

RESEARCH REVIEW: STUDENT ACHIEVEMENT IN CHARTER SCHOOLS¹

As a whole, the research suggests that charter school academic effects are mixed, varying by the research method, state, district, subject, grade level and individual school.

Prominent National Studies

National studies produce findings that characterize charter school outcomes across the entire spectrum of charter schools and states, which helps ensure the generalizability of conclusions.

- Mathematica conducted a national evaluation of charter schools (Gleason et al., 2010) funded by the U.S. Department of Education: On average, charter schools had no significant impacts on student achievement in math and reading; charter school impacts varied widely across schools. The evaluation was based on an experimental design, a high-quality research technique that had never been attempted at the national level. The 36 participating charter middle schools, which serve 3,700 students in 15 states, had to have more applicants than seats for students. The participating schools also had to conduct lotteries as part of their admissions process, and these lotteries separated applicants into two groups: (1) applicants who were offered admission to the school by lottery and (2) lottery participants who were not offered admission. The study estimated the impacts of charter schools by comparing the outcomes of the lottery winners and losers over a two-year follow-up period.
- The Center for Research on Education Outcomes (CREDO, 2009) used a large sample of charters from 16 states covering 70 percent of students currently enrolled in charter schools. Using achievement growth on state tests as the outcome measure, each charter school student was assigned a “virtual twin” in a regular public school against whom his or her performance was compared, with a focus on assessing whether the students would have performed better in a regular public school in their neighborhood. The analysts found that 17 percent of charter schools produced superior results compared with regular public schools; over one-half were not significantly different; and 37 percent of charters generated inferior outcomes compared with regular public schools with similar students.
- A study conducted for the National Center for Education Statistics (Braun, Jenkins and Grigg, 2006) by the Educational Testing Service (ETS) compared a nationally representative sample of charter school students with a nationally representative sample of regular public school students on the 2003 National Assessment of Educational Progress (NAEP). The findings clearly indicate that regular public school students consistently outperform their charter school counterparts in both reading and math, and in both urban and nonurban settings. This study uses a consistent test (NAEP). Instead of achievement growth, it focuses on absolute achievement levels after statistically controlling for differences in student and family background through a quasi-experimental design.

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Lottery Winner/Loser Studies

Prior to Mathematica's national evaluation of charter schools, many analysts thought that proving academic success in charter schools depended on the research method; lottery winner/loser studies produced positive results for charter schools while non-experimental studies showed mixed positive and negative effects. Miron (2011) describes the so-called experimental studies as "quasi-random assignment designs" creating control groups from admissions wait lists. The limited number of lottery winner/loser analyses makes it difficult to generalize the findings:

- Angrist et al. (2010): One oversubscribed college-prep middle school in Lynn, Mass.
- Abdulkadiroglu et al. (2009): Eight oversubscribed college-prep middle and high schools in Boston.
- Hoxby et al. (2009): 42 oversubscribed charter schools in New York City.
- Dobbie and Fryer (2009) One oversubscribed college-prep middle school in New York City.
- Hoxby and Rockoff (2005): Three oversubscribed college-prep charter schools in Chicago.

All showed positive effects except the Hoxby et al. study in which a large number of New York City charter schools showed substantial variation, with some charter schools performing negatively.

According to Mathematica's literature review in the national charter school evaluation (Gleason et al., 2010), lottery and waiting list procedures in charter schools are often complex and schools do not always document the rules governing every admission decision. Some researchers have raised concerns about lottery-based studies that do not have study teams independently observing and documenting the lotteries (McEwan and Olsen, 2010). Mathematica noted that lottery winner/loser studies may have shown charter school success because they included only one or a small number of the most successful charter schools rather than a representative sample of charter schools. Mathematica concluded that the only way to include undersubscribed charter schools with no lottery and charter schools with bad lotteries is to use non-experimental methods.

Non-Experimental Studies and Research Literature Reviews

In addition to the CREDO and ETS studies featured above, other multistate, non-experiential studies include:

- Research by the RAND Corporation (Zimmer et al., 2009) in eight states found that charter schools in five of seven locales were no better or worse than regular public schools in improving student achievement; the research also found wider variability in performance among charter schools than regular public schools. There was also some

evidence that charter middle schools were performing significantly worse in Chicago and Texas, while charters as a whole were having substantially negative effects in Ohio.

- A multistate analysis of charter schools in the Great Lakes Region (Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin) (Miron et al., 2007) used longitudinal data measuring achievement growth and concluded that the performance levels of charter school students is substantially lower than their comparable regular public school counterparts, even though charter schools in these states were getting better over time. All states had some effective charters, but overall about 60 percent of charter schools performed lower than expected.
- Mathematica (Clark Tuttle et al., 2010) used a matched comparison-group design to estimate KIPP's (the Knowledge Is Power Program (KIPP) is an operator of a single network of charter schools) effects on achievement in 22 middle schools in several states. Impacts for large majorities of the 22 KIPP middle schools included in the study are positive in both reading and math.

One effective way to summarize the literature on charter school effectiveness is to rely on meta-analyses and literature reviews.

- Betts and Tang (2008) reviewed more than 70 studies of charter school effects, making a distinction between high- and low-quality studies. They define "high-quality" analyses as those that use either lottery winner/loser techniques, or employ value-added. The meta-analysis concluded that across all of the studies (high- and low-quality) charter school effects are mixed, on average no different than regular public schools. Limiting the literature review to "high-quality" studies (as they define it) suggests that, despite considerable variation, charter schools more often outperform non-charter. They also found a large negative charter effect in high schools as a whole.
- In a literature review in the book *The Charter School Dust-Up* (Carnoy et al., 2004), the authors examined 19 state-level studies and found that charter schools have a negative effect on test scores after the studies controlled for differences in students and other key factors affecting outcomes (growth measures were not used for the most part).
- In a study by the pro-charter National Alliance for Public Charter Schools, Hassel (2005) reviews 38 comparative studies of charter school effects. He found that studies examining absolute performance (rather than growth) tended to find that charters are inferior to regular public schools, or that the effects are mixed. Among studies that used growth measures, about half found charter schools outperforming their regular public counterparts, while the other half found the opposite.
- An article in a peer-reviewed journal by researchers at the pro-charter Center on Reinventing Public Education (Hill et al., 2006) reviewed 35 studies of charter school achievement, and concluded that the evidence suggests that charter and regular public schools overall are not different in their effects and where there are differences, they were minor.

Conclusion

These studies, coming from academic journals or think tanks (some pro-charter) used multiple measures of performance outcomes and cleared peer review. They overwhelmingly lead to one conclusion: The evidence on the effectiveness of charter schools in raising student achievement is, at best, mixed. There is no consistent evidence that charter schools are the answer to our education problems. In fact, the evidence indicates that charter schools are not even a *promising* education policy.

As Schneider and Buckley (2006) conclude: “These two trends—one demanding rigorous evidence and the other demanding more charter schools—may be on a collision course. Like so many other school reforms, we believe the push for charter schools has been characterized by many promises unsupported by evidence.”

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