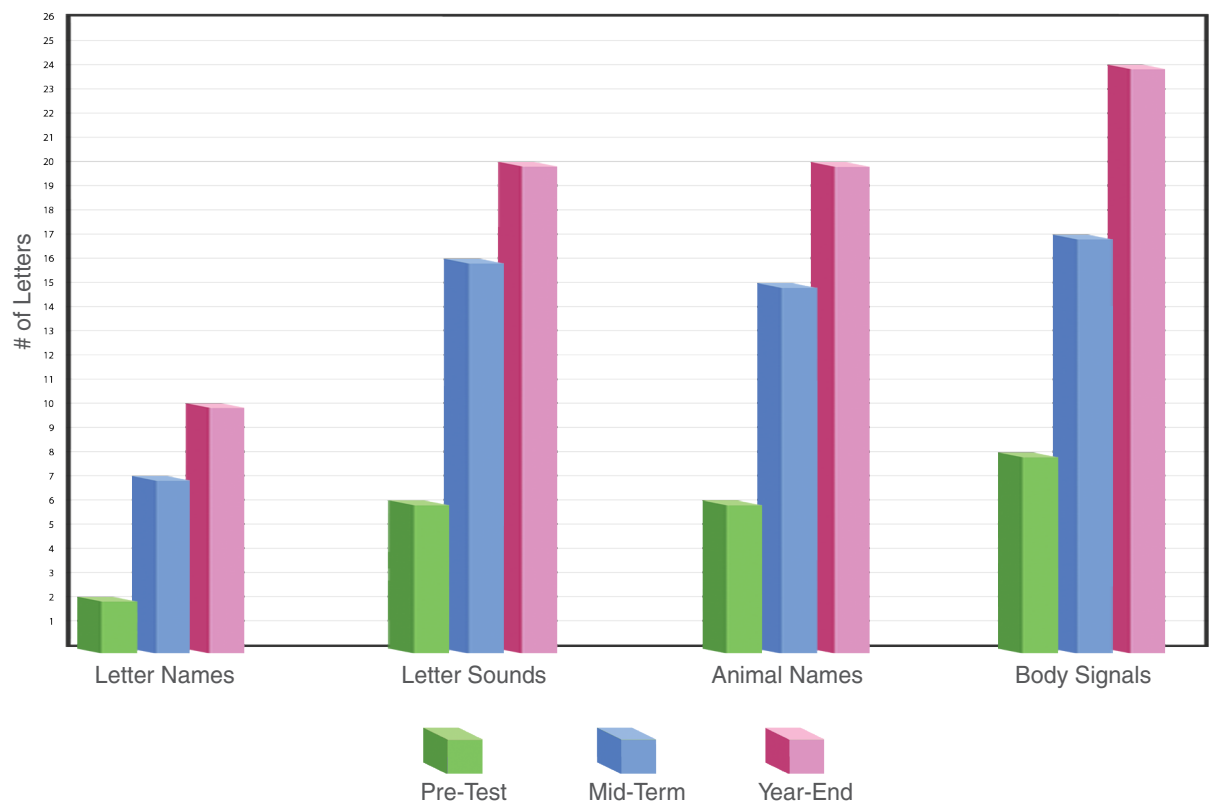


Figure 1. Lowercase Alphabetic Proficiency for 3-Year-Old Preschoolers

## 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.
- Data from two school years and within each cohort were aggregated.

## Findings

Three-year-olds were initially taught lowercase letter shapes and sounds through a lowercase Animal Alphabet (animals directly drawn in the shapes of the lowercase letters), Alliterative Animal Names, and Body Signals (movement). Letter names and capital letters are not emphasized for this age-group in the Zoo-phonics instruction because the letter names may interfere with learning the letter sounds (letter names are sounds, also). Zoo-phonics focuses on lowercase letter shapes and sounds first because they are used 95% of the time in text and speech.

As evidenced in Figure 1, students showed significant gains of 14 to 16 letters in lowercase letter shapes and sounds, Alliterative Animal Names and Body Signals. Eight letter names were also learned by the end of the year. Significant growth occurred in each skill throughout the year, especially between the pre-test and the mid-year test in January. This early proficiency allowed 3-year-olds to learn more advanced phonemic awareness skills, such as identifying initial, medial and ending sounds in words, etc.

## Conclusion

We concluded that the use of the *Zoo-phonics Multisensory Language Arts Program* jumpstarts the alphabet for preschool children and prepares them for kindergarten. This study demonstrates that alphabetic acquisition happens much earlier than generally expected of three-year-olds and does it through play, music, stories, drama, and purposeful movement.



**For more information view the full study at:**

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



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