

## Comments on “Can Early Childhood Interventions Reduce Inequality of Opportunity?” – Evidence from Boston

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Data from the earliest cohorts of pre-K attendees in the Boston Public Schools (BPS, pre-K is referred to as K1) indicate that the benefits of attending pre-K continue through the fifth grade. Specifically, a higher percentage of BPS K1 attendees achieved a passing (“Proficient” or “Advanced”) score on both the literacy (ELA) and mathematics portions of the Massachusetts Comprehensive Assessment System (MCAS) exam as measured in the spring of their 3rd and 5th grade years than their peers who did not attend BPS K1. Minority and low-income students who attended BPS K1 outperformed their peers who did not by over 5 percentage points each:

- **Free or reduced lunch:**
  - ELA: 44.0% of students who attended BPS K1 receive free or reduced lunch passed the 5th grade ELA MCAS, compared to 33.9% who did not attend BPS K1; (3rd grade: 34.3% vs. 27.5%)
- **African-American and Black students:**
  - Math: 37.1% of African-American and Black students who attended BPS K1 passed the 5th grade Math MCAS, compared to 27.5% who did not attend BPS K1; (3rd grade: 42.1% vs. 34.7%)
- **Hispanic and Latino students:**
  - ELA: 37.5% of Hispanic and Latino students who attended BPS K1 passed the 5th grade ELA MCAS, compared to 31.3% who did not attend BPS K1; (3rd grade: 32.7% vs. 26.7%)

The data encompasses students who attended BPS K1 the 2007-08, 08-09, and 09-10 school years; grade 3 MCAS data is from school years 2011-12, 12-13, and 13-14; grade 5 MCAS data from the 2013-14 school year. Students in the sample attended BPS K1 and the relevant grade during the aforementioned years, but there was no requirement in the analysis that students attended all in-between grades in BPS, i.e., students may have left and returned to the district.

# Effects of K1: Grade 3 MCAS Language Arts

	3 <sup>rd</sup> Graders who attended BPSK1 % Prof / Adv.	3 <sup>rd</sup> Graders who did not attend BPS K1 - % Prof / Adv.	Achievement level of 3 <sup>rd</sup> graders who attended K1 over those who did not (Percentage point difference)
All Students	41.8%	31.4%	10.4
F/R Lunch	34.3%	27.5%	6.8
Asian	57.9%	45.0%	12.9
Black	31.0%	26.0%	5.0
Hispanic	32.7%	26.7%	6.0
White	68.5%	57.9%	10.6

*In the elementary grades, where the proficiency rates have generally stagnated at roughly 30%, the performance of grade 3 students who attended one of the first three cohorts of the K1 program is markedly better than for students who did not attend.*

*Results are better for all students, regardless of race or F/R price lunch status.*

*Students attended BPS K1 in 2007-08, 08-09, 09-10. MCAS grade 3 data taken from 2011-12, 12-13, 13-14*

# Effects of K1: Grade 3 MCAS Math

	3 <sup>rd</sup> Graders who attended BPSK1 % Prof / Adv.	3 <sup>rd</sup> Graders who did not attend BPS K1 - % Prof / Adv.	Achievement level of 3 <sup>rd</sup> graders who attended K1 over those who did not (Percentage point difference)
All Students	54.2%	43.7%	10.5
F/R Lunch	47.6%	40.2%	7.4
Asian	78.7%	75.9%	2.8
Black	42.1%	34.7%	7.4
Hispanic	46.5%	40.2%	6.3
White	75.7%	67.3%	8.4

*In the elementary grades, where the proficiency rates have generally stagnated at roughly 30%, the performance of grade 3 students who attended one of the first three cohorts of the K1 program is markedly better than for students who did not attend.*

*Results are better for all students, regardless of race or F/R price lunch status.*

*Students attended BPS K1 in 2007-08, 08-09, 09-10. MCAS grade 3 data taken from 2011-12, 12-13, 13-14*

# Effects of K1: Grade 5 MCAS Language Arts

	5 <sup>th</sup> Graders who attended BPSK1 % Prof / Adv.	5 <sup>th</sup> Graders who did not attend BPS K1 - % Prof / Adv.	Achievement level of 5 <sup>th</sup> graders who attended K1 over those who did not (Percentage point difference)
All Students	50.2%	38.4%	11.8
F/R Lunch	44.0%	33.9%	10.1
Asian	71.2%	65.8%	5.4
Black	44.5%	30.9%	13.6
Hispanic	37.5%	31.3%	6.2
White	77.3%	65.6%	11.7

*In the elementary grades, where the proficiency rates have generally stagnated at roughly 30%, the performance of grade 5 students who attended the K1 program in 2007-08 is markedly better than for students who did not attend.*

*Results are better for all students, regardless of race or F/R price lunch status.*

# Effects of K1: Grade 5 MCAS Math

	5 <sup>th</sup> Graders who attended BPSK1 % Prof / Adv.	5 <sup>th</sup> Graders who did not attend BPS K1 - % Prof / Adv.	Achievement level of 5 <sup>th</sup> graders who attended K1 over those who did not (Percentage point difference)
All Students	50.2%	39.9%	10.3
F/R Lunch	43.9%	35.4%	8.5
Asian	81.4%	78.1%	3.3
Black	37.1%	27.5%	9.6
Hispanic	40.1%	33.8%	6.3
White	77.3%	69.6%	7.7

*In the elementary grades, where the proficiency rates have generally stagnated at roughly 30%, the performance of grade 5 students who attended the K1 program in 2007-08 is markedly better than for students who did not attend.*

*Results are better for all students, regardless of race or F/R price lunch status.*

*Students attended BPS K1 in 2007-08. MCAS grade 5 data taken from 2013-14*