

Effects of One Vs. Two Years of Wy-ERF Early Literacy Instruction

Mary Abbott and Jane Atwater
Juniper Gardens Children's Project, University of Kansas

International Society on Early Intervention (ISEI)
New York, New York
May 2-5, 2011

{ 1 }

Wyandotte County, Kansas



{ 2 }

About Wyandotte County

- Wyandotte County
 - Population in 2009 was 155,085 with 35% White, 32% Hispanic, 28% Black, 5% Other
 - Of the 105 counties in the state of Kansas, has the greatest proportion of families in poverty
 - Ranked 105th for quality of health by the Kansas Health Foundation
 - Nearly half of the children come from families living in poverty,
 - 43% of children live in single-parent households
 - 34% of children are born to teen mothers.
 - On average, children enter kindergarten at least one SD below national norms.
 - By third grade, fewer than half of the children are proficient in reading and math.

{ 3 }

Wy-ERF Partners

Project Staff

Juniper Gardens Children's Project

University of Kansas

Project EAGLE

University of Kansas Medical Center

Implementation Sites

Head Start

Academy of Children

{ 4 }

Wy-ERF

Classrooms/Children

- 9 classrooms across 4 sites
- 3 teachers per classroom
 - BA
 - AA
 - CDA
- Full-day classrooms
- 15-20 children per classroom
- 3 full-time coaches (3 classrooms each)

- 92% from low income families
- Approximately 1/3rd English Language Learners
- Remaining population primarily African-American
- 10% with IEPs

{ 5 }

Wy-ERF Components

- Evidenced-Based Curriculum - Scholastic Curriculum
- Literacy-rich classroom environments – additional dollars for equipment, materials
- Screening, outcome, & ongoing progress monitoring - multiple measures across the year with data driven-decision making for instructional planning
- 2-Tiered system – additional instructional support to children with lowest scores on assessments
- Family involvement
- Intensive, ongoing professional development – 50 hours a year of whole group training and 4 hours a week of coaching
- Systematic instruction across Circle, Centers, Small Group and Storybook Reading to high fidelity

{ 6 }

Research Questions

- What are the differences in letter knowledge, phonological awareness, and oral language growth for preschool children who received one versus two years in of ERF?

- Did child attendance the 1st two years of the ERF program or the last two years of the program make a difference in child outcomes?

{ 7 }

Analysis Sample

	2009 K-Bound Cohort	2010 K-Bound Cohort	Totals
1 Year in ERF	34	44	78
2 Years in ERF	40	38	78
Totals	74	82	156

Note: Analyses are limited to children who received ERF for the entire year and K-bound

{ 8 }

Percentage of English Language Learners

	2009 K-Bound Cohort	2010 K-Bound Cohort
1 Year in ERF	34%	18%
2 Years in ERF	33%	27%

Note: These differences were not significant, using Pearson χ^2 .

[9]

Assessments Across 3 Years

- Progress Monitoring Measures
 - GGG Picture Naming Fluency (vocabulary)
 - DIBELS Letter Naming Fluency (alphabet knowledge)
 - DIBELS Word Part Sound Knowledge (phonological awareness)

[10]

HLM Analysis of Children's Progress

- Analysis of growth in progress monitoring measures during the year prior to kindergarten.
- Growth parameters:
 - Change over time (slope)
 - Status at the end of the year (intercept)
- Tested as possible predictors:
 - Years in ERF
 - K-Bound Cohort
 - Home Language

[11]

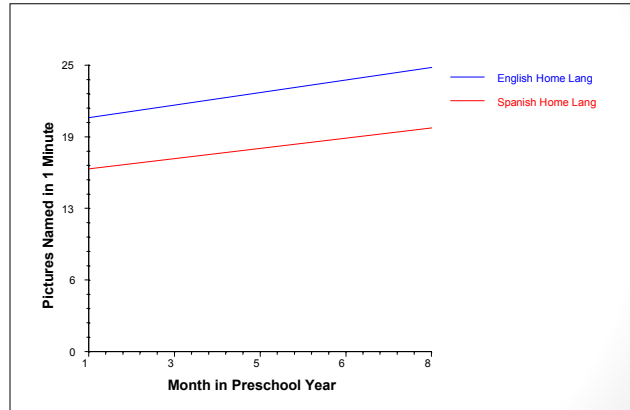
HLM Analysis of Picture Naming (Vocabulary)

- Years in ERF and K-Bound Cohort were not significant predictors of vocabulary growth.
- Home language was a significant predictor of children's scores at the end of the year.***
- Scores were lower for children whose home language was Spanish.
- However, the rate of *growth* over time did not differ significantly by home language.

*** p<.001

[12]

Picture Naming Fluency – Year Prior to Kindergarten Growth Trajectories Based on Home Language



13

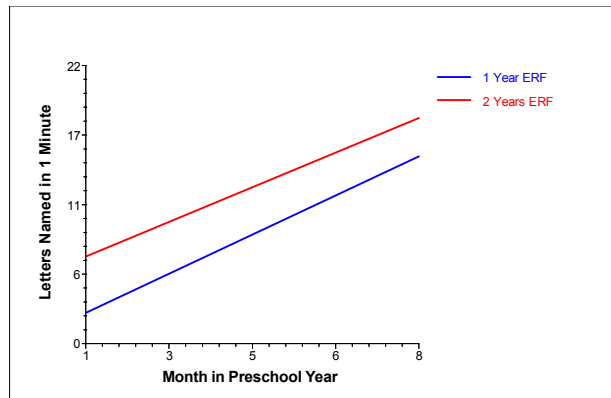
HLM Analysis of Letter Naming Fluency

- At the end of the year, children who had received 2 years of ERF had significantly higher Letter Naming scores than children who had only 1 year.*
- In significant results for K-Bound Cohort, children in the 2010 Cohort showed more rapid improvement over time*** and named more letters correctly at the end of the year.***
- The 2010 Cohort participated in Years 2 and 3 of the project, when teachers had more ERF experience.
- Progress and outcomes in Letter Naming did not differ significantly by home language.

* $p < .05$ *** $p < .001$

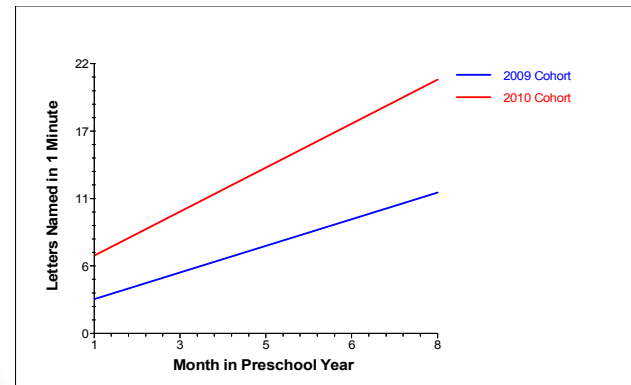
14

Letter Naming Fluency – Year Prior to Kindergarten Growth Trajectories Based on Years in ERF



15

Letter Naming Fluency – Year Prior to Kindergarten Growth Trajectories Based on Kindergarten Cohort



16

HLM Analysis of Word Part PA Knowledge

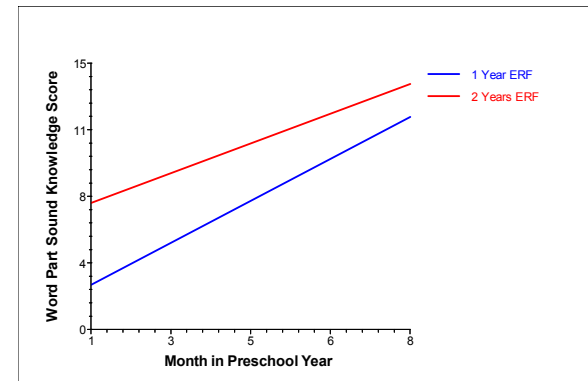
- Compared to children who had already been in ERF for 1 year, new ERF children started the year with lower Sound Knowledge scores but improved more rapidly over the year.**
- Despite this difference in rate of growth, children with 2 years of ERF still had significantly higher scores at the end of the year.*
- Compared to the 2009 cohort, children in the 2010 Cohort showed more rapid progress over the year* and significantly higher scores the spring before kindergarten.**
- Progress and outcomes in PA Knowledge did not differ significantly by home language.

* $p < .05$ ** $p < .01$ *** $p < .001$

17

Word Part Knowledge – Year Prior to Kindergarten

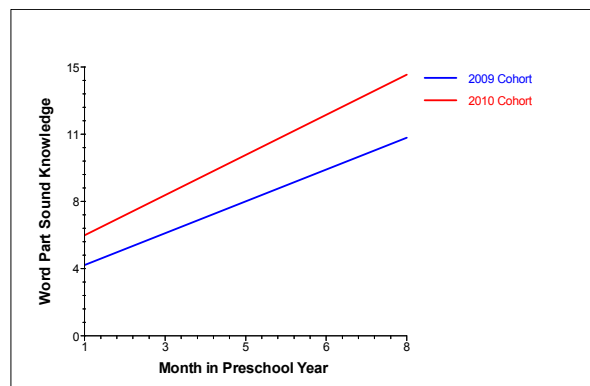
Growth Trajectories Based on Years in ERF



18

Word Part Knowledge – Year Prior to Kindergarten

Growth Trajectories Based on K-Bound Cohort



19

Conclusions

- Children who had received 2 years of ERF had significantly higher letter knowledge and phonological awareness scores than children who had only 1 year of ERF
- As teacher time in ERF increased, children's early literacy growth was accelerated.
- Progress and outcomes for alphabet knowledge and phonological awareness did not differ significantly by home language and vocabulary outcomes had the similar slope.

20

Contact Information

Mary Abbott, PhD
ERF Director
mabbott@ku.edu

Jane Atwater, PhD
Evaluation Director
janea@ku.edu

University of Kansas
Juniper Gardens Children's Project
444 Minnesota # 300
Kansas City, KS 6610