Effectiveness of Preschool in Promoting and Maintaining Early Literacy Skills

Introduction

Background
- High-quality early childhood programs can result in sizeable short-term benefits in children's early literacy skills [e.g., List et al., 2018; Lonigan, Burgess, & Anthony, 2002; Gormley & Anderson, 2016].
- There is, however, marked variation in effects [Phillips et al., 2017].
- Ensuring that children benefit from early learning in preschool is essential to school success.
- It is critical to understand programmatic characteristics that lead to both short- and long-term positive outcomes for all children.

Purpose
- Investigate the linkage between children's early literacy skills at the end of preschool to their skills at the beginning of kindergarten;
- Investigate programmatic differences in the degree to which preschool programs increase acquisition of early literacy skills in preschool; and
- Investigate the characteristics of programs that lead to positive early literacy outcomes for children.

Measures

Preschool Early Literacy Skills (PELI) [Kaminski & Abbott, 2012; Abbott & Peterson, 2012]
- Alphabet Knowledge
- Phonological Awareness
- Vocabulary and Oral Language
- Comprehension

- Assessment of early literacy skills in grades K–6 (e.g., DIBELS Next);
- Letter Naming Fluency
- First Sound Fluency

Early Childhood School/Program-wide Survey
- Adapted from two tools used in previous research
- School-Wide Evaluation Tool for Reading–PreK (Abbot & Peterson, 2012)
- CRITEC Teacher Survey (Greenwood, Curtis, Goddard, Kaminski, McConnell, & Abate, 2010)

Subjects

Sample 1
- 604 preschool children in PreK year in 50 preschool classrooms from 26 schools in 8 states from three US Census regions (West, Midwest, and South).
- From existing data sets of children with preschool and kindergarten data entered into Acadience Data Management for 2015–16 and 2016–17 school years.
- Demographics of schools:
  - Demographics of communities:
    - White Black Asian AI/NI HPI Hispanic Poverty
    - 73% 16% 5% 2% <1% 16% 19%

Sample 2
- 516 preschool children in PreK year
- From existing data sets of children with preschool data entered into Acadience Data Management for 2018–19 school year from sites from which we have completed survey
- 366 preschool classrooms from 125 schools in 19 states from all US Census regions
- Demographics of communities:
  - White Black Asian AI/NI HPI Hispanic Poverty
  - 73% 16% 5% 2% <1% 16% 19%

Survey Respondents
- Administrators of ~130 sites/programs with PELI data entered into Acadience Data Management System for 2018–2019 invited to complete survey.
- Surveys were completed from 57 administrators representing 61 sites/programs in 19 states.
- 52% Administrative staff (e.g., program director/coordinator)
- 30% Specialist/other (e.g., literacy coach)
- 18% Teaching staff

Survey Summary and Results

Question 1
What is the linkage between children’s early literacy skills at the beginning of Kindergarten?
- Correlation and multiple regression analyses for:
  - PELI Composite Score predicting to Acadience Reading beginning of kindergarten composite score
  - PELI Alphabet Knowledge predicting to Acadience Reading Letter Naming Fluency at beginning of kindergarten
  - PELI Phonological Awareness predicting to Acadience Reading First Sound Fluency measure at beginning of kindergarten

Question 2
Are there programmatic differences in the degree to which preschool programs increase acquisition of early literacy skills in preschool?
- Hierarchical linear modeling (HLM) used to fit a growth trajectory for each child's progress during the preschool year
  - Individual children
  - Classroom
  - Program/site

Question 3
What programmatic and instructional characteristics lead to positive growth and early literacy outcomes for children?
- Multilevel growth models were used to assess the relationship between survey responses and individual student growth.

Predictors of Growth: Small Group Instruction
- 76% used additional assessments for some children.
- 56% provided additional instruction (e.g., 1-1 tutoring, small group, sped)
- 84% provided large group instruction in literacy/language skills
- 75% had a curriculum to teach early literacy skills

Predictors of Growth: Use of Curriculum
- 72% additional users include team specialist
- 31% additional users include team administrator
- 43% additional users include specialist

Predictors of Growth: Use of Assessment
- 58% used additional assessments
  - Formal (e.g., literacy/mtss)
- 37% used additional assessments
  - Informal (e.g., observation/anecdotal, caregiver, published
  - 76% used additional assessments
    - (informal, observation/anecdotal, caregivers, published

Predictors of Growth: Use of Planning
- 100% of primary users of PELI data were teachers
- 72% additional users include administrator
- 43% additional users include specialist
- 31% additional users include team (e.g., literacy/mtss)
- 75% received professional development on using assessment results
- 48% also received coaching
- Data used for:
  - Screening (85%)
  - Instructional grouping (49%)
  - Plan activities (74%)
  - Parent conferences (82%)
  - Set learning goals (48%)
  - Monitor progress (74%)
  - Curriculum decisions (36%)

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