

## Abstract Title Page

**Title:**

**Evaluation of the Teacher Incentive Fund: Implementation and Early Impacts of Pay-for-Performance After One Year**

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## **Abstract Body.**

### **Background / Context.** *Description of prior research and its intellectual context.*

Recent efforts to attract and retain effective educators and to improve teaching practices have focused on reforming evaluation and compensation systems for teachers and principals. In 2006, Congress established the Teacher Incentive Fund (TIF), which provides grants to support performance-based compensation systems for teachers and principals in high-need schools. The incentives and support offered through TIF grants aim to improve student achievement by improving educator effectiveness and the quality of the teacher workforce.

Few studies of U.S. pay-for-performance programs have found consistent impacts on student achievement. Most experimental studies found no statistically significant impact of pay-for-performance on student achievement. This includes studies of New York City's School-Wide Performance Bonus Program (Marsh et al. 2011; Fryer 2011; Goodman and Turner 2010); a study of a comprehensive teacher pay reform model in Chicago (Glazerman et al. 2009; Glazerman and Seifullah 2010, 2012); and a study in Nashville that offered substantial pay-for-performance bonuses (\$5,000 to \$15,000) to middle school math teachers (Springer et al. 2010).

However, these studies included schools from only one school district, making it difficult for policymakers to determine whether the study findings can be generalized more broadly. In addition, the programs in these studies tended to have one or more design weaknesses, for example, the average and maximum pay-for-performance bonuses may have been too small to provide meaningful incentives for teachers to change their practices (Glazerman et al. 2009; Glazerman and Seifullah 2010, 2012).

### **Purpose / Objective / Research Question / Focus of Study.** *Description of the focus of the research.*

The number of TIF grants funded by the U.S. Department of Education grew significantly in 2010, with 62 grants awarded that year compared to 16 grants in 2006 and 18 in 2007. As part of the additional funding used to support these grants, Congress required a rigorous evaluation of the 2010 TIF grantees. The purpose of the multiyear study is to describe the program characteristics and implementation experiences of all 2010 TIF grantees and estimate the impact of pay-for-performance bonuses within a well-implemented performance-based compensation system for evaluation grantees. Because educators' understanding of and responses to this policy can change over time, this study plans to follow the grantees for the duration of the five-year grants.

This report addresses two research questions:

1. What are the characteristics of all TIF grantee districts and their performance-based compensation systems? What implementation experiences and challenges did TIF districts encounter?
2. How do teachers and principals in schools that did or did not offer pay-for-performance bonuses compare on key dimensions, including their understanding of TIF program

features, exposure to TIF-funded activities, allocation of time, and attitudes toward teaching and the TIF program?

**Setting.** *Description of the research location.*

The 2010 TIF grant application notice differed from the other rounds of the TIF grants in an important way: it included a main competition and an evaluation competition. Applicants had to apply for one or the other. By holding two separate competitions, ED created a sample of grantees that, by virtue of having applied for an evaluation grant, had indicated their interest and willingness to participate in an evaluation to measure the impact of pay-for-performance bonuses on educators' and students' outcomes.

**Population / Participants / Subjects.** *Description of the participants in the study: who, how many, key features, or characteristics.*

The final study sample for this report consisted of 153 TIF 2010 grantee districts, composed of 141 non-evaluation districts and 12 evaluation districts. For 10 evaluation districts, we also provide information about the experiences, behaviors, and attitudes of educators. The evaluation districts include 137 study schools in which all principals and a sample of 826 teachers were administered surveys.

Compared with all U.S. districts, TIF districts were significantly larger, were more likely to be located in urban areas, had a higher proportion of disadvantaged and minority students, were more heavily located in the South, and were less likely to be in states with collective bargaining requirements.

**Intervention / Program / Practice.** *Description of the intervention, program, or practice, including details of administration and duration.*

The 2010 TIF grants provided more detailed guidance than prior rounds on the measures used to evaluate educators and on the design of the pay-for-performance bonuses. The 2010 grants required four program components in their performance-based compensation systems: 1) measures of educator effectiveness that included students' achievement growth and observations of classroom or school practices; 2) pay-for-performance bonus designed to incentivize and reward educators solely for being effective; 3) additional pay opportunities for educators to take on additional roles or responsibilities such as becoming a master or mentor teacher; and 4) professional development to inform teachers about the performance measures and to provide support based on educators' performance on the measures.

This study focuses most heavily on one of those requirements: the impact of pay-for-performance bonuses. To provide a strong incentive to the most effective educators, bonuses were to be differentiated and substantial enough to lead to a change in the behavior of teachers and principals to improve student outcomes.

**Research Design.** *Description of the research design.*

This study examined TIF implementation for all 2010 grantees as well as implementation and impacts for a subset of 12 districts selected through the evaluation competition. For evaluation districts, the study measured the impact of pay-for-performance bonuses as part of a comprehensive reform system within a large, multisite random assignment study design. In each evaluation district, schools serving grades 4 through 8 were sorted by lottery into two groups. The treatment schools were to implement all components of their performance-based compensation system. The control schools implemented the same performance-based compensation system with one exception—the pay-for-performance bonus was replaced with an across-the-board one percent bonus for all educators (see Figure 1). Because the two groups of schools were assigned by lottery within each district, the only difference between the two groups was that educators in treatment schools were eligible to earn a pay-for-performance bonus, while educators in control schools received an automatic bonus regardless of their performance. All other aspects of the program and the school characteristics (measured and unmeasured) were similar by design.

**Data Collection and Analysis.** *Description of the methods for collecting and analyzing data.*

**Data on TIF implementation in all districts.** To describe TIF program features and implementation experiences of TIF districts in general, the study team administered a survey to all 2010 TIF district administrators in December 2011.

**Additional data on TIF implementation in 10 evaluation districts.** The study team supplemented data obtained from the district surveys with information from additional sources to describe in more detail TIF programs and implementation experiences in evaluation districts. We conducted telephone interviews with staff in evaluation districts in summer 2012. Technical assistance documents included needs assessments conducted in fall 2010 and spring 2011, and communication materials used by districts and grantees during the 2010–2011 planning year.

**Data on teachers' and principals' attitudes and behaviors in 10 evaluation districts.** The study team used teachers' and principals' survey responses to examine their understanding of the TIF program in their districts and to estimate the impact of pay-for-performance bonuses on their attitudes and behaviors. These surveys were administered to all principals in the evaluation schools and a sample of teachers in treatment and control schools in spring 2012. The teacher sample included all 1st- and 4th-grade teachers, and 7th-grade math, English language arts, and science teachers.

**Findings / Results.** *Description of the main findings with specific details.*

This report describes programs implemented during the 2011–2012 school year by the 2010 TIF grantees. The main findings for all TIF districts include the following:

- **Fewer than half of districts reported implementing all required components of the TIF program, evidence that full implementation is a challenge.** Although 85 percent of TIF districts reported implementing at least three of the four required components for teachers, slightly fewer than half (46 percent) reported implementing all four.

- **Consistent with the TIF grant goals, grantees expected pay-for-performance bonuses to be somewhat substantial and differentiated. However, districts expected most educators would receive a bonus, suggesting that the award criteria were not consistent with TIF guidance for challenging pay-for-performance bonuses.** TIF districts expected to award an average pay-for-performance bonus of about 4 percent of the average U.S. educators' salary (Figure 2). The maximum bonus expected by TIF districts was twice as large as the average bonus for teachers and 50 percent larger than the average bonus for principals. Districts also expected to award a pay-for-performance bonus to more than 90 percent of eligible teachers and principals (Figure 3).

The key findings for the 10 evaluation districts that conducted the lottery by spring 2012 include the following:

- **Many educators misunderstood the performance measures and the pay-for-performance bonuses used for TIF.** For example, the measures that educators indicated were used to evaluate their performance sometimes differed from those reported by districts (Table 1). In addition, more than half of teachers did not know they were eligible for pay-for-performance bonuses, and teachers reported a maximum pay-for-performance bonus that was lower than the amount reported by districts (Figure 4).
- **Most teachers and principals are satisfied with their professional opportunities, school environment, and the TIF program.** About two-thirds of teachers were satisfied with their jobs overall and were glad to be participating in the TIF program (Table 2).
- **Educators in schools that offered pay-for-performance bonuses tended to be less satisfied than those in schools that did not offer such bonuses.** For example, fewer teachers in schools that offered bonuses were satisfied with the opportunities for professional advancement (68 versus 76 percent) and school morale (48 versus 55 percent) (Table 2). However, more teachers in schools offering pay-for-performance bonuses were satisfied with the opportunity to earn additional pay (64 versus 59 percent).

**Conclusions.** *Description of conclusions, recommendations, and limitations based on findings.*

This study was designed to provide implementation information for the 2010 TIF grantees. For the subset of grantees that received evaluation grants, the evaluation examines the impact of pay-for-performance bonuses as part of a comprehensive reform system within a large, multisite random assignment study design. Targeted technical assistance supported program implementation in the 12 evaluation districts to help ensure the proper implementation of their performance-based compensation systems.

Future reports will describe the impact of pay-for-performance bonuses on student achievement and teacher mobility, and examine the features of performance-based compensation systems that are related to these outcomes.

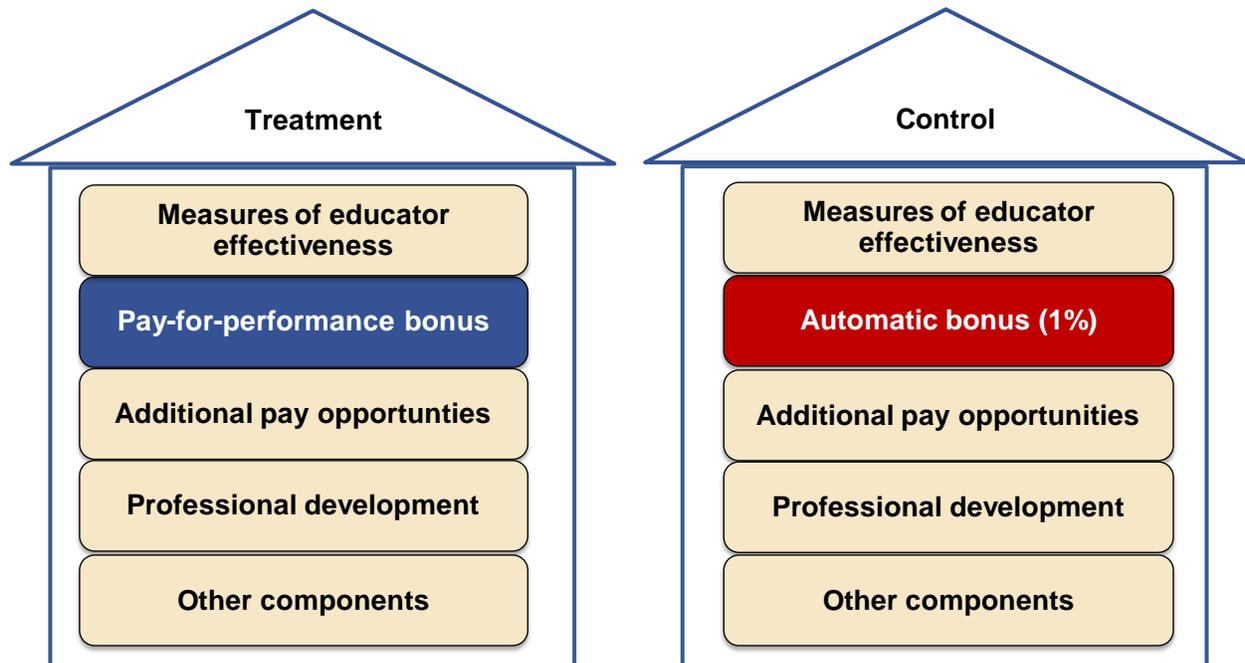
## Appendices

### Appendix A. References

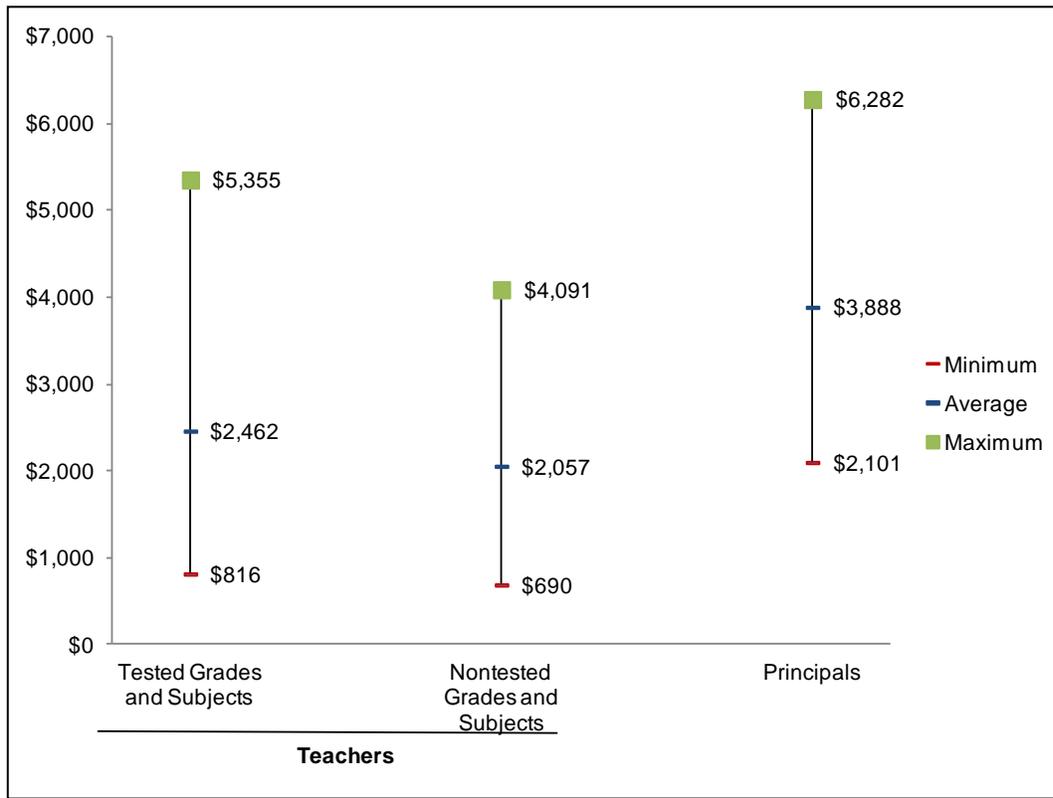
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## Appendix B. Tables and Figures

Figure 1. Random Assignment Evaluation Design



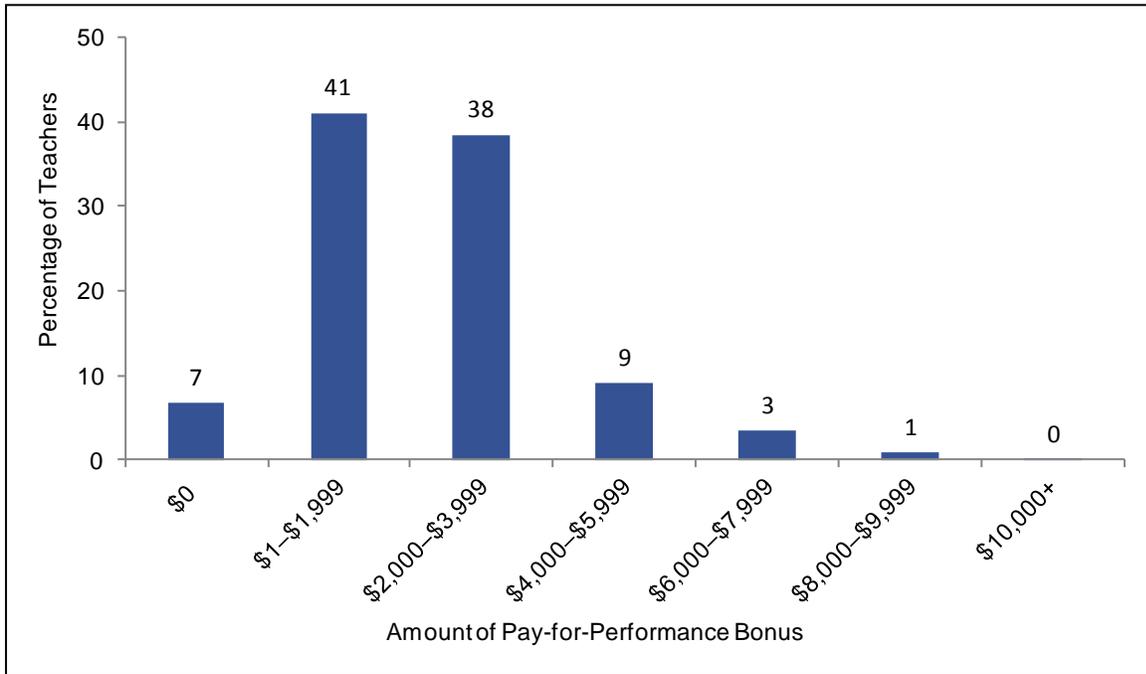
**Figure 2. Average, Minimum, and Maximum Expected Pay-for-Performance Bonuses for Teachers and Principals**



Source: District survey.

Notes: The figure is based on answers to a question about the expected distribution of pay-for-performance bonuses, given 10 categories of bonus amounts that range from \$0 to \$15,000 or more (for example, the percentage of teachers expected to earn a bonus between \$1,000 and \$1,999). Eighty-seven of the 153 TIF districts responded to the question for teachers; 99 of the 153 districts responded to the question for principals. The maximum bonus by district was calculated as the top range of the largest category with a positive percentage of teachers or principals expected to receive a bonus in that range. The minimum bonus by district was calculated as the bottom range of the lowest category with a positive percentage of teachers or principals expected to receive a bonus in that range. The average bonus by district was calculated as the average of the midpoint dollar amount of each category, weighted by the percentage of teachers or principals expected to received a bonus in that range.

**Figure 3. Expected Distribution of Teacher Pay-for-Performance Bonuses in Tested Grades and Subjects**



Source: District survey.

Note: 87 districts responded to this survey question.

**Table 1. Performance Measures Used to Evaluate Teachers and Principals, as Reported by Educators and District Representatives**

	Percentage of Respondents Reporting the Measure Was Used		
	Teacher Report	Principal Report	District Report
<b>Teacher Performance Measures</b>			
Student achievement growth	68.0*+	56.3*	100.0
Classroom observations	78.1*+	97.5	100.0
<b>Sample Size—Range<sup>a</sup></b>	<b>809–811</b>	<b>133–134</b>	<b>10</b>
<b>Principal Performance Measure</b>			
Student achievement growth for the school	n.a.	88.7*	100.0
<b>Sample Size</b>	<b>n.a.</b>	<b>127</b>	<b>10</b>

Sources: Teacher, principal, and district surveys.

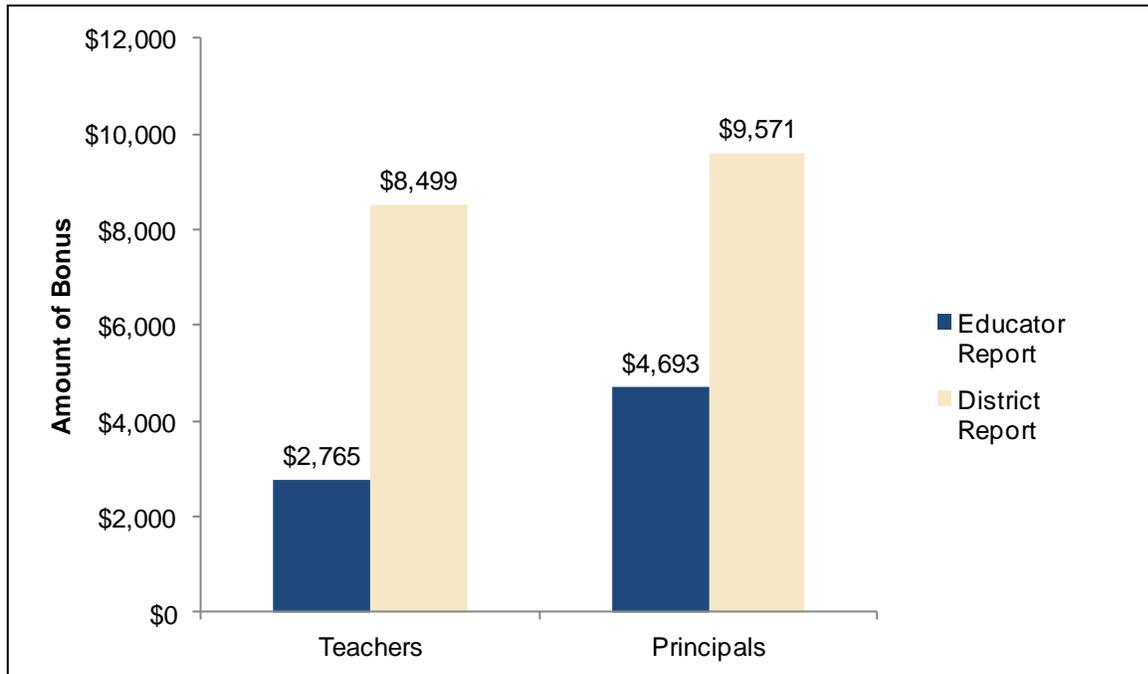
<sup>a</sup>Sample sizes are presented as a range based on the data available for each row in the table.

\*Difference from the district report is statistically significant at the 0.05 level, two-tailed test.

+Difference between teacher and principal reports is statistically significant at the 0.05 level, two-tailed test.

n.a. = not applicable.

**Figure 4. Maximum Possible Size of Pay-for-Performance Bonuses for Treatment Teachers and Principals, as Reported by Respective Educators and Districts**



Sources: Teacher, principal, and district surveys.

Note: Figures indicate respondents' average report of the maximum possible size of teachers' or principals' pay-for-performance bonuses. A total of 395 treatment teachers and 67 treatment principals responded to this survey question from 10 of the evaluation districts.

**Table 2. Teachers' Satisfaction with Performance Measures, Professional Opportunities, School Environment, and TIF Program**

	Treatment	Control	Impact
<b>Attitudes Toward Aspects of Teaching</b>	<b>Percentage Who Are Somewhat or Very Satisfied</b>		
Classroom Observations as an Evaluation Measure	68.4	77.0	-8.6*
Opportunities for Professional Advancement	67.8	75.7	-7.8*
Quality of Interaction with Colleagues	73.6	80.6	-7.0*
School Morale	48.1	54.9	-6.8*
Opportunities to Earn Extra Pay	64.0	58.9	5.1*
<b>Number of Teachers—Range<sup>a</sup></b>	<b>405–408</b>	<b>405–412</b>	
<b>Attitudes Toward TIF Program</b>	<b>Percentage Who Agree or Strongly Agree</b>		
My Job Satisfaction Has Increased Due to the TIF Program	27.1	32.0	-4.9*
The TIF Program Is Fair	53.0	57.6	-4.6*
I Feel Increased Pressure to Perform Due to the TIF Program	62.9	54.1	8.7*
<b>Number of Teachers—Range<sup>a</sup></b>	<b>399–403</b>	<b>394–403</b>	

Source: Teacher survey.

<sup>a</sup>Sample sizes are presented as a range based on the data available for each row in the table.

\*Impact is statistically significant at the .05 level, two-tailed test.