



Evaluation Matters

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Teach for America: *An Analysis of Placement and Impact, 2017-18*

1. What is the purpose of this report?

This report examines the patterns of placement of Teach for America (TFA) teachers and the achievement of the students they taught during the 2017-18 school year. The length of time current and former TFA teachers continue as employees of the District is also explored. TFA is an organization that recruits recent college graduates/professionals to teach for two years in selected communities. Admission is competitive. All members attend five-weeks of intensive preparatory training and receive ongoing support from TFA during their contractual commitment. Teachers who are not eligible for a teaching certificate in their assigned content area are permitted to teach on a temporary basis, pending a summative evaluation at the end of their first year of employment. TFA teachers receive the regular district salary and benefits, supplemented by a voucher funded by Americorps that can be used to cover previous student loans, credentialing, or further education.

2. Which populations were targeted in this report?

TFA teachers identified for this study included all TFA teachers assigned to teach reading/English language arts (grades 1 – 10), mathematics (grades 1 – 10), science (grades 5 and 8), civics (grade 7), biology (grade 10), and U.S. History (grade 11). A comparison pool included all Non-TFA teachers assigned to teach students in the schools, subjects, and grades in which TFA teachers were deployed. Teachers who previously participated in the TFA program were excluded.

3. How were the data for this report collected and analyzed?

Data used in this analysis were obtained from archival test data, the student data-base system, rosters of TFA teachers provided by Human Capital management, and personnel records from the District's Data Warehouse. Analysis of the persistence of TFA teachers, or continued employment beyond the two contracted years of service, was limited to descriptive statistics. The placement of TFA teachers involved classifying each discrete course taught by all the teachers in schools with TFA teachers into categories based on the following criteria: school level (elementary, middle, and senior); content area (reading/English language arts, mathematics, science, and social studies); and curricula (special education, intensive/basic/English for Speakers of Other Languages (ESOL), ESOL related/developing, general education, and honors/gifted/advanced placement). This rubric is depicted in Table 1, which lists the categories within each grade organization with the number of TFA teacher assignments in each subject area. Teachers with assignments in multiple categories would be counted in each group.

Table 1. Categories and Subject Areas of the Courses Taught by TFA Teachers

Category	Subject Area			
	Reading/English Language Arts	Mathematics	Science	Social Studies
	Elementary			
Special Education	2	1	0	--
Intensive/Basic ESOL	9	0	0	--
ESOL Related/Developing	12	5	2	--
General Education	19	12	4	--
Gifted/Honors/AP	0	2	1	--
	Middle			
Special Education	--	--	--	--
Intensive/Basic ESOL	9	3	0	0
ESOL Related/Developing	3	0	0	0
General Education	6	3	1	1
Gifted/Honors/AP	7	6	1	1
	Senior			
Special Education				
Intensive/Basic ESOL	7	2	0	0
ESOL Related/Developing	--	--	2	0
General Education	6	4	7	4
Gifted/Honors/AP	5	2	5	7

Note. The category associated with a course is assumed to serve a distinct subpopulation of students. Teachers assigned to teach one or more different courses/sections are included in multiple groups.

ESOL - English for Speakers of Other Languages

Reading/English language arts: General education and intensive/Basic ESOL courses each comprised more than one-third of TFA teachers' course assignments at each level, whereas advanced courses comprised more than a quarter of TFA teachers' middle and senior course assignments.

Mathematics: General education courses comprised the majority of TFA teachers' course assignments at the elementary and senior levels, whereas half of TFA teachers' middle grades course assignments were comprised of Gifted/Honors/AP courses.

Science/social studies: General education and Gifted/Honors/AP courses together formed the bulk of TFA teachers' secondary level course assignments.

The analysis of the impact of TFA teachers involved a three-step process. First, each TFA teacher was matched to a teacher who was drawn from the comparison pool, based on grade, subject area, the number of students, the proportion of the teacher's course assignments in each of the five predefined categories, and mean student pretest scale score (Sekhon, 2011). Next, estimation procedures conducted separately for each subject area, grade, and test were used to create "expected scores," or the posttest scores the students were predicted to attain. Multi-level modeling was used to produce the expected scores for the students at each subject, grade, and test with students nested within classrooms

nested within schools. The student-level variables in the model (i.e., pretest, gender, ethnic group, English language learner status, exceptional program participation status, and over-age relative to grade) were first fitted on a stepwise basis. Teacher-level intercepts, teacher-level pretest slopes, and school-level intercepts were separately estimated. Expected scores that resulted were used to create "impact scores" (actual score minus expected score), which represented the amount of achievement that was attained over and above what was expected. The impact scores of students who were taught by multiple teachers within the same group (i.e., either TFA or Non-TFA) were treated as if they were separate performance estimates and combined for a single weighted mean. The impact scores of students who were taught by both TFA and non-TFA teachers were excluded.

Finally, the differences in the mean student impact scores of TFA and non-TFA teachers were then converted into standardized effect size statistics (*d*) and confidence intervals (CIs), which indicate the range of values within which the true value of *d* is expected to lie. To assess the relative performance of TFA and Non-TFA teachers, and to control for the potential impact of teachers' course assignments, two comparisons were made: (a) TFA teachers vs. non-TFA teachers, matched on course content, number of students, student demographics, and baseline achievement; and (b) TFA teachers vs. all non-TFA teachers in the sample.

The examination of the duration of TFA teachers' continued employment in the District beyond the TFA contractual period, included both active and terminated employees. The analyses were limited to descriptive statistics.

4. At what school levels were Teach for America teachers placed?

TFA teachers were primarily assigned to M-DCPS senior high schools, but varied in terms of grade organization, subject area, and level of the courses. Table 2 lists the total number of TFA teachers in the sample schools, and the number of TFA teachers assigned to teach each subject area by grade level, within each grade range. Where indicated, "Multiple Subjects" pertain to self-contained classrooms that cover both Reading/English Language Arts and Mathematics (levels K-5) or combination classrooms featuring either Reading/English Language Arts or Mathematics in combination with one or more other subject areas. "Single Subjects" refer to departmentalized instruction delivered by a subject area specialist.

Table 2. Deployment of Teach for America Teachers by Grade Organization, 2017-18

Grade Level	Number of Teachers	Multiple Subjects	Assignment Type			
			Single Subject			
			Language Arts	Mathematics	Science	Social Studies
Elementary (15 schools)						
K	4	4	--	--	--	--
1-5	29	25	3	1	--	--
Middle (11 schools)						
6-8	51	3	24	9	10	5
Senior (10 schools)						
9-10	65	4	27	20	10	4
11-12	7	--	5	1	--	1
Total	156	36	59	31	20	10

- Of the 170 contracted TFA teachers, 11 separated from the District before deployment, and 3 were not placed in schools.
- Nearly 95% (146 of 156) of the TFA teachers assigned to 15 elementary schools, 11 middle schools, and 10 senior high schools during 2017-18 taught content that was directly tested on districtwide and statewide assessment programs.
- Over two-thirds of TFA teachers were assigned to teach English language arts/reading and/or mathematics.
- Of the 20 TFA teachers assigned to teach middle and senior level science courses, 7 taught Grade 8 Science (tested by the FCAT 2.0), and 5 taught Grade 10 Biology (tested by the Biology End-of-Course Exam).
- Of the 10 TFA teachers assigned to teach middle and senior level social studies, 4 taught Grade 7 Civics (tested by the Civics End-of-Course Exam), and 3 taught Grade 11 U.S. History (tested by the U.S. History End-Of-Course exam).

5. What was the impact of the TFA teachers on students' scores on statewide and districtwide standardized assessments?

The analysis of the impact of TFA teachers involved a three-step process culminating in an examination of the difference between the expected and observed scores earned by TFA and non-TFA teachers' students. Results are provided for each subject, grade, and test outcome for two subsamples comprised of (a) TFA teachers vs. all non-TFA teachers, matched on course content, number of students, student demographics, and baseline achievement; and (b) TFA teachers vs. all non-TFA teachers in the sample. A summary of the results for each individual analysis are shown in Tables 3, Reading/English Language Arts; 4, Mathematics; and 5, Science/Social Studies. For each grade level included in the analysis, the numbers of teachers and students in the TFA and comparison groups are given. Note that teachers who instruct students in multiple grade levels are represented in multiple comparisons. In addition, the tests used are listed along with the effect size statistics and confidence intervals (CIs).

The signs of each CI's upper and lower limits indicate how TFA teachers' performance compared with that of the non-TFA teacher comparison group in each subject area. CIs that do not cross zero have upper and lower limits with the same sign. If both signs are positive, the TFA teachers' performance exceeds that of the comparison group's. If both signs are negative, the TFA teachers' performance trails that of the comparison group. Signs that differ indicate that the TFA teachers' performance does not significantly differ from that of the comparison group.

Table 3. The Impact of Teach for America on Students' Test Scores in Reading/English Language Arts

Grade	Matched on Course Assignments										All Teachers in Schools with TFA Teachers										
	Number of Participants					Effect Size of the Difference					Number of Participants			Effect Size of the Difference							
	TFA Teachers	Students	Non-TFA Teachers	Students	Test	d	CI_{Lower}	CI_{Upper}	TFA Teachers	Students	Test	d	CI_{Lower}	CI_{Upper}	TFA Teachers	Students	Test	d	CI_{Lower}	CI_{Upper}	
	Elementary																				
1	--	--	--	--	SAT-10/Reading	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
2	2	15	2	19	SAT-10/Reading	-1.20	-0.52	0.17	2	15	2	15	48	610	2	15	48	610	-0.82	-0.30	0.21
3	5	51	5	76	FSA/ELA ^a	-0.30	0.05	0.41	5	51	5	51	59	508	5	51	59	508	-0.28	0.01	0.30
4	5	82	5	106	FSA/ELA	-0.41	-0.12	0.17	5	82	5	82	54	580	5	82	54	580	-0.46	-0.22	0.01
5	4	81	4	72	FSA/ELA	-0.31	0.01	0.32	4	81	4	81	47	426	4	81	47	426	-0.24	0.00	0.24
Total ^b	16	229	16	273		-0.24	-0.06	0.11	16	229	16	229	208	2,124	16	229	208	2,124	-0.24	-0.10	0.04
	Middle																				
6	14	286	14	385	FSA/ELA	-0.13	0.02	0.18	14	286	14	286	75	1,240	14	286	75	1,240	-0.09	0.04	0.17
7	8	127	8	193	FSA/ELA	-0.22	0.00	0.23	9	132	9	132	73	1,220	9	132	73	1,220	-0.05	0.13	0.31
8	5	155	5	436	FSA/ELA	-0.14	0.05	0.23	5	155	5	155	85	1,368	5	155	85	1,368	-0.10	0.06	0.23
Total ^b	27	568	27	1,014		-0.08	0.03	0.13	28	573	28	573	233	3,828	28	573	233	3,828	-0.02	0.07	0.16
	Senior																				
9	11	140	11	579	FSA/ELA	-0.21	-0.03	0.16	12	147	12	147	70	1,873	12	147	70	1,873	-0.23	-0.06	0.11
10	11	415	11	758	FSA/ELA	-0.15	-0.03	0.09	12	439	12	439	71	1,879	12	439	71	1,879	-0.13	-0.02	0.08
Total ^b	22	555	22	1,337		-0.13	-0.03	0.07	24	586	24	586	141	3,752	24	586	141	3,752	-0.12	-0.03	0.05

Note. The pretests used for this analysis were administered one year earlier at one test level lower than the posttest and are from the same assessment battery, unless otherwise indicated. SAT-10 refers to the Stanford Achievement Test, Tenth Edition. FSA/ELA refers to the Florida Standards Assessment/English Language Arts test.

^aThe pretest used for the FSA/ELA administered in third grade is the SAT-10/Reading Test. ^bTeacher counts are duplicated, as a given teacher may deliver instruction to students in multiple grade levels. The student outcomes of 16, 20, and 19 unique TFA teachers at the elementary, middle, and senior levels, respectively, were represented in this analysis.

Table 4. The Impact of Teach for America on Students Test Scores in Mathematics

		Matched on Course Assignments				All Teachers in Schools with TFA Teachers									
Grade	Number of Participants		Effect Size of the Difference		Number of Participants		Effect Size of the Difference								
	TFA Teachers	Non-TFA Teachers	Cl_{Lower}	Cl_{Upper}	TFA Teachers	Non-TFA Teachers	Cl_{Lower}	Cl_{Upper}							
Elementary															
1	3	95	3	81	-0.33	-0.03	0.27	SAT-10/Math	3	95	41	569	-0.22	-0.01	0.21
2	4	83	4	79	-0.34	-0.04	0.27	SAT-10/Math	4	83	36	586	-0.28	-0.05	0.18
3	4	54	4	18	-1.01	-0.47	0.07	FSA/Math ^a	4	54	38	562	-0.25	0.03	0.31
4	7	174	7	167	-0.18	0.03	0.24	FSA/Math	7	174	33	534	-0.17	0.01	0.18
5	2	67	2	42	-0.48	-0.09	0.30	FSA/Math	2	67	28	474	-0.30	-0.04	0.21
Total ^b	20	473	20	387	-0.18	-0.04	0.09		20	473	176	2,725	-0.11	-0.01	0.09
Middle															
6	4	183	4	185	-0.18	0.02	0.23	FSA/Math	4	183	46	1,612	-0.15	0.00	0.15
7	5	154	5	229	-0.18	0.03	0.23	FSA/Math	5	154	58	1,448	-0.20	-0.03	0.13
8	4	70	4	141	-0.29	-0.01	0.28	FSA/Math	4	70	50	1,146	-0.27	-0.03	0.21
8	4	99	4	81	-0.26	0.04	0.33	Algebra1 ^c	4	99	12	279	-0.26	-0.03	0.20
Total ^b	17	506	17	636	-0.10	0.02	0.14		17	506	166	4,485	-0.11	-0.02	0.07
Senior															
9	7	355	7	315	-0.14	0.01	0.16	Algebra1 ^c	7	355	40	1,506	-0.11	0.00	0.12
9	6	75	6	75	-0.12	0.20	0.52	Geometry ^d	6	75	15	396	-0.23	0.02	0.26
10	8	437	8	592	-0.13	-0.01	0.12	Geometry ^d	8	437	34	1,564	-0.10	0.01	0.11
Total ^b	15	867	21	982	-0.08	0.02	0.11		21	867	89	3,466	-0.07	0.01	0.08

Note. The pretests used for this analysis were administered one year earlier at one test level lower than the posttest and are from the same assessment battery, unless otherwise indicated. SAT-10 refers to the Stanford Achievement Test, Tenth Edition. FSA/Math refers to the Florida Standards Assessment/Mathematics test. Algebra1 and Geometry refer to those specific End of Course exams.

^aThe pretest used for the FSA/Math test administered in third grade is the SAT-10/Math test. ^bTeacher counts are duplicated, as a given teacher may deliver instruction to students in multiple grade levels. The student outcomes of 20, 16, and 17 unique TFA teachers at the elementary, middle, and senior level, respectively, were represented in this analysis. ^cThe pretest used for the Algebra1 End of Course exam is the FSA/Math test administered one year prior and at one level lower than the posttest. ^dThe pretest used for the Geometry End of Course exam is the FSA/Math test administered two years prior and at two levels lower than the posttest.

Table 5. The Impact of Teach for America on Students Test Scores in Science/Social Studies

Matched on Course Assignments															
Grade	Number of Participants				Test	Effect Size of the Difference (TFA - Non-TFA)									
	TFA		Non-TFA			C _{Lower}	d	C _{Upper}	Number of Participants		Effect Size of the Difference (TFA - Non-TFA)				
	Teachers	Students	Teachers	Students					Teachers	Students		C _{Lower}	C _{Upper}		
Science															
5	2	69	2	33	FCAT/Science	-0.46	-0.05	0.37	2	69	20	438	-0.31	-0.05	0.20
8	7	224	7	239	FCAT/Science	-0.18	0.00	0.18	7	224	40	1,261	-0.14	0.00	0.14
10	5	187	5	194	Biology ^a	-0.19	0.01	0.21	5	187	27	1,761	-0.15	0.01	0.16
Total ^b	14	480	14	466		-0.13	0.00	0.13	14	480	67	3,460	-0.10	-0.01	0.09
Social Studies															
7	2	126	2	172	Civics ^a	-0.18	0.05	0.28	2	126	33	1,642	-0.12	0.06	0.24
11	2	203	2	176	U.S. History ^a	-0.28	-0.08	0.12	2	203	32	2,217	-0.19	-0.04	0.10
Total ^b	4	329	4	348		-0.18	-0.03	0.13	4	329	65	3,859	-0.12	0.00	0.11

Note. The Florida Standards Assessment/English Language Arts test administered one year earlier at one test level lower than the posttest served as the pretest for each of these analyses.

^aEnd of Course exams. ^bTeacher counts are duplicated, as a given teacher may deliver instruction to students in multiple grade levels. The student outcomes of 14 and 4 TFA unique teachers in science and social studies, respectively, were included in this analysis.

English Language Arts/Reading (Table 3, page 5) presents the results of the grade by grade comparisons in reading/ELA across two test batteries, which were used to compare the performance of TFA teachers and their students to that of non-TFA teachers. Two comparisons were made: (a) matched pairs, where 65 TFA teachers and their 1,352 students were compared to 65 Non-TFA teachers and their 2,624 students; and (b) an overall comparison, where the same TFA teachers and their students were compared to 582 Non-TFA teachers and their 9,074 students in the sample schools. No significant differences between TFA teachers' and Non-TFA teachers' students' results were found at any grade in either set of comparisons.

Mathematics (Table 4, page 6) presents the results of the grade by grade comparisons in mathematics across four test batteries. Again, the performance of TFA teachers and their students was compared to that of Non-TFA teachers and their students. Two comparisons were made: (a) matched pairs, where 68 TFA teachers and their 1,846 students were compared to 68 non-TFA teachers and their 2,005 students; and (b) an overall comparison, where the same TFA teachers and their students were compared to all 431 Non-TFA teachers and their 10,676 students. No significant differences between TFA teachers' and Non-TFA teachers' students' results were found.

Science/Social Studies (Table 5, page 7) presents the results of the grade by grade comparisons in science/social studies, across four test batteries. Once again, the performance of TFA teachers and their students was compared to that of Non-TFA teachers and their students. Two comparisons were made: (a) matched pairs, where 18 TFA teachers and their 809 students were compared matched to 18 Non-TFA students and their 814 students; and (b) an overall comparison, where the same TFA teachers and their students were compared to all 132 Non-TFA teachers and their 7,319 students. Again, no significant differences between TFA teachers' and Non-TFA teachers' students' results were found.

6. How long do TFA teaches remain employed in the District after completing their commitment to the program?

The extent to which TFA teachers continued teaching in the District beyond their contractual period, beginning in the 2009-10 school year, was gauged through personnel records stored in the District's data warehouse. Table 8 lists the total number of TFA teachers and the number and percent who are teaching, grouped by their first year of post TFA service. Table 9 lists the number of years former TFA teachers who separated from the District remained employed before doing so.

Employment Status

- Of the 875 TFA teachers who entered their first year of post-TFA service since 2009-10, 89.5% (n=783) terminated their employment with the District after one or more years of service; only 10.5% (n=92) continued their employment.
- Of the 74 TFA teachers who entered their first year of post-TFA service in 2017-18, 71.6% (n=53) terminated their employment by August 2018.

Table 8. Employment Status of TFA Teachers in the M-DCPS

First Post TFA Year	Total	Employment Status			
		Active ^a		Separated	
		n	%	N	%
2009-10	25	0	0.0	25	100.0
2010-11	55	3	5.5	52	94.5
2011-12	53	0	0.0	53	100.0
2012-13	92	5	5.4	87	94.6
2013-14	137	9	6.6	128	93.4
2014-15	305	32	10.5	273	89.5
2015-16	132	21	15.9	111	84.1
2016-17	2	1	50.0	1	50.0
2017-18	74	21	28.4	53	71.6
Total	875	92	10.5	783	89.5

Note. TFA Teachers still actively assigned in fulfillment of their commitment during the 2017-18 school year (n=161), are not included in the above table. TFA teachers who withdrew from service at any time prior to fulfilling their commitment (n=42) are excluded.

^aIncludes all job categories.

Length of Service

- Of the 783 TFA teachers who entered their first year of post-TFA service beginning in 2009-10 and subsequently separated from the District, 68.8% (n=539) remained employed in the District for one year, while 17.5% (n=137) remained employed for two years.
- Of those 783 TFA teachers, only 1.5% remained employed in the District for five or more years.

Table 9. Length of Service of TFA Teachers Separated from Service in the M-DCPS

Years of Post-TFA Service	n	%
1	539	68.8
2	137	17.5
3	69	8.8
4	26	3.3
5 or more	12	1.5
Total	783	100.0

7. What were the principal conclusions of this report?

English language arts/reading, standard education and intensive/Basic ESOL courses each comprised more than one-third of TFA teachers' course assignments at each level, whereas advanced courses comprised more than a quarter of TFA teachers' middle and senior course assignments. In mathematics, general education courses comprised the majority of TFA teachers' course assignments at the elementary and senior levels, while half of TFA teachers' middle grades course assignments were comprised of Gifted/Honors/AP courses. Over 90% of the TFA teachers placed in the schools were assigned to teach grade levels and content areas tested via districtwide and statewide assessment programs. Two separate comparisons of the students' impact scores (TFA vs. non-TFA teachers, matched on course content, number of students, student demographics, and baseline achievement; and TFA vs. all non-TFA teachers) failed to show any significant differences at any grade level and subject area. Moreover, the size and direction of the differences were unaffected by teachers' assignments. Finally, an examination of the duration of employment of TFA teachers showed that most separate from service one to two years after completing their commitments to the program.

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