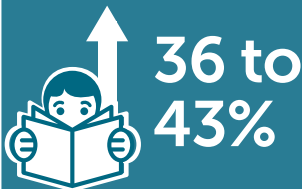


# InFOCUS

## The Impact of Replacing Principals on Student Achievement in DC Public Schools

In their third year, new principals improved the average student's reading score by 4 percentile points.

The improvement was large enough to boost proficiency from



In 2007, the District of Columbia (DC) passed the Public Education Reform Amendment Act (PERAA), which established mayoral control of DC Public Schools (DCPS) and led to the appointment of Michelle Rhee as school chancellor. In an effort to boost student achievement, Chancellor Rhee replaced many school principals as one of her first reforms. For the 2008–2009 school year, 39 percent of the principals in the school district—51 individuals—did not return, and more were replaced in the following years. To determine how the strategy of replacing principals affected student achievement, the Walton Family Foundation contracted with Mathematica Policy Research. This study is the first to examine the impact of such a strategy on student achievement.

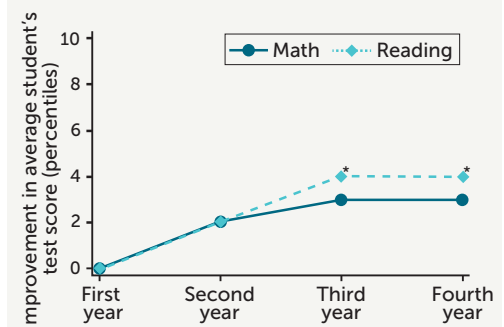
### KEY FINDINGS

**New principals improved student achievement.** Schools led by new principals demonstrated an upward trend in reading achievement compared with schools that kept the same principal. In their third year, new principals improved the average student's reading score by 4 percentile points. The improvement was large enough to have increased the proficiency rate in affected schools during the 2006–2007 school year from 36 to 43 percent. Although not as strong, the pattern was similar for math.

**It took three years for new principals to realize solid achievement gains.** When a new principal led a school, there were, on average, no gains after one year, some evidence of improvement after two years, and solid gains after three and four years.

**Student achievement gains were larger in middle schools than in elementary schools.** In middle schools, the gains were larger and happened faster in both math and reading. In their second year, new principals improved the average middle school student's

### Improvement in math and reading achievement under new principals by year



**Figure 1**

Source: Mathematica calculations based on administrative data from DCPS and DC's Office of the State Superintendent of Education.

Notes: The study included new principals leading schools in each of the four school years from 2008–2009 through 2011–2012.

\* = Statistically significant at the 5 percent level.

test scores by 6 percentile points in math and 5 in reading compared with schools that kept the same principal. In their third year, new principals improved the average middle school student's test scores by 9 percentile points in math and 8 in

reading. The improvements were large enough to have increased the proficiency rate in affected middle schools during the 2006–2007 school year from 36 to 47 percent in reading, and from 28 to 42 percent in math.

## Improvement in math and reading achievement under new principals by year and grade span

Source: Mathematica calculations based on administrative data from DCPS and DC's Office of the State Superintendent of Education.

Notes: The study included new principals leading schools in each of the four school years from 2008–2009 through 2011–2012.

\* = Statistically significant at the 5 percent level.

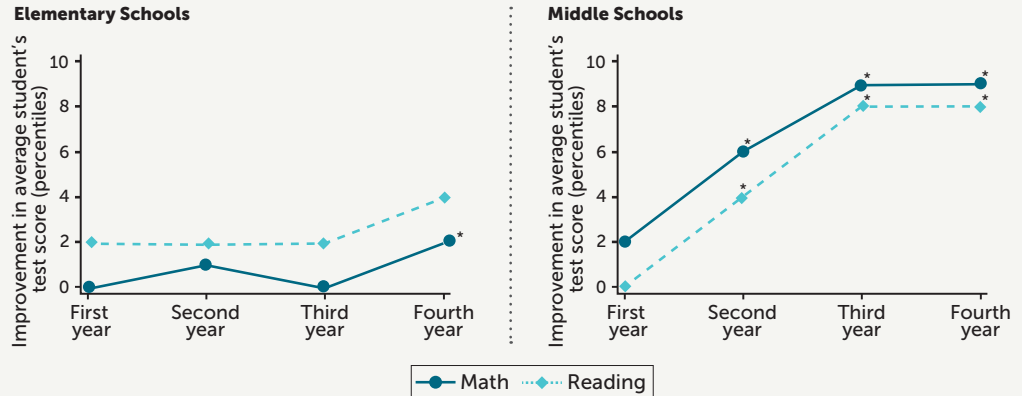


Figure 2

## ABOUT THE STUDY

The study team analyzed the changes in student achievement after principals were replaced in each of the four school years following PERAA's enactment. The analysis compared trends in student achievement in 54 schools with new principals to 22 DCPS schools that had the same principal. Some of the departing principals left voluntarily; others were dismissed. The study team measured changes in student achievement year by year in each of the seven school years from 2005–2006 through 2011–2012 in grades 4 through 8 and in grade 10.

The study team used methods designed to distinguish the effect of new principals from other factors.

- **The study team distinguished the effect of new principals from changes that may have affected student achievement in all of DCPS.** Many changes in DCPS may have affected student achievement during this time period. For example, DCPS instituted IMPACT, a new teacher evaluation system, in the 2009–2010 school year. By comparing student achievement in schools with new principals to achievement at schools that kept the same principal, the study team accounted for changes that would have affected all of DCPS.

- **The study team distinguished the effect of new principals from the effect of changes in the student body's composition in their schools.** The average achievement scores at a school could change over time if the school's demographic composition changed. For example, DCPS combined 12 schools to start the 2008–2009 school year at the same time it replaced principals in some of those schools. Thus, changes in student achievement at these schools may have resulted from new leadership, new types of students enrolled, or both. So instead of examining raw test scores, the study team measured gains in student achievement that account for the contribution of prior test scores and other student background characteristics (like English language learner status or special education status). This approach distinguished changes due to new students from changes due to new principals.
- **The study team found similar results when it changed how it measured the effect of new principals.** When the study team varied the way it measured the effect of new principals, the results were similar. For example, the pattern of results did not change whether the analysis included all new principals in the four years after PERAA or only new principals from the first year after PERAA. Similarly, the analysis was not sensitive to the inclusion or exclusion of closed or combined schools.

The study team measured gains in student achievement that account for the contribution of prior test scores and other student background characteristics.

To view the full report, "The Impact of Replacing Principals on Student Achievement in DC Public Schools," please visit [http://www.mathematica-mpr.com/~media/publications/pdfs/education/replacing\\_principals\\_student\\_achieve\\_DCPS.pdf](http://www.mathematica-mpr.com/~media/publications/pdfs/education/replacing_principals_student_achieve_DCPS.pdf).

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