Expanded Learning Time Found to Have a Positive Impact on Student Achievement at Boston Public Schools

More BPS schools are adding time: Since 2006, Boston Public Schools (BPS) has been implementing expanded learning time (ELT) in schools in order to use this time to improve student outcomes, close opportunity and achievement gaps, and enhance preparation and planning opportunities for staff to support these efforts. In 2015, the district and the Boston Teachers Union agreed to add 40 minutes to the school day at 60 schools, known as "Schedule A ELT." Other Boston schools that have ELT include innovation, pilot, turnaround, in-district charter, and ELT grant recipient schools.

The study: From 2015 to 2017, BPS collaborated with American Institutes for Research to study its ELT program types, with the goal of understanding the impact of ELT on student, staff, and parent outcomes. This handout addresses the study's statistically significant findings, which are found only for student outcomes, not staff and parents.

Participating schools: At the time of the study, 46 schools were implementing ELT, adding at least 30 minutes of time per day, on average. Any school that added time after school year 2015–16 was not included in the study. Early education centers and early learning centers were not included in the study.

Read the full report: http://tinyurl.com/ELTresearch
This study also included preliminary research on other outcomes, including academic achievement in science, achievement for White and Asian students, student attendance, teacher satisfaction, and parent satisfaction and engagement. For more information about the report findings, please see the above link. We hope to continue ELT research to further explore these areas.

The research question: Does ELT improve student outcomes?

Results suggest that by extending their school days, ELT schools in BPS improved student achievement in math and ELA.

Summary of findings: Using Massachusetts Comprehensive Assessment System (MCAS) test score data from the 2005–06 to the 2015–16 school years

Students who attended ELT schools had higher math Composite Performance Index (CPI) scores than students in non-ELT schools.

- Black and Hispanic students benefited the most in terms of gains on math CPI scores, and both groups had math CPI scores that were significantly higher than their peers who did not attend an ELT school.
- English language learners (ELLs), economically disadvantaged students, female students, and male students had math CPI scores that were significantly higher than their peers who did not attend an ELT school.

Students who attended ELT schools had higher English language arts (ELA) CPI scores than students in non-ELT schools.

- Black students in ELT schools had significantly higher ELA CPI scores when compared to their peers in non-ELT schools and had the most gains compared to all other students attending ELT schools.
- Hispanic students in ELT schools had significantly higher ELA CPI scores when compared to their peers in non-ELT schools.
- Female students and economically disadvantaged students had gains in ELA CPI scores in the second year of ELT implementation when compared to peers in non-ELT schools.

Composite Performance Index (CPI) is a 100-point index that assigns points to each student based on their performance. The average of all students' points in a school or a subgroup constitutes a school or student group's CPI for that subject. The CPI is a measure of the extent to which students are progressing towards proficiency (a CPI of 100).

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Detailed Findings:

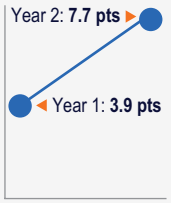
Academic analysis methodology: The study used a comparative interrupted time series (CITS) method, which is a rigorous analysis of the impact of an intervention on students. The CITS analysis compared the composite performance index MCAS scores between students in ELT and non-ELT schools before and after ELT implementation, accounting for trends before ELT and differences in school composition. Cohorts of ELT schools were matched with non-ELT schools in BPS based on preintervention, math and ELA scores, grade levels served, and student demographic characteristics.

ELT impact on students' math scores

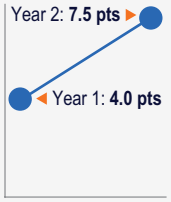
Increase in student scores at ELT schools compared to student scores at non-ELT schools

Students attending ELT schools had higher math scores than their peers: On average, students in ELT schools scored higher on average than students in non-ELT schools that had similar prior-achievement and student populations. In the second year of implementation, students in ELT schools on average scored 5.8 points higher than those in non-ELT schools.

Hispanic students attending ELT schools had higher math scores than their peers: On average, Hispanic students in ELT schools scored 3.9 points higher than their peers in non-ELT schools in the first year of implementation and 7.7 points higher in the second year of implementation.



Black students attending ELT schools had higher math scores than their peers: On average, Black students in ELT schools scored 4 points higher than their peers in non-ELT schools in the first year of implementation and 7.5 points higher in the second year of implementation.



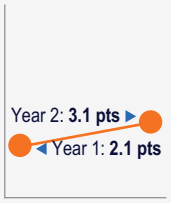
ELLs attending ELT schools had higher math scores than their peers: On average, ELLs in ELT schools scored 3.8 points higher than their peers in non-ELT schools in the first year of implementation and 7.2 points higher the second year of implementation.

Economically disadvantaged students attending ELT schools had higher math scores than their peers: On average, economically disadvantaged students scored 2.8 points higher than their peers in non-ELT schools in the first year of implementation and 5.8 points higher in the second year of implementation.

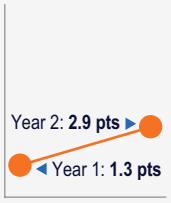
ELT impact on students' ELA scores

Increase in student scores at ELT schools compared to student scores at non-ELT schools

Students attending ELT schools had higher ELA scores than their peers: On average, students in ELT schools scored 2.1 points higher in ELA in the first year of implementation than students in non-ELT schools and 3.1 points higher in the second year of implementation.



Economically disadvantaged students attending ELT schools had higher ELA scores than their peers: On average, economically disadvantaged students scored 1.3 points higher in the first year of implementation than economically disadvantaged students at non-ELT schools and 2.9 points higher in the second year of implementation.



Hispanic students attending ELT schools had higher ELA scores than their peers: On average, Hispanic students in ELT scored 2.5 points higher in the first year of implementation than Hispanic students in non-ELT schools and 4 points higher in the second year of implementation.

Black students attending ELT schools had higher ELA scores than their peers: On average, black students in ELT schools scored 3.1 points higher in the first year of implementation than Black students in non-ELT schools and 4.5 points higher in the second year of implementation.

How do ELT schools improve student outcomes?

To understand the strategies that may contribute to the positive impacts in ELT schools, the research team gathered and analyzed data from participating ELT schools. In ELT schools, staff provided information about the total minutes per week spent on core, enrichment, and intervention activities. Schools were then grouped based on the amounts of time spent into percentile levels within each use of time category. To control for trends prior to ELT implementation, regressions also were run using CPI scores prior to ELT implementation. The limitations in the availability of data required the research team use methods that are less rigorous than the CITS used in the impact analysis; thus, these findings provide potential leads about strategies that must be examined further to confirm their impact on improving student outcomes.

Controlling for prior achievement, the following may improve math outcomes (math outcomes are the focus because only these outcomes were supported with regression analyses):

- more time in math intervention,
- more time in ELA intervention,
- more time in both core math and intervention math, and
- more time in both core ELA and intervention ELA.

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