



# POLICY BRIEF

OCTOBER 2017

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## Does New School Construction Impact Student Test Scores and Attendance?

*Using data from the Los Angeles Unified School District, we find that attending a newly constructed school yields improvements in test scores, attendance, and teacher-reported measures of student effort. These results suggest attending a newly constructed school for four years can eliminate almost half of the math achievement gap between LAUSD students and the state average, and almost 20% of the English gap.*

### Context

Over the past two decades, the Los Angeles Unified School District (LAUSD) invested over \$19 billion dollars to construct and renovate hundreds of school facilities as a part of the largest US public school construction project in US history. **How did this investment translate into student academic achievement and attendance?**

Despite the importance of this question, the academic literature on school capital expenditures so far offers little guidance to district and state policy-makers. We offer new evidence linking new school facilities to improved student outcomes. **We find that students who attended newly constructed schools showed significant improvements in standardized test scores, attendance rates, and teacher-reported measures of student effort.** Notably, standardized test scores improve only after multiple years in attendance at a new facility.

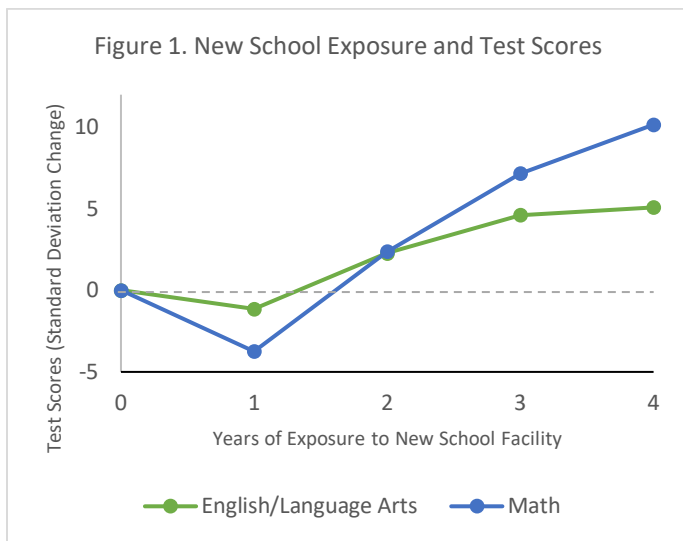
### Methodology

Using more than 5 million individual student records from 2002-2012, we estimate the impact of attending a newly constructed school on individual student outcomes. We examine student gains from attending a newly constructed facility, using a student's performance in the year before they switch schools as a baseline for comparison. To do this, we use variation in the timing and location of new school constructions and control for time-invariant characteristics of students, comparing achievement growth from year-to-year. Our estimates also account for grade-specific and year-specific differences across students. This eliminates any concern that our results are driven by differential growth rates of students switching to newly constructed schools.

### Results

In 2002, students in LAUSD lagged behind the average student in California by about 25% of a standard deviation in math and English. **Our**

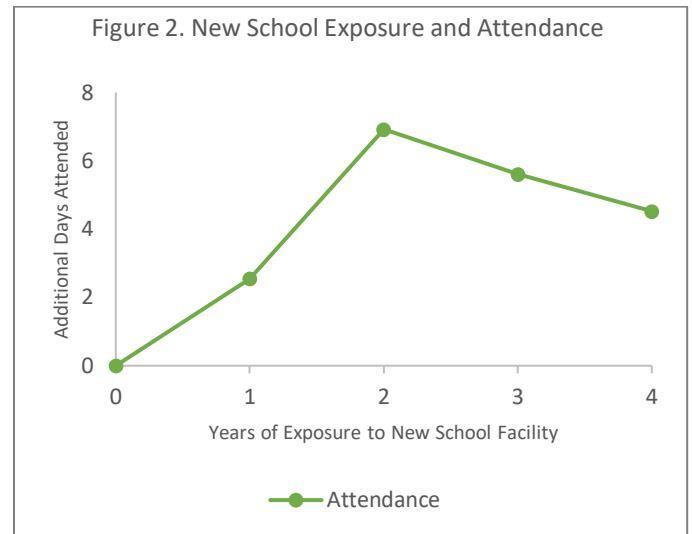
findings indicate that 4 years of attending a newly constructed school leads to an increase of 5% of a standard deviation in English test scores, and an increase of 10% of a standard deviation in math scores (Figure 1).<sup>i</sup> The data show a modest disruption effect in the initial year of switching to a newly constructed school, but this difference is not statistically significant. Results imply that attending a newly constructed facility for 4 years closes 45% of the math achievement gap and 18% of the English achievement gap between LAUSD students and the California average.



Notably, students at newly constructed schools also attend an average of 4 additional days per academic year (Figure 2). Attendance gains are larger in middle school (3 additional days) than in elementary school (2 additional days), and largest in high school (5 additional days). In addition, elementary school students show increases in teacher-reported effort grades. These results suggest that new facilities lead to student gains in non-cognitive measures in addition to gains in standardized test scores.

Effects are larger among students switching from more overcrowded schools with higher shares of temporary classroom facilities. Attendance effects are largest among students switching from schools on multi-track calendars, where students attend on staggered schedules to use the

facilities' full capacity all year long. These findings suggest that some, but not all, of the benefits of new schools may reflect reductions in overcrowding. Results are not driven by class sizes, teachers, or peers at newly constructed schools; if anything, students attending new facilities faced slightly larger class sizes, had less experienced teachers, and attended schools with more disadvantaged peers.



## Further Research

These results provide new insights into the efficacy of public school infrastructure investments as policies to improve student outcomes. In ongoing research, we explore: (1) the underlying mechanisms driving improvement in student outcomes at new school facilities; (2) the impact of facility improvements on teacher productivity and recruitment; (3) changes in neighborhood real estate prices and demographic composition in the years following new constructions.

<sup>i</sup> We report effects in standard deviation units, relative to all students in California in the same exam subject, grade, and year.

The California Policy Lab builds better lives through data-driven policy. We are a project of the University of California, with sites at the Berkeley and Los Angeles campuses.

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