HOW TEACHERS’ PERCEPTIONS OF PROFESSIONAL PREPAREDNESS
RELATE TO TEACHER RETENTION:
COMPARING TRADITIONALLY AND ALTERNATIVELY PREPARED TEACHERS

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HOW TEACHERS’ PERCEPTIONS OF PROFESSIONAL PREPAREDNESS RELATE TO TEACHER RETENTION: COMPARING TRADITIONALLY AND ALTERNATIVELY PREPARED TEACHERS

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ABSTRACT

Selecting and training potentially effective teachers and retaining those teachers in their work present immense challenges to the teaching profession. This paper examines the relationship between new teachers’ perceptions of career preparedness and their career intentions, accounting for differences in teachers’ gender, age, school characteristics, student characteristics, and teacher preparation pathway. This study differs from previous work by employing a nationally representative sample and analyzing three alternative preparation routes—the Teach for America (TFA) program, the New Teacher Project’s (NTP) various teacher programs, and the Troops-to-Teachers (TTT) program. Findings suggest that teachers who report feeling better prepared are more likely to report plans to stay in teaching beyond five years, and those trained by traditional certification programs are more likely to stay in teaching than those certified through alternative programs. Knowing that teachers who feel more prepared are more likely to plan on making teaching a career should guide policy-makers in designing teacher-training programs; fewer vacancies may translate to more competition for open positions, which allow hiring decisions to focus on the most potentially successful applicants. Policy implications include greater scrutiny of teacher education programs, particularly attending to the characteristics of those programs that produce teachers who feel well prepared.
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Introduction

Locke High School in Los Angeles, California, is emblematic of the education crisis upon which many education reformers focus: the graduating class in 2005, at a school where basically all students are members of a racial minority\(^1\), consisted of 240 students, about a quarter of the initial class of ninth graders. Of these 240 graduates, only 30 were deemed eligible to apply to a California state university\(^2\). Such poor academic outcomes translate into poor life outcomes and a worsened picture for U.S. prosperity, including a decreased competitive standing in the global marketplace. While there are many factors that influence student outcomes, one of the most important is a student’s teacher (Darling-Hammond, 2000; Haycock, 1998; Nye et al., 2004; Carey, 2004). Unfortunately, schools like Locke—that is, schools in urban areas with high rates of poverty and insufficient resources—have trouble retaining good teachers (Ingersoll, 2001). Policy-makers considering how to retain teachers in such high-need schools must not only take into account the conditions of the job, but also teachers’ career readiness. Career readiness, in this case, may derive from the value of teacher preparation programs.

On October 22, 2009, the United States Secretary of Education, Arne Duncan, publicly criticized U.S. colleges and universities with teacher education programs, saying that they were doing a “mediocre” job of preparing teachers. Just under a year later, on September 27, 2010, the Secretary announced a new government website, called TEACH.GOV, a teacher recruitment tool that includes an interactive “path to teaching” feature. This tool is meant to help potential

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\(^1\) Demographic Data from the National Center for Education Statistics; accessed at <http://nces.ed.gov/globallocator/sch_info_popup.asp?Type=Public&ID=062271003140>

teachers identify the necessary steps to become eligible to teach. For each state, the tool provides the names of all teacher preparation institutions and alternative preparation programs. Thus, the website is leading potential teachers to choose from among those institutions that the Secretary—and many before him—have admonished as failures.

Like the U.S. Department of Education, whose TEACH campaign intends to recruit enough teachers as are needed by low-performing schools and those with subject-area shortages, the National Council for Accreditation of Teacher Education (NCATE) also recognizes “staffing challenges” faced by high-need schools. Its solution to the challenge, however, is somewhat more nuanced: high-need schools must not only attract a large pool of teacher candidates, but also train these candidates appropriately and effectively. A report released by NCATE on November 16, 2010 concludes that teacher education programs must be radically changed to include much more practical experience in classrooms and less theoretical instruction. The authors of the report describe current teacher preparation programs as lecture-based and not applicable to the demands of today’s classrooms. By providing teachers with more hands-on training, they believe, programs can improve the clinical practice of teachers, which should improve students’ learning. They contend that a more closely supervised clinical experience with an expert teacher and/or mentor will help student-teachers develop and refine their practice, and thus improve their initial performance in the classroom. Early successes may inspire teachers to stay in the profession for at least another year to help avoid schools’ dreaded problem of finding new teachers each year to replace teachers who depart the school or career. If adopted by teacher training programs, this strategy would diverge greatly from the current pre-service

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field experiences of new teachers, and especially of teachers who take alternative pathways into the profession.

Alternative certification pathways, such as Teach for America, the Teaching Fellows, and Troops-to-Teachers, have emerged over the years in order to increase the pool of eligible teachers. These teachers, in particular, generally work in high-need schools, and like their colleagues from traditional preparation pathways—colleges and institutions that provide formal instruction and award degrees in teaching—their readiness for and efficacy in the profession is debated.

Currently, there are myriad ways to train teachers, without one universally accepted approach. Some critics discount alternative certification programs, which require fewer classroom hours, citing teachers’ subsequent lack of readiness. What is missing in this hotly contested policy arena is the dimension of teacher perception—that is, regardless as to whether outsiders perceive teachers to be ready, do teachers feel that they have been well prepared to teach, generally, and in high-need schools, specifically? Does this perception differ by teacher training pathway? The answers to these questions matter for two reasons: first, feelings of preparedness may be related to teachers' willingness to persist in the profession. If so, and if one type of training program does a better job than the other at affecting teachers’ beliefs in their professional competence, or self-efficacy, then this benefit can be leveraged to compel the other type of pathway to change. Second, if strong feelings of preparedness cause teachers to persist in the profession despite challenges, fewer teaching vacancies would exist, resulting in a more competitive process of hiring, which would increase the likelihood that only qualified, effective teachers are hired. The purpose of this paper is to analyze how teachers’ perceptions of their professional preparedness might contribute to their persevering in a teaching career.
Review of the Literature

There is a vast literature that focuses on teacher attrition and retention. Certain elements, such as school conditions, are well established as important factors to a school’s teacher turnover rate. A less conclusive body of scholarship exists regarding teacher preparation pathways and retention. Lastly, very few researchers have investigated teachers’ feelings of professional preparedness as a factor in whether or not they remain in a teaching career. What follows is a review of key findings in each of these areas.

Teacher Retention

Despite high enrollment in education degree-granting programs and a surplus of teachers in some markets, teacher shortages remain a challenge for many schools and districts. Apart from high rates of retirement, retaining new teachers is a major obstacle. Relative to other professions, annual turnover of teachers is considerably higher.4 Most studies are concerned with attrition within the first three to five critical years on the job. In 2007 the National Education Association (NEA) reported that an average of 50 percent of teachers in hard-to-staff schools transfer, resign, or retire within the first five years of the job.5 Among all public school teachers who taught during the 2008-2009 school year—irrespective of individual school characteristics—close to 23 percent of those with between one and three years of experience changed schools or left the career altogether (13.7 and 9.1 percent, respectively).6 Much research on the causes of teacher attrition reveal that there are a variety of reasons a teacher

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4 According to a report from the NCTAF, the turnover rate of teachers from 2000-2001 was 15.7%, compared to 11% in all non-teaching occupations in 1998.
might exit a school, including individual characteristics, school conditions, the characteristics of the student body, and other conditions of employment, such as salary.

Many researchers have identified the individual qualities of teachers that make them more likely to stay in their jobs, including age, race, gender, family status, and subject area. A recent empirical meta-analysis of 34 studies estimated the extent to which the aforementioned factors moderate attrition. The authors employed an odds-ratio analysis and found that men are three-fourths as likely to leave teaching as women, that younger teachers are more likely to leave than older teachers, and that married teachers are more likely to leave than their non-married peers (Borman & Dowling, 2008). Typically, teacher turnover encompasses those employees who change schools as well as those who leave the profession. Other studies that distinguish between teacher attrition from the career and from one school to another are important because they point to school-level conditions that, if altered, might contribute to greater retention.

Research consistently points to school-level factors that impact teacher professional experiences and their future career plans. In a widely cited study, Ingersoll (2001) used data from the nationally representative Schools and Staffing Survey (SASS), sponsored and released by the U.S. Department of Education’s National Center for Education Statistics. Carrying out a multi-stage approach to determine the most important factor influencing teacher turnover, Ingersoll’s results indicate that teachers exit a school because they perceive inadequate support from the school administration, encounter student discipline problems, have limited input into school decision-making, and earn too little. While most of his results are replicated in research on teacher retention, the literature on the impact of teacher salary to retention is decidedly mixed.

While some studies have shown a relationship between teacher salaries and retention, other work considers the role of additional school-level factors and, in accounting for these other
factors, minimizes the effect of salary. Analysis from a market/supply-and-demand perspective tends to reveal that in a similar way to other professions, higher salaries in teaching reduce the probability of turnover (Harris & Adams, 2007). Yet research has found that retention may be more contingent upon additional non-monetary matters. A regression analysis of data from public elementary schools in Texas shows that the characteristics of students at the school may have a greater impact than salary on teachers’ transitions from schools, especially for female teachers (Hanushek et al., 2004). Female teachers, the study reports, are less likely to respond to salary differentials than men, which is speculatively owed to the notion that females make more “family-dependent” decisions than males. Whereas a bump in salary might offset student characteristics in shaping a male teacher’s decision to remain in or leave a school, the same cannot be said for women, for whom considerations about the impact on their family of a move bears more weight in decision-making, according to the authors’ findings. In this study, teachers who changed schools systematically left for schools with fewer minority students and higher achieving, higher-income students. Similarly, higher average student achievement significantly reduced the probability of teachers’ moving or exiting Texas public schools at all levels of experience (Hanushek et al., 2004). Beyond Texas, the student characteristics in this study that drive teachers away typify urban public schools, which often encounter difficulty in recruiting and retaining teachers (Lankford, Loeb, & Wyckoff, 2002).

Considering student characteristics and teaching conditions together provides further insight. Research reveals that poor working conditions, including large class sizes, inadequate facilities, multi-tracked schools, and lack of textbooks, contribute to high rates of staff turnover (Loeb et al., 2005). These results derive from a survey of 1,071 teachers in California on which teachers self-reported whether turnover is a serious problem at their schools and whether the
school had difficulty filling vacancies. Poor working conditions emerged as a greater predictor of turnover than either salary or student characteristics. These data highlight obstacles to teacher retention, but smaller-scale studies that can follow teachers for a span of years at the beginning of their careers provide more in-depth understanding.

A longitudinal study of 26 teachers on whom data were maintained for five years upon finishing the same teacher preparation program—the MUSE\(^7\) program at the University of California at Berkeley—determined whether these graduates stay in urban teaching careers, leave the profession, or stay in urban education but shift from one school to another or from the role of teacher to another role (Freedman & Appleman, 2009). The MUSE-trained teachers stay in the profession beyond the first year at a higher rate than the national average—MUSE-trained teachers have a 96 percent retention rate compared to the 76 percent national rate. Furthermore, after five years, 73 percent of MUSE-trained teachers were still teaching and 69 percent of the original sample was teaching in high-poverty schools.

The MUSE program may influence whether teachers begin and remain in high poverty schools, or may reflect self-selection into a program whose mission is urban education, thus indicating that those teachers may be more committed to the work than typical teachers. In addition, the MUSE program, specifically, comprised teachers who had a sense of mission, a disposition for hard work, substantive preparation to be “teacher researcher[s],” the opportunity to change schools, and on-going support from a professional network (Freedman & Appleman, 2009). While these results offer insights into this boutique program, it is difficult to know whether the successful elements of the program could be more broadly effective. A further look at teacher retention as it relates to additional and more widely available teacher preparation

\(^7\) MUSE is the Multicultural Urban Secondary English Credential and MA Program.
programs illuminates this issue.

**Pathways to Teaching**

The previous studies examine the realities of teaching once teachers are working. Another stream of research considers the role that the teachers’ professional training plays in their job retention. One of the factors examined by many scholars is the very nature of the program itself—be it a traditional route to certification or an alternative route. The teaching profession requires some sort of certification to practice and attaining this certification can be completed through several routes. Standard certification requires having applied directly to a college or university with a state-approved training program, having taken the required courses and met all additional requirements, including student teaching and certification tests. This process is referred to in this paper and elsewhere in the literature as a “traditional” teacher preparation pathway. Alternative certification encompasses any route that is distinct from the traditional one. This pathway is intended for individuals who want to teach but who have bachelor’s degrees in other fields.

At least forty states have alternate-route provisions, accommodating teacher candidates who need alternative routes to certification (Darling-Hammond, 1999). Various studies conducted in the late eighties and early nineties revealed that alternate-route teachers tend to leave teaching at higher-than-average rates (Darling-Hammond, 1992; Lutz & Hutton, 1989; Stoddart, 1992). The literature on teacher retention for such teachers is conflicting, though, due largely to the variety among alternate-route preparation programs.

The theory of career development and transition provides insight into the reason why some alternative certification programs produce teachers with lower rates of attrition than their colleagues in traditional programs. Many alternative teacher-training programs cater to career-
The career development literature finds that transitions between careers are important, and those who make smooth transitions are more likely to stick with their new professions (Jorissen, 2003). It follows that those alternative-route teachers who have smooth transitions from other careers are more likely to remain in teaching. Whether or not someone is transitioning from one career to another, though, they are also more likely to stay if they experience feelings of career competency, which lead to higher self-esteem and increased involvement in the career (Jorissen, 2003). This feeling of competence is part of a teacher’s self-efficacy, which is related to her perception of preparedness for the job.

Self-efficacy is a construct of social cognitive theory, developed by Dr. Albert Bandura. Bandura (1995) describes self-efficacy as “…the belief in one’s capabilities to organize and execute the courses of action required to manage prospective situations” (p. 2). As applied more narrowly to teaching, efficacy has been described as a teacher’s belief in her own ability to plan and implement action that will result in the successful delivery of a teaching task in a given context (Tschannen-Moran, Hoy, & Hoy, 1998). If a teacher believes she has the ability to provide effective instruction to students, then she should have positive self-efficacy in her role as a teacher. If she feels confident as a teacher, then she is likely to show greater investment in the career than if the opposite were true. Consequently, the success with which various teacher preparation programs train educators so that they have high self-efficacy may impact whether or not a teacher stays in the career.

Despite the evidence cited revealing greater retention among career-changers in alternative certification programs, the overall results of retention among teachers trained through alternative programs, regardless of whether they change careers or enter the profession via alternate routes, are mixed. For example, one study found that the key variable related to retention among all of
these teacher preparation programs is the length of the program; a longer preparation program that includes an “intensive” student teaching experience results in higher retention (Darling-Hammond et al., 2001). Teachers felt better prepared with a year-long clinical training and, consequently, remained in teaching (Darling-Hammond et al., 2001). To get a more nuanced understanding of what it is about longer clinical programs that lead to a greater likelihood of retention, Jorissen (2003) conducted a small-scale qualitative study of six teachers who entered the profession through an alternate certification program that included a yearlong internship in urban schools and who were all still teaching six years later. Teachers reported that their mentors, in addition to providing a strong professional relationship, modeled best practices, which the student teachers then had an immediate opportunity to apply. They also appreciated the cohort camaraderie and support offered by the program (Jorissen, 2003).

Large-scale studies lead to alternate conclusions about the relationship between certification route and teacher retention. A large, nationally representative sample of public school teachers from the School and Staffing Survey of 1993-1994 yielded results including that the alternative certification teachers in the sample had lower academic qualifications than the traditional certification teachers and that a lower percentage of alternatively certified teachers than traditionally certified teachers treated teaching as a lifelong career (Shen, 1997). These results sparked controversy because of their implications for educational equity, given that so many alternative certification teachers were teaching in inner-city schools (Shen, 1997) and teacher turnover hurts student outcomes (Murnane & Steele, 2007). While still cited throughout

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8 It is outside the scope of this paper to analyze the characteristics of all teacher preparation programs, but the intensity of a student teaching experience is directly and positively related to the program length, as understood by the authors of the 2001 study by Darling-Hammond and her colleagues. More time in the training program often means more time to learn from student-teaching experiences.
the literature, the study should be replicated with more recent data; the breadth and reach of alternative certification programs have grown substantially since 1994. Teach for America (TFA) and the Teaching Fellows, in particular, are widely popular alternative certification programs whose teaching corps are not randomly selected and whose presence in a national sample might yield different results.

A comprehensive review of the empirical literature regarding the distinctions between alternative and traditional certification programs (Guarino et al., 2006) corroborates earlier work by showing widely disparate retention rates among alternative certification programs. The review of the programs also reveals, however, that none of the studies accounted for self-selection of individuals into alternative certification programs. If teachers from non-traditional programs are substantively different in aggregate than teachers in traditional programs, then differences in retention may not be related to the programs themselves. In addition, none of the studies covered by the authors indicate the relationship between teachers’ own feelings about their preparedness from alternative certification programs and their likelihood to remain in teaching. In general, there are few studies on teachers’ own perceptions of their job preparedness and how that may relate to their decision to stay in or leave the profession.

**Teacher Perceptions of Training**

Teachers’ job mobility is related to school characteristics and student characteristics, as well as certification pathway, but these factors may not provide the full picture. To what extent do teachers’ own perceptions of their preparation relate to their perceptions of their work? Several studies examine how teachers perceive their preparation and whether these perceptions actually affect career decision-making. These studies suggest that traditionally prepared teachers are more likely to plan to stay in teaching, because they are more likely to report feeling prepared
for the job’s demands. Studies from the 1970s and 1980s suggested that when teachers perceived their training as adequate they were less likely to face the typical problems of beginning teachers (Darling-Hammond et al., 2002). Later studies showed that teachers beginning jobs with no preparation or via alternative routes were less satisfied with their training (Darling-Hammond et al., 1989; Jelmberg, 1995). Satisfaction with the degree to which they have been prepared may influence teachers’ on-the-job experiences in schools and, consequently, their decisions to remain teachers.

Darling-Hammond, Chung, and Frelow (2002) used data from a 1998 survey of 2,956 teachers in New York City, all with one to three years of teaching experience, to study the relationship between these teachers’ perceptions of preparedness for teaching, their self-efficacy, and their plans to remain in teaching. The sample included both teachers with traditional certification and those who had been certified through alternative programs. The survey asked the new teachers to report their feelings about their preparation on four levels of “preparedness,” as well as to indicate their plans to remain in teaching (Darling-Hammond et al., 2002). In this study, teachers from traditional programs felt better prepared than those from alternative certification programs, and the traditionally prepared group more often reported plans to stay in teaching.

Zientek (2007) used Darling-Hammond’s model and theoretical framework to conduct a similar study of teachers in Texas three years later. She used a sample of convenience that closely resembled Darling-Hammond’s New York City sample and a survey instrument that replicated some of Darling-Hammond’s questions. Corroborating the earlier research, traditionally prepared teachers felt better prepared than alternative-route teachers on various measures of preparedness. This study could not trace these feelings of preparedness to any
single element of the training; however, the student teaching component distinguishes programs from each other and may influence teacher perceptions, as was determined to be the case in the next study discussed.

A study of 329 students in a pre-service program in elementary education in a large, public, urban university in California provides insight into teachers’ rationale in choosing a preparation pathway and their feelings about the quality of the pre-service program (Turley & Nakai, 2003). Of those teacher candidates, 52 percent completed their preparation program as traditional student teachers—that is, working with a full-time cooperating teacher—42 percent used their employment on the emergency permit as their student teaching experience, and 6 percent began as traditional student teachers and accepted emergency permit positions partway into the student teaching semester (Turley & Nakai, 2003). The traditional student teachers were not paid, while those working on the emergency permit were salaried as regular teachers. The teachers were surveyed once and asked how they perceived the culminating field experience of their pre-service program.

Surprisingly, those without traditional student teaching experience were just as satisfied (on average) as their student-teacher peers with their training. Much of emergency-permit teachers’ satisfaction can be attributed to the financial reward they received as salaried employees; they were disappointed that they could not observe other teachers, but the financial reward was an incentive that apparently offset that disappointment. In contrast, the traditional student teachers were disappointed that they did not receive financial compensation, but they were concerned about their potential negative impact on students if they entered the classroom independently too soon. While some teachers wanted to maximize their time as student teachers, others cut it short for the option of independence and compensation. This study is limited by its
singular focus on teachers at the elementary level, reducing the generalizeability of the findings. Many teachers have a strong preference about teaching young kids or older kids (e.g., elementary or high school); those preferences might be related to their personality type, which may also be related to their willingness to remain in the profession. Moreover, there may be distinct differences between elementary and high school-level teachers, including their thoughts about the efficacy of a culminating field experience or their motivations for choosing a particular preparation pathway.

**Summary**

While relatively broad and robust in the area of teacher attrition and retention, the literature lacks significant depth regarding the relationship between teachers’ perceptions of the quality of their preparation and their decision to stay in or depart the job. What studies have found is that teachers’ personal characteristics, school characteristics, student characteristics, and various features of professional preparation, including field experience, relate to attrition. Turnover is a particular problem in high-need schools, and salary has a mixed impact on teachers’ moving or leaving decisions. Small-scale studies of boutique alternative teacher certification point to higher retention of alternatively-certified teachers, while larger studies show that traditionally-prepared teachers are more likely to stay in teaching. Two studies in the last ten years suggest that traditionally prepared teachers are more likely to report feeling prepared for the job, but another study reveals no real difference in how teacher candidates from alternative and traditional programs perceive their preparation.

This paper’s analysis will examine factors related to teacher retention, specifically whether or not a teacher reports feeling prepared to begin teaching, in order to determine if there is a relationship between teachers’ perceived preparedness and their plans to stay in the career. This
paper will also focus on the relationship between teachers’ perceptions of preparedness and commitment to teaching, and if this relationship varies significantly by teacher preparation program type. This approach will be similar to that taken by authors previously cited, but will be based upon a nationally representative sample of first-year teachers.
Research Question

The research questions at the focus of this paper are twofold: 1) Are teachers’ perceptions of professional preparedness related to teacher retention? And 2) Does this relationship vary by preparation route?

The conceptual model (Figure 1, below) shows the relationship between a new teacher’s likelihood of staying in the profession and the primary variable of interest, perception of preparedness, while accounting for differences in other factors that might otherwise influence the outcome of teacher retention in the profession.

Throughout this analysis, traditionally-certified teachers are defined as having regular, standard, or professional certification, obtained through a traditional undergraduate degree with a major or minor in education or with a Master’s degree in education. The comparison group of “alternatively-certified teachers” holds alternative certification, obtained from programs other than traditional teaching degree programs. In this dataset, alternatively certified teachers include those from Teach for America (TFA), the New Teacher Project (NTP)—which includes various cities’ Teaching Fellows and participants in the Baltimore City Teaching Residency— and Troops-to-Teachers (TTT), each with its own training process. Given that these teachers are more likely to work in high-needs schools, it seems reasonable to infer that they would have lower rates of retention than traditionally certified teachers.

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9 Based on the information on the New Teacher Project’s website <http://www.tntp.org/index.php/teach/> the Baltimore City Teaching Residency is another name for the Teaching Fellows; it is simply the name given to its iteration in Baltimore, thus the Teaching Fellows and Baltimore City Teaching Residency respondents can be considered together.
Teachers’ decisions about whether to stay in the profession or leave may be influenced by a variety of factors, including their own personal characteristics, school conditions, student characteristics, and their manner of preparation for the career. The conceptual model offers a broader picture than the statistical analysis will allow, due to data limitations (those variables in the model that will be incorporated in the analysis are indicated in underlined font). Research presented in the literature review suggests that each of the variables listed is related to teachers’ career decisions. Younger teachers, for example, are more likely to leave the profession. A higher salary often increases retention. A high concentration of students from low-income families will likely mean a higher rate of teacher attrition for the school. But this paper focuses on the relationship of the teacher’s preparation path to the decision to stay or leave the career. To the extent that each of these factors can be operationalized within the dataset used for this analysis, they will be.
Figure 1.

Personal Characteristics of Teachers:
- Gender
- Age
- Race
- Highest education attained
- Family status

School Conditions
- Teaching out of certification
- Salary
- Concentration of poverty
- Concentration of students w/special needs

Student Characteristics
- Race
- Gender
- Age
- Socioeconomic status

Teacher Preparation Route
- Alternative Program TFA, NTP, TTT
- Traditional Program

Teachers’ perception of preparedness to teach
- prepared, -unprepared

Teacher’s Decision to Stay or Leave a School or Teaching
Methodology

Data

The data for this study come from the Roper Center for Public Opinion Research, which catalogued the data from the surveying organization, the Public Agenda Foundation, which was hired by the National Comprehensive Center for Teacher Quality. The surveys were conducted by phone (37.5 percent) and online (62.5 percent) in March and April of 2007. The respondents totaled 865 teachers, including a nationally representative sub-sample of 641 traditionally certified teachers combined with a sub-sample of 224 teachers from alternative-route certification programs. The names of the traditionally-certified sample were pulled from a national list of first-year teachers and the sub-sample of alternative-route teachers came from three specific programs--Teach for America (TFA), the New Teachers Project (TNTP), and Troops to Teachers (TTT).

There are several differences among the alternative route programs, from their guiding philosophies to their profiles among the public. Teach for America (TFA)\(^{10}\) is a national organization that selects and places recent college graduates of all academic majors and career interests in predominately low-income schools. Corps members, as the new teachers are called, commit to two years of teaching, which they begin after a five-week training institute the summer prior to their start. Like TFA, New Teacher Project\(^{11}\)--of which the Teaching Fellows and the Baltimore City Teaching Residency are a part--has a national presence, recruiting and training new teachers to work in hard-to-staff schools, largely in urban settings. Teaching Fellows become full-time teachers after a seven-week training program, which includes coursework towards a master’s degree in teaching, which is subsidized and that they obtain over

\(^{10}\) See [http://www.teachforamerica.org/](http://www.teachforamerica.org/)

the course of the program. Troops to Teachers (TTT)\textsuperscript{12} is a joint program between two federal agencies—the US. Departments of Education and Defense. The goal of the program is to assist military personnel to transition into teaching careers in low-income (typically high need) public schools. Teachers who enter through this program receive financial assistance to defray the costs of training and certification if they commit to three years of teaching. While each of these programs has as a primary goal of staffing low-income schools with highly skilled teachers, their general philosophies vary. The TFA organization provides all professional development for their members and does not intend for their teachers to remain in the classroom beyond two years. The NTP works with colleges of teacher education and requires teachers to obtain their master’s degrees, in large part with the aim of retaining teachers for a longer professional career. The Troops to Teachers program sets up teacher applicants with existing alternative-route programs, rather than training and certifying the applicants themselves.

Of particular interest to this research is the comparison between traditionally and alternatively trained and certified teachers. It is of some concern that the lists of alternative-route teachers were provided by the organizations themselves. This might introduce some positive selection bias, but there is nothing to indicate that the lists provided by each organization were populated with hand-chosen names.

**Sample Description**

The sample for analysis is drawn from the larger two-sample dataset. Identifying which teachers should be included in the analytic sample led to the omission of some teachers and recategorization of others. The original sample contained a subset of 641 teachers classified as traditionally certified and another subset of 224 classified as alternatively certified, however, the

\textsuperscript{12} See [http://www.proudtoserveagain.com/](http://www.proudtoserveagain.com/)
analytic sample has a total of 789 teachers. In order to derive this new sample size, this study combines a new subsample of 573 traditional-route teachers with a new subsample of 233 alternative route teachers (=806), and subtracts 17 teachers for whom responses were missing for either the dependent variable or independent variable of primary interest. To arrive at the number 573 this study reclassifies 68 of the original “traditional” teachers, who are more appropriately classified as “alternative,” based on self-identification in the survey as participating in an alternative-route program (641-68=573). To arrive at the number 233 this study adds 9 of the teachers reclassified as alternative to the original 224. The remaining 59 teachers had to be omitted from the analytic sample because either their program name could not be identified (55 cases) or they refused to answer their program type (4 cases).

The dataset from which the analytic sample is derived is 75 percent female and 25 percent male. Eighty percent of the dataset is white, while 16 percent comprises members of a minority race or identified as non-white Hispanic (4 percent did not report their race). The dataset includes oversamples of teachers in both the Midwest and high-needs schools, and the final data were weighted to account for this disproportionate sample design. Overall, the sample is young without advanced degrees, reflecting the early career focus of the study. Teachers younger than 30 years old represent 67 percent of the dataset, and 51 percent of teachers have not obtained education beyond a bachelor’s degree. With regards to school conditions, 12 percent of teachers in the dataset are teaching outside their certification area. Finally, student characteristics are measured by family income level and special needs—58 percent of teachers report that greater than 51 percent of their students receive free or reduced price lunch (130 and 185 percent of the
poverty line respectively\textsuperscript{13}, suggesting more than half the teachers work with socioeconomically disadvantaged populations. About half -- 51 percent -- report that the majority of their students have special needs.

The teachers in the dataset, 67 percent of whom received certification through traditional routes of preparation, were asked: “Overall, looking back, would you say you were prepared or unprepared for this first year of teaching?” Seventy-four percent of all of the teachers felt prepared to teach, and 68 percent reported that they were likely to teach for more than five years.

\textbf{Data Issues}

One group in this analysis, then, consists solely of teachers who were surveyed in their first year of teaching and came to teaching through a traditional route of teacher preparation. The other group consists of teachers who were recruited and trained through one of the three alternative-route programs already mentioned. The majority of teachers across both groups were surveyed in their first or second year of teaching, while a small portion was surveyed as teachers in their third year or beyond. The inclusion of teachers other than those in their first year might introduce some bias into the results, but a dummy variable (discussed below) is included to help diminish any potential effect, and as the first five years of teaching are recognized as the critical ones—notably because decisions about whether to stay in the profession or go may occur each year in that time span\textsuperscript{14}—their inclusion in the model is warranted.

Teachers who did not verify their certification statuses were omitted from analysis (55 teachers), along with 4 teachers who refused to answer or did not know their certification’s program of origin. Given that these 59 teachers in total comprise 6 percent of the overall sample,

\textsuperscript{13} See USDA Food and Nutrition Service guidelines at http://www.fns.usda.gov/cnd/frp/frp.process.htm
\textsuperscript{14} See, for example: http://www.ednews.org/articles/teacher-retention-a-critical-national-problem.html
their omission is unlikely to impact the analytic results. Also excluded from the analytic sample were those 17 teachers who did not provide answers to the primary variable of interest, perception of preparedness, or did not respond to the question that is used as the dependent variable, which asked how many years they planned to continue in the career. When all omissions are made, the analytic sample includes 789 teachers.

**Descriptive Statistics**

Table 1 presents findings comparing the groups by certification type. For example, about a quarter of the analytic sample is male, but only 20 percent of traditionally certified teachers are males, while a significantly higher percent – 37 percent – of alternatively certified teachers are. The traditional and alternative-route teachers vary significantly across all the characteristics tested and presented in Table 1, with the exception of teachers who are not teaching in their certification area (see Table 1). Teachers who are not teaching in their area of certification comprise 11 percent of the traditional group, compared to 16 percent of the alternatively certified teachers. Alternate routes are significantly more diverse, with only 15 percent of the traditional sample comprising teachers who are members of racial minorities, compared to 32 percent of alternatively certified teachers. There are also more young teachers in the traditional group of teachers, where they comprise 73 percent, compared to the 63 percent of alternatively certified teachers. Teachers with at most Bachelors degrees make up 59 percent of traditionally certified teachers, compared to 24 percent of alternatively certified teachers.\(^\text{15}\)

Table 1 also shows differences in student enrollment among alternative and traditional-route teachers. One of the ways to measure how many teachers are in high poverty schools is to

\[^{15}\text{This age disparity may be accounted for by the presence of older, career-changing teachers for whom many alternative-route certification programs are designed. Similarly, the high proportion of alternative-route teachers may be due to the presence of career changers who previously obtained advanced degrees.}\]
gauge the number of students receiving free or reduced-price lunch at the teachers’ schools. In the analytic sample, 51 percent of traditional-route teachers are in schools where over 51 percent of students receive free or subsidized lunch, compared to 85 percent of teachers from alternative routes. Another indicator of student composition is the concentration of students identified as having special needs. While just 15 percent of traditionally certified teachers indicated that the majority of the students they teach have special needs, 29 percent of alternative-route teachers indicated the same. These numbers, however, are based on teacher reports and likely contain error.

Finally, Table 1 shows the composition of teachers by the main variables of interest. Of the 789 teachers in the sample, 71 percent come from traditional routes and the remainder from alternative routes. Regarding how prepared they felt to begin teaching, 84 percent of traditionally trained teachers felt prepared compared with 54 percent of alternative-route teachers. Finally, while 83 percent of traditional-route teachers reported plans to stay in teaching for longer than 5 years, just 31 percent of alternative-route teachers indicated the same. Bivariate statistical testing reveals statistically significant differences (at p <0.01) between traditional and alternatively certified teachers for the variables of gender, race, age, educational attainment, free lunch eligibility, number of special education students in class, teachers’ perceptions of preparedness, and teachers’ plans to continue teaching.

**Logistic Regression Model**

The analysis estimates a logistic regression model, or a model that estimates changes in the log odds of a given outcome based on one-unit changes in each of the continuous or dichotomous predictor variables. Logistic regression is a version of regression that applies to
dichotomous outcomes generally and in this paper, career persistence, specifically. The model follows the general form:

\[
\logit(Y) = \text{natural log(ods) = } \ln\left(\frac{\pi}{1-\pi}\right) = \alpha + \beta X.
\]

This study uses the following logistic regression model:

Log (odds of plans to remain in teaching for more than 5 years) =
\[
\beta_0 + \beta_1 \text{unprepared} + \beta_2 \text{male} + \beta_3 \text{minority} + \beta_4 \text{young} + \beta_5 \text{postgrad} + \beta_6 \text{misassign} + \beta_7 \text{freelunch} + \beta_8 \text{special} + \beta_9 \text{altcert} + \beta_{10} \text{notfirst} + \mu.
\]

Tests such as the likelihood ratio test evaluate the goodness-of-fit for the model overall, and the Wald statistic evaluates the significance of each independent variable. The Wald test\(^\text{16}\) assesses whether restricting parameters in a model to zero, by removing those variables of interest from the model, alters the fit of the model. In the case of the present analysis, the parameters “unprepared” and “altcert” were restricted. Mathematically, the Wald test is a test of the null hypothesis that “unprepared” and “altcert” are simultaneously equal to zero and thus their removal would not reduce the overall model fit. The Wald test revealed a statistically significant p-value (0.000), indicating that the null hypothesis was to be rejected and that including “unprepared” and “altcert” in the model result in a statistically significant improvement in the fit of the model.

With logistic regression, the raw coefficient output is not meaningful in-and-of itself. Rather, interpretation must be of the odds ratio, which is equal to \(\exp^{\beta_{\text{eta}}}\), or the exponential function where the coefficient is represented by \(\beta\). The percent generated from that function gives the likelihood that the dependent variable will equal 1 (it is dichotomous) given both

\(^{16}\) This explanation is drawn from the UCLA Academic Technology Services’ resources on Stata, For more, see: http://www.ats.ucla.edu/stat/stata/faq/nested_tests.htm
values of 0 and 1 for independent dichotomous variables. As Peng, Lee and Ingersoll (2002) explain, logistic regression estimates the logit of an event outcome given some set of predictors, and because the logit is the natural log of the odds (or probability/[1-probability]), it can be translated into a probability.

Variables

Each table lists the variables included in the analysis. **Demographic background** is related to teacher retention, although not as importantly as once thought (Borman & Dowling, 2008). Slight **gender** differences do emerge among which teachers persist in the profession after three years, which necessitates its inclusion in the model. Gender is coded 0 for females and 1 for males, with the variable labeled as ‘male,’ since the teaching profession is predominated by females, as is the sample. **Race** of teachers is also included, because studies have reached various conclusions about its relationship to retention, including a meta-analysis that revealed white teachers are more likely to leave than minority teachers (Borman & Dowling, 2008). Race is coded as 0 for white teachers and 1 for members of minorities, as whites make up the majority of teachers in the sample (77%). **Age** is also included, as evidence suggests that older teachers are less likely to leave teaching than younger ones (Borman & Dowling, 2008). Age 30 is the division point for comparison and all teachers younger than 30 are coded 1 and those older as 0.

To isolate the relationship between perceptions of preparedness and teacher retention, differences in the **academic backgrounds** of teachers must be considered. First, teacher level of **academic attainment**, as measured by the highest degree obtained, is included based on teachers having at least a bachelors’ degree (=0) or more than a bachelor’s degree (=1). While the evidence is not robust on the role of teacher educational attainment on retention, it is included because it has proved significantly related to other teacher outcomes such as teacher job
commitment. Second, teacher certification is included in the model and coded as 0 for all traditionally trained teachers and 1 for teachers in any of the three above-named alternative certification programs. As already indicated, there is a vast literature debating the relative merits of each training, and this study aims to compare the programs on teacher retention and perceptions of preparedness.

School conditions that might contribute to teacher retention are numerous, but based on previous research and what is available in this dataset, two variables are included to represent the role of school conditions in general. Whether or not a teacher is teaching outside his or her certification area often reflects whether schools face hiring challenges perhaps due to poverty, location, student discipline issues, low morale, or other school contextual factors, which may relate to teachers’ willingness to stay in the profession. Teachers teaching outside their certification area are coded as 1, while all others are 0, since teachers who are not instructing in their chosen field may feel less prepared and thus less willing to stay in the profession.

Various studies have concluded that school composition, such as school average poverty level and students’ average academic achievement, influence teacher attrition (Borman & Dowling, 2008). Thus, I include a proxy variable for the schools’ average family income, as well as the concentration of students with special needs. The latter variable should not be considered synonymous with student achievement, a variable often measured by test scores; rather it reflects the reality that special needs include behavioral problems and learning disabilities and thus may influence teachers who may prefer to teach children with fewer challenges. Additionally, teachers who face the challenge of differentiating instruction for many special needs students may be less willing to remain in the profession. Average family income is operationalized through a variable that approximates the percentage of students in a teacher’s
school who are eligible for free or reduced lunch (which itself is a function of students’ families’ income compared to the poverty line). The variable is called “freelunch” in the model. I measure this variable by creating a dummy variable for teachers who report working in school where fewer than 51 percent of students are eligible (=0), compared with those who work in a school where 51 percent or greater are eligible (=1). Concentration of students with special needs is captured by a dummy variable, where teachers who report that “most” or “virtually all” of their students in a typical class would be classified as having special needs are coded as 1, while those who report that some, a few, or none of their students would be classified are coded as 0.

The key independent variable of interest in this analysis is perception of preparedness. While there is some evidence to suggest that teachers who feel less prepared are less likely to stay in teaching, the empirical evidence is limited. In this analysis, teachers who respond to the question, “Overall, looking back, would you say you were prepared or unprepared for this first year of teaching?” that they felt “prepared” are coded as 0 and those who report feeling “unprepared” are coded as 1.

The outcome variable is the teachers’ report of how long they plan to continue teaching. The scale from which teachers were asked to choose was: not coming back next year; plan to teach next year or two; 3 to 5 years; 6 to 10 years; or more than 10 years. Because of high attrition among all teachers within the first five years, this variable is dichotomous, with teachers who reported up to five years in their career coded as 0 and those who reported six or more years coded as 1. In order to account for the different numbers of years of experience of teachers from alternative routes, I have created a dummy variable, “notfirst,” where teachers in their second year of teaching or greater at the time of the survey are coded as 1, while the remaining teachers
– all first-years – are coded as 0.

As is often the case in regression analysis, where individual characteristics are hypothesized to influence the outcome, it is difficult to control for participants’ motivation unless measured directly. Most surveys do not attempt to measure motivation, and even if they did or could, those who did not respond may experience different levels of motivation from respondents, thus creating a comparison group about which little is known. As such, individual characteristics that shape why people choose one teacher preparation route over another are not captured in this analysis. Similarly, it may be that the route was chosen specifically because of its expectations for retention: if a teacher only intends to teach for a couple of years, it does not necessarily make sense to pay for the traditional route’s teaching degree. There may be some omitted variable bias due to the exclusion of variables that might capture whether the individual views teaching as a viable long-term career.
Results and Discussion

A logistic model was fit to the data to test the research hypothesis that whether a new teacher plans to stay in teaching beyond the fifth year is linked to their perceptions of preparedness and certification route. The logistic regression analysis was carried out by the Logistic procedure in STATA® version 11.1 (StataCorp 2009). The following results emerged:

Predicted logit of (Stayers) = 3.207 + (-1.094)*unprepared + (-0.119)*male + (-0.238)*minority + (-1.431)*young + (0.090)*postgrad + (-0.767)*misassign + (-0.210)*freelunch + (0.120)*specialed + (-2.490)*altcert + (0.033)*notfirst + μ.

According to the model, feeling unprepared to teach, being younger than thirty years old, being assigned to teach a subject outside the teacher’s certification area, and being alternatively certified all hurt the odds of continuing in teaching for more than five years. The research hypothesis at the center of this thesis was confirmed: teachers who feel less prepared for their job are significantly less likely to stay in teaching. The odds of continuing in teaching for more than five years are 67 percent less for those teachers who reported feeling unprepared than for those who reported feeling prepared (p<.001). Young teachers – those in their twenties – are 76 percent less likely than their older peers of planning to continue in teaching for more than five years (p<.001). The odds of continuing in teaching for more than five years are 54 percent less for teachers who reported that they were teaching a subject outside of their certification area (p<.01). Most notably, alternatively certified teachers have odds 92 percent lower than traditionally certified teachers of planning to continue to teach for more than five years. None of the other predictive variables are significant, including gender (p<.624), race (p<.345) and socioeconomic status among teachers’ students, as measured by free lunch eligibility (p<.343).

These results can be used to illustrate predicted probabilities of continuing in the teaching career for more than five years for individuals with certain characteristics. In order to interpret
logistic coefficients it is necessary to plug in values for all of the variables. This then gives a predicted $y$ for a person with those characteristics. A common way to do this is to plug in average values for each of the variables in the model. The analysis here creates an average teacher by plugging in 0 or 1 for each variable – apart from the variables of interest – based upon the value for the majority of teachers. For example, teachers are either male or female, not some average thereof, so the value 0 is plugged in for male (gender) to indicate that the average teacher is female. Then, the logit function\(^\text{17}\) is used to calculate outcomes.

The model predicts that a person with average characteristics who was alternatively certified and reported feeling unprepared to teach has less than a 1 percent chance of continuing in teaching for more than 5 years (see Figure 2). In contrast, a person with average characteristics, including traditional certification, who reported feeling prepared to teach has an approximately 16 percent chance of continuing to teach beyond a fifth year. That is a difference of about 15 percentage points. Additionally, there is a 5 percentage point difference between those who are traditionally certified and unprepared and those who are alternatively certified and prepared. The latter group – teachers who take alternative routes yet feel prepared to teach – is less likely to continue teaching. To sum, Figure 2 presents the findings, supporting the argument that perceptions of preparedness are indeed related to teachers’ career intentions and tied to teachers’ preparation pathways. Alternatively certified teachers are less likely to intend to stay in the profession for more than five years, but those alternatively certified teachers who feel unprepared are especially unlikely to want to stay teaching. Even the teachers who feel unprepared but are certified through traditional means are more likely than alternatively certified teachers to report wishing to remain teaching past five years.

\[^{17}\] Pr ($y=1$) = $\frac{e^z}{1 + e^z}$
Figure 2.

Notes: Bar Labels are Categorical to Identify 4 Distinct teachers:
Person 1 = Traditionally certified, reports feeling prepared to teach
Person 2 = Traditionally certified, reports feeling unprepared to teach
Person 3 = Alternatively certified, reports feeling prepared to teach
Person 4 = Alternatively certified, reports feeling unprepared to teach
Discussion

It was hypothesized that feelings of preparedness in new teachers would be related to their retention in the career, and based on the results, new teachers’ own perceptions of preparedness for the job seem related to their plans to stay in the career. It is important to understand what are the factors that keep teachers in schools in order to reduce turnover and retrain good teachers. Whether or not feelings of preparedness translate into excellent academic outcomes for students is not the focus of this paper, but being able to reduce turnover and retain good teachers may benefit student outcomes. In order to encourage teachers to stay in the career, the evidence from this analysis shows, it is important that they emerge from their teacher training programs feeling prepared. There is variability in the degree to which teacher training programs succeed at this, but it need not be an elusive endeavor. One can imagine mechanisms (and likely such tools already exist in some programs) that allow for monitoring teacher trainees’ feelings of preparedness over the course of a program. Professional educators who facilitate new teacher training ought to periodically assess – through survey or interview – these trainees’ perceptions of preparedness and respond as necessary to improve such perceptions if teachers-in-training feel unprepared.

Notably, the inclusion of perceptions of preparedness in the model did not explain away the relationship between certification route and plans to stay in the profession. Certification route remained significantly related to teachers’ plans, indicating a much greater likelihood that traditionally trained teachers will stay in teaching compared to alternatively certified teachers. At the very least, though, the ability of each of the alternative programs to produce teachers with strong feelings of preparedness warrants research. However, that the predicted probability of continuing in teaching for more than five years is only 16 percent for traditionally certified
teachers who reported feeling prepared, it is clear there are still other factors that impact new
teachers’ career plans.

Of most relevance to this study is that teachers’ perceptions of preparedness upon
beginning the job relate to their plans to stay in the career. That the odds of staying beyond a
fifth year are 67 percent lower for teachers who reported feeling unprepared confirms the
research hypothesis. The intersection of this feeling of preparedness and a teacher’s certification
route shed further light on the problems that the teaching career – and, subsequently, schools –
face. Given the characteristics of an average teacher – as understood within the parameters of
this study – the model predicts very low teacher continuation rates overall, although the
magnitude of the difference (15 percentage points) in this continuation percentage between those
who were traditionally certified and felt prepared and those who were alternatively certified and
felt unprepared is quite large.

Limitations

One of the major limitations of this study is the veracity of the results obtained from the
survey and whether the recorded answers provide a true measurement of reality. This is not an
issue for most of the variables — which are more objective, such as age, race, level of education,
etc. – but for the main dependent and independent variables of interest, the data are obtained by
asking the teachers to assess – subjectively - their preparedness and their future career plans.
Asking a teacher how prepared she was to teach towards the end of her first year of teaching may
not yield an objective response. Any number of experiences might influence how the teacher
remembers how prepared she felt, including current performance. If the teacher was having a
particularly good week, she might say she was prepared to teach, and one who was having a
particularly bad week might say she was unprepared. Nonetheless, the analysis rests on the
assumption that results in the aggregate will tell us something about feelings of preparedness on average. Similarly, the dependent variable is not “true”, insomuch as it is a prospective variable. The importance of this analysis is to uncover what makes a teacher stay or leave a career. The data obtained from this survey do not tell who left the career but, rather, what individuals’ predictions of when they plan to leave the career are. The teachers’ predictions may have turned out otherwise in reality, which would completely alter the results of the regression. Some of the teachers may have ultimately changed schools, rather than leaving the career entirely. This type of information would be useful given the problem of teacher turnover. Consequently, the results must be considered descriptive of possible trends, but not definitive of actual trends.

That the odds of continuing in teaching are 92 percent lower for alternatively certified teachers than for traditionally certified teachers and that the result is statistically significant, is jarring on face value; however, further consideration warrants a skeptical interpretation. Alternatively certified teachers, by and large, do not plan to make careers out of teaching in classrooms. Organizations like Teach for America, from which many alternatively certified teachers come and which comprise a large portion of the dataset used in this analysis, make no claims that they are staffing schools with teachers who will be there for more than two years. Secondly, that traditionally certified teachers have higher odds of staying in teaching does not represent a good in-and-of-itself. If these teachers are staying but are not producing positive outcomes for children, then their continuation is not helpful. Nonetheless, given the general consensus that, up to a certain point, teachers become more effective with more experience, so that – all else equal – it is important to improve teacher retention and reduce turnover, knowing that traditionally certified teachers are more likely to stay merits further analysis.
Policy Implications

The results of this study indicate that policies that allow teachers to begin teaching without a feeling of adequate preparedness are likely to lead to attrition. Additionally, programs that offer alternative routes to certification do not promise a large-scale sustainable teaching force. In general, policies that funnel teachers into strong teacher preparation programs, for which there is evidence that teachers leave with strong feelings of preparedness, have a better chance of producing teachers who are committed to the career. While the conditions of a school and of employment might nudge a teacher towards departure regardless of their preparation route, it is likely that a teacher who feels very well prepared will have a toolkit – so to speak – upon which to draw in order to overcome the challenges that might encourage less prepared teachers to leave. Greater scrutiny of teacher education programs is necessary in general, with particular research attention paid to the characteristics of those programs that produce teachers who feel well prepared.
<table>
<thead>
<tr>
<th>Variable</th>
<th>Traditional</th>
<th>Alternative</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Teacher Characteristics</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>113 (20)**</td>
<td>84 (37)</td>
</tr>
<tr>
<td>Female</td>
<td>450</td>
<td>142</td>
</tr>
<tr>
<td>White</td>
<td>457 (83)**</td>
<td>148 (71)</td>
</tr>
<tr>
<td>Minority</td>
<td>95</td>
<td>61</td>
</tr>
<tr>
<td>Age: ≥30</td>
<td>409 (73)**</td>
<td>143 (63)</td>
</tr>
<tr>
<td>&lt;29 years</td>
<td>154</td>
<td>83</td>
</tr>
<tr>
<td>Bachelor’s degree or less</td>
<td>339 (74)**</td>
<td>52 (24)</td>
</tr>
<tr>
<td>Some post-graduate education</td>
<td>207</td>
<td>163</td>
</tr>
<tr>
<td><strong>School Conditions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching out of certification area</td>
<td>61 (11)</td>
<td>35 (16)</td>
</tr>
<tr>
<td>Not out of certification area</td>
<td>493</td>
<td>181</td>
</tr>
<tr>
<td>At least 51% eligible for free and reduced lunch [5]</td>
<td>269 (51)**</td>
<td>185 (85)</td>
</tr>
<tr>
<td>Less than 51% eligible for free or reduced lunch</td>
<td>261</td>
<td>32</td>
</tr>
<tr>
<td>Classes with a majority of students with special needs</td>
<td>84 (15)**</td>
<td>63 (29)</td>
</tr>
<tr>
<td>Classes with few if any students with special needs</td>
<td>471</td>
<td>154</td>
</tr>
<tr>
<td><strong>Teacher Preparation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preparation route</td>
<td>563 (71)</td>
<td>226 (29)</td>
</tr>
<tr>
<td>Perception of being prepared</td>
<td>473 (84)**</td>
<td>121 (54)</td>
</tr>
<tr>
<td>Perception of being unprepared</td>
<td>90</td>
<td>105</td>
</tr>
<tr>
<td><strong>Dependent Variable</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plans to not continue in profession</td>
<td>4</td>
<td>25</td>
</tr>
<tr>
<td>Plans to continue in profession 1-5 years</td>
<td>90</td>
<td>132</td>
</tr>
<tr>
<td>Plans to continue in profession &gt; 5 yrs</td>
<td>469 (83)**</td>
<td>69 (31)</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td>563</td>
<td>226</td>
</tr>
</tbody>
</table>

**Notes**

[1] Total n=789 teachers
[2] Data are listed as raw number outside of ( ) and corresponding % of column group inside ( )
[3] The alternatively certified teachers in this sample consist of teachers training through Teach for America (n=118), The New Teacher Project/Teaching Fellows/Baltimore City Teaching Residency (n=48), and Troops-to-Teachers (n=58)
[4] Numbers listed represent the portion of the sample whose highest level of education is a Bachelor’s degree or less.
[5] Free and reduced lunch eligible category = number of teachers who report working in school where 51 percent or greater are eligible; Not eligible category = number of teachers who report working in school where fewer than 51 percent of students are eligible

**indicates a statistically significant difference between traditional and alternative-route teachers at p<.01
### Table 2: Results from Logistic Regression Predicting Teachers' Plans to Stay in Teaching for More Than 5 Years

<table>
<thead>
<tr>
<th>Variable (reference group)</th>
<th>Coefficient</th>
<th>Odds Ratio</th>
<th>P-value</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>unprepared (prepared)</td>
<td>-1.094*</td>
<td>0.33</td>
<td>0.00</td>
<td>-1.532 - 0.655</td>
</tr>
<tr>
<td>male (female)</td>
<td>-0.119</td>
<td>0.89</td>
<td>0.624</td>
<td>-0.595 - 0.357</td>
</tr>
<tr>
<td>minority (white)</td>
<td>-0.238</td>
<td>0.79</td>
<td>0.345</td>
<td>-0.733 - 0.257</td>
</tr>
<tr>
<td>young (&gt;29 yrs)</td>
<td>-1.431*</td>
<td>0.24</td>
<td>0.00</td>
<td>-1.974 - 0.889</td>
</tr>
<tr>
<td>postgrad (≠ BA)</td>
<td>0.090</td>
<td>1.09</td>
<td>0.690</td>
<td>-0.352 - 0.531</td>
</tr>
<tr>
<td>misassign (proper assign.)</td>
<td>-0.767*</td>
<td>0.46</td>
<td>0.007</td>
<td>-1.324 - 0.210</td>
</tr>
<tr>
<td>freelunch (&lt;50% qualify)</td>
<td>-0.210</td>
<td>0.81</td>
<td>0.343</td>
<td>-0.645 - 0.225</td>
</tr>
<tr>
<td>specialed (&lt; majority special ed)</td>
<td>0.120</td>
<td>1.13</td>
<td>0.651</td>
<td>-0.400 - 0.640</td>
</tr>
<tr>
<td>altcert (traditional)</td>
<td>-2.490*</td>
<td>0.08</td>
<td>0.000</td>
<td>-3.050 - 1.930</td>
</tr>
<tr>
<td>notfirst (first year teacher)</td>
<td>0.033</td>
<td>1.03</td>
<td>0.923</td>
<td>-0.641 - 0.708</td>
</tr>
<tr>
<td>Constant</td>
<td>3.207</td>
<td>-----</td>
<td>0.000</td>
<td>-----</td>
</tr>
</tbody>
</table>

Notes:
- n=713 teachers
- * indicates statistical significance at p<.01
References


