



## Teach For America: A Review of the Evidence

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# **Teach For America: A Review of the Evidence**

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## *Executive Summary*

Teach For America (TFA) aims to address teacher shortages by sending graduates from elite colleges, most of whom do not have a background in education, to teach in low-income rural and urban schools for a two-year commitment. The impact of these graduates is hotly debated by those who, on the one hand, see this as a way to improve the supply of teachers by enticing some of America's top students into teaching and those who, on the other hand, see the program as a harmful dalliance into the lives of low-income students who most need highly trained and highly skilled teachers.

Research on the impact of TFA teachers produces a mixed picture, with results affected by the experience level of the TFA teachers and the group of teachers with whom they are compared. Studies have found that, when the comparison group is other teachers in the same schools who are less likely to be certified or traditionally prepared, novice TFA teachers perform equivalently, and experienced TFA teachers perform comparably in raising reading scores and a bit better in raising math scores.

The question for most districts, however, is whether TFA teachers do as well as or better than credentialed non-TFA teachers with whom school districts aim to staff their schools. On this question, studies indicate that the students of novice TFA teachers perform significantly less well in reading and mathematics than those of credentialed beginning teachers.

Experience has a positive effect for both TFA and non-TFA teachers. Most studies find that the relatively few TFA teachers who stay long enough to become fully credentialed (typically after two years) appear to do about as well as other similarly experienced credentialed teachers in teaching reading; they do as well as, and sometimes better than, that comparison group in teaching mathematics. However, since more than 50% of TFA teachers leave after two years, and more than 80% leave after three years, it is impossible to know whether these more positive findings for experienced recruits result from additional training and experience or from attrition of TFA teachers who may be less effective.

From a school-wide perspective, the high turnover of TFA teachers is costly. Recruiting and training replacements for teachers who leave involves financial costs,

and the higher achievement gains associated with experienced teachers and lower turnover may be lost as well.

Thus, a simple answer to the question of TFA teachers' relative effectiveness cannot be conclusively drawn from the research; many factors are involved in any comparison. The lack of a consistent impact, however, should indicate to policymakers that TFA is likely not the panacea that will reduce disparities in educational outcomes.

The evidence suggests that districts may benefit from using TFA personnel to fill teacher shortages when the available labor pool consists of temporary or substitute teachers or other novice alternatively and provisionally certified teachers likely to leave in a few years. Nevertheless, if educational leaders plan to use TFA teachers as a solution to the problem of shortages, they should be prepared for constant attrition and the associated costs of ongoing recruitment and training.

A district whose primary goal is to improve achievement should explore and fund other educational reform that may have more promise such as universal pre-school, mentoring programs pairing novice and expert teachers, elimination of tracking, and reduction in early grade class size.

It is therefore recommended that policymakers and districts:

- Support TFA staffing only when the alternative hiring pool consists of uncertified and emergency teachers or substitutes.
- Consider the significant recurring costs of TFA, estimated at over \$70,000 per recruit, and press for a five-year commitment to improve achievement and reduce re-staffing.
- Invest strategically in evidence-based educational reform options that build long-term capacity in schools.

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## ***Introduction***

Teach For America (TFA) is a non-profit organization that aims to eliminate disparities in educational outcomes by recruiting recent graduates of elite colleges to teach in low-income urban and rural schools for a two-year commitment. TFA began in 1990 with 500 teachers in six communities and has grown to more than 7000 individuals teaching in 35 rural and urban areas, including the San Francisco Bay Area, Chicago, the Mississippi Delta, and the Washington D.C. region.

TFA is not a traditional teacher education program. Rather than the extensive preparation traditionally educated teachers receive over four years as education majors in undergraduate credentialing programs, TFA candidates attend a five-week training program in the summer between graduating from college and beginning their teaching assignments. While the program includes a brief stint of student teaching, the experience is not comparable to that provided in traditional teacher education programs. Schools operate differently in the summer; moreover, candidates often have no indication of grade level or type of students they will be working with until they arrive at their assigned districts. Also included in the summer training are short lessons in pedagogy, content and classroom management. Once placed for the school year, TFA teachers must continue coursework in local colleges to pursue full teaching credentials. Districts that hire TFA teachers pay several thousand dollars per year to TFA for each placement. Once hired, TFA teachers are paid like other teachers in the district; however, they also receive additional Americorps stipends to assist with student loans or continuing education.

While TFA is likely the most widely known program of its kind, other selective programs place alternatively certified teachers in high-need schools. New York City's Teaching Fellows Program, for example, places mid-career and recent college graduates into the city's schools and supports their training while they teach. Teach Kentucky in Louisville, as well as Mississippi Teacher Corps in the Mississippi Delta region, are both alternative certification programs that also assign select college graduates to schools. These programs, however, expect candidates to stay in teaching over the long-term, rather than for only a two-year commitment.

Unlike the programs in New York, Louisville, and Mississippi, TFA receives a significant amount of press and millions of dollars in contributions from private sources and in allocations from local, state and federal sources. However, as is true for many educational reforms, the impact of TFA is hotly contested.

Education experts, policymakers, practitioners, former TFA members, and even members of the general public have taken strong positions and advocated for or against TFA. However, only a handful of peer-reviewed studies of TFA’s impact exist—and the findings are mixed. These studies analyze different samples, assess the impact on different outcomes, control for different variables, and compare TFA teachers with different types of non-TFA teachers. We intend to make sense of existing research and, based on our review of the evidence, to make recommendations for policymakers and districts. To locate relevant research literature, we searched the Education Resources Information Center (ERIC) for all peer-reviewed, statistically sound studies linked to the keyword Teach For America. Where appropriate, we also include descriptive analyses of TFA’s publicly available data.

Although this brief focuses on statistical assessments, it should be noted that there are other important issues around TFA worth considering. For example, a rare ethnographic study on the experiences of TFA teachers in schools characterizes the short-term experiences of TFA teachers as “learning on other people’s kids”<sup>1</sup> and points to critical issues beyond those captured in statistical studies. The researcher, a former university instructor of struggling TFA beginning teachers and a curriculum designer, found the TFA paradigm problematic: “instant” teachers are not hired in “Scarsdale, New York; Greenwich, Connecticut; or Los Altos, California... only in poor, urban school districts of mostly minority populations does TFA have the collective ability to ‘save America’s tough schools.’”<sup>2</sup> Ethical issues beyond the reach of empirical research also merit consideration.

Here, we examine available research on more tangible aspects of the question of whether TFA is a panacea or a problem for low-income communities.

### *Numbers and Geographic Distribution of TFA Teachers*

TFA’s teaching corps has increased since its inception in 1990, when 500 teachers were placed in six sites nationwide.<sup>3</sup> In 2009-2010, more than 7,000 TFA teachers are in some 170 sites across the country, reflecting many educational leaders’ willingness to hire TFA personnel.

**Table 1: Distribution of TFA Teachers by U.S. Census Bureau Regions (2009-2010)**

<i>Region</i>	<i>Sites</i>	<b>Number of TFA Teachers</b>	<b>Percentage of All TFA Teachers</b>
<i>South</i>	98	3212	44.8%
<i>Northeast</i>	20	1899	26.5
<i>West</i>	40	1427	19.9
<i>Midwest</i>	10	633	8.8
<i>Total</i>	168	7171	100%

Data Source: Teach For America

Teachers are placed across the US in low-income urban and rural communities. Detailed information on how sites are selected is not publicly available, but TFA does publish data on sites that engage its services. Data extracted from various tabulations on the TFA website reveal striking and significant patterns across regions and states. For the 2009-2010 academic year, the highest percentage of TFA teachers (45%) and greatest number of sites were in the South; the lowest percentage of TFA teachers (9%) and the fewest sites were in the Midwest (see Table 1, above).

**Table 2: Distribution of TFA Teachers by State (2009-2010)**

<i>State</i>	<b>Sites</b>	<b>Number of TFA Teachers</b>	<b>Percentage of All TFA Teachers</b>
<i>Texas</i>	22	844	11.8%
<i>New York</i>	2	820	11.4
<i>California</i>	14	727	10.1
<i>Louisiana</i>	11	652	9.1
<i>Pennsylvania/Delaware/ New Jersey (Mid-Atlantic)</i>	4	445	6.2
<i>Washington D.C.</i>	2	424	5.9
<i>North Carolina</i>	12	401	5.6
<i>Illinois</i>	2	399	5.6
<i>Arkansas/Mississippi (Mississippi Delta)</i>	38	358	5.0
<i>Arizona</i>	14	322	4.5
<i>Missouri</i>	7	317	4.4
<i>Georgia</i>	2	210	2.9
<i>Florida</i>	2	197	2.7
<i>Colorado</i>	4	184	2.6
<i>Connecticut</i>	8	160	2.2
<i>Tennessee</i>	2	152	2.1
<i>Nevada</i>	3	98	1.4
<i>New Mexico</i>	5	96	1.3
<i>Indiana</i>	1	91	1.3
<i>Oklahoma</i>	2	81	1.1
<i>South Dakota</i>	5	62	0.9
<i>Massachusetts</i>	4	50	0.7
<i>Minnesota</i>	1	43	0.6
<i>Wisconsin</i>	1	38	0.5
<i>Rhode Island</i>	New in 2010	—	—
<i>Alabama</i>	New in 2010	—	—
<i>Total</i>	168	7171	100%

Data Source: Teach For America

The multi-state, rural Mississippi Delta region has the most sites, with 38 sites, followed by the state of Texas with 22 sites (see Table 2, above).<sup>4</sup>

### *Targeting Areas with Teacher Shortages?*

Despite some claims to the contrary, minority students in urban schools, and poor students generally, are most likely to be assigned low-quality teachers.<sup>5</sup> To address this issue, TFA originated with the publicly stated goal of becoming “one of the nation’s largest providers of teachers for low-income communities,”<sup>6</sup> where classrooms might otherwise be staffed by substitutes, emergency hires or other inexperienced or unprepared personnel.

A 2006 study by Boyd, Grossman, Lankford, Loeb, & Wyckoff<sup>7</sup> examined the impact of the rapid increase since the 1990s of teachers entering New York schools via alternative credentialing programs, such as Teach For America. The study found that such teachers filled slots that “had previously had been filled by teachers with temporary licenses,” although there was a concurrent “small decrease in college recommended teachers.”

However, TFA has begun placing teachers not in positions lacking qualified candidates, but in slots previously held by veteran teachers—that is, in districts using layoffs to ease budget problems. The practice of laying off experienced teachers and replacing them with inexperienced TFA teachers—or of “laying off people to accommodate Teach For America”—has been reported in Boston, Charlotte-Mecklenburg, Chicago, Dallas, and Washington, D.C., among other cities.<sup>8</sup>

In fact, an analysis of teacher shortage data across the U.S. tentatively confirms that TFA placements have been moving outside the original targeted high-need districts. Since 1990, the U.S. Department of Education has produced a nationwide listing of teacher shortage areas, based on data submitted by state educational agencies.<sup>9</sup> All of the states where TFA teachers are placed report teacher shortages by subject area, but a closer look at more detailed geographic data where it is available undermines the initial impression that TFA is working primarily with districts experiencing staffing problems. In the only two states that list shortages by geographic area, Arizona and South Dakota, TFA placements are primarily outside high-need areas. In Arizona, while 13 of 15 counties report shortages, the vast majority of TFA teachers in are placed in one of only two counties that do not report teacher shortages—Maricopa County, which includes the Phoenix metropolitan area. In South Dakota, where TFA has five sites, only one (Todd County School District) is identified as a geographic teacher shortage area.<sup>10</sup>

TFA supporters proffer that TFA is not only about sending teachers to schools facing staffing shortages, but also about improving the teacher labor supply and shaping individuals who will care about education in their future jobs on Wall Street, in Washington, or elsewhere outside the classroom. Whatever the rationale, there is substantive evidence that TFA is not exclusively focused on filling teaching positions for which other qualified candidates cannot be found.



## ***Impact of TFA Teachers on Student Achievement***

How well TFA teachers perform in the classroom is a critical issue, especially as it appears that they are beginning to be hired in place of experienced teachers. The Chief Executive Officer and Founder of TFA claims that “studies ... show that TFA teachers do as well as or better than teachers with traditional certification.”<sup>11</sup> The studies discussed below include all those available from peer-reviewed journals, and two from non-peer-reviewed sources that TFA cites in favor of its program.

Decker, Mayer and Glazerman<sup>12</sup> conducted a study for Mathematica Inc. that examined the student achievement results for 41 Teach For America teachers and 57 beginning and experienced comparison teachers, all teaching grades 1-5 in the same schools across 6 districts. Pre- and post-tests on the Iowa Tests of Basic Skills were given to students in reading and mathematics. In considering findings from this comparison, it is important to note that at the end of the first teaching year, TFA teachers were *more likely* to hold regular or initial teacher certification than their novice non-TFA counterparts, a large proportion of whom were on temporary or emergency licenses. The study’s authors note: “Compared with a nationally representative sample of teachers, the control teachers in the schools in our study had substantially lower rates of certification and formal education training.” Whereas 100% of the TFA teachers had had some student teaching experience before entering classrooms, only 47% of other novice teachers and only 71% of the overall comparison group had prior classroom experience. Whereas 51% of TFA teachers were certified by the end of the study year, only 38% of novice control teachers were certified.

Compared with this underprepared group, overall TFA teachers’ students showed gains similar to those of comparison teachers in reading and better in mathematics, though students’ scores remained low overall, hovering around the 15<sup>th</sup> percentile for both groups of teachers. However, the positive impact was found only for TFA teachers who had obtained training and certification in their second and later years in the classroom. First-year TFA teachers did not have a positive impact in either mathematics or reading; a negative coefficient in reading was not statistically significant. Students of TFA teachers had slightly higher rates of absenteeism, disciplinary referrals (suspensions and expulsions), grade retention, and summer school referrals than non-TFA teachers’ students, but due to the small sample size, these were not statistically significant.

In an Arizona study, Laczko-Kerr and Berliner<sup>13</sup> compared the achievement test scores of primary school students taught by 110 matched pairs of recently hired under-certified and certified teachers in five low-income school districts. They found that students of certified teachers out-performed students of uncertified teachers, including TFA teachers, in reading, mathematics and language arts. Students of certified teachers outperformed students of under-certified teachers, including those of TFA teachers, by about 4 months on a grade equivalent scale in reading, about 3 months in mathematics, and about 3 months in language arts.

These studies make no claims of causality, as the statistical tests (t-tests and ANOVA) did not control for factors such as prior-year achievement at the individual student level. However, other studies that included these controls obtained similar findings.

Two such studies were conducted in New York City. Using value-added models, Boyd, et al.<sup>14</sup> examined the effectiveness of 3,766 new teachers who entered teaching in grades 4-8 through different pathways in New York City. The study found that, compared with the students of new teachers who graduated from teacher education programs, students of new TFA recruits scored significantly lower in reading/language arts and about the same in mathematics (worse in grades 4-5 and better in grades 6-8). These results were similar to those of other teachers from non-traditional routes, including the New York Teaching Fellows, temporary license holders, and non-native teachers.

TFA teachers' effectiveness generally improved as they became more prepared. By the second year, when most were certified, negative effects disappeared for elementary math and middle school reading. However, TFA teachers continued to exert a significant negative influence on their students' reading scores in the elementary grades. By their third year, the effect was still negative, but not statistically significant. Students taught by TFA teachers with more than three years of experience did show a significant increase in math achievement. However, the authors observed that achievement results for TFA beyond the third year "should be interpreted with caution due to small sample sizes."<sup>15</sup>

Using the same New York City database, Kane, Rockoff and Staiger<sup>16</sup> compared entrants into New York City schools by different categories of initial pathway and certification status. The comparison group was defined in a way that would minimize the effect of teacher preparation, because the authors included teachers licensed through "transcript review" and temporary permits in the same group as college-prepared teachers. Nonetheless, like the Boyd et al. study, this study found that, in math and reading, students of first-year teachers from TFA, the NYC Teaching Fellows, and other uncertified teachers did worse than those of first-year teachers who were "regularly certified." They also found that the negative effects were generally reduced or eliminated in math as teachers finished their training and certification and gained experience. However, TFA teachers continued to have a negative effect on reading for two of three years, and the other uncertified groups (Teaching Fellows and others) continued to have a negative effect on reading for all three years.

Another large-scale achievement study analyzed data from Houston, Texas, representing more than 132,000 students and 4,400 teachers in grades 3-5 over six years. Scores were drawn from six achievement tests, including both reading and mathematics scores on the TAAS, the SAT-9, and Aprenda (for Spanish-speaking students).<sup>17</sup> This study compared TFA with non-TFA teachers and controlled for experience and certification status. Using both ordinary least squares regression and multi-level modeling, the authors found "no instance where uncertified Teach For America teachers performed as well as standard certified teachers of comparable experience levels teaching in similar settings."<sup>18</sup> Uncertified TFA teachers had significant negative effects on student achievement for five of the six

tests. (The sixth was also negative but not statistically significant.) On five of the six tests, the negative effect of having an uncertified TFA teacher was greater than the negative effect of having another kind of uncertified teacher, depressing student achievement by between half a month to 3 months annually compared with a fully certified teacher with the same experience working in a similar school.

TFA teachers' effectiveness improved when they gained certification. Those who stayed long enough to obtain standard certification did about as well as other similarly experienced certified teachers on four of six measures; they also did significantly better on the TAAS test in mathematics, and marginally worse on the Aprenda in mathematics. Although TFA teachers appeared to improve when they became certified in their second or third year, few of them stayed in the district.

Another study of teachers in Houston, cited by TFA but not published in a peer-reviewed venue, used data from the same time period (the 1990s), but did not control for the certification status of teachers in drawing comparisons.<sup>19</sup> This study examined the test scores of fourth- through eighth-grade students taught by TFA teachers and non-TFA teachers, even more of whom were uncertified than the TFA sample. The authors found that the achievement of students taught by TFA teachers was always positive but "generally not statistically significant."<sup>20</sup> Their findings are consistent with those of other studies comparing TFA teachers with other largely underprepared teachers.

Teach For America also cites a report by Xu, Hannaway and Taylor,<sup>21</sup> also not peer-reviewed, which concluded that TFA teachers are "more effective than other teachers, including more experienced teachers and those fully certified in their field."<sup>22</sup> However, the study was critiqued by the What Works Clearinghouse at the U.S. Department of Education's Institute of Education Sciences (IES) for not linking students with the teacher who taught them; instead, students were matched to teachers based on a test proctor and classroom demographics.<sup>23</sup> Where the test proctor was not the student's teacher, the impact would be misallocated.<sup>24</sup> IES identified this as an important limitation in the study's data that could lead to "imprecise" and perhaps misleading estimates.<sup>25</sup>

An unpublished technical report funded by the Louisiana Board of Regents used multi-level modeling to examine TFA and student achievement in Louisiana between 2004 and 2007.<sup>26</sup> In terms of achievement, the authors found that the effect of TFA teachers was positive in comparison with inexperienced and uncertified teachers and was about the same as experienced, certified teachers. However, the study's authors, Noell and Gansle,<sup>27</sup> add caution to the findings by noting that very "few" TFA teachers persisted in teaching in Louisiana beyond three years—a prospect explored further in the forthcoming section on corps members' persistence in the profession.

Generally, the studies reviewed found that TFA teachers usually showed a positive impact on student achievement in mathematics relative to the comparison group only when they had obtained training and certification in their second and later years in the classroom. They rarely had a positive impact on reading achievement, and four peer-reviewed studies found novice TFA recruits to have significant negative effects on elementary students' reading achievement com-

pared with fully prepared teachers. These negative effects for TFA beginners extended to mathematics in three of the studies. Despite the decidedly mixed effects of corps teachers noted in the research literature, TFA continues to claim that, “Our corps members are as effective as, and in some cases more effective than, other teachers, including certified and veteran teachers.”<sup>28</sup>

Glass concisely sums up the ongoing debate surrounding the effects of TFA teachers on student achievement. He states:

A few experimental studies give conflicting findings on the ability of “Teach for America” teachers to produce higher achievement among their students. Discrepancies among the studies hinge on abstruse matters of statistical methods. There is little reason to expect any consensus on the question of relative effectiveness, or to expect test score data to quiet the debate...<sup>29</sup>

### *Attrition of TFA Teachers*

An additional finding of virtually all of the studies discussed above, and many others, is that both TFA and non-TFA teachers grow more effective with experience, with a major increment in effectiveness after the second year of teaching. Hence, pathways to teaching that enable teachers to stay in teaching longer have an additional positive effect on student achievement.

While the debate about the impact of TFA teachers on student achievement continues, there is little disagreement across the research literature regarding the attrition of TFA teachers. Reporting on TFA’s longitudinal national survey of alumni, Miner<sup>30</sup> suggests that “all one can say with certainty is that in 2007, at least 16.6 percent of those recruited by Teach For America were teaching in a K-12 setting beyond their two-year commitment.” A number of research studies examining TFA in localities nationwide looks more closely at the retention rate using administrative data, which are more accurate for this purpose than TFA’s partial survey data. Findings from those studies are no more encouraging than Miner’s report.

In a New York City study, teachers from traditional college teacher education program teachers were found to have the lowest short-term and long-term turnover rates, followed by temporarily licensed teachers; attrition was “substantially” higher for TFA members.<sup>31</sup> By the second year, the study found TFA attrition in New York City to be triple the rate of college-recommended teachers, and double that of teachers from other alternative routes. By the fourth year, 85% of TFA teachers had left the district, compared to 37% attrition for the traditionally educated teachers—alternatively phrased, only 15% of TFA teachers remained, while 67% of the college educated teachers stayed.

An analysis of six years of Houston’s primary school data similarly found that very few TFA teachers remained in the district for the long haul.<sup>32</sup> Attrition rates for TFA teachers were about twice those of non-TFA teachers. Of teachers who entered Houston schools in 1998, 85% of TFA teachers had left after three years, compared with about 45% of non-TFA teachers.

A study of teacher attrition in Baltimore from 1999-2004 found that TFA teachers were marginally less likely (<3%) than traditionally and conditionally certified teachers to leave in the first two years, but far more likely to leave left thereafter, with about 60% having left after three years and 80% after five.<sup>33</sup>

Noell and Gansle<sup>34</sup> found that in three TFA cohorts in Louisiana (entering 2003-2004, 2004-2005, and 2005-2006), the percent of TFA teachers remaining by the fifth year ranged from 4% to 20%. By comparison, for all three cohorts, about 65% to 70% of teachers who had received standard certification remained after five years. The authors relate that “the persistence in teaching data clearly demonstrate that a small minority of Louisiana TFA Corps members persist to the fourth year in teaching and beyond.”<sup>35</sup>

Miner<sup>36</sup> cites Barnett Barry, President and CEO of the Center for Teaching Quality, as aptly summarizing the retention picture: “TFA gets its recruits ready for a sprint, not a 10K or a marathon.” The weight of the empirical literature consistently finds a rate of attrition for TFA teachers of 80% or more by the fourth year of teaching. These high attrition rates have implications for measures of effectiveness. Because TFA recruits who remain beyond the first year or two gain significant additional education and experience, those factors—rather than their TFA association—may explain enhanced effectiveness. In addition, studies have found that less effective teachers generally leave sooner. Therefore, it is possible that as less effective TFA recruits leave, the remaining, smaller pool of TFA teachers may represent only the stronger recruits rather than TFA personnel overall.

The high attrition rates of TFA teachers are predictable. TFA teachers have not made an explicit commitment to teaching, in contrast to individuals who complete college-recommended teacher education programs. TFA makes the two-year commitment clear—validating the conception of teaching not as a profession but a short-term stopover before graduate school or employment in the “real” world. Moreover, research indicates that teachers are more likely to teach and stay in schools that are close to those they attended,<sup>37</sup> an unlikely scenario for the graduates of the highly selective colleges where TFA recruits.

Realizing that turnover is a problem for TFA, the aforementioned Kane, Rockoff and Staiger study<sup>38</sup> examined the relationship between the high attrition rate of TFA teachers and student achievement. They found that the gains made by the students of experienced TFA teachers more than compensated for the continual turnover. This broad conclusion is confusing, however, since they found that TFA teachers only outperform credentialed teachers in math but not in reading, and that the differences were not large.

### ***Social Impact of TFA Teachers***

Teach For America may have important effects on education beyond its teachers’ impact on student achievement. In fact, TFA touts its influence on education through its alumni:

A growing number of alumni work for educational equity through fields such as politics, policy and advocacy, and social entrepreneurship. The vast majority of our alumni, regardless of career path, remain committed to our mission well beyond their two-year teaching commitments. In fact, 93 percent report that they support Teach For America's mission through career, philanthropy, volunteer work, and/or graduate study.<sup>39</sup>

Moreover, in its 2009 *Alumni Social Impact Report*, TFA reports having nearly 17,000 alumni who "comprise a growing force of leaders working to expand educational opportunity from a variety of sectors."<sup>40</sup>

While there is no doubt that TFA has well-placed alumni in government, business, and other sectors, only one peer-reviewed study<sup>41</sup> assesses the effects of TFA on civic service. McAdam and Brandt surveyed all accepted TFA applicants from 1993-98 to assess the longer-term effect on participants' civic attitudes and behaviors and found that TFA alumni lagged behind both non-TFA matriculates (those who were admitted but chose not to participate) and TFA program dropouts in current service activity and five self-reported forms of civic and political activity. Fewer graduates reported employment in "pro-social" careers than either non-TFA matriculates or program dropouts. So while TFA has a service "mission," it does not appear to result in higher levels of civic activity for TFA alumni than otherwise observed in like-minded individuals.<sup>42</sup> While one study is hardly conclusive, it raises questions about the social impact of TFA on its alumni, and of those alumni on their communities.

### *Cost of TFA*

Beyond the impact of TFA on educational outcomes and equity, analysis of the program's usefulness and viability must consider TFA's costs. These include costs to the teacher, to the district, to TFA, and to the public. Inevitably, someone must pay, and the cost to one constituency might be decreased by a proportionately increasing cost to another constituency. Therefore, policymakers should think about the consequences for each group incurring costs and try to strategically distribute costs to secure optimal outcome.

Boyd et al.<sup>43</sup> found that the financial outlays for entering teaching through an alternative route are "substantially less for the individual teacher than the costs of traditional university-based teacher preparation" because the teacher earns a salary while completing training and pays a reduced rate for coursework. However, the authors also found that the teacher's savings result in increased costs to the City of New York because the district subsidizes the ongoing education of the TFA teachers.

Between 2000 and 2008, TFA's operating expenditures increased from \$10 million to \$114.5 million. Of those expenditures, TFA annual reports show that about a third of operating costs are currently borne by the public (See Table 3). Notably, TFA launched a campaign for a direct allocation of \$50 million in

federal support for 2011.<sup>44</sup> If such an allocation were made, and if TFA’s operating expenditures in 2011 were similar to 2008, a large majority of TFA’s funding would be from the federal government and other taxpayer sources.

**Table 3: TFA Operating Contributions Sources**

	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>
<i>Public Funds (Federal, State, Local)</i>	33%	31%	33%	33%
<i>Foundations</i>	33%	30%	26%	26%
<i>Individuals</i>	15%	15%	18%	20%
<i>Corporations</i> <sup>45</sup>	14%	18%	17%	15%
<i>Special Events</i>	5%	6%	6%	6%

Data Source: Teach For America

Moreover, the cost to taxpayers is actually higher than the direct local, state, and federal allocations revealed in TFA’s annual report. For example, in addition to the thousands of dollars that districts pay TFA for each of its corps members, a district must still maintain a human resources department that recruits, screens, interviews, and places all other new teacher candidates. A former superintendent of a large, urban Texas district reflected on the cost to a district in a personal conversation about the recent TFA expansion in the Lone Star State.

In a large school district like Houston, they may recruit and hire 175 TFA teachers a year, which means that after the first year of using TFA, the cost to the district could well run about \$700k annually.<sup>46</sup>

As result of the TFA model, a participating district has to pay twice for new teachers—the outsourced costs of teacher recruitment and training by TFA, costing thousands of dollars per teacher, along with the fixed costs of in-house provision of human resources for all other teachers in the district. These costs are exacerbated by the high turnover of TFA teachers, leading districts to have to replace nearly all TFA teachers after three years of service. As a result, the actual costs of TFA to the public are higher than the direct local, state, and federal allocations.

To estimate these costs, we can consider the special costs incurred by TFA, the extra costs incurred by districts, and the costs of traditional teacher preparation, which all TFA recruits undertake during their two years in the classroom. In 2006, for example, TFA spent approximately \$22,455 for each entering core member it recruited and placed.<sup>47</sup> To these costs must be added the “finders’ fees” local districts are frequently charged by TFA—as much as \$5,000 per recruit—plus salary costs and the costs of attrition districts must pay, which typically exceed \$15,000 for each teacher who leaves.<sup>48</sup> A third cost is that of the local teacher education, mentoring, and professional development programs in which TFA corps members enroll, which exceed \$25,000 on average.<sup>49</sup> Thus, the total cost of a two-year commitment from a TFA recruit exceeds \$70,000.

In a piece focused on how to improve TFA, Megan Hopkins, a former TFA recruit, notes, “Districts—and their schools and students—bear the cost of this high level of attrition, and not surprisingly, some district officials have expressed their concerns about this turnover rate.”<sup>50</sup> Hopkins advocates a residency model providing a full year of training before TFA recruits take on a classroom and a longer commitment to the profession to improve student achievement and TFA’s value to districts.

Of course, it’s possible that districts using TFA realize some savings by paying TFA recruits lower salaries, but data on such possibilities is not readily available for analysis. It’s clear, however, that more research is necessary to better understand the full costs and benefits of TFA. This gap in knowledge is problematic for a reform mechanism that seeks to double its size with a goal of “reach[ing] one million students in low-income communities each day by 2015.”<sup>51</sup>

## *Conclusion*

Even if TFA teachers performed better in the classroom than non-TFA teachers (a claim, as we have shown, that is not clearly supported by the research), TFA teachers only make up about 0.2% of the US’s 3.5 million teachers.<sup>52</sup> Thus, TFA can hardly be considered a panacea, or a major factor in educational reform. Why, then, is there so much discussion, even controversy, surrounding TFA?

TFA supporters see the current pool of teachers as a major contributor to the failures of today’s schools, and the introduction of non-traditional entrants, including TFA recruits, as a key solution, despite their short tenure. In contrast, TFA critics tend to focus on improvement of the current teaching pool through better education and professional development. This constituency urges educational reforms focused on improved in-service training, mentoring, and professionalization of teaching. They focus on ways to support teachers before and during their time in the classroom, rather than on market dynamics, as the best hope for maintaining a high quality teaching force.

These two groups understandably clash over the impact of TFA. TFA proponents see TFA as providing urban and rural schools with “outstanding recent college graduates” who will “go above and beyond traditional expectations” to improve students’ academic achievement.<sup>53</sup> TFA opponents claim that TFA is not a solution but a short-term remedy that may not even be better than what it aims to fix. Both groups are correct. TFA corps members are a highly select group from the nation’s most selective colleges. They likely enter their teaching stints with very high expectations. The studies reviewed in the previous section indicate that, in the short-term, when compared to other underprepared teachers hired into many high-need schools, they may compete well with similarly trained and situated non-TFA teachers (even if just marginally better and only in mathematics).

However, TFA opponents are correct, too. TFA teachers appear less effective in both reading and mathematics than fully prepared entrants teaching similar



students, at least until the TFA teachers become prepared and certified themselves. While the small number who stay this long are sometimes found to be more effective in mathematics than other teachers, their attrition rate of more than 80 percent means that few students receive the benefit of this greater effectiveness, while districts pay the costs of high attrition. In addition, TFA provides only a (small) fraction of America's teachers to a small number of America's schools, and likely has little to no impact outside of its participating schools. Unless it starts admitting larger swaths of college seniors and potentially watering down the quality of its corps members, it will not ever comprise more than a small fraction of America's teachers.

Finally, even in the limited cases when TFA has a positive impact, it is consistently small; other educational reforms may have more promise such as universal pre-school, mentoring programs that pair novice and expert teachers, eliminating tracking, and reducing class size in the early grades.

The debate surrounding teacher preparation is ongoing. A recent undertaking by the National Academies synthesizes existing research in an effort to understand the impact of teacher preparation and certification on student learning. Despite limited data, the report concluded that no single pathway, including "traditional" bachelor's or master's degree programs housed in colleges and universities and "alternative" routes, such as Teach for America, was conclusively better than another and urged further research into the differences among pathways.<sup>54</sup> However, proponents and opponents of TFA would likely agree that sending a would-be TFA teacher (that is, a teacher with strong academic ability and considerable drive) to a high-quality traditional teacher education program would lead to a teacher who would outperform a TFA teacher who had not received the additional education or a less academically able teacher who went the traditional route. A recent study implicitly tests this presumption and finds that academically able teachers trained in Stanford University's teacher education program are on average significantly more effective than others in the Bay Area, suggesting heterogeneity within teacher education programs, the students they serve, or both.<sup>55</sup> So, the most useful question to pose may not be whether TFA is preferable to non-TFA, but instead how we might interest America's most talented college students in teaching as a *profession* and in pursuing the education that seems most important in creating the best teachers—namely, the education that the nation's best schools of education provide.

Policymakers interested in improving poor and minority students' educational outcomes should think critically about how well TFA supports their goals. Educational change takes time. In the time it takes to design, pass, and implement effective educational reform, another generation of low-income minority students will have passed through schools, ill-equipped to compete in a global economy. This is where TFA may have a limited policy application. It's a well-oiled machine that is ready to deliver smart teachers to whatever schools will take them. Notably, TFA has increased the training of its teachers in response to critics.<sup>56</sup> These improvements are aimed at ensuring that TFA teachers have some preparation to teach the students that most need the best teachers. However, the supply of TFA teachers is limited and the preponderance of empirical research suggests that

they are not a panacea. Policymakers and stakeholders should consider TFA teachers for what they are—a slightly better alternative when the hiring pool is comprised primarily of uncertified and emergency teachers—and continue to consider a broad range of solutions to reshape our educational system of education to ensure that all students are completing school with the education they need to be successful. While the debate continues on the effectiveness of TFA teachers, there is no debate over the high attrition rate of the corps. If educational leaders plan to use TFA teachers as the solution to the problem of teacher shortages, they must be prepared to continually lay out taxpayer dollars, and those from other sources, into recurring TFA recruitment and training to ensure a flow of novice teachers as TFA teachers consistently exit in the first few years on the job.

### *Recommendations*

Based on these findings, it is recommended that policymakers and districts:

- Support TFA staffing only when the alternative hiring pool consists of uncertified and emergency teachers or substitutes.
- Consider the significant recurring costs of TFA, estimated at over \$70,000 per recruit, and press for a five-year commitment to improve achievement and reduce re-staffing.
- Invest strategically in evidence-based educational reform options that build long-term capacity in schools.

## *Notes and References*

- <sup>1</sup> Veltri, B. T. (2010). *Learning on Other People's Kids: Becoming a Teach For America Teacher*. Charlotte: Information Age Publishing
- <sup>2</sup> Veltri, B. T. (2008). Teaching or Service?: The site-based realities of Teach for America teachers in poor, urban schools. *Education and Urban Society*, 40(5), 511-542.
- <sup>3</sup> Teach for America. (n.d.) History. Retrieved April 20, 2010, from [http://www.teachforamerica.org/about/our\\_history.htm](http://www.teachforamerica.org/about/our_history.htm).
- <sup>4</sup> TFA sites are districts and individual schools.
- <sup>5</sup> Darling-Hammond, L. (2002). Research and rhetoric on teacher certification: A response to "Teacher Certification Reconsidered." *Education Policy Analysis Archives*, 10(36).
- <sup>6</sup> Teach for America. (n.d.) History. Retrieved April 20, 2010, from [http://www.teachforamerica.org/about/our\\_history.htm](http://www.teachforamerica.org/about/our_history.htm).
- <sup>7</sup> Boyd, D., Grossman, P., Lankford, H., Loeb, S., & Wyckoff, J. (2006). How changes in entry requirements alter the teacher workforce and affect student achievement. *Education Finance and Policy* 1(2) (Spring 2006), 176-216.
- <sup>8</sup> Miner, B. (Spring 2010). Looking past the spin: Teach for America. *Rethinking Schools Online*, 24(3). Retrieved June 2, 2010, from [http://www.rethinkingschools.org/archive/24\\_03/24\\_03\\_TFA.shtml](http://www.rethinkingschools.org/archive/24_03/24_03_TFA.shtml).
- <sup>9</sup> U.S. Department of Education. (2010). Teacher Shortage Areas Nationwide Listing: 1990-91—2010-11 Washington, DC: Office of Postsecondary Education.
- <sup>10</sup> U.S. Department of Education. (2010). Teacher Shortage Areas Nationwide Listing: 1990-91—2010-11 Washington, DC: Office of Postsecondary Education.
- <sup>11</sup> Kopp, W. (2009). Building the movement to end educational inequity. *Education Digest: Essential Readings Condensed for Quick Review*, 74(7), 10-13.
- <sup>12</sup> Decker, P. T., Mayer, D. P., & Glazerman, S (2006). Alternative routes to teaching: the impacts of Teach for America on student achievement and other outcomes. *Journal of Policy Analysis and Management*, 25(1), 75-96.
- <sup>13</sup> Laczko-Kerr, I., & Berliner, D. C. (2002). The effectiveness of "Teach for America" and other under-certified teachers on student academic achievement: A case of harmful public policy. *Education Policy Analysis Archives*, 10(37).
- <sup>14</sup> Boyd, D., Grossman, P., Lankford, H., Loeb, S., & Wyckoff, J. (2006). How changes in entry requirements alter the teacher workforce and affect student achievement. *Education Finance and Policy* 1(2) (Spring 2006), 176-216.
- <sup>15</sup> The size of the sample of TFA teachers narrows substantially after the second year, making it difficult to understand the validity of the long-term effects of the Corps on student achievement in many studies.
- <sup>16</sup> Kane, T. J., Rockoff, J. E., & Staiger, D. O. (2008). What does certification tell us about teacher effectiveness? Evidence from New York City. *Economics of Education Review*, 27(6), 615-631.
- <sup>17</sup> Darling-Hammond, L., Holtzman, D. J., Gatlin, S. J., & Heilig, J. V. (2005). Does Teacher Preparation Matter? Evidence about Teacher Certification, Teach for America, and Teacher Effectiveness. *Education Policy Analysis Archives*, 13(42).
- <sup>18</sup> Darling-Hammond, L., Holtzman, D. J., Gatlin, S. J., & Heilig, J. V. (2005). Does Teacher Preparation Matter? Evidence about Teacher Certification, Teach for America, and Teacher Effectiveness. *Education Policy Analysis Archives*, 13(42).

- <sup>19</sup> Raymond, M., Fletcher, S. H., & Luque, J. (2001). *Teach For America: An Evaluation of Teacher Differences and Student Outcomes In Houston, Texas*. Palo Alto: CREDO.
- <sup>20</sup> Raymond, M., Fletcher, S. H., & Luque, J. (2001). *Teach For America: An Evaluation of Teacher Differences and Student Outcomes In Houston, Texas*. Palo Alto: CREDO.
- <sup>21</sup> Xu, Z., Hannaway, J., & Taylor, C. (2009). *Making a Difference? The Effects of Teach for America in High School*. Washington, DC: National Center for Analysis of Longitudinal Data in Education Research.
- <sup>22</sup> Teach For America (n.d.) Research on Teach For America. Retrieved June 2, 2010, from <http://www.teachforamerica.org/about/research.htm>.
- <sup>23</sup> What Works Clearinghouse. (2008). *WWC Quick Review of the Report "Making a Difference? The Effects of Teach for America in High School."* Washington, DC: What Works Clearinghouse, U.S. Dept. of Education. Retrieved June 2, 2010, from [http://ies.ed.gov/ncee/wwc/PDF/QuickReviews/tfa\\_071508.pdf](http://ies.ed.gov/ncee/wwc/PDF/QuickReviews/tfa_071508.pdf).
- <sup>24</sup> It is not known how likely it would be that a student's proctor was their teacher.
- <sup>25</sup> What Works Clearinghouse. (2008). *WWC Quick Review of the Report "Making a Difference? The Effects of Teach for America in High School."* Washington, DC: What Works Clearinghouse, U.S. Dept. of Education.
- <sup>26</sup> Noell, G. H., & Gansle, K. A. (2009). *Teach for America Teachers' Contribution to Student Achievement in Louisiana in Grades 4-9: 2004-2005 to 2006-2007*. Baton Rouge: Louisiana State University.
- <sup>27</sup> Noell, G. H., & Gansle, K. A. (2009). *Teach for America Teachers' Contribution to Student Achievement in Louisiana in Grades 4-9: 2004-2005 to 2006-2007*. Baton Rouge: Louisiana State University.
- <sup>28</sup> Teach For America (n.d.) Core member impact. Retrieved June 2, 2010, from [http://www.teachforamerica.org/mission/our\\_impact/corps\\_impact.htm](http://www.teachforamerica.org/mission/our_impact/corps_impact.htm)
- <sup>29</sup> Glass, G. (2008). *Alternative Certification of Teachers*. Boulder & Tempe: Education and the Public Interest Center, University of Colorado; Education Policy Research Unit, Arizona State University.
- <sup>30</sup> Miner, B. (Spring 2010). Looking Past the Spin: Teach for America. *Rethinking Schools Online*, 24(3). Retrieved June 2, 2010, from [http://www.rethinkingschools.org/archive/24\\_03/24\\_03\\_TFA.shtml](http://www.rethinkingschools.org/archive/24_03/24_03_TFA.shtml).
- <sup>31</sup> Boyd, D., Grossman, P., Lankford, H., Loeb, S., Ronfeldt, M., & Wyckoff, J. (2009). *Recruiting Effective Math Teachers, How Do Math Immersion Teachers Compare?: Evidence from New York City*. Albany, NY: Teacher Policy Research.
- <sup>32</sup> Darling-Hammond, L., Holtzman, D. J., Gatlin, S. J., & Heilig, J. V. (2005). Does Teacher Preparation Matter? Evidence about Teacher Certification, Teach for America, and Teacher Effectiveness. *Education Policy Analysis Archives*, 13(42).
- <sup>33</sup> Mac Iver, M. A. & Vaughn, E. S., III. (2007). "But how long will they stay?" Alternative certification and new teacher retention in an urban district. *ERS Spectrum*, 25(2), 33-44.
- <sup>34</sup> Noell, G. H., & Gansle, K. A. (2009). *Teach for America Teachers' Contribution to Student Achievement in Louisiana in Grades 4-9: 2004-2005 to 2006-2007*. Baton Rouge: Louisiana State University.
- <sup>35</sup> Noell, G. H., & Gansle, K. A. (2009). *Teach for America Teachers' Contribution to Student Achievement in Louisiana in Grades 4-9: 2004-2005 to 2006-2007*. Baton Rouge: Louisiana State University.
- <sup>36</sup> Miner, B. (Spring 2010). Looking Past the Spin: Teach for America. *Rethinking Schools Online*, 24(3). Retrieved June 2, 2010, from [http://www.rethinkingschools.org/archive/24\\_03/24\\_03\\_TFA.shtml](http://www.rethinkingschools.org/archive/24_03/24_03_TFA.shtml).
- <sup>37</sup> Boyd, D., Lankford, H., Loeb, S., & Wyckoff, J. (2005). The draw of home: How teachers' preferences for proximity disadvantage urban schools. *Journal of Policy Analysis and Management*, 24(1), 113-132.
- <sup>38</sup> Kane, T. J., Rockoff, J. E., & Staiger, D. O. (2008). What does certification tell us about teacher effectiveness? Evidence from New York City. *Economics of Education Review*, 27(6), 615-631.

- <sup>39</sup> Teach For America (n.d.) Alumni impact. Retrieved June 2, 2010, from [http://teachforamerica.org/mission/our\\_impact/alumni\\_impact.htm](http://teachforamerica.org/mission/our_impact/alumni_impact.htm).
- <sup>40</sup> Teach For America (2009) Alumni Social Impact Report – 2009. Retrieved June 2, 2010, from [http://www.teachforamerica.org/mission/documents/2009\\_ASIR\\_Final.pdf](http://www.teachforamerica.org/mission/documents/2009_ASIR_Final.pdf).
- <sup>41</sup> McAdam, D. & Brandt, C. (2009). Assessing the effects of voluntary youth service: The case of Teach For America. *Social Forces*, 88(2), 945-970.
- <sup>42</sup> TFA Corps members compared with individuals who applied, were accepted, but did not matriculate or eventually dropped out of TFA
- <sup>43</sup> Boyd, D., Grossman, P., Lankford, H., Loeb, S., & Wyckoff, J. (2006). How changes in entry requirements alter the teacher workforce and affect student achievement. *Education Finance and Policy* 1(2) (Spring 2006), 176-216.
- <sup>44</sup> Teach For America (n.d.) Help Teach For America restore and increase our federal support for 2011. Retrieved June 2, 2010, from <http://www.teachforamerica.org/federalfunding/mobile/>.
- <sup>45</sup> Miner (2010) notes: “TFA’s 2008 annual report lists Wachovia as one of five corporations donating more than \$1 million at the national level. The others are Goldman Sachs, Visa, the biotechnology firm Amgen, and the golfing tournament Quail Hollow Championship.”
- Miner, B. (Spring 2010). Looking Past the Spin: Teach for America. *Rethinking Schools Online*, 24(3). Retrieved June 2, 2010, from [http://www.rethinkingschools.org/archive/24\\_03/24\\_03\\_TFA.shtml](http://www.rethinkingschools.org/archive/24_03/24_03_TFA.shtml).
- <sup>46</sup> Personal communication on April 20, 2010.
- <sup>47</sup> Dividing TFA’s income reported on its 990 form by the number of entering corps members.
- <sup>48</sup> Barnes, G., Crowe, E., Schaefer, B. (2007) *The Cost of Teacher Turnover in Five School Districts: A Pilot Study*. Washington, DC: National Commission on Teaching and America’s Future. Retrieved June 2, 2010, from [http://www.nctaf.org/resources/demonstration\\_projects/turnover/documents/CTTFullReportfinal.pdf](http://www.nctaf.org/resources/demonstration_projects/turnover/documents/CTTFullReportfinal.pdf)
- <sup>49</sup> The total per pupil costs of preparation programs from federal, state, and local (tuition) sources typically average from \$20,000 to \$40,000 annually; costs for beginning teacher mentors average \$5000 per candidate annually; and costs for teacher professional development average between \$3,000 and \$7,000 per teacher annually, not counting the cost of teacher time.
- <sup>50</sup> Hopkins, M. (2008). Training the next teachers for America: A proposal for reconceptualizing Teach For America. *Phi Delta Kappan*, 89(10), 721-725.
- <sup>51</sup> Teach For America (n.d.) Help Teach For America restore and increase our federal support for 2011. Retrieved June 2, 2010, from <http://www.teachforamerica.org/federalfunding/mobile/>.
- <sup>52</sup> U.S. Department of Labor, Bureau of Labor Statistics. (December 17, 2009). *Occupational Outlook Handbook, 2010-11 Edition*, Teachers—Kindergarten, Elementary, Middle, and Secondary. Retrieved April 21, 2010, from <http://www.bls.gov/oco/ocos318.htm>.
- <sup>53</sup> Teach For America (2010, May 24) Teach For America fields largest teacher corps in its 20-year history (press release). Retrieved June 2, 2010, from [http://www.teachforamerica.org/newsroom/documents/20100524\\_Teach.For.America.Fields.Largest.Teacher.Corps.In.Its.20.Year.History.htm](http://www.teachforamerica.org/newsroom/documents/20100524_Teach.For.America.Fields.Largest.Teacher.Corps.In.Its.20.Year.History.htm).
- <sup>54</sup> National Research Council (2010, April 29). Better data on teacher preparation could aid efforts to improve education (press release). Retrieved June 2, 2010, from <http://www8.nationalacademies.org/onpinews/newsitem.aspx?RecordID=12882>.
- <sup>55</sup> Newton, X. (2010). *Teacher Effectiveness and Pathways into Teaching in California*. Berkeley: University of California at Berkeley.
- <sup>56</sup> Darling-Hammond, L. (2009). A future worthy of Teaching for America. *Education Digest: Essential Readings Condensed for Quick Review*, 74(6), 11-16.