Alabama’s First Class Pre-K Program

Outcomes and Impacts:
A Summary of Most Recent Results

Prepared by the First Class Pre-K Research Evaluation Team
October 2018
Quality of Teacher-Child Interactions in First Class Pre-K Classrooms, 2018

CLASS (Classroom Assessment Scoring System)

<table>
<thead>
<tr>
<th>Positive Climate</th>
<th>Negative Climate*</th>
<th>Teacher Sensitivity</th>
<th>Regard for Student Perspective</th>
<th>Behavior Management</th>
<th>Productivity</th>
<th>Instructional Learning Format</th>
<th>Concept Development</th>
<th>Quality of Feedback</th>
<th>Language Modeling</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Alabama Post Test</strong></td>
<td>6.24</td>
<td>1.12</td>
<td>5.69</td>
<td>5.36</td>
<td>5.90</td>
<td>5.93</td>
<td>5.33</td>
<td>2.96</td>
<td>3.24</td>
</tr>
<tr>
<td><strong>National Average</strong></td>
<td>6.01</td>
<td>1.07</td>
<td>5.88</td>
<td>5.45</td>
<td>6.00</td>
<td>6.14</td>
<td>5.35</td>
<td>2.49</td>
<td>2.99</td>
</tr>
</tbody>
</table>

*Want lower score
Children who completed First Class Pre-K were more likely to test as “ready” at the beginning of Kindergarten than were children who did not receive First Class Pre-K.

Teaching Strategies GOLD Kindergarten Entry Assessment; Fall 2017

<table>
<thead>
<tr>
<th>School Readiness Domain</th>
<th>No First Class Pre-K (n=2,615)</th>
<th>First Class Pre-K (n=997)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social-Emotional</td>
<td>76.9</td>
<td>80.5</td>
</tr>
<tr>
<td>Physical</td>
<td>81.0</td>
<td>83.6</td>
</tr>
<tr>
<td>Language</td>
<td>66.7</td>
<td>73.4</td>
</tr>
<tr>
<td>Cognitive</td>
<td>60.9</td>
<td>67.2</td>
</tr>
<tr>
<td>Literacy</td>
<td>76.9</td>
<td>85.6</td>
</tr>
<tr>
<td>Math</td>
<td>49.9</td>
<td>55.1</td>
</tr>
</tbody>
</table>
By the end of the year, the majority of children in First Class Pre-K tested “ready” for Kindergarten in each domain – **70% of children were kindergarten ready** in at least 5 of 6 domains.
Though half or more of children arrived in First Class Pre-K below developmental expectations, nearly all were meeting or exceeding by the end of the year.
The largest gains in percent meeting or exceeding by the end of the First Class Pre-K year were for math, cognitive, and social-emotional skills.

### Gains in Developmental Skills

#### Teaching Strategies GOLD

<table>
<thead>
<tr>
<th>Skill</th>
<th>Percentage Point Gains</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social-emotional</td>
<td>51.9</td>
</tr>
<tr>
<td>Physical</td>
<td>44.6</td>
</tr>
<tr>
<td>Language</td>
<td>47.1</td>
</tr>
<tr>
<td>Cognitive</td>
<td>55.9</td>
</tr>
<tr>
<td>Literacy</td>
<td>47.7</td>
</tr>
<tr>
<td>Math</td>
<td>61.8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Percent</th>
<th>Meets or Exceeds - Fall 2017</th>
<th>Meets or Exceeds - Spring 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social-emotional</td>
<td>41.5</td>
<td>93.4</td>
</tr>
<tr>
<td>Physical</td>
<td>50.1</td>
<td>94.7</td>
</tr>
<tr>
<td>Language</td>
<td>44.6</td>
<td>91.7</td>
</tr>
<tr>
<td>Cognitive</td>
<td>35.9</td>
<td>91.8</td>
</tr>
<tr>
<td>Literacy</td>
<td>47.6</td>
<td>95.3</td>
</tr>
<tr>
<td>Math</td>
<td>24.9</td>
<td>86.7</td>
</tr>
</tbody>
</table>
Improving Developmental Outcomes

Among children who arrived in First Class Pre-K below developmental expectations for their age, over 80% were meeting or exceeding by the end of the year.

Spring Performance of Children who were Below Developmental Expectations at First Class Pre-K Entry, 2017-2018, Teaching Strategies GOLD

<table>
<thead>
<tr>
<th>Category</th>
<th>Percent Meeting or Exceeding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social-emotional</td>
<td>89.5</td>
</tr>
<tr>
<td>Physical</td>
<td>90.6</td>
</tr>
<tr>
<td>Language</td>
<td>85.9</td>
</tr>
<tr>
<td>Cognitive</td>
<td>87.8</td>
</tr>
<tr>
<td>Literacy</td>
<td>91.4</td>
</tr>
<tr>
<td>Math</td>
<td>82.7</td>
</tr>
</tbody>
</table>

Percent Meeting or Exceeding
Assessing Impact for All Alabama Students

Using advanced statistical methods to “control” for all other characteristics* that might influence school performance,

**Children who received First Class Pre-K were:**
- More likely to be proficient in reading
- More likely to be proficient in math
- Less likely to be retained in grade
- Less likely to be chronically absent

Compared to children who did not receive First Class Pre-K.

❖ We see no evidence of fade out of benefits over time.

Based on analyses of ACT Aspire results from Spring 2015, 2016, and 2017 for children in 3rd through 7th grades.

*Multivariable linear probability fixed effects models control for receipt of First Class Pre-K, year received/could have received First Class Pre-K, race/ethnicity, gender, poverty, and school attended.*
Impact for Low-Income Students: Reading & Math Proficiency at 3rd and 6th Grades

Statewide analysis among Alabama’s most vulnerable 3rd and 6th grade children shows that children who received First Class Pre-K were more likely to be proficient in reading and math compared with children who did not receive First Class Pre-K.
3rd Grade Achievement Gap Based on Income

In both Reading and Math, we observe a **29.6 percentage point gap** in proficiency between poverty and non-poverty students. First Class Pre-K closes that gap for children in poverty.

**Reading Proficiency**

- **Poverty:** 23.5
- **Non-Poverty:** 53.3
- **Statewide:** 34.1

**Math Proficiency**

- **Poverty:** 43.5
- **Non-Poverty:** 73.5
- **Statewide:** 54.3

2016-2017 ACT-Aspire
Impact: Narrowing the 3rd Grade Achievement Gap in Reading for Low Income Students

- **Statewide**: 34.1
- **No-FCPK Poverty**: 23.5
- **FCPK Poverty**: 26.5

**Reading Proficiency**

- **28% gap closure**: 10.6 point gap
- **3 point increase**: 23.7
- **2.8 point increase**: 26.5

The 3% difference means 1,068 more children could have been proficient if all in poverty had FCPK

**12% gain**
Impact: Narrowing the 3rd Grade Achievement Gap in Math for Low Income Students

Statewide: 54.3
No-FCPK Poverty: 43.5
FCPK Poverty: 49.7
All Poverty: 43.9
FCPK Poverty: 49.7

57% gap closure
10.8 point gap
6.2 point increase
5.8 point increase
13% gain

Math Proficiency

The 6.2% difference means 2,207 more children could have been proficient if all in poverty had FCPK

2016-2017 ACT-Aspire
Impact: Grade Retention for All Alabama Students

Children who received First Class Pre-K are **less likely to be retained in grade** than children who did not attend.

The differences in grade retention are even larger among more vulnerable low-income children.

Reducing retention = Fewer “extra years” → cost savings

A study of 4 groups of low income children estimated potential cost savings of $11.1M to $17.3M per year.
Impact: Attendance for Low Income Students

Alabama First Class Pre-K children consistently over time and across grades miss fewer days of school. Low income children who received First Class Pre-K are less likely to be chronically absent.

Percentage of Low Income Children who were Chronically Absent by Grade, 2015-2016 school year

Impact: Attendance for Low Income Students

Alabama First Class Pre-K children consistently over time and across grades miss fewer days of school. Low income children who received First Class Pre-K are less likely to be chronically absent.

Percentage of Low Income Children who were Chronically Absent by Grade, 2015-2016 school year

<table>
<thead>
<tr>
<th>Grade</th>
<th>FCPK</th>
<th>No-FCPK</th>
</tr>
</thead>
<tbody>
<tr>
<td>3rd</td>
<td>8.5%</td>
<td>9.1%</td>
</tr>
<tr>
<td>4th</td>
<td>7.3%</td>
<td>8.9%</td>
</tr>
<tr>
<td>5th</td>
<td>6.8%</td>
<td>8.9%</td>
</tr>
<tr>
<td>6th</td>
<td>7.0%</td>
<td>9.3%</td>
</tr>
<tr>
<td>7th</td>
<td>7.3%</td>
<td>10.9%</td>
</tr>
</tbody>
</table>

These differences result in an estimated $5,403,655 in cumulative “lost cost” avoided.

Chronically absent students missed 18 or more days per year.
In an analysis of children who began Kindergarten in 2010, at each grade children who received First Class Pre-K **needed special education services at lower percentages** compared with children who did not receive First Class Pre-K.

These differences result in a cost savings of $4,374,400 over this group’s K-12 experience.