Alignment of early childhood policy and classroom processes and practices in a large, diverse, public school district

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Today’s Talk

• Early Learning Network Overview
• Fairfax Pre-k to 3rd Grade (FP3) Study Overview
• Programs and Policies that Promote Student Learning
• Alignment of Policy and Observed Data
• Discussion and Next Steps
Early Learning Network Overview

• In 2016, IES formed the Early Learning Network comprised of:
  • 5 assessment teams (OSU, MDRC, UNL, UNC-Chapel Hill & UVA)
  • 1 assessment team (UC Irvine)

• Network Mission: To improve the academic success of children by identifying research-proven policies and practices that narrow the achievement gap and ensure early learning success is maintained as children transition from preschool to elementary school and beyond.
Fairfax Pre-k to 3rd Grade Study

• **Policy Study:** Examine policies and programs designed to support learning from Pre-K through third grade in Fairfax County

• **Observational Study:** Across PK-3 classrooms, describe the nature and level, in each grade, of teacher-child interactions, content of instruction, children’s classroom engagement

• **Longitudinal Study:** Examine the effect of early educational experiences on children’s learning through 3rd grade by tracking all children who entered public Pre-K in 2016-2017 and a *random sample* of children with no center-based Pre-K who entered K in 2017-2018
Programs and policies that promote student learning

• Recent evaluations of successful state and city early learning models suggest policies and program design features that are effective in improving outcomes for low-income children.

• Key factors include:
  • Clear articulation of school readiness goals and aligned strategies to achieve them
  • Use of educationally focused curricula
  • Professional development focused on teachers’ classroom interactions and implementation
  • Use of data to inform instruction
Alignment between policies, classroom practice, and child outcomes

• This study uses a mixed method approach to:
  • Analyze the district’s school readiness goals
  • Examine (mis)alignment with observed classroom data and child outcomes.
Setting and Study Partners

• Fairfax County Public Schools and Office for Children
• 11th largest school district in U.S.
• One of fastest-growing, most diverse regions
  • Serves more than 2,000 low income children in publicly funded preschool
Participants

• Pre-kindergarten (2016-2017)
  • 1,431 students
  • 117 school and community-based pre-k classrooms
    • Funded by VPI (state-funded), Head Start, Title I, Child Care Subsidies, or other public funding

• Kindergarten (2017-2018)
  • 2,437 students
    • 1,261 who attended public pre-k and participated in pre-k year
    • 1,176 who have similar demographic characteristics but had no center-based pre-k experience
  • 351 kindergarten classrooms
A Very Diverse Population

- Black/African American: 16%
- Native American/American Indian: 2%
- White/Caucasian: 10%
- Latino/Hispanic/Spanish: 62%
- Asian: 0%
- Multiracial: 10%
# Data Collected Across Years

<table>
<thead>
<tr>
<th></th>
<th>Pre-K All pre-k students</th>
<th>K Random sample of no pre-k and pre-k</th>
<th>Grades 1-3 Random sample of no pre-k and pre-k</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>fall</td>
<td>spring</td>
<td>fall</td>
</tr>
<tr>
<td>Policy focus groups</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>(Administrators, teachers, parents)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Administrator surveys</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Parent surveys</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Teacher surveys/ratings</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Observations</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Direct Assessments</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>FCPS Data</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>
What are FCPS school readiness goals?

• Reviewed policy documents with a focus on learning more about school readiness goals
• Surveyed administrators about school readiness goals
• Conducted focus groups with parents and teachers, asking about school readiness goals. Data analyzed using a four-stage coding process to identify themes.
School Readiness Goals – FCPS Strategic Plan

• School Readiness Goal: All children have the social, emotional, physical and intellectual skills they need to succeed in kindergarten and beyond.

• School Readiness Strategy: “Provide quality early childhood experiences aligned with . . . outcomes that are designed to prepare students to successfully enter Kindergarten.”
School Readiness Goals - Administrators

• Pre-k administrators reported on how much emphasis they placed on school-readiness goals:
  • % reporting strong or major emphasis
    • 77.2% - pre-reading
    • 77.2% - number concepts
    • 100% - social skills
School Readiness Goals – Parents and Teachers

• In focus groups, parents and teachers noted the importance of pre-k in supporting children’s behavioral and emotional readiness for kindergarten, with some also mentioning the importance of academic readiness.
Are Goals Aligned with How Programs Use Time?

• Trained observers visited classrooms 2-3 mornings during the pre-K year

• Used time sampling to code activity setting and instructional content using the Behavioral Coding System (adapted from the NICHD SECCYD Classroom Observation System and Observational Record of the Caregiving Environment; McCartney et al., 2007; Pianta et al., 2008)

• Estimated descriptive statistics to present a picture of pre-K classrooms
Are Goals Aligned with How Programs Use Time?

<table>
<thead>
<tr>
<th>Activity Setting</th>
<th>County Public Schools</th>
<th>Community-based Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole group</td>
<td>0.28</td>
<td>0.28</td>
</tr>
<tr>
<td>Small group</td>
<td>0.03 **</td>
<td>0.08</td>
</tr>
<tr>
<td>Individual</td>
<td>0.04 0.03</td>
<td>0.29 0.32</td>
</tr>
<tr>
<td>Free play</td>
<td>0.19</td>
<td>0.36 0.34</td>
</tr>
<tr>
<td>Routines</td>
<td>0.13 0.13</td>
<td></td>
</tr>
<tr>
<td>Meals</td>
<td>0.36 0.34</td>
<td></td>
</tr>
<tr>
<td>Academics</td>
<td>0.04 0.04</td>
<td></td>
</tr>
<tr>
<td>Socioemotional</td>
<td>0.15</td>
<td>0.24</td>
</tr>
<tr>
<td>Art</td>
<td>0.11 **</td>
<td>0.28</td>
</tr>
<tr>
<td>Other content</td>
<td>0.24</td>
<td>0.24</td>
</tr>
<tr>
<td>No content</td>
<td>0.21</td>
<td>0.24</td>
</tr>
</tbody>
</table>
Are Goals Aligned with How Programs Use Time?

• To some extent. . .
  • Children are engaged in learning-focused activities about 75% of the morning in free play or teacher-directed settings
  • Exposed to academic content 35% of the morning
    • More time spent in literacy and social studies (70%) than math or science
  • Only exposed to social-emotional content 4% of the morning
Are Goals Aligned with Child Outcomes?

• Children assessed in fall of K

• *Woodcock-Johnson III Tests of Achievement* - Early Reading Skills, Mathematics (WJ-III; Woodcock, McGrew, & Mather, 2001)

• Executive Function
  • *Backward Digit Span* (Carlson, 2005)
  • *Head, Toes, Knees, Shoulders* (McClelland et al., 2007)
  • *Pencil Tap* (Smith-Donald, Raver, Hayes, & Richardson, 2007)

• Social Skills and Conduct Problems – *Teacher Child Rating Scale* (Hightower et al., 1986)

• Regression models tested for significant differences at kindergarten entry between FP3 students who attended pre-k and those who did not
Academic Skills — Early Reading Skills

Note: Significant mean difference; PreK students score higher
Academic Skills – Mathematics Reasoning

![Bar graph showing average ratings for No Pre-k and Pre-k with a note stating significant mean difference; PreK students score higher.](image)

Note: Significant mean difference; PreK students score higher.
Executive Function – Backward Digit Span

Note: Significant mean difference; PreK students score higher
Executive Function — Head, Toes, Knees, Shoulders

Note: Significant mean difference; PreK students score higher
Executive Function – Pencil Tap

Note: Significant mean difference; PreK students score higher
Social-Emotional Skills

Average Ratings

No Pre-k: 3.48
Pre-k: 3.53

Note: Non-significant mean difference
Are School Readiness Goals Aligned with Child Outcomes?

• To some extent. . .
  • Children with pre-k experience show significantly greater academic and EF skills at kindergarten entry, as compared with those who did not attend pre-k
  • Consistent with large-scale national studies, pre-k did not result in benefits for children’s social-emotional skills
Discussion

• Goal of preparing students to be academically ready for kindergarten supported both in teachers’ pre-k instruction and evidenced in academic readiness of children with pre-k experience

• Preparing students to be socially and emotionally ready for kindergarten one of highest priorities for school readiness goals, but not reflected in pre-k classroom practice and children’s entering skills at kindergarten
Next Steps

• Examine whether patterns of findings in classroom process and child outcomes continue as we collect data in grades 1 – 3
  • Are positive effects of pre-k on academic outcomes maintained, or do our findings replicate national studies that find “fade out” effects?

• Continue to examine alignment between district policies and practice (transitions, data use, support for diverse families)
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