



## The Evaluation of Charter School Impacts

Charter middle schools popular enough to hold admissions lotteries are, on average, no more successful than nearby traditional public schools in boosting student achievement, behavior, and attendance. However, charter schools vary widely; some are more effective and some are less effective than nearby traditional public schools. Those located in large urban areas and those serving disadvantaged students are the most successful. Overall, parents and students who win entry into a charter are more likely to be satisfied with their school than those who do not win and must attend another school.

### The policy context

Charter schools are an important and growing component of the public school system in the United States. There are now more than 5,000 of these schools, which first appeared in the early 1990s, and they are expected to play a role in federal school improvement. However, there remains considerable debate as to whether, how, and under what circumstances charter schools improve the outcomes of students who attend them.

### The study approach

This study—the first large-scale randomized trial of the effectiveness of charter schools in multiple states and types of communities—was conducted with 2,330 students who applied to 36 charter middle schools that held lotteries for admission. The study was funded by the Institute of Education Sciences (IES) and conducted by Mathematica Policy Research and its partners.

The study focused on students who applied to charter schools that met three criteria:

- They were middle schools, with entry usually in grades 5 to 8. Studying middle schools allowed researchers to use state-mandated achievement test results in this study.
- The schools were open 2 years or more. Thus, the results would not be influenced by the challenges of start-up schools, which are less stable in their operations.
- They had substantially more eligible students than they could admit. Choosing schools with lotteries created an ideal study sample—two statistically similar groups of students, one offered admission to the charter they applied to and one not offered admission.

The charter middle schools that were eligible and agreed to participate in the study were somewhat different from other charter middle schools in the United States. Participating charter middle schools served more advantaged students than the typical charter middle school. For example, the study charter schools had smaller percentages of students who were eligible for free or reduced-

price school meals (44 percent versus 62 percent nationally) and smaller percentages of students who scored below proficiency on their state assessments at the time they applied to the charter school (34 percent versus 49 percent, in math). In addition, fewer African American students attended the study schools than attended typical charter schools (16 percent versus 29 percent).

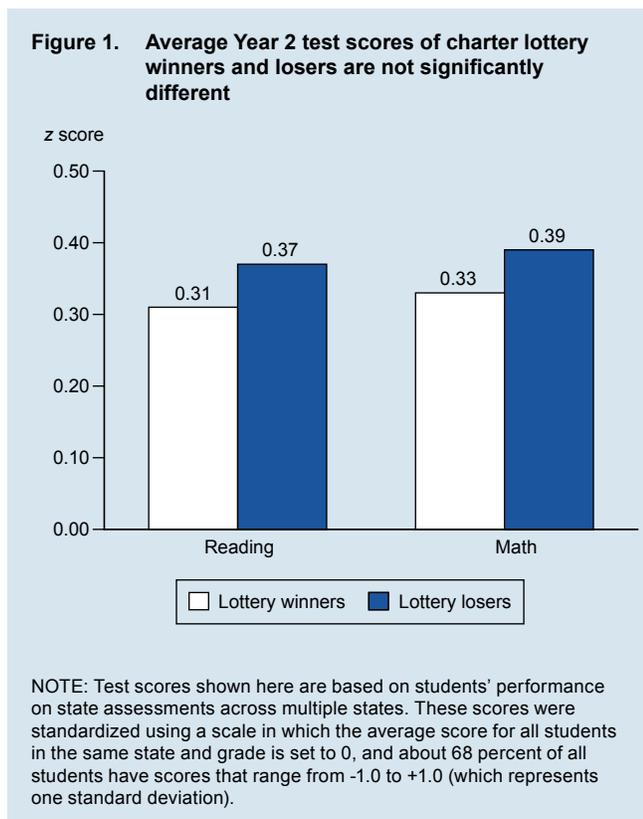
In each charter school, impacts were estimated by comparing average achievement outcomes among lottery winners with those of lottery losers over the 2 years following the lottery, controlling for students’ background characteristics. Researchers estimated overall impacts by averaging across all sites. They also examined which school characteristics could be possible predictors of higher or lower impacts on students’ test scores in reading and math.

The primary outcome measure was student performance on state math and reading tests. Because the tests varied by grade and from state to state, the scores were converted to a comparable scale. The scale is based on how each student’s score measured up to all other students within

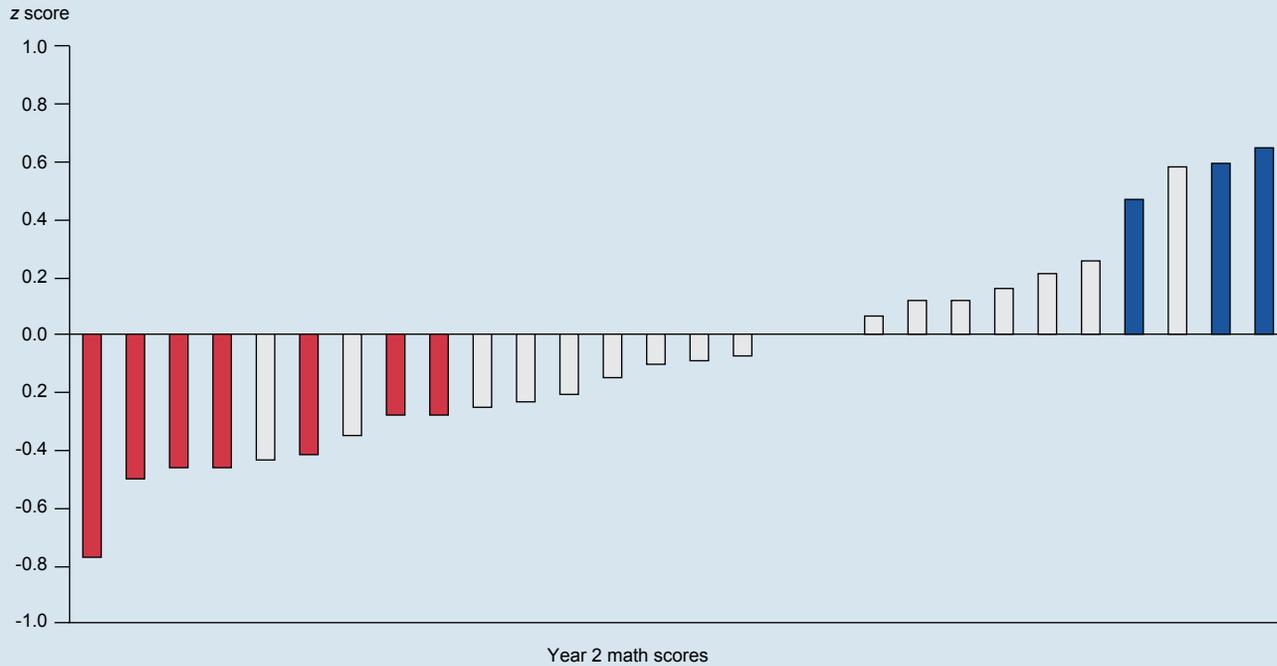
the same state, so that the average score for all students in the same state and grade is set to 0, and about two-thirds of students have scores that range from -1.0 to +1.0 (which represents one standard deviation). The study also used school records and student and parent surveys to examine other outcomes—including student effort in school, behavior, and attitudes, as well as parental involvement and satisfaction.

### The findings

- On average, study charter schools did not have a statistically significant impact on student achievement.** However, the averages mask wide variation across the charter schools in how well their lottery winners performed compared to the lottery losers, who typically went back to their neighborhood schools. Based on the comparable scale, math achievement impacts ranged from a minus .78 for one charter to a plus .53 for another. (There also is statistically significant variation in reading impacts, although not as wide). “Impacts” represent the difference between the charter school and the other schooling options available to students. Charter schools with high average achievement may have negative achievement impacts if the other nearby schools provide more benefit to students. Similarly, charter schools with low average test scores may have higher impacts because they provide a better educational experience for their students than the neighborhood schools.
- Study charter schools did not significantly affect most other outcomes examined, except for parent and student satisfaction.** These outcomes included absences, suspensions, and other measures of student performance, as well as survey-based measures of student effort in school, student well-being, student behavior and attitudes, and parental involvement. However, lottery winners and their parents were more satisfied with their schools. For instance, lottery winners were 12 percentage points more likely to report that they liked school a lot than were lottery losers. Parents of lottery winners were 33 percentage points more likely to rate their child’s school as “excellent” than were parents of lottery losers.



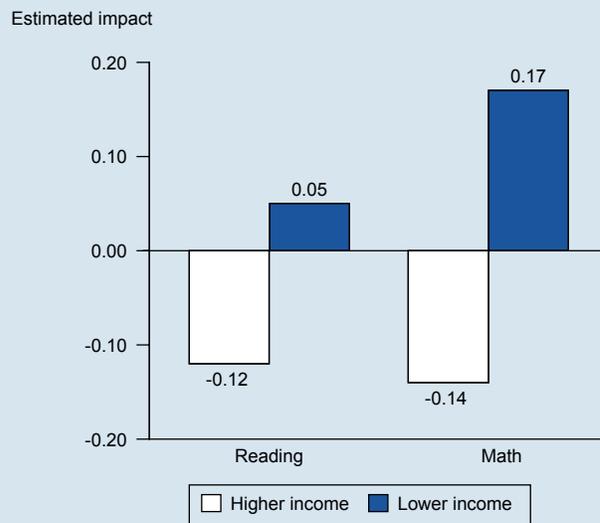
**Figure 2. Study charter schools show wide variation on Year 2 math score impact**



NOTE: Each bar represents a study charter school. The red bars show a negative impact on math scores, while the blue bars represent a positive impact. Not all of these impacts are statistically significant.

- Study charter schools were more effective for lower income and lower achieving students and less effective for higher income and higher achieving students.**  
 On average, two subgroups of lottery winners—those with initial low test scores and those from low-income families—benefited academically from admission to charter schools (in math but not reading) while their more advantaged counterparts did not (lottery winners had lower achievement than lottery losers in both reading and math). However, there were no significant differences in charter school impacts for other student subgroups—such as those defined by race, ethnicity, and gender.
- The variation in student achievement impacts among charter schools may be related to certain school characteristics.** Charter schools in large urban areas, those serving more lower income or more lower achieving students produced positive impacts on student math scores relative to other nearby school options. Charter schools outside of large urban areas, those serving fewer low-income students, and those

**Figure 3. Impacts on Year 2 test scores vary significantly by family income status**



NOTE: The estimated impact on reading test scores is statistically significant for students from higher income families; in math, it is statistically significant for students from both higher and lower income families. The difference between the impacts for the lower income and higher income groups also is statistically significant in both math and reading.

serving higher achieving students had negative impacts on both reading and math scores. Less negative impacts were found in smaller charter schools and those more likely to use ability grouping.

### The study in context with other charter school research

The Evaluation of Charter School Impacts adds to the growing body of evidence on this important topic. Although the literature on charter school impacts covers a broad range of charter schools and methodological strategies, there remain gaps in the research that this study was designed to address. The study used an experimental lottery-based methodology, but—unlike previous experimental studies—included charter schools in multiple states and in suburban, rural, and urban areas. Most previous studies of charter school impacts focused almost entirely on impacts on test scores and provided little evidence on the impacts on other student outcomes. Common themes include the following:

- Studies that covered a wide span of states and/or districts, like this study, also found that charter schools did not positively impact student achievement on average.
- Previous lottery-based studies—which focused on charter schools in large urban areas, primarily serving large populations of disadvantaged students—have found positive

impacts. Such findings are consistent with the findings of this new study.

- A key finding from this study—that individual charter schools varied in their impacts on students' reading and math achievement—also was found in several other studies.
- While this study found significantly different impacts for students from different socioeconomic backgrounds, findings from previous charter school studies concerning variation in charter school impacts across student subgroups have been mixed.

### Looking ahead

This study was not able to determine why some charter schools—particularly those in urban areas, serving more disadvantaged students—appear to be more effective than the traditional public schools these students would have attended if they had not enrolled in the charter lottery. Nor could the study appropriately investigate why other charter schools, serving more advantaged students, appear to provide less academic benefit than the nearby alternatives. Studies focused on better understanding these patterns would provide useful information for policymakers and educators seeking to improve student achievement through the expansion and adaptation of charter schools.

IES develops these briefs to offer short, accessible summaries of complex technical evaluation reports. For the full report with technical details, see: <http://ies.ed.gov/ncee/pubs/20104029>.

Gleason, P., Clark, M., Tuttle, C., and Dwoyer, E. (2010). *The Evaluation of Charter School Impacts* (NCEE 2010-4029). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance.



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