



Achievement Gap Closure and Gains Associated with Alabama First Class Pre-K

Executive Summary – Proficiency in Reading and Math at 3rd grade Differences by Poverty Status and Race Gap Closure and Gains Associated with First Class Pre-K

I. Introduction and Methods

These results are for one group of children who entered Alabama public schools in Kindergarten during the 2013 school year and who continued to be enrolled in Alabama public schools during the 2016 school year (sample size = 59,346). Based upon Kindergarten entry, these children should have matriculated to 3rd grade at the time of these analyses. Children who received First Class Pre-K were identified (sample size = 3,543 or 6% of total). Demographic data, including free or reduced lunch status, were gathered from Alabama State Department of Education data collection as extracted from the iNow (Chalkable) student data system. Children were considered poverty/low income based on receipt of free or reduced lunch. [NOTE: This was the standard method for determining income status at the time of these analyses. Future analyses will be based on direct certification.] See Appendix for full sample demographics.

Individual student performance on the 3rd grade ACT Aspire exam (2016) was analyzed. Grade placement was determined as of the beginning of the 2016 school year with students classified as retained if they had ever been held back in a grade (Kindergarten through 3rd grade).

Proficiency in reading and/or math was defined according to a two-prong approach based on both ACT Aspire performance and retention. Students were classified as proficient only if they met both prongs of the definition:

Proficiency =

1. Student scored level 3 or 4 on ACT Aspire test
- AND**
2. Student is in expected grade based on when entered Kindergarten/has never been retained

(i.e., students classified as proficient in these analyses scored proficient on test and were in correct grade for age)

Analyses were completed on behalf of the Alabama Department of Early Childhood Education by the multi-disciplinary Pre-K Research Evaluation Team, which includes researchers and data specialists from the UAB School of Public Health, the UAB School of Education, the Public Affairs Research Council of Alabama (PARCA), and ThinkData Solutions. Full report with graphs and calculations available separately.

II. Summary of Findings – Implications of these analyses for this group of 3rd graders

- Despite large differences in both reading and math proficiency based on income status and racial/ethnic minority group, First Class Pre-K narrows the gap in proficiency, bringing these children closer to statewide proficiency levels. The magnitude of gap closure to statewide observations ranges from 28% for reading proficiency for children in poverty to 71% for math proficiency for Hispanic children in poverty. The largest gap closures were observed for children in poverty and for Black and Hispanic children.
- Further, children in poverty and/or who are members of racial/ethnic minority groups who received First Class Pre-K outperformed their peers who did not receive First Class Pre-K, resulting in gains or increases in proficiency compared to what might otherwise be expected based on observed proficiency levels for children in poverty and/or racial/ethnic minorities overall. Gains ranged from 3% for reading proficiency for White children in poverty to 25% for reading proficiency for Hispanic children in poverty. The largest gains were observed for Black and Hispanic children

III. Results

A. Reading Proficiency – 3rd grade

i. Income Status

Statewide	Non-Poverty	Poverty	Poverty		Gap Closure: FCPK Poverty to Statewide	Gain: FCPK Poverty over Poverty
			FCPK	No-FCPK		
34.1%	53.3%	23.7%	26.5%	23.5%	28%	12%

- First Class Pre-K **closes the gap** in reading proficiency by **28%** for children in poverty compared to observed statewide proficiency levels.
- First Class Pre-K for children in poverty provides a **12% gain** (increase) in reading proficiency over and above proficiency levels observed for children in poverty overall.

ii. Race/Ethnicity and Income Status

Black and Black Poverty

Statewide	White	Black	Hispanic	Asian
34.1%	44.1%	19.9%	19.9%	60.8%

White Poverty	Black Poverty	Hispanic Poverty	Asian Poverty
31.1%	17.5%	18.4%	46.5%

Black		Black Poverty		Gap Closure:	Gap Closure:	Gain:	Gain:	Gain:
FCPK	No-FCPK	FCPK	No-FCPK	FCPK Black to Statewide	FCPK Black Poverty to Statewide	FCPK Black over Black	FCPK Black Poverty over Black	FCPK Black Poverty over Black Poverty
23.8	19.5	21.6	17.2	29%	26%	20%	8%	23%

- First Class Pre-K **closes the gap** in reading proficiency by **29%** for Black children compared to observed statewide proficiency levels.
- First Class Pre-K **closes the gap** in reading proficiency by **26%** for Black children in poverty compared to observed statewide proficiency levels.
- First Class Pre-K for Black children provides a **20% gain** (increase) in reading proficiency over and above proficiency levels observed for Black children overall.
- First Class Pre-K for Black children in poverty provides an **8% gain** (increase) in reading proficiency over and above proficiency levels observed for Black children overall.
- First Class Pre-K for Black children in poverty provides a **23% gain** (increase) in reading proficiency over and above proficiency levels observed for Black children in poverty overall.

Hispanic and Hispanic Poverty

Statewide	White	Black	Hispanic	Asian
34.1%	44.1%	19.9%	19.9%	60.8%

White Poverty	Black Poverty	Hispanic Poverty	Asian Poverty
31.1%	17.5%	18.4%	46.5%

Hispanic		Hispanic Poverty		Gap Closure: FCPK Hispanic to Statewide	Gap Closure: FCPK Hispanic Poverty to Statewide	Gain: FCPK Hispanic over Hispanic	Gain: FCPK Hispanic Poverty over Hispanic	Gain: FCPK Hispanic Poverty over Hispanic Poverty
FCPK	No-FCPK	FCPK	No-FCPK					
23.8	19.7	21.6	17.2	26%	31%	18%	16%	25%

- First Class Pre-K **closes the gap** in reading proficiency by **26%** for Hispanic children compared to observed statewide proficiency levels.
- First Class Pre-K **closes the gap** in reading proficiency by **31%** for Hispanic children in poverty compared to observed statewide proficiency levels.
- First Class Pre-K for Hispanic children provides an **18% gain** (increase) in reading proficiency over and above proficiency levels observed for Hispanic children overall.
- First Class Pre-K for Hispanic children in poverty provides a **16% gain** (increase) in reading proficiency over and above proficiency levels observed for Hispanic children overall.
- First Class Pre-K for Hispanic children in poverty provides a **25% gain** (increase) in reading proficiency over and above proficiency levels observed for Hispanic children in poverty overall.

White Poverty

*Comparisons for White were limited to White Poverty only as White proficiency was above Statewide proficiency at outset.

Statewide	White	Black	Hispanic	Asian
34.1%	44.1%	19.9%	19.9%	60.8%

White Poverty	Black Poverty	Hispanic Poverty	Asian Poverty
31.1%	17.5%	18.4%	46.5%

White Poverty		Gap Closure:	Gain:
FCPK	No-FCPK	FCPK White Poverty to Statewide	FCPK White Poverty over White Poverty
32.0	31.0	32%	3%

- First Class Pre-K **closes the gap** in reading proficiency by **32%** for White children in poverty compared to observed statewide proficiency levels.
- First Class Pre-K for White children in poverty provides a **3% gain** (increase) in reading proficiency over and above proficiency levels observed for White children in poverty overall.

B. Math Proficiency – 3rd Grade

i. Income Status

Statewide	Non-Poverty	Poverty	Poverty		Gap Closure:	Gain:
			FCPK	No-FCPK		
54.3	73.5	43.9	49.7	43.5	57%	13%

- First Class Pre-K **closes the gap** in math proficiency by **57%** for children in poverty compared to observed statewide proficiency levels.
- First Class Pre-K for children in poverty provides a **13% gain** (increase) in math proficiency over and above proficiency levels observed for children in poverty overall.

ii. Race/Ethnicity and Income Status

Black and Black Poverty

Statewide	White	Black	Hispanic	Asian
54.3	64.0	39.5	44.6	82.9

White Poverty	Black Poverty	Hispanic Poverty	Asian Poverty
50.8	36.9	43.6	75.2

Black		Black Poverty		Gap Closure:	Gap Closure:	Gain:	Gain:	Gain:
FCPK	No-FCPK	FCPK	No-FCPK	FCPK Black to Statewide	FCPK Black Poverty to Statewide	FCPK Black over Black	FCPK Black Poverty over Black	FCPK Black Poverty over Black Poverty
45.8	39.0	43.0	36.3	44%	37%	16%	9%	16%

- First Class Pre-K **closes the gap** in math proficiency by **44%** for Black children compared to observed statewide proficiency levels.
- First Class Pre-K **closes the gap** in math proficiency by **37%** for Black children in poverty compared to observed statewide proficiency levels.
- First Class Pre-K for Black children provides a **16% gain** (increase) in math proficiency over and above proficiency levels observed for Black children overall.
- First Class Pre-K for Black children in poverty provides a **9% gain** (increase) in math proficiency over and above proficiency levels observed for Black children overall.
- First Class Pre-K for Black children in poverty provides a **16% gain** (increase) in math proficiency over and above proficiency levels observed for Black children in poverty overall.

Hispanic and Hispanic Poverty

Statewide	White	Black	Hispanic	Asian
54.3	64.0	39.5	44.6	82.9

White Poverty	Black Poverty	Hispanic Poverty	Asian Poverty
50.8	36.9	43.6	75.2

Hispanic		Hispanic Poverty		Gap Closure: FCPK Hispanic to Statewide	Gap Closure: FCPK Hispanic Poverty to Statewide	Gain: FCPK Hispanic over Hispanic	Gain: FCPK Hispanic Poverty over Hispanic	Gain: FCPK Hispanic Poverty over Hispanic Poverty
FCPK	No-FCPK	FCPK	No-FCPK					
50.5	44.3	51.1	43.2	62%	71%	13%	15%	17%

- First Class Pre-K **closes the gap** in math proficiency by **62%** for Hispanic children compared to observed statewide proficiency levels.
- First Class Pre-K **closes the gap** in math proficiency by **71%** for Hispanic children in poverty compared to observed statewide proficiency levels.
- First Class Pre-K for Hispanic children provides a **13% gain** (increase) in math proficiency over and above proficiency levels observed for Hispanic children overall.
- First Class Pre-K for Hispanic children in poverty provides a **15% gain** (increase) in math proficiency over and above proficiency levels observed for Hispanic children overall.
- First Class Pre-K for Hispanic children in poverty provides a **17% gain** (increase) in math proficiency over and above proficiency levels observed for Hispanic children in poverty overall.

White Poverty

*Comparisons for White were limited to White Poverty only as White proficiency was above Statewide proficiency at outset.

Statewide	White	Black	Hispanic	Asian
54.3	64.0	39.5	44.6	82.9

White Poverty	Black Poverty	Hispanic Poverty	Asian Poverty
50.8	36.9	43.6	75.2

White Poverty		Gain:	Gain:
FCPK	No-FCPK	FCPK White Poverty over Statewide	FCPK White Poverty over White Poverty
56.0	50.5	3%	10%

- First Class Pre-K for White children in poverty provides a **3% gain** (increase) in math proficiency over and above observed statewide proficiency levels.
- First Class Pre-K for white children in poverty provides a **10% gain** (increase) in math proficiency over and above proficiency levels observed for White children in poverty overall.

IV. Appendix – Sample Demographics

The following table displays the demographics of students included in these analyses.

Full sample = 59,346

Overall Demographics		
	Frequency	Percent
Income Status		
Non-Poverty	21,205	35.7
Poverty	38,141	64.3
First Class Pre-K		
No	55,803	94.0
Yes	3,543	6.0
Race/Ethnicity		
White	32,288	54.4
Black	19,428	32.7
Hispanic	4,562	7.7
Other/Multi	2,235	3.8
Asian	833	1.4

First Class Pre-K Description				
	First Class Pre-K		No-First Class Pre-K	
	Frequency	Percent	Frequency	Percent
Non-Poverty	1,000	28.2	20,205	36.2
Poverty	2,543	71.8	35,598	63.8
White	1,730	48.8	30,558	54.8
Black	1,440	40.6	17,988	32.2
Hispanic	221	6.2	4,341	7.8
White Poverty	968	27.3	14,597	26.2
Black Poverty	1,264	35.7	15,497	27.8
Hispanic Poverty	204	5.8	3,777	6.8

Poverty and Race										
	White		Black		Hispanic		Asian		Other/Multi	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Non-Poverty	16,723	51.8	2,667	13.7	581	12.7	545	65.4	689	30.8
Poverty	15,565	48.2	16,761	86.3	3,981	87.3	288	34.6	1,546	69.2