EDUCATION

# MATHEMATICA Policy Research

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# Going to Scale: As KIPP Network Grows, Positive Impacts Are Sustained

Network-wide, KIPP schools have positive, statistically significant, and educationally meaningful impacts on student achievement, particularly at the elementary and middle school grades. In the first high-quality study to rigorously examine the impacts of the network of KIPP public charter schools at all elementary and secondary grade levels, Mathematica found that KIPP schools have positive impacts on student achievement, particularly at the elementary and middle school levels. In addition, the study found positive impacts on student achievement for new entrants to the KIPP network in high school. For students continuing from a KIPP middle school, KIPP high schools' impacts on student achievement are not statistically significant, on average.

KIPP is a rapidly growing network of public charter schools with a mission to improve the education of low-income children and lay the foundation for their success in college. Started in 1994 as a middle school program, KIPP has since expanded to elementary and high schools. As the KIPP network grows, it is focusing on building strong leadership and maintaining positive academic results for its students. In 2010, the U.S. Department of Education awarded the KIPP Foundation a \$50 million Investing in Innovation (i3) scale-up grant to help meet these goals. The foundation used the i3 grant to bolster its leadership pipeline and more than double the number of students it serves from 27,000 to nearly 60,000 by 2015. Mathematica conducted an independent, five-year evaluation for the KIPP Foundation to assess KIPP's effectiveness at improving student outcomes on a larger scale under the i3 grant.

# **KEY FINDINGS**

- KIPP **elementary schools** have positive, statistically significant, and educationally meaningful impacts on three of four measures of reading and mathematics skills, based on tests administered three years after students entered the schools.
- Consistent with prior research, KIPP **middle schools** have positive, statistically significant, and educationally meaningful impacts on student achievement in math, reading, science, and social studies.
- At the **high school** level, impacts on achievement are positive for students who are new to the KIPP network but not statistically significant for students continuing in the network from KIPP middle schools.

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## **OTHER SCALE-UP EFFECTS**

Additional findings from the analysis include:

- Across the KIPP network, the average impacts of middle schools on student achievement were positive and statistically significant throughout the 10-year period covered by the study data, although they were higher in earlier than in recent years.
- KIPP middle schools that opened in 2011 and later-the i3 scale-up period-are producing positive impacts similar in size to those that older KIPP middle schools produced in their first years of operation.
- KIPP high schools increase students' coursetaking, likelihood of applying to college, and several other college preparation activities.

• Across grade levels, KIPP generally had no impacts on measures of students' motivation, engagement, educational aspirations, or behavior, but positive impacts on parents' satisfaction with their child's school.

# **RESEARCH IN CONTEXT**

Prior studies (such as Gleason et al. 2014) have found that attending a KIPP middle school positively affects student achievement, but few have addressed longer-term outcomes and none have rigorously evaluated the impacts of KIPP schools at the elementary or high school levels. In addition to the work cited above, Mathematica's contributions to studying the effectiveness of the KIPP model include an analysis of student attrition from KIPP and a second volume of the current report, which describes KIPP leadership practices.

## Methodology

This research builds on Mathematica's initial study of KIPP middle schools to address the question of whether KIPP can maintain its effectiveness as the network grows. This evaluation measured the impact of KIPP on student outcomes as the network scales up the number of schools, students, and grades it serves. The study used a combination of lottery-based and quasi-experimental designs in a set of 8 elementary, 43 middle, and 18 high schools in 20 cities, employing the most rigorous study designs possible at each school level. Under these different designs and samples, the study measured KIPP's impacts on outcomes up to four years after students entered a KIPP school. The analysis used data from study-administered student achievement tests; state assessments in math, English/language arts, science, and social studies; and student and parent surveys. It builds on two prior reports published by Mathematica (Tuttle et al. 2010, Tuttle et al. 2013), and is the first rigorous research to examine the impacts of KIPP at all three school levels.

> Read the full study, Understanding the Effect of KIPP as it Scales: Volume I, Impacts on Achievement and other Outcomes.







- <sup>1</sup> Model: Lottery-based design. Outcome: Woodcock-Johnson III Test. Sample size: eight schools: 654 students. Statistically significant at the 0.05 level (\*) or 0.01 level (\*\*), two-tailed test.
- <sup>2</sup> Model: Matched-student design. Outcome: State test scores. Sample size: 37 schools; 36,798 students. Statistically significant at the 0.05 level (\*) or 0.01 level (\*\*), two-tailed test.
- <sup>3</sup> Model: Matched-student design. Outcome: State test scores. Maximum sample size: 14 schools; 1,861 students. Statistically significant at the 0.05 level (\*) or 0.01 level (\*\*), two-tailed test.
- <sup>4</sup> Model: Matched-school design. Outcome: TerraNova test. Sample size: eight schools; 933 students. Statistically significant at the 0.05 level (\*) or 0.01 level (\*\*), two-tailed test.