Effectiveness of Preschool in Promoting and Maintaining Early Literacy Skills

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Introduction

Background

- High-quality early childhood programs can result in sizeable short-term benefits in children's early literacy skills (e.g., Li et al., 2016, Lonigan, Burgess, & Anthony, 2000; 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, Aguayo, & Good, 2014)

- Early childhood assessment designed for screening and progress monitoring of early literacy and language skills:
  - Alphabet Knowledge
  - Phonological Awareness
  - Vocabulary and Oral Language
  - Comprehension

Acadience Reading: Beginning kindergarten measures (Good & Kaminski et al., 2010)

- Assessment of early literacy skills in grades K–6 (fka 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)
  - CRTIEC Teacher Survey (Greenwood, Carta, Goldstein, Kaminski, McConnell, & Atwater, 2015)

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 set of children with preschool and kindergarten data entered into Acadience Data Management for 2015–16 and 2016–17 school years.
  - Demographics of schools:

White	Black	Asian	AI/NI	H/PI	Hispanic	FR Lunch
44%	6%	3%	1%	<1%	42%	62%

Note: Based on NCES data from 2015-16. AI/NA = American Indian/Native Alaskan. H/PI = Hawaiian/Pacific Islander

Sample 2

- 3,516 preschool children in PreK year
  - From existing data set 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	H/PI	Hispanic	Poverty
73%	16%	5%	2%	<1%	16%	19%

Note: Based on data from 2017 American Community Survey, US Census Bureau. AI/NA = American Indian/Native Alaskan. H/PI = Hawaiian/Pacific Islander

Results

Question 1

What is the linkage between children's early literacy skills at the end of preschool to their 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
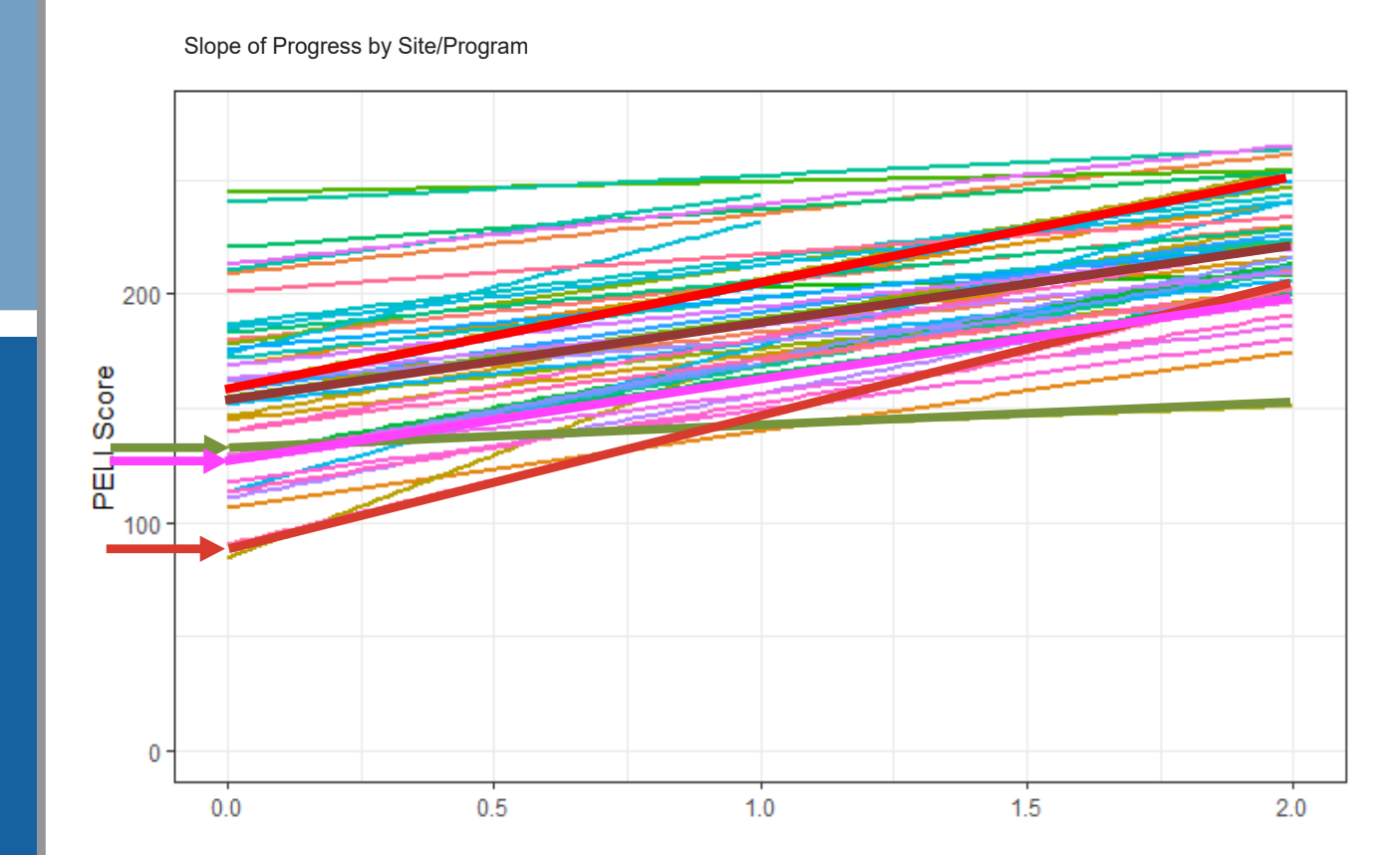

Linkages From Preschool to Kindergarten
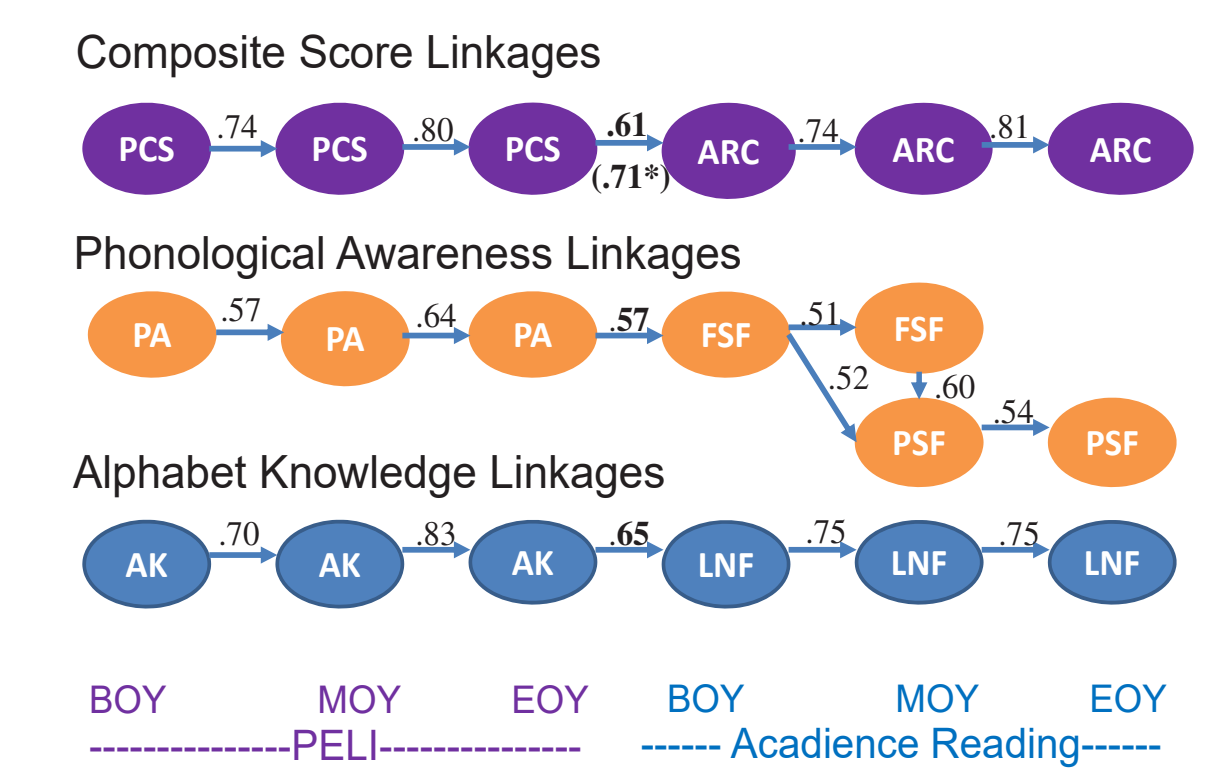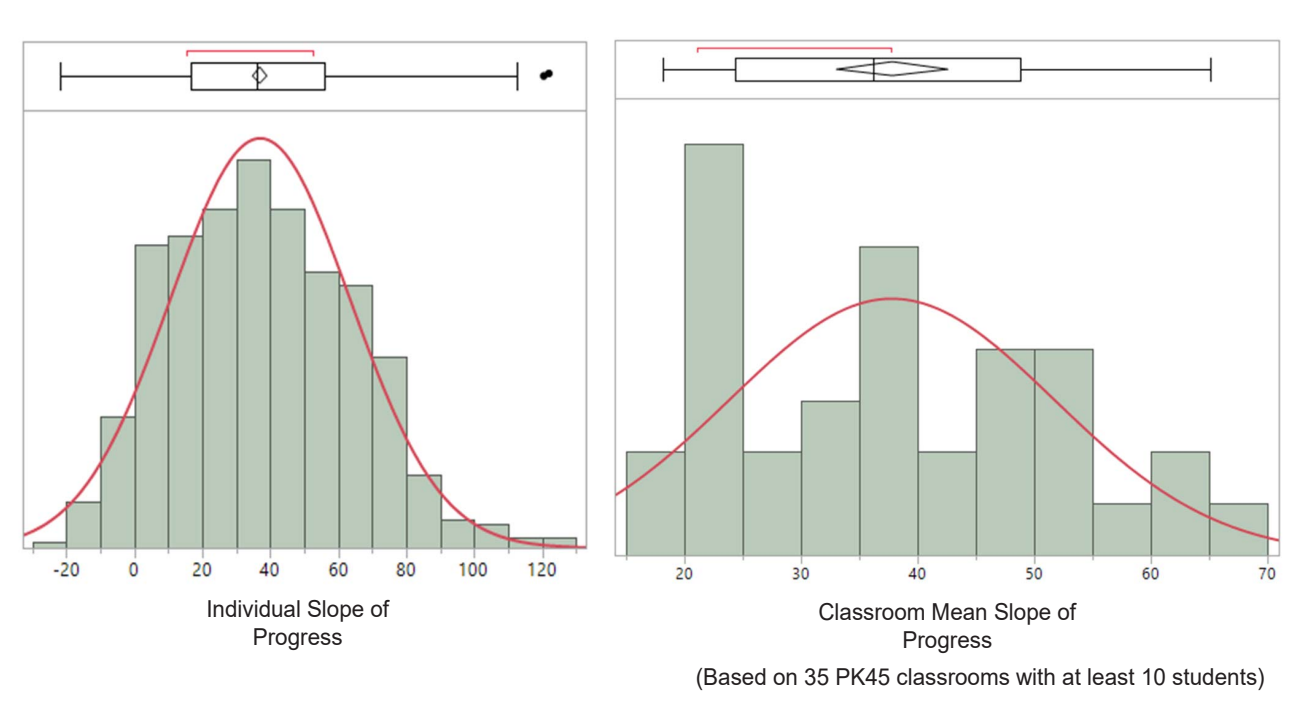
Question 2

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
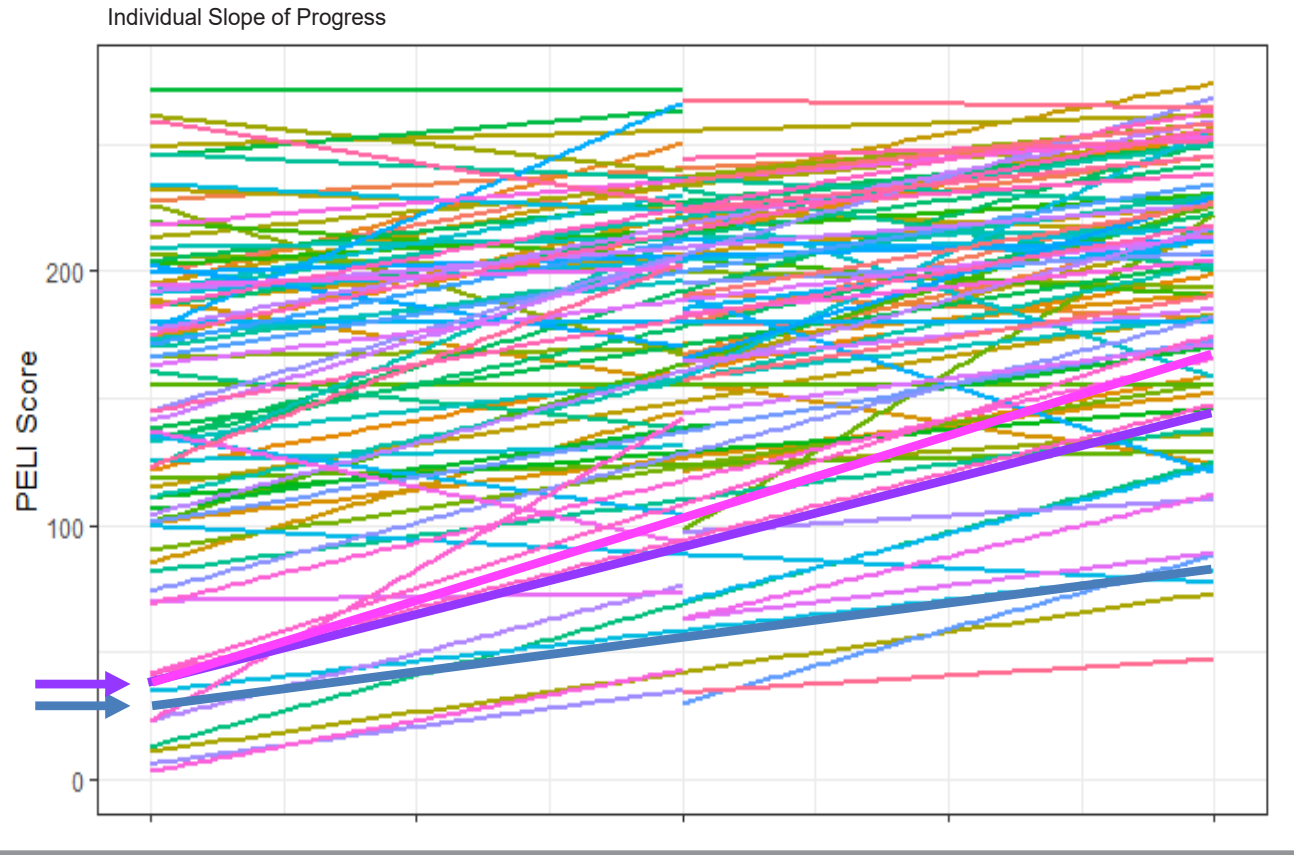 - Individual children
  - Classroom
  - Program/site

Differences in Growth in PreK: Sample 1
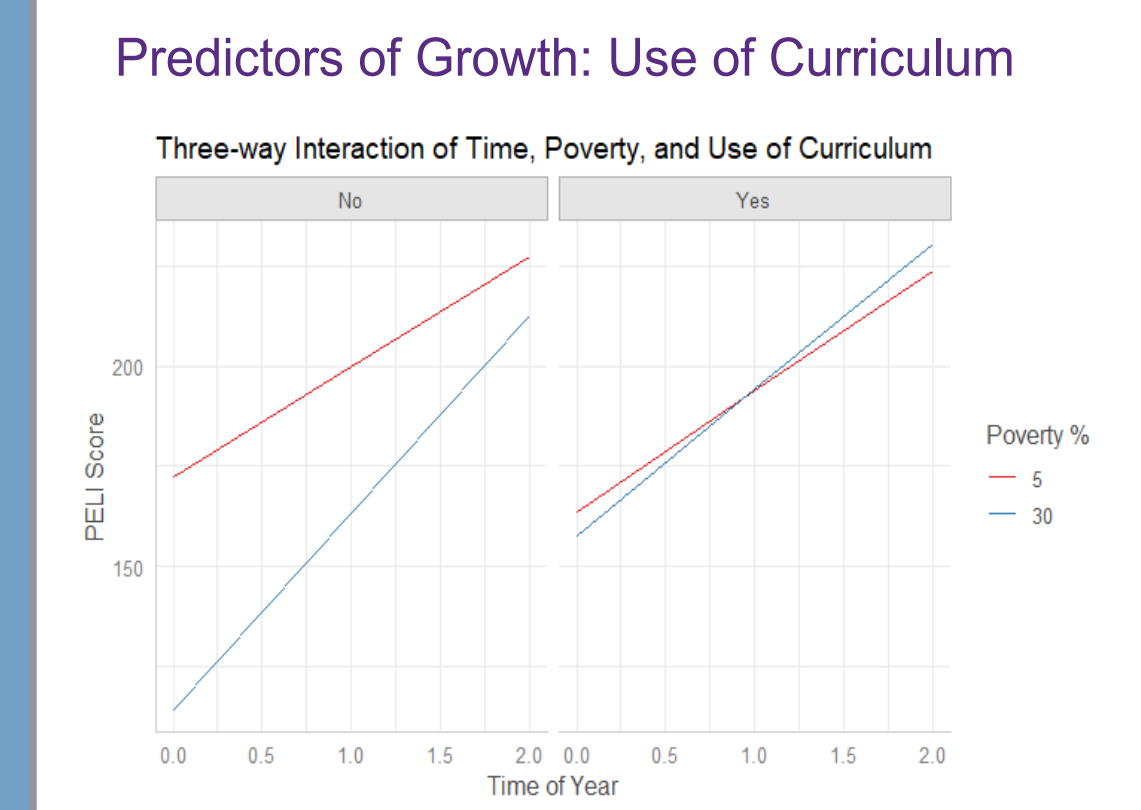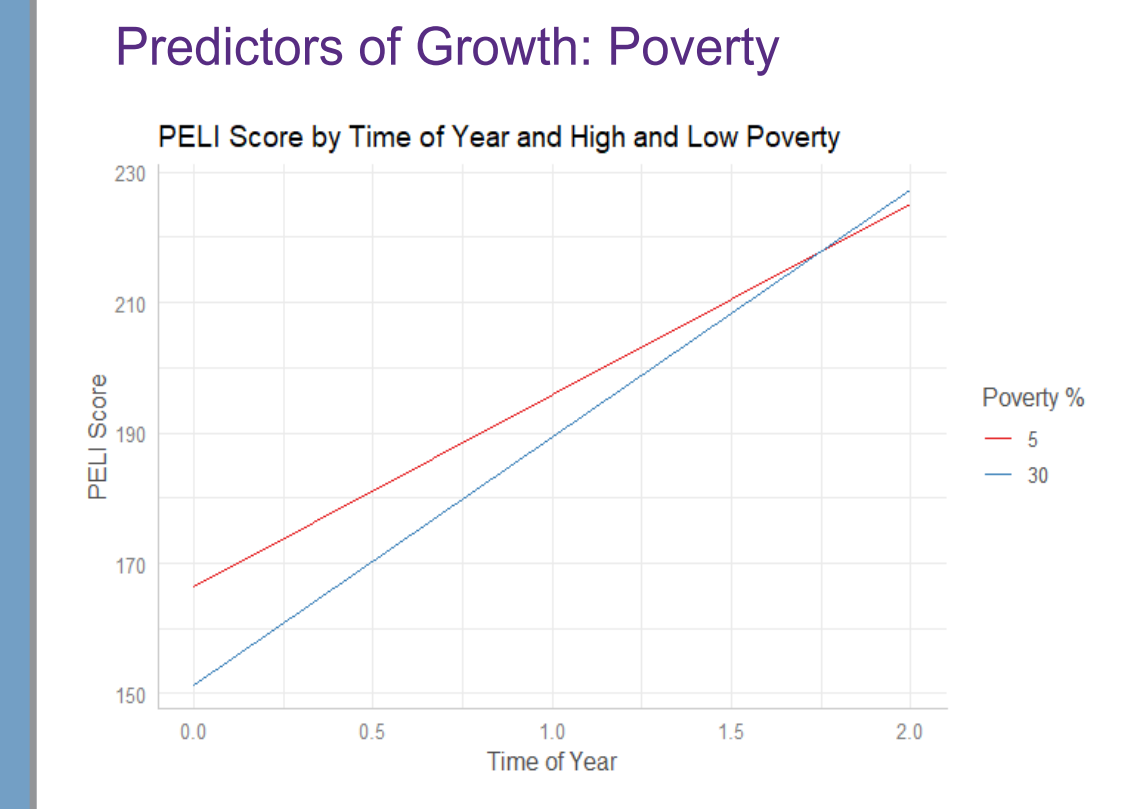

Differences in Growth in PreK: Sample 2

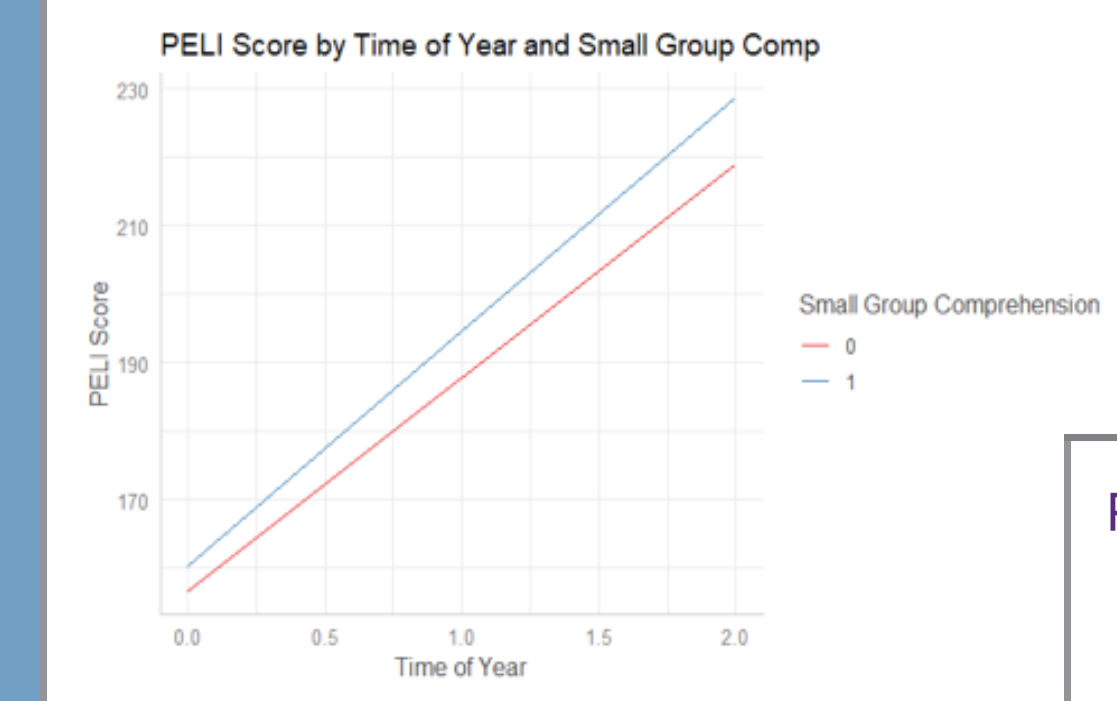Differences in Growth in PreK: Sample 2

Question 3

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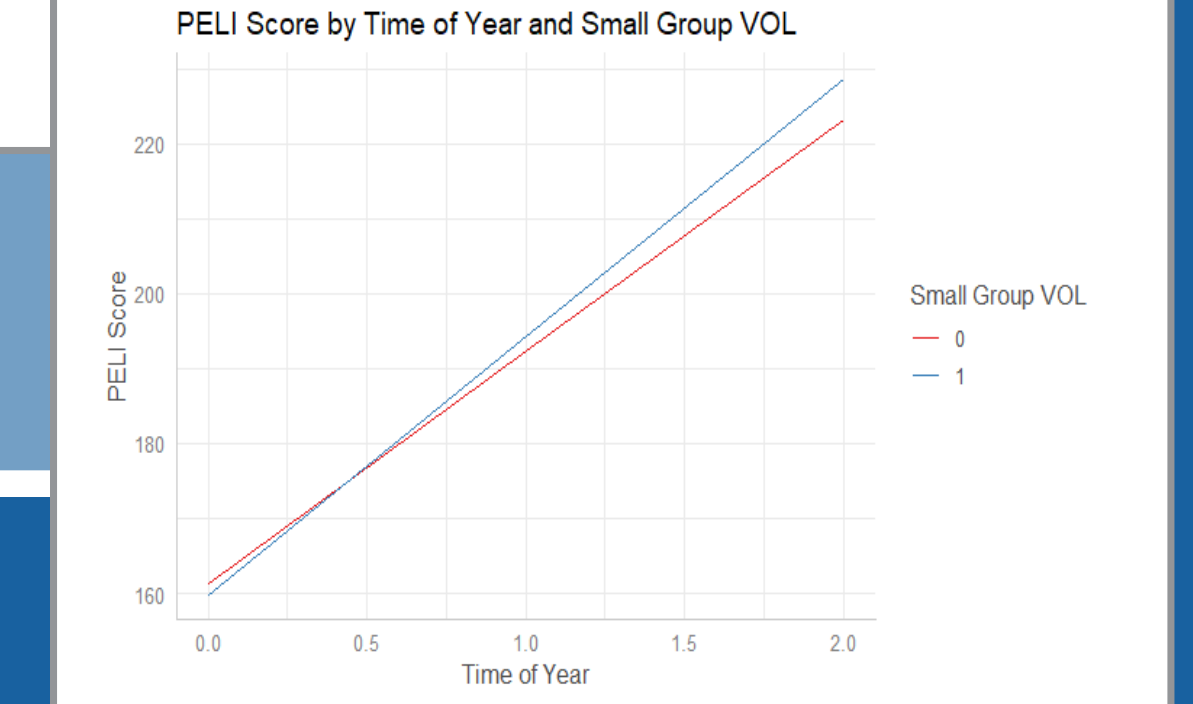
- Multilevel growth models were used to assess the relationship between survey responses and individual student growth.

Predictors of Growth: Poverty

Predictors of Growth: Use of Curriculum

Predictors of Growth: Small Group Instruction

Predictors of Growth: Small Group Instruction

Survey Summary and Results

Survey Respondents

- Administrators of ~130 sites/programs with PELI data entered into Acadia 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

Program Type

Schedule

Teacher Certification
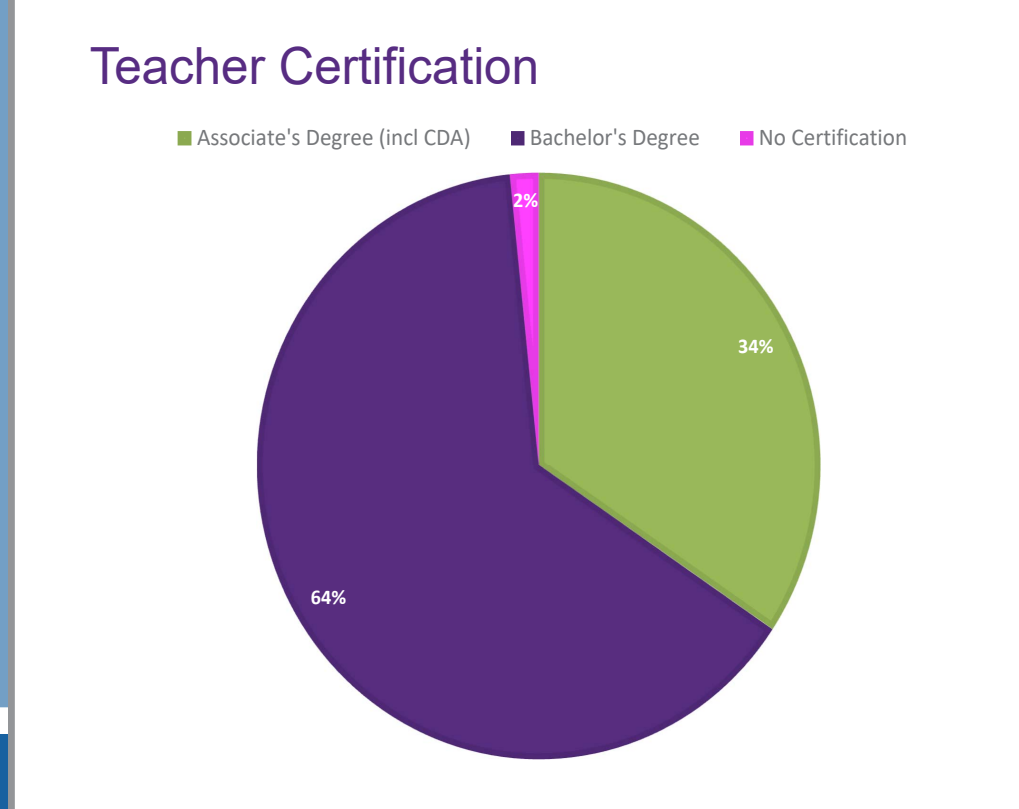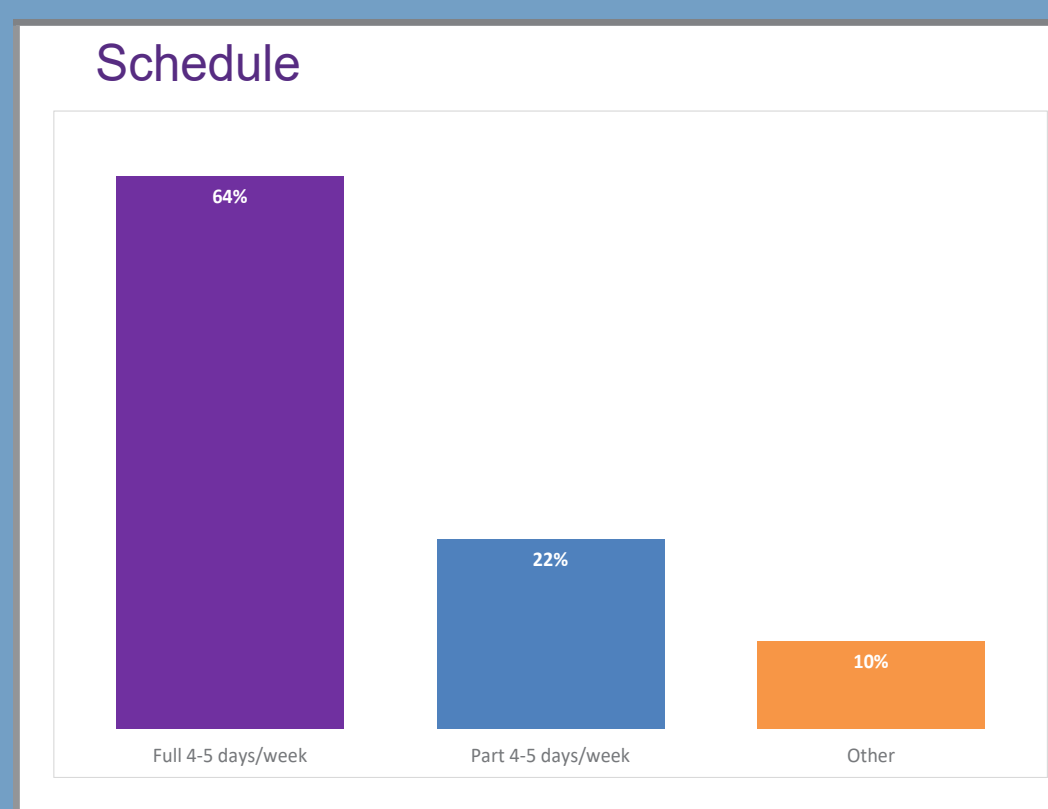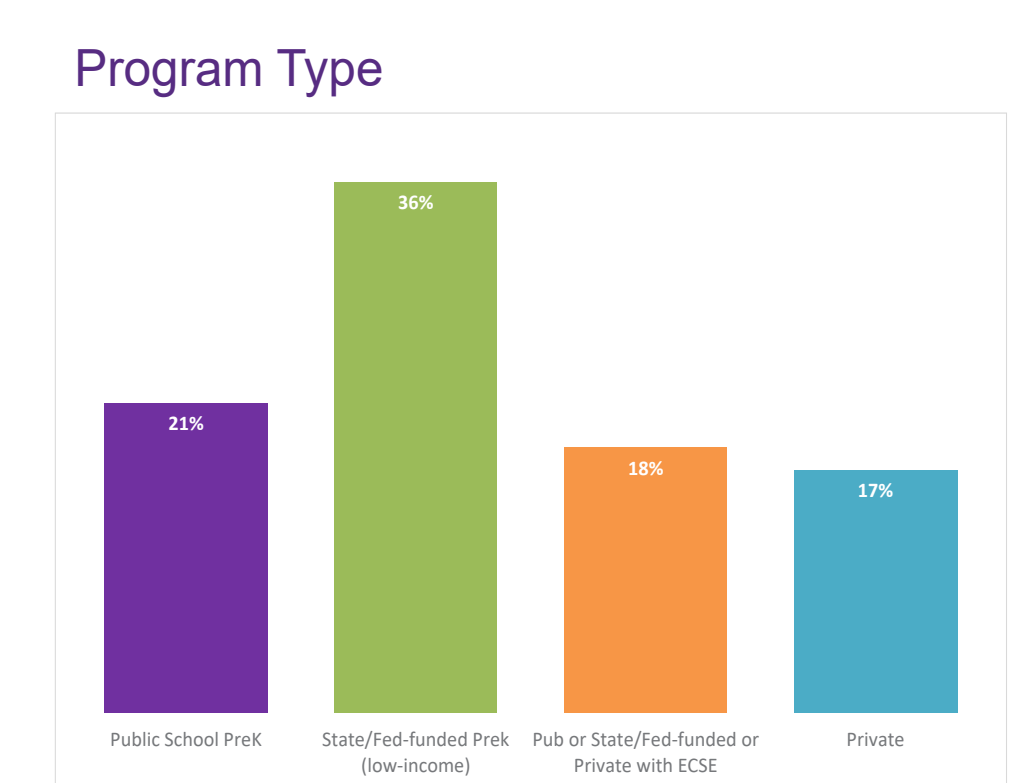
Survey Summary

Across all sites it was reported that:
- 75% had a curriculum to teach early literacy/language skills
- 81% provided small group instruction in one or more skill areas.
- 84% provided large group instruction in one or more skill areas.
- 56% provided additional instruction (e.g., 1-1 tutoring, small group, sped) for some children.
- 97% provided inservice training on promoting early literacy and language skills.
- 76% used additional assessments (informal, observation/anecdotal, caregivers, published
  - (70%, e.g., AEPS, Teaching Strategies Gold, PALS, Ages and Stages)

- 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 (95%)
    - Instructional grouping (49%)
    - Plan activities (74%)
    - Parent conferences (82%)
    - Set learning goals (48%)
    - Monitor progress (74%)
    - Curriculum decisions (36%)