

## RESEARCH BRIEF

# Instructional Conditions in Charter Schools and Students' Mathematics Achievement Gains



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When examining school choice in the United States, one is struck by the variety of options available as well as the bitter controversies surrounding these choices. Nevertheless, the school choice movement is gathering steam, and research on choice is expanding to assess whether or not the movement is doing what it aims to do: advance educational opportunities for students by expanding school choice options to families (Berends, Springer, Ballou, & Walberg, 2009).

As part of a larger National Center on School Choice research effort investigating the relationship between instructional conditions and academic achievement in schools of choice and traditional public schools, the study

### KEY FINDINGS:

- Mathematics achievement gains were similar for students who attend charter schools and students who attend traditional public schools.
- Greater instructional innovation did not result in greater achievement gains.

described in this brief was based on survey data collected from teachers and principals in a sample of charter and traditional public schools in spring 2006. Researchers also examined student achievement data from the Northwest Evaluation Association (NWEA)<sup>1</sup> for the 2002–03 through 2005–06 school years. **The sample included 1,727 students from a matched convenience sample of 44 charter and traditional public schools in NWEA-tested schools in Idaho, Indiana, and Minnesota.**

The study explored student achievement gains in elementary charter and traditional public schools and how these gains relate to a school's organizational and instructional factors. The two main research questions were:

1. How do elementary students in charter schools compare with similar students in traditional public schools in terms of gains in mathematics achievement?
2. What effect do the organizational and instructional conditions in a school have on these students' achievement gains?

### School Choice Debate

Proponents of choice argue that market-style mechanisms of consumer choice and competition between different kinds of schools will promote innovation, competition, and increased satisfaction and outcomes. Critics of this market model argue that the institutional environment of American education is so strong that significant changes in instruction and innovative reforms are likely to be rare or short-lived.

### What Is a Charter School?

A charter school is a publicly funded school that typically is governed by a group or organization under a contract or charter with the state; the charter exempts the school from selected state or local rules and regulations. In return for funding and autonomy, the charter school must meet accountability standards. A school's charter is reviewed (typically every three to five years) and can be revoked if guidelines on curriculum and management are not followed or the standards are not met. The first U.S. charter school opened in 1992. In 2006–07, almost 1.2 million students were enrolled in 4,132 charter schools (U.S. Department of Education, 2008).

<sup>1</sup> NWEA contracts with states, districts, and schools to provide student assessments in mathematics, reading, and language arts. Currently, NWEA tests students in more than 4,200 districts in 49 states.

To address the second question, which moves the study beyond merely looking at student outcomes, researchers were particularly interested in how *teacher academic press for learning* and *in-school organizing enabling conditions* impact student achievement.

Teacher Academic Press for Learning	• Instructional innovation
	• Time on task
	• Focus on student achievement
	• Instructional program coherence
In-School Organizing Enabling Conditions	• Principal leadership
	• Teacher decision-making authority
	• Professional learning community
	• Teacher efficacy

**There was no significant difference in academic achievement gains between students who attend charter schools and students who attend traditional public schools in the sample.** That is, regardless of whether they attended a charter school or traditional public school, students made the same achievement gains in mathematics on NWEA assessments between spring 2005 and spring 2006. However, in schools where teachers reported that they had high expectations for achievement, believed it was important for all students to do well, and emphasized challenging work and completing assignments, students experienced higher gains than those in schools where the focus on academic achievement was weaker.

**In schools where teachers reported that there was greater instructional innovation, students had lower achievement gains than those in schools where teachers reported less innovation.** Instructional innovations included teachers experimenting with new ideas for teaching and learning, relying on unique instructional programs, using innovative strategies to improve achievement, and working with staff to implement innovative approaches.

Although a previous study using the same data was consistent with proponents of school choice who argue that some of the in-school organizational enabling conditions and teacher press conditions are more prevalent in charter schools compared with traditional public schools (Goldring & Cravens, 2008), this analysis of the data found that the effect on student achievement is mixed. The findings of this study also support critics' claims that institutional regulations and constraints in schools are so strong that it is very difficult for truly innovative reforms to take hold in a way that could impact student academic achievement.

## Policy and Research Implications

This study holds implications for policy and future research. The finding that there is no difference in the mathematics achievement gains between students who attend charter schools and traditional public schools suggests that school improvement processes may not work better in schools of choice than in traditional public schools. Although charter schools actively promote effective in-school organizational conditions and improved teachers' press for student learning, it is unclear if this strategy can or will lead to greater student achievement. The finding that increased innovation was negatively associated with achievement gains suggests that innovation for innovation's sake may not be the best strategy for improving student achievement in any type of school. In addition, the study supports the claim that while there may be individual schools or pockets of schools where innovation and success are occurring, the scale-up of such schools continues to be challenging because of the highly institutionalized and bureaucratic nature of the public school sector in the United States.

This research makes clear the need to move beyond merely considering student outcomes in research on school choice. Future studies need to explore how school organization and instructional processes differ between schools of choice and traditional public schools. Such research informs and adds substance to the school choice debate. In addition, by gathering measures of school effectiveness—with a particular focus on

organizational enabling conditions, teacher academic press, and more specific measures of classroom instruction—there will be a greater understanding of the conditions under which different school types are related to academic achievement gains and growth. Only then will the effectiveness of choice versus non-choice schools be determined. And only then will researchers, policymakers and educators alike better understand the context of choice schools, their effects on student achievement growth, and the conditions under which these effects occur.

## References

Berends, M., Springer, M. G., Ballou, D., & Walberg, H. J. (Eds.). (2009). *Handbook of research on school choice*. New York: Routledge.

Goldring, E., & Cravens, X. (2008). Teachers' academic focus on learning in charter and traditional public schools. In M. Berends, M. G. Springer, & H. J. Walberg (Eds.), *Charter school outcomes* (pp. 39–60). New York: Taylor & Francis.

U.S. Department of Education. (2008). *Numbers and types of public elementary and secondary schools from the common core of data: School year 2006–07* (NCES 2009-304). Washington, DC: Author. Retrieved March 9, 2010, from <http://nces.ed.gov/pubs2009/pesschools07/findings.asp>

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