Troops to Teachers Grant Study 4: Technical Report

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Executive Summary

TTTs are continuing to provide a stable, high-quality cadre of certified and effective schoolteachers who demonstrate research-based instructional practices and strong classroom management skills to students who really need effective and reliable teachers – and most plan to remain in the teaching profession until retirement. Specifically,

4,157 TTTs consented to participate in the initial Teacher Questionnaire

Nearly 84% of TTTs' first teaching assignments were in high-poverty and/or highminority schools; 40% of these were minority TTT completers.

Almost 73% of TTTs have remained in the same high-needs school; 42% of these were minority TTT completers. Of those who change schools, from 95% to 98% now work in schools with the same or higher percentages of low-income and minority students. This is also true for minority TTT completers.

43% of Troops teachers are teaching high-needs content areas as compared with 81.7% teaching high-needs content areas in 2005.

74% of Troops teachers plan to remain in the teaching profession until retirement as compared with 80% in 2005.

Troops teachers who were leaving or planning to leave the teaching profession for reasons other than retirement named students, pay, disappointment with the education system, administration, and disrespect, in this order as the primary reasons.

Almost 100% of Troops teachers say they are "Always" or "Usually" using four research-based classroom management practices.

85% or more of supervising administrators say that Troops teachers are "Always" or "Usually" using research-based instructional practices – about the same percent as in 2005 – and reported TTTs using them at higher levels than they did in 2005. 93% of supervising administrators say that Troops teachers are "Always" or "Usually" using the four research-based classroom management practices - as compared with about 90% in 2005 – and reported TTTs using them at higher levels than they did in 2005. 96.4% of administrators "Somewhat" or "Strongly" agreed that the TTT completer follows school regulations, policies, and procedures, and 95.5% "Somewhat" or "Strongly" agreed that the TTT completer has a positive impact on student achievement. Almost 50% of administrators rated the TTT completers as "About the same" 31% said "More effective," and over 11% said "Much more effective" in their instructional and classroom management practices as their non-Troops teachers colleagues with similar years of teaching experience – as compared with over 90% of administrators rating their Troops teachers as "More Effective" than their colleagues within similar years of teaching in 2005.

69.1% of Troops teachers completed a traditional teacher preparation program, either bachelor's or master's degree and either on campus or through distance learning. 92% of supervising administrators rated their TTTs and being well prepared to meet the needs of diverse students in diverse learning environment.

Introduction

Teacher effectiveness – their capacity to generate acceptable levels of student achievement – has become central to the national education debate. Public education policy, such as 2009's \$4.35 billion Race to the Top (RttT) grant program, is making student achievement outcomes a "significant factor" in determining teacher and principal effectiveness (Crowe, 2011; U. S. Department of Education, 2009a). Nearly half the states now link teachers' salaries to their effectiveness in increasing students' achievement test scores (Banchero, with similar years of teaching experience (Owings, et al, 2006, p. 123). Research also finds that school administrators who have entered education

Purpose of this Study

This study's purpose was to update and expand upon a previous Troops to Teachers program study (Owings, Kaplan, Nunnery, Marzano, Myran, & Blackburn, 2005, 2006). We examined the extent to which TTT completers are meeting program goals regarding job placement, the extent to which they are teaching critical-needs subjects, and the extent to which TTT program completers – and their supervising administrators – believe they are implementing research-based instructional and classroom management practices. We also examined the teacher preparation program structures and program features and TTTs' and their administrators' perceptions of TTTs' preparation to work with diverse learners in diverse settings. Finally, we examined reasons why TTT completers leave the teaching profession (other than retirement).

Research Questions

Specifically, this research addresses a range of questions:

- 1. What are the structural features of teacher preparation programs that TTTs complete?
- 2. What percent of current Troops teachers complete traditional and alternative teacher preparation programs?
- 3. To what extent do current TTTs tend to work in high-poverty, high-minority schools as compared with these findings in the 2005 study?
- 4. To what extent do current TTT tend to teach critical needs subject areas (mathematics, science, special education, and career/technical education as compared with the 2005 study?
- 5. To what extent do current TTTs remain in the classroom longer than traditionallyprepared teachers as compared with these findings in the 2005 study?

schools throughout the nation and relieve teacher shortages, especially in critical subjects (Hiebert, 2013).

Troops to Teachers was the brainchild of J. H. "Jack" Hexter, a Yale history professor whose own life demonstrated the value of a second career. In 1992, he persuaded U.S. senators John McCain and Mike DeWine to federally fund the Troops to Teachers program through the Department of Education budget with an emphasis on teacher recruitment (Bank, 2007; Gantz, 2013). The National Defense Authorization Act for FY 2000 transferred the responsibility for program oversight and funding to the U.S. Department of Education but continued operation by the Department of Defense. The No Child Left Behind Act of 2001 provided for the TTT program's continuation. More recently, the National Defense Authorization Act for FY2013 transferred the responsibility for the program oversight and funding back to the U.S. Department of Defense. The Defense Activity for Non-Traditional Education Support (DANTES), Pensacola, Florida manages Troops to Teachers (DANTES, 2013).

By 2013, more than 17,000 active duty military veterans have transitioned into teaching positions through Troops to Teachers¹ (W. McAleer, personal communication with William Owings, January 17, 2013; DANTES, 2012; Weisenstein, 2013).

Troops to Teachers is a program that assists veterans in becoming certified teachers. Veterans recognize the value of an alternative teacher preparation route because of its secondcareer nature rather than because of the qualities of any particular teacher preparation program

The actual number of military persons who transitioned into teaching through Troops to Teachers funding is unclear. While Weisenstein (2013) claims that over 18,000 military personnel have transitioned into classrooms through Troops to Teachers, McAleer (2013) asserts that more than 17,000 have been employed as teacher through Troops to Teachers counseling and referral services and of this about 14,000 have actually received the Troops to Teachers funding for tuition or stipends and 18,000 military service persons have contacted Troops to Teachers about obtaining teacher licensure. A DANTES (Defense Activity for Non-Traditional Education Support) report from September 17, 2012 records approximately 12,000 Troops to Teachers employed.

(Owings, Kaplan, Nunnery, Marzano, Blackburn, & Myran, 2006). To be eligible to receive Troops to Teachers' funding to become a Pre-K,

teaching in the classroom is the most important school factor in predicting student outcomes. This topic is extensively explored elsewhere see, for example Archer, 2002; Darling-Hammond, 2000; Darling-Hammond, Berry, & Thoreson, 2001; Goe & Stickler, 2008; Goldhaber, 2002; Hanushek, Kane, & Rivkin, 1998; Kaplan & Owings, 2003; Hanushek, Kain, O'Brien & Rivkin, 2005; Sanders & Horn, 1995).

Effective teachers can make a measurable difference in student achievement. For example, on average, students with a teacher in the top quartile of the talent pool achieve at levels corresponding to an extra two or three months of instruction per year, compared with peers who have a teacher in the bottom quartile (Miller & Chait, 2008). Similarly, all other things equal, a student with a very high quality teacher will achieve a learning gain of 1.5 grade level equivalents while a student with a low-quality teacher achieves a gain of only 0.5 grade level equivalents (Hanushek, 1992). Even among teachers in a given school with students of similar demographics, the teacher's effectiveness can make the difference of a full year's learning growth in math and reading levels, classroom by classroom, in one academic year (Hanushek, 2011b). Lastly, researchers conclude that a student encountering an above-average teacher for five years in a row could overcome the achievement gap typically found between students qualifying for free or reduced-price lunches and those from higher income backgrounds (Hanushek & Rivkin, 2004). Clearly, high quality, highly effective teachers can make up for the typical educational deficits that economically disadvantaged children bring to school.

In fact, economist Eric Hanushek (2011a) estimates that a teacher who performs one standard deviation above the mean effectiveness in a class of 20 students can annually produce marginal gains of over \$400,000 in present value of student future earnings. The greater the class sizes, proportionally larger are the earnings. He also approximates that replacing the lowest 5%

to 8% of teachers with colleagues of average effectiveness could propel the U.S. to near the top of international math and science rankings and a present value of \$100 trillion (Hanushek, 2011a).

Earlier research places Troops teachers within the effective teacher cadre. Updating TTT 2005 findings and placing these within the context of current teacher effectiveness research – namely, which preparation programs generate the most effective teachers, how traditional "teacher quality" factors such as certification, advanced education, and experience affect student outcomes, how principals can improve their accuracy

At the same time, the relative professional status of traditionally and alternatively prepared teachers is changing. Whereas early research on this topic indicated that alternatively prepared teachers were less effective than traditionally prepared teachers in producing student achievement (Rivkin, Hanushek, & Kain, 2005; Rockoff, 2004), current research confirms that effective teachers come from both traditional and nontraditional certification routes (Boyd, Grossman, Lankford, Loeb, & Wyckoff, 2006; Gordon, Kane, & Staiger, 2006; Kane, Rockoff, & Staiger, 2006). Teacher experience – rather than the type of certification – tends to make a difference in increasing student achievement, with increased teacher experience and improved student achievement during the first three to five years in the classroom (Boyd, et al, 2005; Kane et al, 2006; Rivkin, Hanushek, & Kane, 2005).

Both traditional and alternative teacher preparation programs vary widely within each pathway. Traditional U.S. teacher education programs – 1,434 state-approved colleges of education – prepare elementary and secondary teachers (Alderman, Carey, Dillon, Miller, & Silva, 2011). These programs can vary widely in rigor of selectivity, design, duration, program content, and clinical, field-based practice – even within institutions (Greenberg & Walsh, 2008; Walsh, Glaser, & Wilcox, 2006).

Alternative teacher preparation programs, also widespread and highly varied, are supplying a growing portion of today's to e^{-1} w R q

certification, making 136 state-defined alternate routes to teacher certification available. Nationally, one-third of first-time public school teachers hired annually now enter the profession through an alternative teacher preparation program (approaches are common (Johnson, Birkeland, & Peske, 2005; Perry, 2011). In fact, researchers are concluding that more variation exists *within* the "traditional" and "alternative" categories than *between* them (Grissom & Vandas, 2010; National Research Council, 2010; Sass, 2011). As a result, researchers and education policymakers question whether states' alternative routes to licensure reflect a genuine alternative to the traditional teacher preparation programs (Walsh & Jacobs, 2007).

Any pathway is likely to involve tradeoffs – in rigor of candidate recruitment and selection, depth and amount of curricula related to teaching and learning, program length, and duration and quality of field experiences that tie theory to practice and provide timely and relevant feedback to the novice teacher – with more selective routes and those requiring greater effort and time to complete yielding fewer but more highly effective teachers (National Research Council, 2010).

Within the past decade, research has described the features of alternatively prepared and certified teachers and compared their effectiveness on value-added outcomes for students and to their retention in their schools with traditionally prepared and certified teachers as well as to the unlicensed teachers they replaced (Boyd, Grossman, Lankford, Loeb, & Wykoff, 2006; Boyd, Grossman, Lankford, Loeb, & Wyckoff, 2009; Boyd, Lankford, Loeb, Rockoff, & Wyckoff, 2007; Constantine, Player, Silva, Hallgren, Grider, & Deke, 2009; Feistritzer & Haar, 2008; Grossman & Loeb, 2008; Decker, Deke, Johnson, Mayer, Mullens, & Schochet, 2005; Kane, Rockoff, & Staiger, 2006; Nunnery, Kaplan, Owings, & Pribesh, 2009; Xu, Hannaway, & Taylor, 2011). Research has also compared characteristics of alternative and traditionally prepared teachers. For example, 22% of teachers coming through alternate routes are men,

compared with 16% of teachers entering the profession through traditional programs (Feistritzer, 2011).

Both traditional and alternative teacher preparation routes have their critics. Traditional teacher preparation skeptics note that although these programs can produce teachers, they are less successful at ensuring

on learning how to teach their content and doing supervised teaching in real world settings with students similar to those in the type of school to which they plan to work.

a strong subject matter background (Goldhaber & Brewer, 2000). Similarly, another study found that students who had a certified teacher for most of their early school experience scored higher in reading than students who did not have a certified teacher Easton-Brooks & Davis, 2009). Certification or licensure test scores seem to matter more for math than (a)4(rl)-5(e)4(rtifie)4h1(a)4(th t)-3(ha)4(

Many alternatively prepared teachers agree that they may not be effective in producing student achievement. A survey by the National Comprehensive Center for Teacher Quality compared responses of randomly sampled first-year teachers from three alternative programs, Teach for America (TFA), New Teacher Project (NTP), and Troops for Teachers (TTT) with those of first-year traditionally prepared teachers also teaching in high-needs schools. Only 46% of the alternate route teachers said they were prepared for their first year of teaching, compared with 80% of the traditionally prepared teachers (Immerwahr, Doble, Johnson, Rochkind & Ott, 2007). Moreover, in this same study, certain preparation program and teacher characteristics (e.g., curricula that focused more on the work in the classroom, provided opportunities for teachers to study what they will be doing, timing and oversight of student teaching, certification status, teaching experience, graduation from a competitive college, and math SAT scores) predict program and teacher effectiveness in elementary and middle school mathematics and English language arts during their first year teaching while those with stronger content knowledge from an alternative teacher preparation pathway are able to make use of that knowledge by their second or third year (Boyd, Grossman, Lankford, Loeb, Michelli, & Wyckoff, 2006; Boyd, Grossman, Lankford, Loeb, & Wyckoff, 2008; Boyd, Lankford, Loeb, Rockoff, & Wyckoff, 2007). In their study, researchers estimated that a one standard deviation move in their preparation's focus on practice was similar to roughly one additional year of teaching experience in terms of teacher effectiveness, a very notable difference (Boyd, Grossman, Lankford, Loeb, & Wyckoff, 2009).

Similarly, Harvard's Strategic Data Project analyzed the teaching effectiveness of math teachers in Los Angeles schools, using students test score growth measures, grade three through eight (2004-2005 through 2010-2011), and determined that teachers who become certified teachers through Teach for America or the district's career ladder program for paraprofessionals were slightly better, on average, than other math teachers, giving students an increase of about two months of learning in a school year. The difference between top- and bottom- performing elementary math teachers was nearly 8 months of learning (Sawchuk, 2012).

These studies suggest that important variations in effectiveness exist in teachers graduating from different preparation programs – some of which may be large. At the same time, these investigators and others have identified more disparity in teacher effectiveness within

preparation routes than between them (Boyd, Grossman, Lankford, Loeb & Wyckoff, 2006; Gordon, Kane, & Staiger, 2006; Kane, Rockoff, & Staiger, 2006).

Changes in program accreditation

Despite the variability of teacher preparation outcomes, state approval and voluntary accreditation, the two quality control measures available for program accountability, have been unable to resolve which teacher preparation programs tend to produce more effective teachers. Research has found no difference in the student achievement outcomes of teachers educated at accredited programs versus those educated at non-accredited programs, and half of all institutions are not accredited (Levine, 2006).

This may be about to change. Until 2013, accreditation evaluated only the process of preparing teachers; it did not directly evaluate graduates' instructional skills in relation to their students' actual achievement (Crowe, 2010). In 2013, however, the Council for Accreditation in Teacher Education (CAEP) – the 2010 merger of two former accreditors, the National Council for Accreditation of Teacher Education (NCATE) with the Teacher Education Accreditation Council (TEAC) – unanimously approved a new set of standards that establishes both minimum requirements for teacher preparation program admissions and obliges programs to use "all available [student] growth measures" including "value added" data demonstrating that program graduates can successfully raise their students' achievement (Sawchuk, 2013b). Likewise, for the first time, teacher preparation programs will be expected to guarantee each entering group of candidates averages a specific level of academic credentials (Sawchuk, 2013b).

At the same time, federal and state officials and policy makers are advocating teacher education reform that moves from counting inputs (such as the percent of teacher preparation students who pass state certification exams, number of graduates, and placement rates) to measuring outcomes such as student achievement (Alderman, et al., 2011). The Obama Administration is supporting initiatives to improve teacher preparation – both traditional and alternative – by connecting the effectiveness of the certified teachers to both their teacher preparation programs and to their students' measured academic achievement (Klein, 2013). The best programs will be scaled up, and the lowest performing will be supported to show substantially improved performance or be closed (Alderman, et al., 2011). To assist this reform, 31 states now require that teacher evaluations be partially based on student achievement growth on standardized tests (Rich, 2013), and in 2012, eight states had policies that included the use of student achievement data to hold teacher preparation programs accountable for their graduates' effectiveness (National Council on Teacher Quality, 2013).

More importantly, educational accountability is starting to rely more on teachers' actual classroom performance and student achievement outcomes than in external credentials (such as professional preparation or certification routes) to determine teacher effectiveness (Crowe, 2011). Preparing and hiring teachers who can regularly generate student learning and achievement is becoming the baseline for teacher employment.

What this means to Troops to Teachers

The choice of preparation routes matters. Selecting the right teacher preparation pathway means looking for programs that emphasize and provide those factors that research demonstrates are related to effective teaching – rather than whether the route is considered to be "traditional" or "alternative." Having the knowledge and skills to regularly generate high levels of student learning with students of every demographic is what gets Troops teachers hired, highly evaluated, and continuously employed.

Principals' evaluations of teacher effectiveness and student achievement

Until recently, principals' evaluations of teacher effectiveness have not been important tools for school management, school improvement, or school reform. State laws and district policies about teacher evaluation vary in their requirements for teachers and for their performance appraisers (National Association of Secondary School Principals, 2011). And, although administrators are responsible for assessing teachers' effectiveness, these evaluations too often have been a perfunctory and inconsequential process (Weisberg, Sexton, Mulhern, & Keeling, 2009).

In fact, Weisberg and colleagues' (2009) coined the term, *widget effect*, to describe a school district's "culture of indifference" to the wide variations in teacher quality, classroom-to-classroom, and the infrequency of dismissing ineffective tenured teachers from employment. In their study of 12 school districts in four states, investigators found that over 99% of tenured teachers in districts using a "satisfactory" or "unsatisfactory" rating system earned a positive rating. Among districts with more than two rating options, 94% of the teachers still earned one of the top two ratings, and less than 1% was rated "unsatisfactory" – even in schools where high percentages of students were failing to meet basic academic standards each year (Weisberg, et al., 2009).

The powerful effect that the rater's overall judgment has on the person being rated has long been recognized (Wells, 1907). It even has a name: the "halo effect" (Rugg, 1922). The *halo effect* means that the teacher who appears to be the most effective receives the highest ratings. Teacher performance ratings scales, therefore, have high face validity. Yet, early empirical studies connecting teacher evaluation results and students' achievement scores find a low correlation (Hill, 1921). Medley and Coker (1987) identified eleven studies from 1921 to 1946 which reached the same conclusion: The correlations between the average principals' ratings of teacher performance and direct measures of teachers' effectiveness were near zero – slightly more accurate than if based on chance. Since the halo effect virtually decides the teacher's ratings, the ratings' actual validity depends almost entirely on the rater's accuracy in judging the teacher's instructional performance – making suspect both the validity of teacher ratings scales and principals' judgment (Medley and Coker, 1987).

Critiques of these early studies speculate that the small correlations found between principal evaluations and student achievement might be due to small, non-representative samples, not accounting properly for measurement error, and relying on objective measures of teacher performance that were probably biased (Jacob & Lefgren, 2008a; Medley & Coker, 1987; Peterson, 1987, 2000).

In fact, Medley and Coker's (1987) own study examining the relationship between principals' ratings of teachers' effectiveness and their students' achievement in reading and math reached similar conclusions: Principals could not accurately judge teachers' effectiveness in generating student test performance. Similarly, a qualitative literature review concluded that principals are not accurate evaluators of teacher performance, and both teachers and administrators have little confidence in the results of performance evaluations (Peterson, 2000). In attempts to explain this weakness, one investigation of teacher evaluation practices found that relatively few school districts had highly developed teacher evaluation systems; even fewer put the results into action Wise, Darling-Hammond, McLaughlin, & Bernstein, 1985).

Research suggests that many principals have a difficult time evaluating teachers. Reasons include lack of knowledge of the subject being taught; not wanting to upset working relationships by judging teachers strictly; viewing teacher evaluation as a cumbersome, time-consuming chore; and lack of sufficient training and guidance about how to conduct an effective evaluation (Halverson, Kelley, & Kimball, 2004; Nelson & Sassi, 2000; Peterson, 2000; Stein & D'Amico, 2000; Weisberg, et al., 2009; Wise, et `al., 1985). A 2008 Regional Education Laboratory (REL)

this distribution (Jacob & Lefgren 2008a; National Governors Association, 2011). Researchers also found that a teacher's previous value-added score is a better predictor of current student outcomes than are current principal ratings. The principals in this study did not have to tell the teachers how they were rated, however, and the ratings had no consequences; this may have engendered more accurate, less lenient teacher ratings than might have been observed in an actual evaluation situation (Jacob & Lefgren, 2008a).

Adding to the growing consensus, a Florida school district study found positive correlations between teacher value-added estimates and principals' subjective ratings (Harris & Sass, 2009). Investigators

high correlations between objective teacher performance estimates based on student data and principals' prior beliefs; the more detailed the objective or subjective data, the stronger the relationship. These results suggest that objective and specific performance data provides useful information to principals in constructing employee evaluations and using these evaluations to improve teacher effectiveness.

These studies, however, use either summary scores or subjective teacher ratings on general attributes and do not identify the specific instructional practices which teachers use to advance student learning. Later investigations would affirm that with training and practice, principals can identify those instructional behaviors related to increased student achievement – and feedback from these observations actually can improve teaching effectiveness (Kane & Staiger, 2012; Kane, Taylor, Tyler, & Wooten, 2010, 2011; Sartain, Stoelinga, Brown, Luppescu, Matsko, Miller, Durwood, Jiang, & Glazer, 2011).

What this means to Troops to Teachers

Principals' ratings and evaluations of teachers' classroom effectiveness are becoming more widespread, reliable, and valid indicators of teachers' effectiveness. Studies find positive, meaningful correlations between principals' If school districts and principals

as compared with traditionally prepared and certified teachers, all with more than three years of experience (Boyd, Dunlop, Lankford, Loeb, Mahler, O'Brien, & Wyckoff, 2011). Although the alternatively prepared teachers were much more likely to teach students who were poor, African American, or Latino, had been suspended from school, and who had lower math and English language arts achievement test scores, the teachers who were more effective in generating student learning and measured achievement were more likely to stay or transfer – regardless of the preparation route – while the least effective teachers were more likely to exit, regardless of pathway (Boyd, et al, 2011).

What this means to Troops to Teachers

While Troops teachers receive their professional preparation from both traditional and alternative programs, hiring organizations cannot generalize that a particular candidate – other than a TFA individual – will or will not remain in the school or profession for long based on the preparation pathway. Instead, hiring officials might find it useful to ask about and, if possible, observe this applicant's teaching practices in a demonstration lesson because classroom effectiveness is a better indicator of likely commitment to remain in the school and in the profession.

Preparation Factors that Affect Teaching Effectiveness and Student Achievement

Research confirms that not all teacher preparation programs do an equally good job in readying effective teachers for America's classrooms. In 2010, U.S. Secretary of Education, Arne Duncan stepped on a few toes when he recounted the troubled history of schools of education and scolded preparation programs that lacked a focus on increasing student learning and achievement. "To claim, 'I taught it – but the student didn't learn it," Duncan related, "…is like a hospital administrator affirming, 'The operation was a success – but the patient died"

(Duncan, 2010). Duncan recommended that teacher preparation programs use data, including student achievement data, to foster an ethic of continuous improvement for teacher educators, teachers, and students. Currently, researchers are accepting his invitation to do just that.

State-level studies linking teacher preparation, teacher effectiveness, and student

achievement

Assessing TPP's efficacy by looking at their graduates' K-

Goldhaber, Liddle, & Theobald, 2012) – and have characteristics that influence their graduates to earn higher value-added scores than veteran teachers (Tennessee Higher Education Commission, 2012). One study found that high productivity within traditionally or alternatively prepared cohorts depended on the subject taught and assessed as well as on the teachers' characteristics (Sass, 2011). One study found small differences between teachers from different preparation programs but high variability of effectiveness within programs (Koedel, Parsons, Podgursky, & Ehlert, 2012; Sass, 2011).

Several conclusions are especially relevant to Troops to Teachers. Researchers speculate that the advantage of certain alternatively prepared teachers may not reflect their preparation pathway so much as their unique nature as second career individuals. For them, teaching is not a first fulltime or professional position; and, as mature adults, they may have received more intensive and meaningful practical training that prepares them for the classroom than do programs that prepare young adult undergraduates to become teachers (Gansle, et al, 2010; Owings, et. al., 2005, 2006). Researchers suggest that where teachers are credentialed explains only a small portion of the overall variation in teacher effectiveness and point to the consensus that the best assessments of teacher effectiveness are based on actual classroom performance (Goldhaber & Liddle, 2011, 2012; Goldhaber, Liddle, & Theobald, 2012). Also researchers surmised that prior research has overstated differences in teacher performance across preparation programs for several reasons, mostly because some sampling variability in the data has been incorrectly attributed to the preparation programs (Koedel, et al, 2012).

Additionally, researchers advise their audiences to assess their findings within a wider context, reminding readers that classroom and student factors – apart from teacher effectiveness – influence student achievement. These include differences between student demographic

subgroups (such as gender differences, students identified as receiving free and reduced-price

Many studies affirm the relationship between teacher preparation, teaching effectiveness, and student achievement (Boyd, et al., 2006; Darling-Hammond, et al., 2005; Kane, Rockoff, & Staiger, 2006), but only recently are studies identifying the specific program factors that most influenced teachers' abilities to generate student learning.

Regardless of route, studies are finding that the best teacher preparation programs design their offerings around the goal of teaching teachers how to teach their particular content (Constantine, Player, Silva, Hallgren, Grider, & Deke, 2009; Grissom & Vandas, 2010; Winters, 2011). Likewise, after looking at how teacher education programs practiced accountability, the National Research Council (NRC) (2010) concluded that the evidence points to effective teachers having strong content knowledge (a body of conceptual and factual knowledge) and strong pedagogical knowledge: effective teachers understand both how learners acquire learning in a given subject and how to teach it.

For Troops to Teachers, this means that traditional and alternative pathways to teaching can be equally successful at producing effective teachers, so long as they use approaches geared towards linking preparation to actual teaching practice. Consequently, selecting teacher preparation programs that provide extensive and supervised pre-service teaching experiences – especially with students such as those the candidate intends to teach – help Troops teachers make informed judgments in choosing preparation pathways. Such coursework and pre-professional experiences as evidenced on Troops teachers' transcripts, in their behaviors, and in discussions of instructional practices during employment interviews speak to the candidates' ability to generate student achievement. Being able to credibly and specifically respond to the question, "Describe for me the main focus of your teacher preparation program and give examples of how these affected what you know about teaching," will serve Troops teachers well in employment interviews and in their classrooms.

Characteristics and Practices That Make Teachers Effective

Although evidence has shown that teachers' instructional practices have differential effects on student learning, knowledge gaps have existed about exactly which teacher characteristics and teaching behaviors led to increased student learning and achievement (Medley & Coker, 1987; Seidel & Shavelson, 2007). This situation, too, is changing.

Research on effective teachers' characteristics and student achievement.

Over the past decade, 140.54 543.58 Tm[()] 140.54.G75 Tm[(Ove)i54 543.58 Tm[()] 140.5 54175 Tm[(

and verbal ability that help them organize and explain ideas, observe analytically, and think diagnostically; solid content knowledge in the areas they teach; expertise of how to teach others to develop higher-order thinking skills in that content; an understanding of students' differences in having difficulty learning a new task or content; or tell about a time when they taught another person to develop higher-order thinking skills in a particular content – all ways in which they can provide relevant data about their potential teaching effectiveness.

Research on effective teachers' behaviors and student achievement

Although school district hiring officials cannot control where teacher candidates receive their preparation for licensure nor can they influence teachers' personal traits and dispositions, knowing which specific teaching behaviors can make a measurable difference in increasing student achievement enables employers to better identify effective candidates for their schools. Knowing these can also influence Troops teachers in their selection of preparation programs that will ready them for classroom effectiveness. Recent studies link intentionally-observed teaching practices to student achievement gains in real world classrooms (Kane, Taylor, Tyler, & Wooten, 2011).

Findings from Cincinnati (Kane & Staiger, 2012; Kane, Taylor, Tyler, & Wooten, 2010, 2011; Kane, Wooten, Taylor, & Tyler, 2011) and New York Public Schools (Grossman, Loeb, Cohen, Hammerness, Wyckoff, Boyd, & Lankford, 2010) confirm that teachers who tend to generate higher student achievement growth are actually teaching differently than teachers associated with lower student achievement growth. In Cincinnati (2003-2004 to 2008-2009 and ongoing), externally-trained evaluators used an elaborate set of standards that described the behavioral practices, skills, and characteristics that effective teachers have in domains of "creating an environment for student learning" and "teaching for student learning" and connected these to their students' measured achievement. Investigators found that teachers with higher classroom observation rubric scores had students who learned more. The difference in student learning gains on state math tests between teachers in the top and bottom 24% of teachers'

observation scores amounted to approximately 2.7 months of schooling (Kane & Staiger, 2012) – the equivalent of about 7-percentile points in reading and about 6-percentile points in math (Kane, Wooten, Taylor, & Tyler, 2011). Midcareer teachers even improved their effectiveness in the years after they were evaluated (Sawchuk, 2011a).

Similarly, a New York City pilot study using structured observation protocols (along with teacher logs and student work) compared moderately performing (second quartile) and high-performing (fourth quartile) middle school English language arts teachers on value-added performance in 12 matched pairs. Despite the small sample, investigators found consistent evidence that high value-added teachers use different instructional practices than low value-added teachers on all 16 observed elements of instruction (Grossman, Loeb, Cohen, Hammerness, Wyckoff, Boyd, & Lankford, 2010).

In a comparable Chicago study, a two-year pilot effort found that classroom observation ratings are valid and reliable measures of teaching practice and are related to value-added measures for math and reading test scores (Sartain, Stoelinga, Brown, et al., 2011). In classrooms of highly-rated teachers, students showed the most growth while in classrooms of teachers with low observation ratings, students showed the least growth. Interestingly, principals were able to rate teaching practice reliably at the low and middle ends of the scale while principals were less able or willing to differentiate effective instruction in the scale's upper ranges, tending to give the highest ratings to "good" teachers (commenting to investigators that they do this to maintain their relationships with teachers) (Sartain, Stoelinga, Brown, et al., 2011).

Likewise, a Louisiana study using virtually the same observation rubrics as in Cincinnati and Chicago to assess prospective alternatively prepared teachers for initial certification (2004-2005 through 2008-2009), found a modest correlation between teacher evaluation scores and student achievement growth in math and reading. These correlations were lower than those found in Kane's (2012) due to low inter-rater reliability (Darling-Hammond, 2010a).

Employing a different approach, investigators conducted a study with secondary school teachers using a web-mediated coaching method employing clear behavioral anchors (based on the Classroom Assessment Scoring System–Secondary (CLASS-

combining the three measures into` an appropriately weighted index produced a balanced and accurate profile of teacher performance. Critics of this study note, however, that the MET's lack of students' random assignment to classes, the voluntary nature of the teachers' involvement, and measurement error limit findings to comparisons of teachers within a school – and not generalizable beyond (Rothstein & Mathis, 2013).

Research on teaching behaviors and school environment.

The instructional environment in which teachers work also influences their effectiveness in increasing student achievement. One large-scale study in elementary schools using a multilevel constellation of teacher-related effects (e.g. classroom effectiveness, collective teaching quality, school academic organization) that could be changed to increase educational efficacy found that teachers' effectiveness was a stable and continuing part of the school organization, and teaching processes were positively associated with achievement levels (Heck, 2009). Likewise equally). Using a longitudinal dataset, the investigator found that teachers who switch schools are more effective after a move than before suggesting match effects. In contrast, teachers are less likely to leave their current school when match quality is high. The researcher's conclusion: a sizeable part of teacher effectiveness may be a function of the teacher-school environment match and not portable across schools (Jackson, 2010).

Despite their usefulness when well designed and conducted, classroom observations have their limitations. If this is the only data that school districts use to evaluate teachers, they may discourage innovation and pressure teachers to adopt a certain model of effective practice (Kane, 2012). Even when using standards-based rubrics to identify specific behaviors, observers must be trained to interpret behavior the same way in order to keep inter-rater reliability high and reduce subjective judgments. Also, teachers' performance may change, depending on the content taught and the student audience. Accordingly, multiple trained raters must be available to observe and score different lessons and average them for a more accurate measure of the teacher's practice. Plus, the labor intensive nature of providing frequent, detailed classroom observations is costly in terms of principals' time or peer observers' salaries (Kane, 2012). To answer the research questions, we employed a non-experimental, mixed method design incorporating quantitative and qualitative data collection and analysis. Quantitative

We employed descriptive statistic methods to answer each of the research questions. Qualitative content analysis of open-ended statements was applied to develop the contextual understanding vital to further address research questions one, two, seven, and eight (Bernard & Ryan, 2010; Manning & Cullum-Swan, 1994). The different data collection approaches allowed investigators to provide a more accurate and complete evaluation of results.

Participants

Since 1994, the Department of Defense's Troops to Teachers funding has recruited, prepared, and supported former members of the U.S. military services to be teachers in highpoverty and/or high-need schools. Elementary and secondary teaching applicants are required to have a baccalaureate or advanced degree from an accredited higher education institution, and individuals with educational or military experience in science, math, special education, or vocational or technical subjects and who agree to seek full-time employment as science, math, or years' experience teaching K-12 (33% of responders did not identify years of teaching experience). An additional 2,075 T3 completers (49.9% of initial responders) responded to the Follow-up Teacher Questionnaire. Demographic data are not available for those responders.

Table 1. Ethnicities of Participating Troops to Teachers Program Completers.

Ethnicity	Ν	Percentage
Black	780	18.8
White	1,698	40.8
Hispanic/Latino	241	5.8
Asian	28	0.7
Native Hawaiian/Pacific Islander	12	0.3
American Indian/Alaskan Native	50	1.2
Other	46	1.1
Undisclosed	1,302	31.3

Table 2. Grade Levels Currently Taught by Participating Troops to Teachers.²

Grade level	Ν	Percentage
Prekindergarten	32	.4
Kindergarten – Third grade	531	6.0
$4^{\text{th}} - 5^{\text{th}}$ grade	406	4.6

Of the 2,075 TTT completers who responded to the TTT follow-up questionnaire item that focused on the type of certification program attended, the majority identified their preparation program as a traditional on-campus certification program (21.6%), a state specific certification program (18.9%), a traditional on-campus master's program with student teaching (13.9%), a JROTC certification program (11.1%), or a career switcher program (9.2%). Another 10% (n = 213) stated that they attended a non-specified bachelor's degree program, a provisional licensure program, or a state-approved alternate certification program. More than 92% of respondents to the TTT follow-up questionnaire rated the quality of their licensure or certification program as "Fair," "Good," or

Analyses of open-ended questions about respondents' perceptions of instructional features revealed additional areas of certification programs beneficial for their teaching experiences. These included statements such as:

"Many of our instructors were still in the field in administrative positions and provided real world experience through instruction. The program provided us and opportunity to build on online portfolio, field work in every class, assignments based on reflection during those experiences and internship with exceptional teachers. We learned the value of collaborative and cooperative teaching. The administrators of the program were available to walk us through the challenges and provide insight into the profession." and implementation, special education, and alternative educational programs as helping their teaching experiences (see Appendix A).

To what extent is the TTT program meeting its goals in regards to job placement and retention of program completers in high need areas and schools?

A stated goal of the TTT program is to place a large percentage of TTT completers into high-needs schools and/or in high-needs content areas, with a specific interest in placing minority teachers in high-needs schools or content areas. For the purpose of this study, "highneeds schools" are defined as high-poverty and/or high-minority and "high-needs content areas" are defined as math, science, special education, foreign language, and career/technical education. We defined "minority" as any participant who responded to the ethnicity item with any ethnicity other than white.

Results indicated that nearly 84% of respondents' (n = 2,330, 83.7 percent) first teaching TTT assignments were in high-poverty and/or high-minority schools. Forty percent of these were minority TTT completers (n = 940). At the time this study was conducted, almost 73% (n =1,691) had remained in the same high-needs school; minority TTT completers comprised 42% of those who stayed in the same high-needs school (n = 707). Of those who left their initial school, 98.1% (n = 627) moved to a school with the same or higher proportion of students who were eligible for free- or reduced-price lunch (the traditional poverty indicator for K12 students) and 95.5% (n = 610) moved to a school with the same or higher proportion of minority students. Results also indicate that a large percentage of TTT completers are filling positions in high-needs content areas. Forty-three percent (n = 2016) of respondents identified their content or subject area as being math (n = 714), science (n = 575), special education (n = 332), foreign language (n = 49), career/technical education (n = 436). Another 19% of respondents (n = 946) identified JROTC as their subject, a content area that includes such sciences as aerospace science, naval science, and general military science. Other TTT completers serve in content areas such as English, language arts and reading (n = 321, 6.5%), social studies (n = 637, 13percent), and physical education (n = 256, 5.2%) (see Table 6). This 43% of TTT teaching highdemand subjects compares with 81% teaching these high-demand subjects in 2005.

Table 6. Content Areas Currently Taught by Participating Troops to Teachers. ³				
Content/subject area	Ν	Percentage		
English	321	6.5		
Math	714	14.6		
Science	575	11.7		
Social Studies	637	13.0		
Special Education	332	6.8		
Language Arts and Reading	362	7.4		
Physical Education	256	5.2		
Career/Technology				

Table 6. Content Areas Currently Taught by Participating Troops to Teachers.⁵

Results for minority TTT completers mirror those of the overall TTT completer sample by content area. Similar to the results for the entire sample, minority TTT respondents teach in the math (12.3%), science (9.6%), and special education (6.8 percent) content areas. Further, minority TTT completers represent at least a third of TTT completers in all content areas, as indicated in Table 7 below, with the largest percentages of minority TTT completers serving in the foreign language and JROTC/military science areas. Figure 1 illustrates the comparison of all

TTT completer respondents with minority only TTT completer respondents in the high-needs content areas.

		Percentage of	Percentage of total number
Content/subject area	n	minority teachers	of teachers in content area
English	118	6.0	36.8
Math	241	12.3	33.8
Science	187	9.6	32.5
Social Studies	217	11.1	34.1
Special Education	133	6.8	40.1
Language Arts and Reading	145	7.4	40.1
Physical Education	123	6.3	48.0
Career/Technology	181	9.3	41.5
Foreign Language	31	1.6	63.3
JROTC/Military science	488	24.9	51.6
Other	92	4.7	33.1

Table 7. Content Areas Currently Taught by Participating Minority Troops to Teachers.⁶

s total more than 1,157 because some respondents indicated that they teach more than one subject.

Figure 1. Comparison of All TTT Completers and Minority TTT Completers Serving in High-Needs Content Areas.

To what extent are TTT completers implementing research-based instructional practices?

TTT program completers were asked to rate the frequency with which they use 17 research-based instructional practices. Over two-thirds of respondents stated that they "Usually" or "Always" implement 14 of the 17 practices. The most commonly implemented practices were "emphasize the importance of effort with students" (99.4% compared to 84.2% in 2005), "recognize students who are making observable progress toward learning goals" (96.8%; 82.5% in 2005), "provide students with specific feedback on the extent to which they are accomplishing learning goals" (95.9% compared to 80.8%

students to construct verbal or written summaries of new content" (65.4 percent "usually or "always" implement compared to ---- in 2005), "prescribe in-class activities and homework assignments that require students to generate and test hypotheses regarding content" (53.1 percent "Usually" or "Always" implement compared to 60.5% in 2005) and "prescribe in-class and homework assignments that require students to construct metaphors and analogies" (46.8 percent "Usually" or "Always" implement; 57.0% in 2005). Complete TTT completer responses to the 17 instructional practices, along with their respective frequency ratings, are reported in Table 8.

% (<i>n</i>) 67.1 (<i>1</i> ,857)
67.1 (<i>1</i> ,857)
(1,857)
, · · · ,
63.7
(1,746)
33.1
(914)
66.8
(1,843)
88.0
(2, 421)

Table 8. TTT Completers' Perceptions of Use of Research-Based Instructional Practices

that their respective TTT completers implemented these instructional practices in their classrooms. Even the lowest rated item, "teacher organizes students into groups based on their understanding of the content when appropriate," had an 88.3% "Agree" or "Strongly agree" rating. The most strongly rated instructional practices were, "teacher recognizes students who are making observable progress toward learning goals" (96.3% "Agreed" or "Strongly agreed" as compared to 90.4% in TTT Study 2005), "teacher assigns in-class and homework tasks that require students to practice important skills and procedures" (96.2% "Agreed" or "Strongly agreed" as greed" as compared to 89.7% in 2005), and "teacher emphasizes the importance of effort with students" (95.7% "Agreed" or "Strongly agreed" as compared to 93.3% in TTT Study 2005). These responses coincide with TTT completers frequency responses for the same instructional practices, with TTT completers responding that they "Usually" or "Always" implemented these same practices (96.8%, 89.1%, and 99.4%, respectively). Complete administrator responses to the 14 instructional practice items are reported in Table 9.

Table 9. Administrator's Perceptions of Use of Research-Based Instructional Practices	Table 9. Adm	inistrator's Perc	eptions of Use	of Research-Ba	ased Instructional Practices
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	0.	Somewhat Disagree	Somewhat Agree	Strongly Agree
	%			
Instructional practice				

organizes students into cooperative groups	2.2	5.5	35.0	57.3
when appropriate	(10)	(25)	(158)	(259)
provides specific feedback on the homework	1.1	4.7	35.9	58.4
assigned to students	(5)	(21)	(161)	(262)
ends units by providing students with clear	0.9	6.5	31.7	
feedback on the learning goals	(4)	(29)	(142	

practices. The items with the highest agreement ratings were for "teacher responds to inappropriate behavior quickly and assertively" (96.2% as compared to 90.1% in

Table 11. Administrator's Perceptions of Use of	Research-B	ased Classroo	om Manageme	nt Practices
	Strongly	Somewhat	Somewhat	Strongly
	Disagree	Disagree	Agree	Agree
Classroom management practice				

Table 11. Administrator's Perceptions of Use of Research-Based Classroom Management Practices

procedures	(4)	(12)	(83)	(347)
	1.1	3.4		
has a positive impact on student achievement	(5)	(15)		

and emotional issues; students' apathy; and issues with classroom management and discipline. Selected answers illustrate the identified themes:

"The unexpected experiences I have encountered mostly revolve around the unwillingness of parents to do important things necessary to allow their children to benefit from a good education."

"The unexpected experience that I have encountered in my teaching practices is the students that just give up. They let their different situations outside of school dictate their mood, lifestyle and their future. Macn0B4}/MCID 4>BDC BT/F6 12 Tf thee0B4tthg44400T1 0A34 4900

they were thinking of leaving the teaching profession (compared with 4% in 2005 saying they would stay in teaching until a better opportunity arises and 11.7% undecided), 3.7% (n = 74) stating they were definitely planning to leave the teaching profession (compared with 1.2% in 2005 who said they would leave the teaching profession), and 3.1% (n = 63) responding that they had left the teaching profession between the time that the initial and follow-up questionnaires were administered (Table 13).

Further, we asked those who responded that they were leaving or thinking about leaving the teaching profession for reasons other than retirement to provide the rationale for their decision. Seventy-seven percent (n = 352) of those leaving or thinking of leaving responded to this item, with the most common reasons as "students" (cited by 18.2%, n = 64), "pay" (cited by 12.2%, n = 43), "overall disappointment with the educational system" (cited by 11.9%, n = 42), "school administration" (cited by 7.4%, n = 26), and "disrespect" (cited by 4.8%, n = 17).

Those who cited "students" stated that they had experienced "unmotivated, entitled, apathetic students," "discipline issues with students," and "lack of work ethic on the part of the student body." Respondents who stated that "pay" was the reason for leaving said "teacher pay has been frozen for the last several years," and "I can make more money working less hours and having much less responsibility." One respondent who identified overall "disappointment with the educational system" as the reason for leaving cited, "the current dismantling of public education by state and federal mandates" as the catalyst for his/her decision. Another believed that "education has been ruined by standardized testing, school ranking, and the absolute lack of student accountability," with another stating that "the education system in this country is headed in the wrong direction. We pay too much attention to test scores. We don't spend enough time instilling values and principles." Those who stated that "school administration" is to blame for

their decision to leave cited, "lack of support from administration," "poor leadership skills of administrators," "lack of vision by educational leaders," and, ultimately, a "lack of effective leadership in school administration." Finally,

Intention to remain	п	Percentage
I'm not interested in leaving the teaching profession	1,483	71.5
I am thinking about leaving the teaching profession	384	18.5
I'm definitely planning on leaving the teaching profession	74	3.6
I have left the teaching profession.	63	3.1

Table 13. TTT Completers' Intentions to Remain in Education Field

Discussion

The 2012-2013 TTT study updated and expanded the TTT 2005 investigation. The update found continued success with Troops teachers' placement and retention in high-needs schools, teaching high-demand subject areas, continued plans to remain in the teaching profession, and continued use of research-based instructional and classroom management practices affirmed by both teachers and their administrators. In new data, we determined that over half the Troops teachers successfully completed traditional master's degree teacher preparation programs as compared with alternative teacher certification programs, and we identified the curricular characteristics of these programs which Troops teachers' say aided their transition to effective classroom teaching. While in open-ended questions some Troops teachers express lack of preparation to successfully teach diverse students in diverse learning environments, their administrators affirm that they do and previous TTT research (Nunnery, Kaplan, Owings, & Pribish, 2009) affirm that they do.

First, current data show that the TTT program continues to meet its goals for job placement in high-needs schools. In 2012-2013, 73% of TTTs remain in their original highneeds school placements – rather than the 84% who were originally placed in high-needs schools – but 95.5% - to - 98.1% are either working at a school with similar or higher percentages of low-income or minority students, respectively. Yet although 43% of Troops teachers are still teaching in high-demand fields (mathematics, 14.6%; science, 11.7%;

to leave the profession is not much different as compared with 2005. And, the rate of Troops teachers leaving the profession is far fewer than the nearly 50% of new teachers who leave the profession within their first five years (Ingersoll, 2002, 2003). They remain, therefore, a strong cadre of effective teachers, many of whom are minority, working in high-needs schools.

Of the 384 (18.5%) troops teachers who were thinking of leaving the teaching profession for reasons other than retirement, 18.3 percent pointed to "students" (called unmotivated, entitled, apathetic, discipline issues), 12.2 percent identified "pay" ("frozen" salaries, can make more money with fewer hours and less responsibility in another field), 11.9 stated "overall disappointment with the educational system" (state and federal mandates, overemphasis on presenting students with learning goals" (94.7%). These are important procedures to help students focus on the class's objectives for the day and may increase students' mastery of content and raise their achievement.

The same is true for classroom management. For classroom management, 98.3% to 99.5% of responders stated that they "Usually" or "Always" implement these research-based

practices in their classrooms (as compared with between 86% and 90% in 2005). In addition,

certification program's quality in the top two categories, "Superior" or "Good." Only a small percentage (less than 2 percent) gave their program quality a "Poor" rating.

The research also finds that certain teacher preparation programs (TPP) characteristics – a curricula focused more on the work in the classroom, provides opportunities for teachers to study what they will be doing, timing and oversight of student teaching, for example – appear to positively shape teaching effectiveness in English and math (Boyd, Grossman, Lankford, Loeb,

percent, distance-

are working in high-poverty, high-minority schools, helping them select preparation programs that clearly address culturally competent teaching would help TTTs feel – and perhaps, be – more effective in generating learning in diverse classrooms.

Research supports the belief that teaching diverse students effectively involves relationship-building and compatible learning goals (for example, Baler, 1999; Boykin & Noguera, 2011; Hamre & Pianta, 2005; Irvine, 2003; Lipman, 1995). Since teaching effectiveness – teachers' ability to generate at least one year of student learning for each academic year – is becoming the basis for teacher employment and school accountability, those guiding and advising TTTs about selecting teacher preparation programs would do well to point them towards programs that include the factors such as working effectively with diverse students; develop culturally competent pedagogy; having varied, sustained, and supervised field based classroom experiences, mentoring, and other preparation experiences that are likely to help them be more comfortable and successful in diverse classrooms.

Recommendations for Further Study

- It would be helpful to conduct a new study of the program results after changes have been made to the Troops to Teachers organization.
- 2. It would be beneficial to assess Troops teachers' effectiveness in generating student learning and achievement should be expanded to multiple states.
- 3. It would be helpful to take a closer look at Troops' teachers' perceptions of their effectiveness with diverse students in diverse setting with a formal survey rather than elicit responses solely in open-ended questions.

4. It would also help to assess Troop

teacher's characteristics and instructional practices – in addition to the particular employing school and student factors.

Well-designed investigations have determined that teacher preparation can make a measurable difference in student achievement – especially in the first year in the classroom. But with a few years of experience, the differences in teacher effectiveness between certain

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Appendix A: Teacher Survey Questionnaire

Troops to Teachers National Evaluation Questionnaire 2012-2013

Thank you for taking the time to complete this survey. We want to better understand your professional teaching practices. It is important that you fill the survey out completely, honestly, and accurately in order to provide data that are meaningful and representative of your experience.

SECTION 1

1. What is your status in education?

Working in K-12 as a teacher

Working in education as a building administrator or as a central office administrator or non-

instructional personnel (if 'Yes', proceed to the next and submit)

Retired from teaching (if 'Yes', proceed to the next and submit)

Unemployed and seeking work (if 'Yes', proceed to the next and submit)

None of the above (if 'Yes', proceed to the next and submit)

2. Race/Ethnicity (check all that apply)

Black

White

Hispanic or Latino

Asian

Native Hawaiian/Pacific Islander

American Indian/Alaskan Native

Prefer not to disclose

Other (please specify)

6. Gender

Female

Male

7. Including the current year, how many years have you worked in elementary or secondary education?

I have never worked in elementary or secondary education

Other (please specify)

10. How long do you plan to remain in education as a classroom teacher?

1-5 years

6-10 years

More than 10 years

Undecided at this time

16. When you began teaching after entering the profession with Troops to Teachers funding, did you first work in a high-poverty, high-minority school?

12. ask students questions that help them recall what they might already know about the content prior to presenting new content.

13. provide students with direct links with Previous knowledge or studies prior to presenting new content.

14. provide ways for students to organize or think about the content(e.g., use advance organizers) prior to presenting new content.

15. ask students to construct verbal or written summaries of new content.

16. ask students to take notes on new content.

17. ask students to represent new content in nonlinguistic ways (e.g., mental image, picture, pictograph, graphic organizer, physical model, enactment).

18. assign in-class and homework tasks that require students to practice important skills and procedures.

19. prescribe in-class and homework assignments that require students to compare and classify content.

20. prescribe in-class and homework assignments that require students to construct metaphors and analogies.

21. prescribe in-class activities and homework assignments that require students to generate and test hypotheses regarding content.

Section 2 Classroom Management

21. In my professional practice as a teacher, I ... Never Sometimes Usually Always

Appendix B: Administrator Survey Questionnaire

Troops to Teachers National Evaluation School Administrator Questionnaire 2012-2013

- 4. What is the approximate total enrollment of your school?
 - Less than 400
 - 401-800
 - 801-1,200
 - 1,201-1,600
 - More than 1,600
- 5. Approximately what percentage of students in your school are African American?
 - 0 to 10%
 - 11% to 25%
 - 26% to 50%
 - 51% to 75%
 - 76% to 90%
 - More than 90%
- 6. Approximately what percentage of students in your school are Asian/Pacific Islander? 0 to 10%
 - 11% to 25%
 - 26% to 50%
 - 51% to 75%
 - 76% to 90%
 - More than 90%
- 7. Approximately what percentage of students in your school are Caucasian?
 - 0 to 10%

- 8. Approximately what percentage of students in your school are Latino?
 - 0 to 10%
 - 11% to 25%
 - 26% to 50%
 - 51% to 75%
 - 76% to 90%
 - More than 90%
- 9. Approximately what percentage of students in your school are Native American?
 - 0 to 10% 11% to 25% 26% to 50% 51% to 75% 76% to 90% More than 90%

SECTION 2

As one who observes and evaluates the TTT Subject of this study, I find that he/she exhibits these behaviors to a greater degree than other, traditionally-prepared teachers with similar years of experience.

10. In instruction, the teacher	0.	Somewhat Disagree	Somewhat Agree	Strongly Agree
1.begins instructional units by presenting students with clear learning goals.				
2. provides students with specific feedback on th extent to which they are accomplishing the learn goals.				
3. asks students to keep track of their own performance on the learning goals.				
4. recognizes students who are making observab progress toward learning goals.	le			
5. emphasizes the importance of effort with stude	ents.			
6. organizes students into groups based on their understanding of the content when appropriate.				
7. organizes students into cooperative groups wh	en			

appropriate.

11. prior to presenting new content, asks student	ts					
questions that help them recall what they might already know about the content by providing direct links with previous knowledge or studies.						
					12. asks students to construct verbal or written	
					summaries of new content and to take notes.	
13. asks students to represent new content in						
nonlinguistic ways (e.g., mental image, picture,						
pictograph, graphic organizer, physical model, enactment).						
14. assigns in-class and homework tasks that req	uire					
students to practice important skills and procedu	ures.					
11. In classroom management, the teacher	Strongly Somewhat Somewhat Strongly Disagree Disagree Agree Agree					
1. has comprehensive and well-articulated rules						
and procedures for general classroom behavior,						
beginning and ending the period or day, transition						
and interruptions, use of materials and equipme group work, and seatwork.	nt,					
2. uses specific disciplinary strategies that reinfo	rce					
appropriate behavior and provide consequences	for					
inappropriate behavior.						
3. uses specific techniques to keep aware of						
problems or potential problems in their classroo	ms.					
4. responds to inappropriate behaviors quickly a assertively.	ind					

5. uses specific techniques to maintain a healthy

12. Other This teacher...

StronglySomewhat Somewhat StronglyDisagreeDisagreeAgree

1. is better prepared to teach than other

Appendix C: Follow-Up Teacher Questionnaire

Troops to Teachers National Follow-Up Evaluation Questionnaire 2012-2013

Thank you for taking the time to complete this survey. We want to better understand your professional preparation as a teacher.

1. Did you receive any funds from TTT as a stipend to start teaching?

Yes

No

Not certain

2. Please identify the teacher preparation program you went through to enter the teaching field (select the best answer):

Traditional on-campus master's program with student teaching

Traditional on-campus master's program without student teaching

Distance-based synchronous master's program with student teaching

Distance-based synchronous master's program without student teaching

Distance-based asynchronous master's program with student teaching

Distance-based asynchronous master's program without student teaching

Traditional on-campus coursework for certification, not leading to a master's degree

Career switchers (workshops, one-year probationary teaching)

Any state-specific teacher licensure program:

- under 6 months

- more than 6 months to under one year
- more than one year

State Teaching Fellows program

Other (please specify)

3. How would you describe the quality of the licensure program you attended to enter the teaching field?

Poor Fair Good Superior Undecided

Please specify or explain your choice:

4. What features/courses of your teacher preparation program were the most beneficial in preparing you for classroom teaching? (Please select all that applies)

Reading and writing in content areas

Instructional technology

Developing instructional strategies

Classroom management and discipline

School and community life

Hands-on learning

Student teaching

Other (please specify)

5. Which of the following statements best describes your current feelings about staying in education:

I am not interested in leaving the teaching profession.

I am thinking about leaving the teaching profession.

I am definitely planning to leave the teaching profession within the next 12 months.

I have left the teaching profession.

Plt d

Troops to Teachers National Follow-Up Evaluation

School Administrator Questionnaire 2012-2013

Thank you for taking the time to complete this survey. We want to better understand the professional preparation of the Troops teacher serving at your school. We appreciate your thoughts about your Troops teacher's preparation experiences. It is important that you will fill the survey out completely, honestly, and accurately in order to get data that are meaningful and representative of your experience.

1. How would you rate your TTT teacher's instructional effectiveness as compared to a

Yes

No

5. If 'Yes', do you know why they have left?

Left for another school

Left the profession

Left to become a school administrator

Other

6. What statement(s) would you like to make about your experience working with a TTT teacher?

Appendix D: Responses to Open-Ended Questions

Unexpected experiences

Analyses of open-ended questions about respondents' unexpected experience in teaching revealed several themes: lack of parental support; family and emotional issues; students' apathy; and issues with classroom management and discipline. Selected answers show the areas of concern:

"The unexpected experiences I have encountered mostly revolve around the unwillingness of parents to do the important things necessary to allow their children to benefit from a good education."

Troops to Teachers Open Ended Questions

Themes

1. Unexpected Experiences	"It continually amazes me that so many parents don't seem to care, or be engaged in their child's education."
a. Lack of Parental Support	"Lack of parental involvement. Apathy from parents with regard to their child's education and expecting the teacher to parent the child during and after school."
	"I've always known that some parents are better than others, but it always surprises me when a parent doesn consider the long term future of their child when they make poor academic decisions."
	"The biggest surprise for me in teaching was that we have many parents who are not parenting their children and show little interest in them and their studies."
	"The only thing I feel I am always trying to find more answers to is to how to get more parent involvement and ownership in their child's education."

b. Family and Emotional Issues **c. Students' Apathy** "The general apathy that parents and students have towards bettering themselves though education was surprising to me."

"Dealing with student apathy is the toughest of all. Students come to class tired, worn out from staying up late and yet they feel school is time to rest or just have fun."

"I get frustrated with apathetic students. I change around the way I present material to them to try to spark their imaginations and generate interest, but some kids are just blank slates it seems."

"I was surprised by the number of students that have given up on themselves or feel that society has given up on them and that they have no hope of success."

"I was unprepared to deal with the amount of apathy thatstudents and parents have about attending and passing school and I was unaware that I would be held

d. Issues with Classroom Management and Discipline

	Teachers' Perception of the	"The college I went through was exceptional in preparing me for my license in my state."
	Quality of T3 Program	"It was a great program, because it was military friendly and considered all my experience in the military."
		"Many of our instructors were still in the field in administrative

"Many of our instructors were still in the field in administrative positions and provided real world experience through instrucreded 1

"The program helps us prepare for teaching but not understanding of student problems and issues. Also, lack of good classroom management classes."
"I don't think the program really prepared me to do the job of teaching. I got more of the philosophy of pedagogy and history when what I really needed (I figured this out after I started teaching) was lessons on how to actually do the job. Classroom management, lesson planning and administrative stuff are what they need to teach in college."
"Much of the required coursework appeared to be just fill with no specific practical use in a classroom. Some of the coursework didn't even match the title/objectives of the requirement such as classroom management."
"The Teacher Ready Program at the University of did not prepare me for teaching. The course gave me an understanding of what to do; however, it was not a program designed to really train as a teacher. The result of that is me being bounced from one school to the next and no longer able to teach in County due to its so called teacher mentoring program."
"Not their fault, but any teaching cert program should include classroom experience, early and often. Reading about the classroom is one thing, experiencing it is something very different."
"Too much focus on academic theory and not enough practical advice."

3.	Helpful T3	"Educational Psychology. The mere introduction of educational	
	Program Features	psychology as a concept is something that stays in the back my	
	identified by T3	mind. Depending on the climate and culture of the public school	
	participants	that you work in today, a new teacher may have received some	
		classroom preparation in all of the areas above but once the	
		teacher actually becomes part of the school setting it seems like	
		none of the above can prepare you for the social emotional	
		problems that students are dealing with. This is where the use of	
		psychology becomes a tool to motivate students."	
		"I was teaching full time as I took classes. What I learned in the	
		university classes I was able to apply immediately."	
		"Curriculum preparation, developing camaraderie with other local	
		teachers in training."	
		teachers in training.	
		"Teaching students with disabilities."	
		C C	
		"I encoding a literative Educational matheds that included	
		"I specialized in Alternative Educational methods that included	