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Errata

To: Recipients of MG-1114-FPS, A Big Apple for Educators: New York City's Experiment with Schoolwide Performance Bonuses--Final Evaluation Report

From: RAND Corporation Publications Department

Date: September 2011

Re: Corrected pages (pp. 212–214, 220, 221, 223–228)

The authors identified errors in the originally published document in Tables 7.9 through 7.14. In each of these tables, the row labels "(std. dev.)" should have been labeled "(std. err.)". The posted document has been corrected. This error does not affect any other assessments or findings.

Table 7.9
Estimated SPBP Effects on Overall and Component Progress Report Scores, by School Year

Progress Report Component Score	School Year		
	2007–2008[a]	2008–2009[b]	2009–2010[b]
Overall	−0.39	0.11	−1.32
(std. err.)	(1.65)	(1.63)	(1.86)
Categories			
Environment	−0.06	0.14	−0.12
(std. err.)	(0.27)	(0.26)	(0.29)
Performance	0.15	0.00	−0.31
(std. err.)	(0.42)	(0.47)	(0.52)
Progress	−0.28	0.01	−0.60
(std. err.)	(1.00)	(1.02)	(1.19)
Additional credit	−0.20	−0.03	−0.29
(std. err.)	(0.29)	(0.33)	(0.28)

[a] High school data for the 2007–2008 school year include only 87 schools with Progress Reports—six control and four SPBP schools were missing data.

[b] Elementary and middle school data for the 2008–2009 and 2009–2010 school years include only 306 schools with Progress Reports—nine SPBP and five control schools were missing data, and four SPBP schools had closed; high school data for the 2008–2009 and 2009–2010 school years include only 87 schools with Progress Reports—four control and six SPBP schools were missing data.

the four school years of interest. Across all three program years for elementary, middle, and K–8 levels, we found that SPBP did not improve average student test scores in mathematics and ELA. Average scores for student enrolled in elementary, middle, and K–8 schools invited to participate in SPBP were lower than those for students enrolled in control schools for both subjects and all years, but the differences were small and were statistically significant only for mathematics in the last year. Similarly, across two years for high schools, we found no effect on student test scores in any of the Regents subjects: Comprehensive English, Mathematics A, Mathematics B, Science–Living Environment, Earth

Table 7.10
Estimated SPBP Effects on Overall and Component Progress Report Scores for Elementary and Middle Schools, by School Year

Progress Report Component Score	School Year		
	2007–2008	2008–2009[a]	2009–2010[a]
Overall Score	0.21	–1.14	–2.62
(std. err.)	(1.82)	(1.42)	(2.02)
Categories			
Environment	0.00	0.11	–0.17
(std. err.)	(0.29)	(0.28)	(0.32)
Performance	0.33	–0.04	–0.35
(std. err.)	(0.46)	(0.44)	(0.44)
Progress	0.10	–0.95	–1.64
(std. err.)	(1.14)	(0.97)	(1.37)
Additional credit	–0.22	–0.25	–0.46
(std. err.)	(0.32)	(0.35)	(0.32)

[a] Data for the 2008–2009 and 2009–2010 school years include only 306 schools with Progress Reports—nine SPBP and five control school were missing data, and four SPBP schools had closed.

Science, and Chemistry. The next section begins with a brief description of our analytic approach, followed by a summary of findings.

Analytic Approach

As discussed previously, we used an ITT analysis to estimate how SPBP might affect student achievement test scores. We produced estimates for high schools separately from those for elementary, middle, and K–8 schools because Regents Exams differ from the exams administered to students in grades 3 through 8. The content assessed on Regents Exams is more narrowly focused than that for the lower grades. Students can also select when to take Regents Exams and can sit for an exam multiple times. Although we restricted our analysis sample to scores from

Table 7.11
Estimated SPBP Effects on Overall and Component Progress Report Scores for High Schools, by School Year

Progress Report Component Score	School Year		
	2007–2008[a]	2008–2009[b]	2009–2010[b]
Overall Score	–2.68	2.64	4.63
(std. err.)	(3.85)	(3.69)	(3.44)
Categories			
Environment	–0.29	0.12	0.22
(std. err.)	(0.66)	(0.58)	(0.54)
Performance	–0.56	–0.35	0.51
(std. err.)	(1.01)	(0.95)	(1.09)
Progress	–1.71	2.34	3.65
(std. err.)	(2.04)	(2.16)	(1.99)
Additional Credit	–0.12	0.53	0.25
(std. err.)	(0.67)	(0.71)	(0.59)

[a] Data for the 2007–2008 school year include only 87 schools with Progress Reports—six control and four SPBP schools were missing data.

[b] Data for the 2008–2009 and 2009–2010 school years include only 87 schools with Progress Reports—four control and six SPBP schools were missing data.

the first time a student took a specific examination,[7] the lack of uniformity on assessments and the assessment process across the different grade levels could have produced systematic differences in the SPBP

[7] The common interpretation of the SPBP effect on achievement is the average of the difference between a student's achievement had the student been enrolled in a school participating in SPBP and the achievement had the student been enrolled in a school not participating in SPBP. Because high school students have some flexibility in taking the Regents Exams, SPBP could affect which students take an exam and when; for students who take the exam, it could also affect performance. Our estimate of the SPBP effect combines the effects on who takes each exam and how they perform. It describes how much, on average, we might expect student achievement on the Regents Exams to change because of a school's participation in SPBP. Our high school analyses did not estimate how much an individual student's performance would change as a result of the school's participation in the program. For elementary and middle school grades, the tests are mandatory, and we interpreted the SPBP effect for schools with those grades as the average effect on the achievement of an individual student.

Table 7.12
SPBP Effects on Test Scores for Elementary, Middle, or K–8 Schools, by Subject and School Year (ITT Estimates)

	Year 1		Year 2		Year 3		Years 1, 2, and 3	
	No Controls	Controls	No Controls	Controls	No Controls	Controls	No Controls	Controls
Scale Scores								
Mathematics	–1.20	–0.97	–1.63	–1.59	–2.13*	–1.93*	–1.65	–1.57
(std. err.)	(1.08)	(0.89)	(1.05)	(0.90)	(1.07)	(0.96)	(1.01)	(0.86)
Observations	111,014	111,014	108,093	107,953	108,555	107,976	327,662	326,943
R^2	0.10	0.23	0.09	0.20	0.09	0.22	0.10	0.22
ELA	—	—	–0.69	–0.80	–0.90	–0.91	—	—
(std. err.)	—	—	(0.78)	(0.65)	(0.66)	(0.58)	—	—
Observations	—	—	105,483	105,330	105,303	105,269	—	—
R^2	—	—	0.04	0.18	0.08	0.24	—	—
Student and school controls		√		√		√		√
Standardized Scores								
Mathematics	–0.03	–0.02	–0.05	–0.04	–0.06*	–0.06*	–0.05	–0.04
(std. err.)	(0.03)	(0.02)	(0.03)	(0.02)	(0.03)	(0.03)	(0.03)	(0.02)
Observations	111,014	111,014	108,093	107,953	108,555	107,976	327,662	326,943
R^2	0.00	0.15	0.01	0.13	0.01	0.15	0.01	0.14

Table 7.12—Continued

	Year 1		Year 2		Year 3		Years 1, 2, and 3	
	No Controls	Controls	No Controls	Controls	No Controls	Controls	No Controls	Controls
ELA	—	—	–0.02	–0.03	–0.03	–0.03	—	—
(std. err.)	—	—	(0.02)	(0.02)	(0.02)	(0.02)	—	—
Observations	—	—	105,483	105,330	105,303	105,269	—	—
R^2	—	—	0.00	0.15	0.01	0.18	—	—
Student and school controls		√		√		√		√
Number of schools								
Treatment	191		187		187		191	
Control	133		133		132		133	

NOTES: *, **, *** Estimates are statistically significant from zero at the 5%, 1%, and 0.1% levels, respectively. Student-level controls include gender, race and/or ethnicity, ELL status, special education status, free or reduced-price lunch status, retention flag, and grade level. School-level controls include male students (%), students by race and/or ethnicity (%), free and reduced-price lunch students (%), school size, and school level. The referant categories are grade 8, white, female, white (%), female (%), K–8 schools, and year 3. Four of the 324 in the elementary, middle, and K–8 sample were excluded from the analysis because they did not enroll students in at least one tested grade (grades 3–8). Standard errors appear in parentheses. Year 1 and three-year combined results for ELA are excluded because testing occurred early in the school year, before effects could occur.

Table 7.13
SSPBP Effects on Regents Exams Scores for High Schools, by Subject and School Year: Scale Scores (ITT Estimates)

	Fall Test Administration		Spring Test Administration			
	Fall, Year 2		Spring, Year 1		Spring, Year 2	
	No Controls	Controls	No Controls	Controls	No Controls	Controls
ELA	0.62	0.72	0.39	–0.56	2.23	1.72
(std. err.)	(2.01)	(2.14)	(1.79)	(1.63)	(1.52)	(1.37)
Student Observations	8,234	8,234	10,276	10,276	9,345	9,345
School Observations	82	82	84	84	82	82
R^2	0.00	0.17	0.00	0.15	0.00	0.19
Mathematics A	0.26	0.48	–0.16	0.54	—	—
(std. err.)	(0.81)	(0.66)	(1.07)	(0.97)	—	—
Student Observations	8,469	8,469	11,907	11,907	—	—
School Observations	82	82	82	82	—	—
R^2	0.00	0.09	0.00	0.10	—	—
Mathematics B	–0.66	–0.88	–2.32	–0.19	–2.72	0.97
(std. err.)	(3.13)	(2.38)	(2.66)	(2.20)	(2.72)	(2.28)
Student Observations	1,299	1,299	1,914	1,914	1,813	1,813
School Observations	62	62	66	66	72	72
R^2	0.00	0.10	0.00	0.11	0.01	0.11

Table 7.13—Continued

	Fall Test Administration		Spring Test Administration			
	Fall, Year 2		Spring, Year 1		Spring, Year 2	
	No Controls	Controls	No Controls	Controls	No Controls	Controls
Integrated Algebra	0.65	1.36	1.14	1.58	–1.14	–0.28
(std. err.)	(1.09)	(0.78)	(1.06)	(1.11)	(1.04)	(1.03)
Student Observations	7,170	7,170	10,447	10,447	16,062	16,062
School Observations	81	81	80	80	82	82
R^2	0.00	0.08	0.00	0.09	0.00	0.09
Science–Living Environment	0.08	–0.42	0.15	0.27	–0.36	0.30
(std. err.)	(1.21)	(1.20)	(1.07)	(1.08)	(1.12)	(1.17)
Student Observations	7,903	7,903	11,953	11,953	12,540	12,540
School Observations	82	82	81	81	81	81
R^2	0.00	0.07	0.00	0.09	0.00	0.13
Earth Science	–2.38	–2.03	–2.70	–2.84	–1.36	–1.89
(std. err.)	(2.82)	(2.22)	(1.85)	(1.87)	(2.12)	(2.11)
Student Observations	1,490	1,490	5,856	5,856	6,197	6,197
School Observations	50	50	68	68	68	68
R^2	0.01	0.10	0.01	0.11	0.00	0.10

Table 7.13—Continued

	Fall Test Administration		Spring Test Administration			
	Fall, Year 2		Spring, Year 1		Spring, Year 2	
	No Controls	Controls	No Controls	Controls	No Controls	Controls
Chemistry	–3.76	–3.56	0.01	0.13	1.62	3.40
(std. err.)	(5.74)	(3.10)	(2.02)	(1.88)	(2.38)	(2.14)
Student Observations	316	316	2,869	2,869	2,705	2,705
School Observations	31	31	62	62	57	57
R^2	0.02	0.41	0.00	0.08	0.00	0.12
Student and school controls		√		√		√

NOTES: *, **, *** Estimates statistically significant from zero at the 5%, 1%, and 0.1% levels, respectively. Student-level controls include gender, race and/or ethnicity, free/reduced lunch status, and indicators if gender or race and/or ethnicity was undefined. School-level controls include the percentage of male students, percentage of students by race and/or ethnicity, percentage of free/reduced price lunch students, school level and school size. The number of schools containing at least one student with valid test score information ranges between 31 (Chemistry, fall 2008) and 84 (ELA, spring 2008). Table does not contain estimates for Mathematics–A in spring 2009 because of insufficient number of valid test scores. Standard errors appear in parentheses.

Table 7.14
SPBP Effects on Regents Exams Scores for High Schools, by Subject and School Year: Standardized Scores (ITT Estimates)

	Fall Test Administration		Spring Test Administration			
	Fall, Year 2		Spring, Year 1		Spring, Year 2	
	No Controls	Controls	No Controls	Controls	No Controls	Controls
ELA	0.04	0.04	0.02	-0.03	0.13	0.09
(std. err.)	(0.11)	(0.11)	(0.09)	(0.08)	(0.07)	(0.07)
Student Observations	8,234	8,234	10,276	10,276	9,345	9,345
School Observations	82	82	84	84	82	82
R^2	0.00	0.17	0.00	0.14	0.00	0.19
Mathematics A	0.02	0.04	-0.01	0.04	…	…
(std. err.)	(0.07)	(0.05)	(0.08)	(0.07)	…	…
Student Observations	8,469	8,469	11,907	11,907	…	…
School Observations	82	82	83	83	…	…
R^2	0.00	0.08	0.00	0.09	…	…
Mathematics B	-0.04	-0.05	-0.13	0.01	-0.15	0.05
(std. err.)	(0.19)	(0.14)	(0.15)	(0.13)	(0.15)	(0.13)
Student Observations	1,299	1,299	1,914	1,914	1,813	1,813
School Observations	62	62	66	66	72	72
R^2	0.00	0.08	0.00	0.07	0.01	0.08

Table 7.14—Continued

	Fall Test Administration		Spring Test Administration			
	Fall, Year 2		Spring, Year 1		Spring, Year 2	
	No Controls	Controls	No Controls	Controls	No Controls	Controls
Integrated Algebra	0.05	0.11	0.08	0.12	-0.08	0.22
(std. err.)	(0.09)	(0.06)	(0.08)	(0.08)	(0.08)	(0.07)
Student Observations	7,170	7,170	10,447	10,447	13,855	13,855
School Observations	81	81	80	80	82	82
R^2	0.00	0.08	0.00	0.09	0.00	0.09
Science–Living Environment	0.01	-0.03	0.01	0.02	-0.03	0.02
(std. err.)	(0.09)	(0.09)	(0.08)	(0.08)	(0.08)	(0.09)
Student Observations	7,903	7,903	11,953	11,953	12,540	12,540
School Observations	82	82	81	81	81	81
R^2	0.00	0.07	0.00	0.09	0.00	0.12
Earth Science	-0.15	-0.13	-0.16	-0.17	-0.08	-0.12
(std. err.)	(0.18)	(0.15)	(0.11)	(0.11)	(0.13)	(0.13)
Student Observations	1,490	1,490	5,856	5,856	6,197	6,197
School Observations	50	50	68	68	68	68
R^2	0.01	0.09	0.01	0.10	0.00	0.09

Table 7.14—Continued

	Fall Test Administration		Spring Test Administration			
	Fall, Year 2		Spring, Year 1		Spring, Year 2	
	No Controls	Controls	No Controls	Controls	No Controls	Controls
Chemistry	-0.30	-0.28	0.00	0.01	0.13	0.26
(std. err.)	(0.45)	(0.24)	(0.17)	(0.16)	(0.18)	(0.17)
Student Observations	316	316	2,869	2,869	2,705	2,705
School Observations	32	32	62	62	57	57
R^2	0.09	0.39	0.00	0.05	0.00	0.11
Student and school controls		√		√		√

NOTES: *, **, and *** Estimates are statistically significant from zero at the 5%, 1%, and 0.1% levels, respectively. Student-level controls include gender, race and/or ethnicity, free or reduced-price lunch status; indicators of gender or race and/or ethnicity were undefined. School-level controls include male students (%), students by race and/or ethnicity (%), free and reduced-price lunch students (%), school level, and school size. The number of schools containing at least one student with valid test score information ranged between 31 (chemistry, fall 2008) and 84 (ELA, spring 2008). Table does not contain estimates for Mathematics A in spring 2009 because of insufficient valid test scores. Standard errors appear in parentheses.