Study provides evidence that the New York City bonus program did not lead to marked gains in student achievement

New York City’s decision to scrap school-wide bonus pay echoes study findings that school-wide performance pay hampers the incentives for individual teachers to improve performance

CAMBRIDGE, MA – An analysis of the first two years of the New York City’s School-Wide Performance Bonus Program found that school-wide merit pay had very little impact, positive or negative, on student reading or math achievement. Under the Program, schools that achieved their goals received bonuses equal to $3,000 per union teacher; those that meet 75 percent of their goal received $1,500 per union teacher. In the first year of the program, 55 percent of participating schools received bonus payments averaging $160,500 per school; in the second year, 91 percent of schools earned bonus awards, averaging $195,100 per school. The total bonus pool totaled $14.0 million in the first year and $27.1 million in the second year.

There is some evidence that the program had a positive impact in schools where teachers were few in number, an environment in which it may be easier for teachers to cooperate in pursuit of a common reward. School-wide bonus programs may be able to provide those incentives in schools with relatively small teaching staffs. They may also be appropriate for schools characterized by a high degree of staff cohesion, in which teachers work collaboratively to improve student learning and it is difficult to isolate the performance of a single teacher. The early experience with the Program suggests, however, that a heavy reliance on school-wide rewards hampers the effectiveness of merit pay programs in schools with large teaching staffs that are not highly collaborative.

In the program’s first year, the bonus program boost to math scores was 3.2 points on the New York state test, or 0.08 standard deviations. Statistically significant at the .1 level, the gain is described by the authors as “modest in size but meaningful.” Students in the 4th to 8th grades gained, on average, approximately 0.25 standard deviations over the course of a year.

The study was co-authored by Sarena Goodman and Lesley Turner, PhD candidates in Columbia University’s Department of Economics. It will appear in the Spring 2011 issue of Education Next and is available on the web at www.educationnext.org.

The city’s School-Wide Performance Bonus Program, endorsed by both the Department of Education (DOE) and the teachers union, was launched in 2007. The study’s authors analyzed data from the 2007-08 and 2008-09 academic years.

The randomized design of the bonus program made it possible to test whether eligibility to earn a lump sum bonus, distributed to all teachers within an effective school, could increase student achievement.
The city randomly selected 181 schools out of a group of 309 high-need schools serving kindergarten through 8th grade to participate in the program, the remaining 128 schools serving as the control group for the purposes of the evaluation. Of the 181 schools, 158 participated in the program. In order to participate, schools had to gain the support of 55 percent of their full-time United Federation of Teachers (UFT) staff.

The authors note that the schools given the opportunity to participate needed to “out-pace their counterparts in the control group” over the program’s first two years in order to demonstrate that merit pay made a real difference for student achievement. While both treatment and control groups saw an increase in the average math and reading scores over the two-year period studied, the average scores of all the schools in the treatment group did not exceed those in the control group to a statistically significant degree. They suggest that in a school with more teachers, “the diffusion of responsibility for test-score gains across many teachers may erode the incentive that any individual teacher has to increase effort in the classroom.”

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Sarena Goodman and Lesley Turner are PhD candidates in Columbia University’s Department of Economics.

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