

An Alternate Route to Urban Mathematics Teaching: The NYC Teaching Fellows Program

Dr. Laurel A. Cooley, Associate Professor

Mathematics Department, Brooklyn College, City University of New York

LCooley@brooklyn.cuny.edu

Abstract

The NYC Teaching Fellows (NYCTF) program, as the nation's largest alternative certification program, aims to provide high-needs NYC public schools with highly qualified teachers in such hard-to-staff areas as math, science, and special education. Reports of NYCTF teacher retention are mixed; The New Teacher Project (TNTP) claims high retention rates, but other research indicates that fellow recruits have lower retention rates than other teachers in similar NYC schools – only Teach for America (TFA) exhibits higher attrition (Boyd *et al.*, 2006).

After scrutinizing these contrary claims, this paper examines the retention of a recent cohort of approximately 300 Mathematics Teaching Fellows (MTFs) in the NYCTF program, examining MTF's early attrition, movements from school to school in the NYC system, and professional plans for the future. We also include findings on teacher induction, school leadership, and school context that affect MTF retention.

NYCTF Retention

The NYCTF program was instituted to help the NYCDoE replace uncertified teachers with certified teachers. Though Fellows initially replaced uncertified teachers, they now replace each other, as MTFs leave and new ones enter. Hence, while NYCTF has helped NYCDoE meet NCLB's "highly qualified" teacher guidelines, it has not solved the problem of math teacher turnover in NYC public schools. The transitional teaching license (Transitional B), created in 2000 as part of alternative route legislation, counts Fellows and other alternatively certified teachers (ACTs) as "certified" after completing a short summer preservice program. In September, they become teachers of record and are expected to, within 2 to 3 years, complete a Master's degree at 1 of 4 cooperating universities in or near NYC. In regard to retention, TNTP claims the following:

Today, 87% of Fellows begin a second year of teaching, a higher rate than the national average, and nearly 75% teach a third year. These retention rates are noteworthy since Fellows teach in some of the hardest-to-staff schools in the city. Nearly half of all Fellows who start their first year continue into at least a fifth year in the classroom.

Such comparisons can be deceptive though; after fulfilling their 2-year commitment to NYC public schools, many Fellows move to schools outside NYC or private schools, so many of those who "continue into at least a fifth year in the classroom" are teaching outside the NYC public school system at that point. The portability of the DoE-subsidized Master's degrees all but encourages Fellows to seek jobs in better-resourced districts or private schools.

Second, the comparison of Fellows to "the national average" of teachers who "begin a second year of teaching" is problematic. Unlike many new teachers, Fellows receive financial support upwards of \$30,000 in exchange for signing a 2-year commitment, which includes \$2,500 for completing a summer preservice program. In addition, the Master's coursework required by NYS is heavily subsidized by the NYCDoE; Fellows who leave teaching before fulfilling their 2-year commitment have to repay their funding. Unlike some states, NYS requires new teachers to receive mentoring and other induction supports. In sum, sizable incentives and induction supports help Fellows fulfill their 2-year commitment to NYC schools. Given that other beginning teachers generally are not provided similar support, it is unsurprising that Fellows' initial retention rates beat the national average. Given the resources spent on each Fellow, it is actually surprising that the first-year attrition rate is as high as 13%, but after a second year, Fellows no longer beat the national average for teacher retention, as extra incentives and supports drop away.

Third, calculating NYCTF retention is not straightforward. TNTP does not count recruits who complete the NYCTF preservice program but fail the Content Specialty Test (CST) in math on their first try, although some of these do pass the CST on subsequent tries. Nor do they count those few recruits who drop out of preservice before becoming teachers of record. A less selective count could increase TNTP's attrition rates by at least 5%. Retention calculations that include this currently uncounted information are reasonable; the NYCTF spends \$4,000-7,000 on each Fellow, and NYS requires university-based teacher education programs to include any student who takes teacher education courses in state reports of program-wide failure rates on the CST.

Fourth, TNTP retention reports gloss over Fellows' school-to-school movement in NYC. While TNTP implies that Fellows stay in the hardest-to-staff schools, evidence runs contrary. Boyd *et al.* (2005) find that "high-achieving" teacher candidates, like those recruited by NYCTF, are less likely to stay in these NYC schools. Rather than helping stop the "revolving door" of teachers in high-needs schools, Fellows may actually worsen the problem.

Fifth, contrary to the implication that Fellows' retention rates beat "the national average", extant research finds that they (and TFA recruits) have lower retention than other teachers in similar NYC schools. Adjusting for differences in school context, Boyd *et al.* (2006) find that, while first-year TFs have higher retention than traditionally certified teachers, it falls in later years.

At times, Boyd *et al.* (2006) may favor alternative route programs, downplaying the fact that students of novice Fellows under-perform on math exams relative to students of other novice teachers. While they factor school context into their analysis of teacher retention, they neglect the specific support systems in place for Fellows but not for other novices in NYC. After describing our methodology, we examine retention rates for first-year MTFs, school-to-school movement in NYC, and early indicators of long-term retention. We then examine some induction supports and school context factors shown to be important in new teacher retention and end with a brief discussion.

Methodology

The primary data source for this paper is a large-scale survey study of an annual cohort of MTFs who began the NYCTF program in June 2007. At the end of the 7-week NYCTF preservice program, 269 of approximately 300 MTFs were surveyed. In the summer and fall of 2008, approximately 90 members of the same cohort completed a second survey at their partner universities. Completion rates for the first-year survey were between 85-90%. The inservice survey response rate was 70-80%. The lower number of inservice surveys and lower completion rates reflect attrition from the program (some quit, some repeatedly fail the CST, some are excessed), slippage between cohorts (some fall behind in coursework and take classes with later cohorts), and greater difficulty in gaining access to the MTFs as they progress through the Master's programs (one university partner would not allow us to give surveys on campus).

The preservice and inservice surveys were both in-depth, including Likert-type, forced-choice items and open-ended questions, and took respondents about 35 minutes to complete. Survey items dealt with the content of Master's coursework, in-school supports (e.g., mentoring, planning periods, administration), their perceptions of their students and school administrators, and their professional plans.

Analyzing preservice and inservice surveys, we adopted a mixed-method approach, including classical statistics, exploratory data analysis, and coding of expository responses. In the first phase of analysis, we have begun to examine connections and correlations between item responses. Because many MTFs completed both surveys, we can assess the development of individual MTFs and have yet to begin analyses of individual change.

The inservice survey did not fully address MTF retention; it only included data from MTFs who remained in the program after their first year. So, to further examine first-year retention, we supplied key personnel at the 4 NYCTF university partners with lists of Fellows who had completed the preservice but not the inservice survey. They told us who was "active" and "inactive" in the 2008-09 academic year. We stress that this manuscript is exploratory and the findings tentative.

Math Fellows and Teacher Turnover

Reports by personnel at the 4 NYCTF university partners for math indicate that, of the 269 MTFs who took the preservice survey, 55 were inactive at the start of the 2008-09 school year; some left teaching in their first year and some at year's end. This translates into an attrition rate of at least 20%, which would be higher if the dozen or so recruits who left the preservice program prematurely (i.e., before the preservice survey) were included. It does include a small number of preservice candidates who were never officially counted as "Fellows" because they failed the mathematics CST test – even though they may have passed it later and become a teacher of record. Even without this latter group, the first-year attrition rate for MTFs is over 16%. Whether closer to 20% or 16%, MTF retention is higher than the 13% reported by TNTF for the NYCTF population.

Of the inservice respondents who began a 2nd year of teaching in NYC, approximately 20% report moving from school to school by the start of their second year (4% moved in their first year, while 16% found a new school for their second). While most moved of their own volition, a few report being "excessed" and having to find a new school. A cursory analysis indicates that the highest-needs schools are most impacted by MTF movement in the NYC system. This resonates with extant research on teacher turnover in NYC schools (Boyd *et al.*, 2005; Loeb *et al.*, 2005). Combining results on MTF turnover, we find that more than 35% of these MTFs had either left teaching or moved to new schools by the start of the second year. The highest-needs schools – those that NYCTF was designed to help – appear to be impacted most. Further, retention rates of MTFs are significantly lower than for general Fellows reported by TNTF.

Short-Term and Long-Term Career Plans: Implications for the Revolving Door

A majority of inservice respondents report that they planned to teach for an additional 6 years or more; however, more than 1 in 3 planned to be out of the NYC system within 3 years. Combining these results with the 16+% of MTF teacher leavers, it appears that only about half of MTFs will be teaching four years after they began the program. Of course, these are reports of future plans and some MTFs who plan to leave may have a change of heart. Also, some respondents may inflate the amount of time they plan to stay in the classroom. In terms of teacher turnover, almost a third of inservice MTFs report that they would leave their current school by their second year's end. Combining these results with the 35% first-year turnover rate, it appears that less than half of MTFs will continue to teach in their first school after their 2-year commitment is up, and only about 30% for four or more years.

A year or less of teaching in NYC schools appears to have convinced many MTFs to teach elsewhere or not in any school at all. That said, our data suggest many MTFs viewed teaching as a short-term commitment from the start. On the preservice survey, only 38.5% of preservice respondents claimed they planned to teach in NYC for more than 5 years. An additional 14.2% claimed they would still be teaching at that point, just not in NYC public schools. An additional 12.3% of preservice MTFs said plans were uncertain. Some MTFs report that NYCTF officials stated or implied in admissions interviews that it was acceptable for them to view teaching as a short-term job. Many Fellows were recent college graduates – about 4 in 10 MTFs were 23 years old or younger – and seemed particularly prone to view teaching as a resumé builder.

A second forced-choice item asked preservice MTFs about their longer-range career plans, which provides further insights into MTFs' professional plans to teach. In particular, while just more than a third of MTFs viewed teaching as a long-term career, large numbers reported being unsure. In terms of long-range plans, close to one-fifth reported planning to work in "another education position." When prompted for clarification, many wrote that they aspired to be school administrators. Smaller numbers planned to teach in public schools outside NYC, teach in a private

school, or attend graduate school. Another approximate fifth reported being unsure about their long-term plans. It would seem, then, for the majority of MTFs, that teaching in NYC schools was seen as a short-term way to help advance their careers.

Yet another follow-up item on the inservice survey was an open-ended item that asked MTFs “who planned to leave NYC schools within the next three years” about the incentives and changes that would “keep them in the profession for longer”. The most common response amongst those who planned to leave within 3 years had to do with raising salaries and the high cost of living in NYC. A smaller number complained about “unsupportive” administrators, schools that lacked structure or discipline, and the lack of planning time. A few critiqued NYCTF for not providing enough “support.” A small number yearned for “more intellectual” students, “better kids” who were “more respectful”, and students with “parents who cared” about education. A few disliked NYC, wanted to move back to their hometowns, or desired a shorter commute to work. These are familiar refrains in the literature on teacher retention (see Boyd *et al.*, 2005; Guarino *et al.*, 2006).

A companion item on the inservice survey asked respondents planning to stay in NYC schools “for more than three years” what “motivated them to stay in the profession”. Many wrote that they “love” NYC students and want to help them succeed in academics and life. A few of those planning to stay discussed job stability and benefits (e.g., summers off), while a few mentioned career advancement (e.g., moving into school administration).

First-Year Induction for Math Fellows

Hypothetically, NYCTF induction goes beyond basic induction; Fellows are assigned to a NYCDoe mentor who visits weekly, if not more. A NYS law passed in 2005 (still unfunded) requires school districts to give all new teachers mentoring and induction. Alternative route legislation, passed 5 years earlier, requires ACT programs to provide mentoring. In addition to a DoE mentor, Fellows are assigned a university mentor who visits once a month, in part, for evaluative purposes. In terms of supportive administrators, after the 2000-01 school year, when many Fellows were placed in unwelcoming schools, NYCTF began advising Fellows to take jobs in schools with administrators that supported the program (Goodnough, 2004). More generally, the NYCDoe expects principals and other administrators (e.g., math or literacy coaches) to support all new teachers, including Fellows. In terms of teacher networks, once Fellows secure a school position, NYCTF connects them with more experienced Fellows who work at that school. NYCTF uses a cohort model; Fellows are encouraged to network with others in the cohort; while they teach in different schools, they see each other weekly at 1 of 4 universities where they complete Master’s coursework in math and education. Finally, Fellows receive something that approaches a new teacher seminar in their preservice programs; specifically, in these NYCTF-provided professional development “sessions”, Fellows are oriented to district policy and NYC schools and discuss lesson planning, classroom management, and their clinical experiences in summer school classrooms. The inservice survey included items that addressed most induction components outlined above. However, since DoE mentoring is the centerpiece of NYCTF induction, we focus on it here. First and foremost, 3 of 10 inservice respondents report never being assigned a NYCDoe mentor in their first year. Again, this does not include data on the over 20% of MTFs who quit teaching prior to the second year. Hence, 90 or more MTFs lacked a key component of new teacher induction in the 2007-08 school year. Further, the 7 out of 10 MTFs who were assigned a DoE mentor report significant variation in the amount of mentoring they received. Over 60% of these MTFs report that their mentors visited at least twice a month during the 2007-08 school year, while the remainder (37.9%) received 1 visit per month or less. Combining results, less than half of MTFs (43.4%) had a mentor that visited them at least twice a month.

While many mentors visited regularly, they often did not observe whole lessons. Indeed, just over a third (35.7%) of MTFs who received mentoring report having an entire lesson observed twice a month or more. Hence, when mentors came, they generally only observed part of a lesson. Further, while the majority of the follow-up meetings lasted from 20 to 45 minutes, about 1 in 5 lasted 10 minutes or less.

There was considerable variation in what DoE mentors and MTFs discussed in meetings. Some MTFs claimed such things as, “my mentor was candid with me and gave helpful classroom management tips and lesson planning tips.” Others reported that mentoring was more about moral support than practical advice; e.g., 2 respondents described their mentors as, “just a person to talk to who had been through a similar situation” and “a sympathetic ear”. Still other MTFs claimed that their DoE mentors provided little if any support. One wrote, “None! He did nothing but sit and watch and leave.” We also note here that a small number report being mentored by an out-of-field mentor who may have been unable to provide assistance in the area of math.

A Likert-type item examined the extent to which DoE mentoring helped MTFs become proficient in specific areas of teaching (e.g., instructional strategies, management) and provided more general types of support (e.g., moral, psychological). While most of the 70% of MTFs who received mentoring saw some benefit in it, reports of what was most “helpful” about it varied considerably. On average, DoE mentors provided more general encouragement than specific help in any one area. An exploratory analysis suggests that MTF turnover in the first year correlates with a lack of mentoring. MTFs who received little or no mentoring were more likely to move from school to school than others. That said, MTFs were also more likely to leave the most troubled schools – schools that likely have the most difficulty getting DoE mentors to work with their teachers. Importantly, more than 80% of inservice respondents reported being mentored by someone other than a DoE mentor. The most commonly named persons providing support were: a) math coaches (officially not mentors), b) university mentors, and c) fellow teachers.

Discussion

We find substantial teacher turnover amongst Cohort 14 MTFs and a first-year attrition rate that appears higher than that of other Fellows. The majority of MTFs who entered NYC schools in 2007-08 plan to stay a total of

four years or less. At least in the case of math, rather than stopping the “revolving door,” NYCTF may actually be exacerbating the problem.

While salary and organizational factors contribute to rapid and massive teacher turnover, the backgrounds of MTFs are not unimportant. More than 1 in 3 (35%) of MTFs report that they entered NYCTF program having completed minimal college coursework (i.e., 1 to 3 courses) in math (Donoghue *et al.*, 2008). Teaching math was not their first-choice discipline and becoming a math teacher may not have been in their future plans at all when they applied to NYCTF. In interviews, a number of MTFs claim that NYCTF administrators convinced them to become math teachers during the admissions process. Some MTFs report that they were told that teaching math would increase their competitive advantage in getting into NYCTF. The fact that many MTFs have relatively weak backgrounds in math could contribute to lower rates of teacher satisfaction and comparatively high rates of turnover amongst the MTFs. Many of these MTF are not particularly passionate about math and may even feel underprepared to teach it. Further, in interviews and open-ended survey responses, many MTFs discuss feeling considerable social distance from their students. As adolescents, most Fellows were in selective school programs (i.e., honors tracks, private schools). Over 70% report coming from middle- and upper-class backgrounds. More problematic is that many preservice MTFs articulate deficit views of NYC students and their guardians after having only minimal contact with them in summer fieldwork classes.

[The neighborhood I grew up in was] really obsessed with class and prestige and wealth . . . 99% of the students go to college. So it was just like [a] school culture where kids paid attention in class . . . But from my experience with summer school, these [NYC public school] kids won't do their homework at all. And half the time they don't care if they fail. So I think I'm going to be a lot more aggressive in my classroom than maybe some of my teachers were at home by necessity (Interview, Summer 2006).

As this excerpt shows, there is an implicit contrast between normal (privileged) students who care about school and urban students who ostensibly “don't care”. While some MTFs certainly do develop into effective and caring NYC teachers, initially at least, privileged-class teachers may not be particularly good “fits” for high-needs urban schools (Brantlinger, Cooley, & Brantlinger, in press). As our data indicate, the lack of fit is likely exacerbated by unsupportive administrators and ineffective mentoring.

The idea that the *type* of ACT recruit matters as much as the teacher education program itself is one that is gaining currency amongst scholars who study alternative routes to teaching (Humphrey & Weschler, 2008; Johnson, 2004). They argue that “early entry” ACT programs, such as NYCTF, work for some recruits. To a large extent, the success of these programs depends on what individual recruits bring to teaching and the schools they teach in. As our paper suggests, there is considerable diversity to ACTs and their first-year experiences in NYC schools. While large numbers leave their initial school or teaching altogether within the first year, others are committed and survive. One wonders, however, what could be done to reduce massive math teacher turnover in the highest-needs urban schools and, given the high rates of attrition, whether the money spent per Teaching Fellow is worth the cost.

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