

Widening the Pathway

Implementation and Impacts of Alternative Teacher
Preparation Programs Across Three Contexts

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About This Report

TNTP (formerly The New Teacher Project) is committed to ending educational inequities by promoting the recruitment, training, and retention of high-quality teachers and school leaders. The U.S. Department of Education's Supporting Effective Educator Development (SEED) grant has funded TNTP to implement the Teacher Effectiveness and Certification (TEACH) program in three regions. Through TEACH, TNTP works with organizational partners such as school districts to develop a local process to recruit, prepare, and certify teacher candidates, as well as to support them with coaching and other training in their first year. The RAND Corporation conducted an evaluation of TEACH, investigating each program's implementation, the effects of TEACH on the recruitment and retention of teachers, and the relative performance of those teachers. This is the final report for that evaluation.

This report offers guidance to leaders and policymakers across the country who may be interested in enhancing the supply of skilled teachers to work in kindergarten through 12th grade education (K–12) schools through alternative pathways and preparation programs. These findings about this program may also inform teacher preparation practices more broadly, including in traditional teacher certification programs and pathways. This research on the TEACH program builds on an existing evidence base of studies conducted by RAND and other researchers on the efficacy of TNTP programs to recruit and prepare teachers to serve in hard-to-staff positions.

RAND Education and Labor

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Summary

This report offers an in-depth analysis of the Teacher Effectiveness and Certification (TEACH) program, an alternative teacher preparation program intended to train diverse cohorts of high-quality teaching candidates to fill hard-to-staff positions. We follow three TEACH programs in different regions of the United States, each established in partnerships between TNTP (The New Teacher Project [former name]) and a local partner organization. In this report—as in past iterations of TEACH (see Kaufman et al., 2020)—two of three partner organizations were medium- to large-sized school districts facing challenges recruiting teachers for specific subject areas (e.g., secondary mathematics, special education [SPED]). The third partner organization in this study was a small, nonprofit educational consortium established to improve the supply and quality of teachers in two small districts in its geographical region. In all three programs, TNTP worked with its partner organizations to recruit, select, train, and support cohorts of teachers in a gradual release model; during the first year of the program, TNTP led these processes. In the second year, TNTP and its partner organizations worked in collaboration during each step, with the goal that TNTP would transition full ownership of the programs to their partners beginning in year three. In this report, we analyzed implementation and impacts of the TEACH programs in the 2018–2019 and 2019–2020 school years, which comprised the programs’ first two cohorts of teacher candidates.

This report is composed of two complementary studies, one focused on the implementation of the TEACH programs and the second on the programs’ impact on teacher hiring and retention and on student outcomes. We address the following research questions in this study:

- What factors enabled or constrained implementation of the three TEACH preparation programs, particularly in the areas of (1) recruitment and selection, (2) pre-service training (PST), (3) hiring, (4) first-year supports, and (5) program sustainability?
- How many teachers were hired through TEACH in each TNTP program, and what were their job roles and characteristics?
- How did the achievement gains for students of TEACH teachers from each TNTP program compare with those of students of other new teachers in the same districts?
- How did the rate of TEACH teacher retention in a given school district compare with retention rates for other new teachers in the same district?

Our investigation identified a variety of implementation challenges and successes, many of which were influenced by characteristics of the organizational partners and the local policy environment. Overall, the TEACH programs were generally successful at recruiting substantial numbers of new teachers. These teachers were somewhat more diverse than other new teacher hires. They were not significantly different from other new teacher hires in terms of their effects on student achievement in their first year, although there is some evidence that they were more effective by their second year on the job. However, it is not clear the extent to which the programs will be sustained by the local partner organizations after the grant and TNTP’s involvement ends. Key findings are as follows:

Implementation of TEACH

Recruitment and selection

- Candidates were drawn to the affordability and local nature of the program, and two programs in particular were able to capitalize on within-district recruitment.

- The state’s elimination of lateral entry pathways likely contributed to recruitment in one program’s second cohort.

Pre-service training

- Candidates described classroom time as the most beneficial component of their training, but felt under-prepared in those cases when their classroom experiences were not closely aligned with their school-year position.
- Candidates appeared to value training that focused on culturally relevant teaching and content that was customized to their location and needs.

Hiring

- Most candidates were successfully hired into appropriate teaching positions prior to the start of the school year.
- Relationships with principals were key to hiring, but some principals were uncertain whether or not they would hire from the TEACH program again.

First-year supports

- The coaching model varied widely in both years, meaning candidates in different programs received notably different supports.
- Programs had different degrees of success shifting coaching responsibilities from TNTP to the partner organizations.

Program sustainability

- Financial sustainability was a primary concern across all three programs.
- All three programs reported that they needed more staff to effectively run PST once TNTP supports diminished.

Impact of TEACH

- Across the three programs, TEACH candidates were somewhat more diverse than other new teacher hires, though a smaller proportion of TEACH candidates identified as Latinx.
- Achievement gains for students of TEACH participants in their first year were not significantly different than for students taught by comparison (i.e., non-TEACH) first-year teachers.
- In the one program where student achievement data in the 2019–2020 school year were available, achievement gains for students of TEACH teachers in their second year were significantly higher in math—but not in English language arts (ELA)—than for students of comparison second-year teachers.

TEACH teachers did not differ significantly from comparison teachers in terms of the rate at which they remained teaching in their districts.

Takeaways for Policy and Practice

- Our findings indicate several advantages of alternative pathways to recruiting, training, and supporting local teaching candidates.

- However, the capacity of partner organizations such as districts to independently sustain such programs without external funding or support structures may be limited.
- Local policy environments may play an important role in the implementation of alternative pathway programs such as TEACH.

Abbreviations

COVID-19	coronavirus 2019
ELA	English language arts
ESL	English as a second language
HR	human resources
K-12	kindergarten through 12th grade education
MAP	Measures of Academic Progress
PST	pre-service training
SD	standard deviation
SEED	Supporting Effective Educator Development
SPED	special education
STEM	science, technology, engineering, and mathematics
TEACh	Teacher Effectiveness and Certification
TNTP	The New Teacher Project (former name)

Introduction

Many states and school districts nationwide are facing substantial shortages of teachers to staff key roles in kindergarten through 12th grade education (K–12) schools. Teacher shortages are particularly acute in high-poverty, high-minority schools and in specific hard-to-staff areas such as special education (SPED) and science, technology, engineering, and mathematics (STEM) subjects (Berry and Shields, 2017; Wiggan, Smith, and Watson-Vandiver, 2021). The strain on educators and schools from the coronavirus 2019 (COVID-19) pandemic has further exacerbated preexisting shortages of teachers. A recent survey of teachers who left the profession shows that job-related stress was the most common reason for leaving, both before and during the pandemic. The pandemic, however, heightened this stress, and in the face of low pay, technological difficulties, and health concerns, many teachers left the profession (Diliberti, Schwartz, and Grant, 2021). High teacher turnover is not likely to abate as nearly one in four current teachers indicated that they were likely to leave the profession at the end of the 2020–2021 school year (Steiner and Woo, 2021).

A variety of trends has contributed to the recent teacher shortages that have plagued the profession, even prior to the pandemic. The entrance of new teachers into the field has slowed as enrollments in teacher preparation programs have been declining and teachers who left the profession have begun reentering it at lower rates (Sutcher, Darling-Hammond, and Carver-Thomas, 2016; Castro et al., 2018). In addition, teacher attrition over time—and particularly in high-poverty schools serving high-needs students—has been increasing (Carver-Thomas and Darling-Hammond, 2019). Factors influencing teacher attrition have included concerns about wages, lack of preparation, insufficient support, and poor teaching conditions (Sutcher, Darling-Hammond, and Carver-Thomas, 2016). These challenges were likely exacerbated by the pandemic, which has worsened high stress levels by forcing teachers to work more hours and navigate unfamiliar remote teaching challenges (Diliberti, Schwartz, and Grant, 2021).

Teacher shortages present significant challenges to student success. In the absence of sufficient qualified applicants, districts may hire emergency-certified teachers with limited training or rely on substitute teachers. Or they may cancel courses or increase class sizes, which also negatively affect student learning (Podolsky and Sutcher, 2016). Hiring teachers who are temporary or more likely to turnover also affects students, due to the net loss of teacher experience and the disruption created by frequent teacher transitions in schools, with the largest impacts in lower-achieving schools (Hanushek, Rivkin, and Schiman, 2016; Ronfeldt, Loeb, and Wyckoff, 2013). Therefore, effectively addressing teacher shortages requires recruitment of skilled and committed staff, rather than simply identifying a sufficient number of prospective teachers.

Diversifying the teacher workforce also remains a persistent challenge, given a shortage of both current and prospective teachers from diverse backgrounds. Research suggests that students achieve at higher levels when taught by teachers who reflect their own racial and ethnic backgrounds (Egalite, Kisida, and Winters, 2015; Gershenson et al., 2018; Dee, 2005), all other factors being equal. However, the contrast between current teacher demographics and student demographics in public schools nationwide is considerable: As of 2018, more than half of all students (52 percent) were non-White, while the large majority (79 percent) of teachers were White (Spiegelman, 2020). These proportions suggest that many minority students may be at a disadvantage due to the current demographic makeup of the teacher workforce. Research has further

shown that turnover tends to be higher among minority teachers than among White teachers (Ingersoll, 2015; Carver-Thomas and Darling-Hammond, 2019; Sun, 2018), and recent surveys indicate that a higher proportion of African American teachers anticipate leaving the profession in the aftermath of the COVID-19 pandemic (Steiner and Woo, 2021).

In part as a response to teacher shortages, many school districts have developed alternative, faster-track teacher preparation programs that are locally based, often in partnership with external organizations or institutions of higher education. While alternative preparation pathways vary widely, many include a residency component in which teachers continue to receive guidance and support while actively teaching (Humphrey and Wechsler, 2008). Alternative programs sometimes include pathways for staff already associated with districts (e.g., teachers' aides) to enter the teaching profession, in ways that require less time and investment than a traditional training program (Podolsky and Sutcher, 2016; Espinoza et al., 2018; Guha, Hylar, and Darling-Hammond, 2016; Cole, 2017; Kaufman et al., 2020). By hiring locally, such programs also have the potential to recruit candidates that are demographically more similar to the students they serve. Districts can also exercise control over the types of teaching roles they prioritize and thereby address shortages of teachers more directly in specific areas. However, more research about the characteristics of alternative programs that are successful in recruiting and preparing effective teachers is needed; the most practical models and partnerships for sustainably implementing such programs also need further study.

This report examines the implementation and impact of one type of alternative teacher preparation program designed to compensate for the shortage of teachers entering the profession from traditional pathways: TNTP's (The New Teacher Project [former name]) Teacher Effectiveness and Certification (TEACH) program.¹ The TEACH program is intended to help partner organizations—such as school districts—develop sustainable, in-house preparation programs that can enable them to fill hard-to-staff teaching positions with diverse, high-quality teachers. TNTP collaborated with three partner organizations to develop these programs over three years, with ownership of the program transitioning fully to the partner organizations at the end of that period.

TNTP also supported the partner organization in developing customizable, local training for program candidates. The three TEACH programs in this report provided pre-service training (PST) for enrolled candidates, as well as ongoing coaching once they were hired into classrooms. Evidence indicates that new teachers are more effective when they have the ongoing support of instructional mentors such as coaches (Kraft, Blazar, and Hogan, 2018; Papay et al., 2020) and that teachers who engage with coaching cycles more often have a greater impact on student learning (Glover et al., 2019; Desimone and Pak, 2017). TNTP is well suited to focus on coaching in its TEACH programs, given its history building coach capacity in districts around the country.

Prior Research on TEACH and Similar TNTP Programs

Our evaluation contributes to a substantial body of prior research about the performance of teachers trained through TNTP's alternative teacher preparation programs, including both TEACH and TNTP's similar Teaching Fellows program. Although the specifics of these alternative pathway programs are customized to meet individual districts' needs and have also evolved somewhat over time, the core components of the pathway have been fairly consistent. These include a combination of selective recruitment, summer training, and on-the-job professional development and coaching for novice teachers recruited through the pathway. The extant research on TNTP pathway programs and the effectiveness of program participants includes six prior

¹ TEACH was funded by a grant from the U.S. Department of Education's Supporting Effective Education Development (SEED) grant program.

TABLE 1.1
Summary of Prior Research on TNTP’s TEACH and Teaching Fellows Programs

Study	Context	Student Achievement Outcomes	Teacher Retention Outcomes
Kaufman et al. (2020)	3 districts (2 with outcome data)	Positive achievement impacts among first-year TEACH teachers in math, relative to other novice teachers (0.08 standard deviation [SD]), but no significant differential effects in reading	No significant differences in retention rates
Gerdeman et al. (2017)	7 districts	No significant differential effects in math or reading	Fellows’ retention rates 6% higher going into their second year
Clark et al. (2013)	9 districts	Positive achievement impacts in math among Fellows in their first three years, relative to other novice teachers (0.13 SD)	Not examined
Noell and Gansle (2009)	Statewide in Louisiana	Positive achievement impacts among fellows when compared with more experienced peer teachers, in math (0.11 SD) and reading (0.08 SD)	Not examined
Boyd et al. (2006)	New York City	Negative achievement impacts among first-year fellows in both math (–0.04 SD) and reading (–0.04 SD), relative to other novice teachers from university-based pathways	Not examined
Kane, Rockoff, and Staiger (2008)	New York City	No significant differential effects in math or reading	Not examined

NOTES: Clark et al. (2013) examined outcomes only in math. Kaufman et al. (2020) spanned three urban districts, but achievement outcomes were available in only two districts. The study also examined teacher evaluation score outcomes in districts but found no significant differential effects. Noell and Gansle (2009) results were significant in math but not in reading at conventional significance thresholds. Boyd et al. (2006) examined program participants from 1998–1999 through 2003–2004, while Kane, Rockoff, and Steager (2008) spanned 1998–1999 through 2004–2005.

research studies that collectively span program implementation in more than 20 districts, most of them large urban school districts.

As shown in Table 1.1, most, but not all, of the studies of TNTP’s teacher pathway programs to date have indicated that program participants in their first few years of teaching have equivalent or better impacts on student achievement than other teachers hired at the same time in the same districts. For example, a recent study of TNTP program participants in seven urban school districts indicated that on average TNTP teachers’ effects on student achievement were similar to that of other novice teachers (Gerdeman et al., 2017). However, three other recent studies spanning 12 districts as well as a statewide comparison have indicated that TNTP program participants were significantly more effective at raising student achievement than other novice teachers (Kaufman et al., 2020; Clark et al., 2013; Noell and Gansle, 2009). One of those three studies in particular (Clark et al., 2013) included random assignment of students to teachers, eliminating a key source of potential bias in estimates of differential teacher effectiveness. Finally, two older studies that considered TNTP program participants’ effectiveness specifically in New York City yielded contradictory indications of their initial effectiveness. In one study (Boyd et al., 2006), TNTP participants were slightly less effective than graduates of traditional university-based teacher preparation programs in their first year on the job (but improved substantially in subsequent years), while in the other study—which spanned a slightly different time period—TNTP participants were as effective as other novice teachers (Kane, Rockoff, and Steager, 2008).

Only two prior studies have evaluated TNTP participants’ propensity to remain in teaching relative to other novice teachers; they indicate that TNTP program teachers tend to be at least as likely to remain in teaching as other new hires. One study spanning programs in seven districts (Gerdeman et al., 2017) found

that TNTP program participants were more likely than other new hires to remain in teaching at least two years. A second study spanning three districts (Kaufman et al., 2020) indicated no significant differences in retention within TNTP teachers' first three years on the job, relative to other new hires.

Collectively, the prior studies of the TNTP program have focused primarily on the effectiveness of teachers prepared through the program at raising student achievement and on their propensity to remain in teaching. Results from those studies suggest that they tend to be at least as effective as teachers from traditional pathways into teaching as well as at least as likely to remain in teaching. Districts may benefit from TNTP's contributions to the supply of teachers as well as—in some cases—from their superior performance on the job relative to other new hires. However, the extent of differential TNTP-pathway teacher effectiveness appears to be inconsistent or perhaps is not large enough to be reliably detected. Unfortunately, the prior research does not provide enough information to identify any clear trends in the types of districts or implementation approaches that tend to yield more or less positive results. It is also important to consider that variation in the relative performance of TNTP program teachers may be a function of variation in the relative quality of other new hires in each of the participating districts, as well as variation in the quality or implementation of the TNTP programs themselves across districts and time periods.

While RAND has recently published about the implementation and impact of a previous iteration of TEACH programs in three districts (Kaufman et al., 2020), there are several factors that set this report apart both from that study and from much of the prior research. First, in contrast with much of the prior research, this study (as well as the previous RAND study) provides much more detail about the implementation and outlook for sustainability of TNTP's programs in the context of an eventual handoff of program management to local districts. Second, this report highlights variation in TNTP's partner organizations. In RAND's previous report, TNTP partnered with three school districts. In this version, two organizational partners were school districts, while the third was a smaller, nonprofit educational consortium. This variation allowed for more insights related to implementation based on the program partners' characteristics to emerge. This report also stands out from other prior research on TNTP's TEACH programs in that we focused more on the specifics of program-provided coaching activities during candidates' first year in the classroom. We will discuss these differences in more detail in the second chapter of this report, which focuses on implementation.

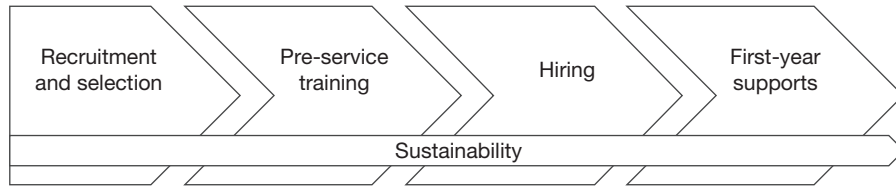
Objectives and Methods

This report provides the results of an in-depth study of the TEACH model in three locations. This research includes two approaches: (1) an in-depth analyses of implementation of the programs and (2) an analysis of the impact of TEACH on student and teacher outcomes. The implementation study, described in Chapter Two, details the work undertaken by the programs and their partner organizations as the model was administered in the 2018–2019 and 2019–2020 school years. We analyze successes and challenges of engaging in this work, identifying factors that hindered or enabled implementation, and derive lessons to inform others interested in developing similar programs. While the three programs at the center of this report were uniquely tailored to their contexts and the needs of their partner organizations, there were some common dimensions that we use to structure this report (see Figure 1.1). These included (1) recruitment and selection, (2) PST,² (3) hiring into school-year positions, (4) on-the-job support, and (5) program sustainability. It should be noted that, before beginning implementation, TNTP and its partner organizations had done a considerable amount of planning; this planning occurred prior to our data collection and is not included in this report or shown in Figure 1.1.

² The programs used different terms to refer to their summer training. To remain consistent with our prior report (Kaufman et al., 2020), we elected to continue using the phrase “pre-service training.”

FIGURE 1.1

Phases of TEACH Programs Explored in Implementation Findings



While our examination of implementation in the current report is similar to our previous research on TEACH programs (see Kaufman et al., 2020), this current iteration has a heightened focus on the first-year support of teaching candidates and on coaching in particular. We employed an additional form of data collection—a coaching log—in order to better understand details of the candidate-coach relationship, the frequency and duration of visits, and the practices used. Our focus on coaching sets this report apart, as we were able to correlate specific coaching practices with student achievement in the first year of the study.³

The impact portion of this study, Chapter Three, uses administrative data from the districts to describe program participants and estimate the effect of TEACH on student and teacher outcomes. This chapter begins by describing the numbers and characteristics of the teachers hired through the TEACH programs in comparison with numbers and characteristic of other teachers hired in the same district and year, but through traditional district recruitment channels. We then present results of our analyses of the effects of the TEACH teachers both on student achievement on standardized tests and on teacher retention within their first two years of service, compared with their peers hired in the same district in the same year through traditional channels.

The impact study analyzed the effect of TEACH on student academic achievement on state standardized tests across all districts during the 2018–2019 school year. Due to the COVID-19 pandemic, state standardized tests were not administered in any district during the 2019–2020 school year. However, we were able to analyze student achievement in one district that administered the Measures of Academic Progress (MAP), a computer-adaptive formative assessment given three times a year. In that district we measured the effect of the program midway through the 2019–2020 school year, when the winter MAP was administered before schools closed because of the pandemic. Finally, we also look at two-year retention of teachers in their district for three of the four districts for which we have retention data.

Research Questions for This Report

For the implementation study, we asked this question:

- What factors enabled or constrained implementation of the three TEACH preparation programs, particularly in the areas of (1) recruitment and selection, (2) PST, (3) hiring, (4) first-year supports, and (5) program sustainability?

For the impact study, we asked these questions:

- How many teachers were hired through TEACH in each TNTP program, and what were their job roles and characteristics?
- How did the rate of TEACH teacher retention in a given school district compare with retention rates for other new teachers in that district?

³ We caution that these results are exploratory and noncausal.

- How did the achievement gains for students of TEACH teachers from each TNTP program compare with those of students of other new teachers in the same districts?

Implementation Data Sources and Analysis

The primary data sources for the implementation portion of this research were interviews, coaching logs, and collected documents. In each of the three programs, we interviewed a sample of teaching candidates in the first two cohorts of TEACH, principals, and key TNTP and partner organization staff supporting those cohorts. The online coaching logs were a crucial source of data for us. The logs included questions about how coaches spent their time, how many minutes they spent with a candidate, and what practices they used while coaching that candidate. We used these logs to better understand what coaching looked like across the three programs. We also collected documents from interviewees throughout. Documents included handouts from summer training, the welcome packets that candidates received upon entering the program, and TNTP “stepbacks,” which were internally distributed reflections on program progress. We analyzed interview notes and transcripts in the qualitative software Dedoose; we qualitatively coded transcripts according to themes related to our implementation measures, as documented in the technical appendix (Huguet et al., 2021). We analyzed coding to extract themes regarding areas of success and concerns that were shared across programs and examined our coding to determine when a unique issue in a single program was mentioned by multiple interviewees. We confirmed findings by reviewing multiple interviewees’ input, as well as by looking across documents and notes for confirming and disconfirming evidence.

Impact Data Sources and Analysis

The primary sources of data for the impact study were administrative records from four districts participating in the study. The four districts were spread across three programs, each of which functioned as a TNTP administrative unit. In this report, Programs A and B refer to the programs that each contain a single district, while Program C was a small, nonprofit organization that worked with two smaller districts. These records included the characteristics and course assignments of all students and teachers in each of two years in the study. For teachers, available data included their demographic characteristics, the courses and students they taught, and in some districts the areas in which they were earning certification. For students, the data included their demographic characteristics and their performance on standardized achievement exams.

Using data on new teacher hires, we documented the contribution of TEACH to the teacher recruitment pipeline in each program and in each year. This provided us insight into the extent to which TEACH contributed to the supply of new teachers in each program. We also examined available data on the characteristics of TEACH hires in comparison with all other program hires, while focusing on characteristics relevant to programs’ goals for teacher diversity and filling hard-to-staff areas. These characteristics included candidates’ race/ethnicity and their hiring in specific hard-to-fill content areas, including teaching SPED, English as a second language (ESL) instruction, and secondary math instruction.

We also evaluated the rate at which TEACH teachers were retained, both in absolute terms and by comparing TEACH retention rates with those of other teachers. In our comparative analysis we specifically compared the rate at which teachers from the TEACH programs remained teaching in their district with that of other new teachers hired in the same year (i.e., “comparison teachers”), when controlling for the characteristics of their schools, the students in their classrooms, and their job roles (such as SPED or ESL instructors).⁴ Because

⁴ The programs prioritized filling specific areas of need, as determined through conversations between TNTP and their partner organizations. Correspondingly, we focused on district-level retention, rather than within-school retention, as the most appropriate retention outcome to evaluate the program.

TABLE 1.2
Summary of TEACH Teachers Included in Analyses of Impacts on Retention and Student Achievement

	Retention Outcomes	State Assessments	MAP Assessments
Districts/Regions/ Programs	Programs A and C	Programs A, B, and C	Program A
TEACH Cohorts and Years	Cohort 1 Years 1 and 2; Cohort 2 Year 1	Cohort 1 Year 1	Cohort 1 Years 1 and 2; Cohort 2 Year 1
<i>N</i> (TEACH teachers included in analyses)	144	73	101

NOTE: Analyses of impacts in Program C exclude a small number of charter schools that hired TEACH teachers but did not provide administrative records for this study.

working conditions might influence teachers' decisions to remain in teaching, our statistical approach allowed for a fairer comparison of retention for teachers working in similar contexts.⁵

Finally, to understand the relative performance of TEACH teachers, we compared the student achievement gains of students taught by TEACH teachers with those of similar students taught by other new teachers hired in the same school year in each study district. We considered TEACH candidates' outcomes both in their first year on the job, when they were still participating in the program, and in their second year as teachers, after they had fully completed the program. Like the retention analyses, the achievement analyses were conducted using the doubly robust estimation approach that accounted for the differences between the characteristics of TEACH and comparison teachers, demographic characteristics and baseline achievement levels of the students they taught, and the characteristics of the schools where they were placed. Huguet et al. (2021) describe our statistical approach in detail.

Student achievement outcomes were not available in all school years in all programs, and they were available for teachers only in specific grade levels, which narrowed the types of teachers for whom we can assess instructional impacts. In all three programs, participating districts administered their state's standardized achievement exams in English language arts (ELA) and math in grades 3 through 8 in the spring of school year 2018–2019. However, due to the COVID-19 pandemic, none of the participating districts administered state exams in school year 2019–2020. Separately, Program A administered additional ELA and math assessments (MAP), a computer-adaptive assessment typically administered in the fall, winter, and spring of each school year in grades K–10. Program A administered the MAP assessments three times in school year 2018–2019, but only administered the fall and winter MAP assessments in school year 2019–2020, prior to the pandemic. The MAP assessments were designed to assess student growth in key topics aligned with the state standards.

In Table 1.2 we summarize available TEACH samples for our analyses of impacts on student achievement and retention. Our analyses of student achievement focused on a set of teachers who taught in tested grades and subjects, in programs and/or school years when tests were administered. Only around 23 percent of all TEACH teachers (and 55 percent of Cohort 1 TEACH teachers) were included in our assessment of impacts on state assessments. Within Program A, around 69 percent of TEACH teachers were included in assessment

⁵ Specifically, we used the “doubly robust” estimation approach, which is conducted in two steps. The first step entails creating teacher-level propensity scores via Generalized Boosted Models that control for the teacher, classroom, and school-level differences between TEACH and comparison teachers. The estimated propensity scores are used to create teacher-level weights. The second step of the estimation approach involves comparing retention outcomes of the TEACH and comparison teachers using weighted regression models that control for the teacher, classroom, and school-level characteristics used to estimate propensity scores. Please see Huguet et al. (2021) for more details on the implementation of this approach.

of impacts on MAP assessments. The samples in which we analyzed teacher retention included more TEACH teachers because any TEACH teacher whom we could link to students was included, regardless of whether the grade subject was tested. We were able to include 81 percent of TEACH teachers in Programs A and C. We were unable to obtain retention data from Program B.

Where an outcome was available across multiple programs, we pooled results as our primary test of impact to better understand the overall average TEACH effect across contexts. We also explored results separately for each program. Originally, the primary intended focus of our impact analyses was on TEACH teachers as of their second year of teaching, after they had fully completed the program. However, due to data limitations related to COVID-19, we had less complete data than we had hoped regarding teachers as of their second year.

Implementation

In this chapter, we discuss implementation of the three TEACH programs. While the programs were located in different regions of the United States and varied in size and structure, they also had commonalities. The programs' worked with districts that served primarily students of color, where a majority of students were eligible for free or reduced-price lunch. The programs all shared the goal of contributing to a more diverse teaching population—one that would more closely mirror the students in their respective communities. In this chapter, we first describe key characteristics of the three programs in order to set the context for our findings. We then delve into the primary themes that emerged after following the programs during their first two cohorts of teachers; these themes include challenges and successes that were common among the programs, but also highlight ways that each individual program was unique in its implementation.

The three programs in this iteration of TEACH differed significantly on several key aspects of implementation, related primarily to the structure of their organizational partners. As described in the introduction to this report, the TEACH model is designed so that TNTP can eventually stop providing implementation support and the partner organization (typically a school district) can continue operations independently. As illustrated in Table 2.1, TNTP partnered with school districts for two of the three programs (Programs A and B)—as it had in past TEACH programs (Kaufman et al., 2020). In these cases, the goal was for the TEACH program to become embedded in the district. For the third program, Program C, TNTP partnered with a different kind of organization: a small nonprofit consortium that worked with local school and district leaders to improve education in two relatively small local districts. The partnership looked very different in this case, as the nonprofit was a one-person organization prior to the TEACH program. Instead of embedding TNTP program practices into existing structures—integrating it with current district systems such as human resources (HR) or coaching, for instance—this program needed to start from scratch to create an independent infrastructure. Program C hired staff members to fill key roles in operations and recruitment, candidate training, and coaching.

Data for the implementation portion of this report were collected via six research activities:

1. interviews with TNTP and district staff
2. interviews with coaches working with the TEACH candidates
3. coaching logs related to the frequency of coaching sessions and their primary foci
4. phone interviews with teaching candidates
5. phone interviews with principals who hired program teaching candidates
6. documents collected from program staff.

For a more detailed description of our implementation methods, see the technical appendix (Huguet et al., 2021).

TABLE 2.1
Characteristics of the Three TEACH Programs

	Program A	Program B	Program C
TNTP's partner organization	Medium-sized school district (between 25,000 and 100,000 students)	Large school district (more than 100,000 students)	Small, nonprofit organization serving two school districts (each with 25,000 students or less)
Program size	Large (more than 50 candidates per cohort)	Large (more than 40 candidates per cohort)	Small (fewer than 25 candidates per cohort)
Subject area(s)	Cohorts 1 and 2: Elementary	Cohort 1: Secondary math and elementary Cohort 2: Secondary math, elementary, and <i>added</i> secondary science and language arts	Cohort 1: Elementary, SPED, ESL Cohort 2: Elementary, SPED, ESL, and <i>added</i> secondary math
Ability to certify	No (not during data collection)	Yes	Yes
Cost for candidates ^a	Free	< \$2,500	< \$7,000
Stipend for PST	Yes	No	No

NOTE: Information on this chart is drawn primarily from interviews with program staff.

^aWe provided a range, as costs varied by year.

Due to their partner organizations' sizes and contexts, the three programs' recruiting goals were markedly different: As shown in Table 2.1, Programs A and B recruited more candidates than Program C. There were also differences in recruitment objectives and strategy among programs. From the first to the second cohorts, Programs B and C updated the subject areas that they were recruiting for, based on the partner organizations' needs, and indicated that such updates would likely continue after the first two cohorts. Program A was unable to make such updates, despite potential shifts in the district's needs, because it was initially unable to certify teachers in the first two cohorts.¹ Thus, Program A only recruited and trained candidates to become elementary teachers, as emergency certification was readily available for this position. The program cost for candidates was also notably different from program to program. Program B charged candidates to enroll, but its cost appeared low compared with other local options for teacher certification. Program C charged a higher fee (according to interviewees, \$6,500 the first year and \$7,000 the second year), but according to program staff, this cost was still competitive with other certification programs in the region. In contrast with Programs B and C, Program A participants were not charged tuition. As noted, Program A was also the only program of the three that was not initially able to certify teachers. The incentives to participate in the program were the training and support themselves, which would particularly benefit new teachers who had limited previous experience.² In addition, candidates in Program A received a stipend for their participation during PST (\$1,500 for the first cohort, and \$120/day during Cohort 2). Despite these differences in

¹ As we discuss in the findings, a change in the policy environment during Cohort 2 would make certification possible.

² One might ask why a principal would want to hire a candidate from Program A, given that they were not eligible for certification through the program in its first two years. The context in the partner district was such that every year, a large proportion of new hires were emergency certified—like the TEACH candidates. The TEACH candidates had an advantage because they had been exposed to training through PST, which could differentiate them from other emergency-certified teachers without any prior experience.

TABLE 2.2
TEACH Initiative Recruitment and Hiring Data, by Program

	Cohort 1 2018–2019	Cohort 2 2019–2020
Program A		
Applications submitted to TEACH	292	311
Candidates passing screening	233	203
Candidates enrolled in TEACH PST	168	180
TEACH candidates beginning PST	93	112
TEACH candidates completing PST	74	85
TEACH candidates hired as first-year teachers	72	74
TEACH candidates completing the program	Not given	40
Program B		
Applications submitted to TEACH	375	967
Candidates passing screening	216	667
Candidates enrolled in TEACH PST	185	542
TEACH candidates beginning PST	82	105
TEACH candidates completing PST	48	95
TEACH candidates hired as first-year teachers	48	88
TEACH candidates completing the program	44	79
Program C		
Applications submitted to TEACH	161	147
Candidates passing screening	136	89
Candidates enrolled in TEACH PST	49	67
TEACH candidates beginning PST	24	36
TEACH candidates completing PST	20	32
TEACH candidates hired as first-year teachers	20	30
TEACH candidates completing the program	19	21

cost, staff at all programs reported that it was important to remain low- or no-cost in order to lessen barriers to entering the teaching profession.

Table 2.2 identifies numbers of participants in the recruitment, hiring, and teaching phases. Across districts, there was a large drop in numbers between applications received and offers extended. This attrition between the application and selection phases was by design, as the TEACH programs proactively screened for applicants who they felt had the best potential to pass PST and the required state assessments, and to be

successful in classrooms. Screening and selection occurred in multiple phases (i.e., prescreening, interviewing, selection). TNTP and/or its partner organizations first conducted prescreening, determining whether applicants met essential criteria (e.g., a four-year college degree) and had characteristics that they looked for (e.g., commitment to educational equity). Applicants who passed this prescreening were invited to a phone or virtual interview.³ Those who passed the interview phase received invitations to enroll in the summer PST.

Looking across programs and cohort years, one trend shown in Table 2.2 is the attrition of candidates from those who were successfully screened into the programs (“Candidates passing screening”), to those who received and accepted an offer to join the PST (“Candidate enrolled in TEACH PST”), to those who actually began PST (“TEACH candidates beginning PST”). The drop between these latter two categories was particularly high for Cohort 2 in Program B, decreasing from 542 candidates enrolled in the program to 105 actually beginning PST; in this second cohort, Program B updated their requirements so that candidates had to pass their state assessments prior to beginning training. Program B applicants who were accepted but did not pass were given the option to defer until the next year. The required assessments were expensive, and, as has been shown in prior research, candidates often found them difficult (Kaufman et al., 2020).⁴ In Programs A and C, candidates were not required to pass state assessments prior to PST. According to the program staff, common reasons for not matriculating included losing interest in the program and financial difficulty—as noted in Table 2.1, two of the three programs did not provide stipends to candidates during the summer PST. In an effort to reduce attrition, program staff worked to maintain relationships with accepted applicants during what they often called a “cultivation” period, between selection and PST.

In the second cohort, readers will note a large decline in the number of candidates hired into school-year teaching positions and those who completed the program. This second cohort experienced the challenges of school disruptions associated with the COVID-19 pandemic in addition to the typical difficulties that accompany first-year teaching; this may have contributed to the number of teachers exiting the programs early. The drop appears particularly large in Program A in the second cohort. At least 26 of these candidates “opted out” of the program in the second half of the school year, but continued teaching in their schools (their emergency credentials did not require them to be enrolled in a preparation program at the time). We hypothesize that many of these candidates left the program when its requirements changed, as discussed in the “Program Sustainability” section of our implementation findings. Other than this, attrition at each phase in Table 2.2 does not look notably different than patterns seen in the Kaufman et al. (2020) TEACH study; however, we do not have all the same data points for the two studies in order to complete a direct comparison. For more about retention, see Chapter Three.

The structure of this chapter echoes that in our recently published RAND report about TEACH program implementation (see Kaufman et al., 2020). Some themes from that report are echoed in these current findings. For instance, candidates appreciated opportunities to meet in person with other cohort members, the programs capitalized on relationships with principals to ease candidate hiring, and staff at each program felt trepidation about their preparedness for TNTP’s exit. However, we were able to collect data on additional dimensions of the programs in this study. For instance, this report provides a more in-depth look at variation between coaching models across the three programs, particularly given the administration of the coaching log. As noted, this study also benefited from the variety of types of partner organization involved with TEACH; while the 2020 study addressed implementation of TEACH in three school districts, this study included one nondistrict partner organization. This allowed themes to surface related to enablers and challenges unique to the type of partnership at hand. In this report, we also attend more closely to ways that the

³ In Program A, the phone screen was added in the second year.

⁴ All programs offered some form of test preparation supports.

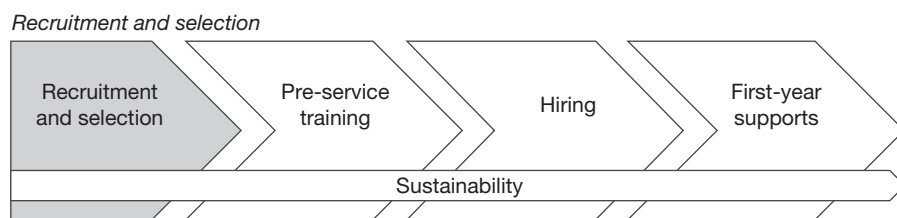
policy environment interacted with implementation. Those with acute interest in the implementation of programs such as TEACH would benefit from a review of both reports.

Implementation Themes

As noted, we organize our findings into five phases of the TEACH programs: (1) recruitment and selection; (2) PST; (3) hiring of candidates into school-year positions; (4) first-year program supports; and (5) sustainability. Within our analyses, we consider factors shaping implementation at multiple levels, including the experiences of teaching candidates enrolled in the programs, the design and execution of programs themselves, the broader partner organization within which the programs were embedded (e.g., the school district), and the policy environment surrounding the programs' implementation. In the sections that follow, we note common hindrances to or enablers of success across all three programs. Where applicable, we also address notable ways that individual programs stood out. Table 2.3 summarizes the key themes discussed in this chapter. Throughout the report, readers will note that many findings could be categorized into more than one cell in Table 2.3, though we conferred as a team to categorize each finding in only one for the purpose of organization.

We present our findings in chronological order, beginning with recruitment and selection and ending with sustainability. In reality, these phases do not proceed linearly; rather, they interact with and are often dependent on one another. For instance, program success (or lack thereof) in recruitment and selection is likely associated with subsequent success in hiring teachers in classrooms prior to the school year. In addition, we use levels of implementation identified in Table 2.3 (i.e., the candidate level, program level, partner organization level, and policy environment) to further subdivide our findings, but these are also interrelated and often permeable. We encourage readers to consider the various ways that the findings interact, and we note some clear instances of such interactions in the sections to follow. We emphasize that implementation of complex programs such as these is nuanced and that we necessarily distilled these findings for the purpose of this report.

Recruitment and Selection



The recruitment phase typically began in the fall and continued until the start of PST, though all three programs made some shifts in this timing during our two years of data collection. According to the gradual release model of the programs, the first year of recruitment was intended to be led primarily by TNTP. TNTP and the partner organization planned to then manage recruitment jointly in the second year, and by the third year, the partner organization would lead recruitment with some advising and support from TNTP. This transition happened to various degrees across the three programs, which we will discuss in the “Program Sustainability” subsection. We found that characteristics of the programs—particularly their relatively low cost for candidates—initially attracted applicants. Programs recruited by various means, including internet recruitment sites (e.g., Indeed), posting on social media (e.g., Twitter), and attending events such as career fairs. The programs focused their recruitment efforts locally, with some reportedly positive results, though

TABLE 2.3
Key Implementation Themes

Recruitment	Pre-service training	Hiring	First-year supports	Sustainability
Candidate level				
Candidates were drawn to the affordability and local nature of the program.	All three programs centered culturally responsive teaching in PST; candidates appeared to value this content; some trainers noted benefits of receiving support to teach it.	Most candidates were hired into appropriate teaching positions prior to the start of the school year, with some exceptions.	Teaching candidates valued in-person training that was tailored to their needs and connected them with cohort members. More coaching time, as well as time coaches and candidates spent reviewing data and student work, were correlated with student achievement growth.	
Program				
The three programs had some success in recruiting diverse cohorts, but struggled to recruit Latinx candidates.	Programs updated their training content for the second cohort, a move that interviewed candidates and coaches generally approved of.	Staff at each program depended on relationships with principals to facilitate hiring. Principals offered mixed reviews about whether or not they would hire from the TEACH program again.	The coaching model varied widely in both years, meaning candidates in different programs received notably different supports.	Interviewees from all three programs reported that they needed more staff to effectively run PST once TNTP supports diminished.
Partner organization				
Two programs capitalized on within-district recruitment.	Candidates described classroom time as a beneficial component of their training, but felt underprepared when their classroom experiences were not aligned with their school-year position.		When coaching shifted from TNTP to partners' management, their success varied as a function of the local partners' capacity.	Financial sustainability was a primary concern across all three programs. One program struggled more than others in taking ownership of the program from TNTP.
Policy environment				
Elimination of lateral entry policies likely contributed to recruitment in one program.				A state-level policy shift may contribute to one program's chances of longer-term sustainability.

NOTE: Readers will note that there is not a finding to fill every cell; due to the necessary constraints on the length of this report, we elected to focus only on the themes that emerged as strongest (having been highlighted by the most sources) or most consequential for the programs, regardless of the category that they fall under.

all the programs struggled to recruit Latinx candidates. Finally, one of the programs appeared to benefit from state policy shifts in its second recruitment season.

Candidates were drawn to the affordability and local nature of the program. Teaching candidates learned about their programs through various channels, such as on online job-posting boards, school district websites, former colleagues or friends, and even media coverage. When asked what drew them to the program, the most common response candidates gave was that they were interested in the lower overall cost of the TEACH program, as compared with typical teacher-preparation routes. One candidate told us, “I could work while I was getting my certification, instead of going to a university and spending a lot more money in some cases, and not working.” This common refrain suggests that the TEACH programs in our study experienced some success in lowering the financial barriers to entry that a traditional teacher preparation program can pose.

The three programs took different approaches to supporting candidates financially. Only one program, Program A, provided stipends for all candidates during their summer training (funded by a local foundation). Program C supported its candidates in applying for outside funding opportunities, specifically AmeriCorps’ educational reimbursements. By the second year, the third program (Program B) had connected with a Black educators’ group that provided stipends to support Black candidates who showed evidence of financial need. Although these financial supports did not reach all candidates at all programs, most interviewees felt that the TEACH programs were a better financial choice for them than other comparable training paths to teaching.

In addition, some candidates reported that it was important to them that the program was based in their local communities. While other alternative teacher-preparation options required candidates to move cities or even states, the TEACH programs provided the opportunity for them to train and work in a specific location—often where they were already living. We hypothesize that this factor might have been particularly appealing to midcareer candidates who had roots in their communities. One candidate stated, “I’ve lived in [this area] for the last five years—I was already living here. So not having to relocate to do something was really beneficial.” Candidates who were making midcareer transitions to teaching also appreciated the condensed timeline of the one-year programs.

The three programs had some success in recruiting diverse cohorts of candidates, but struggled to recruit Latinx candidates. As noted, a primary goal of the TEACH programs was to recruit candidates who better mirrored the demographic makeup of the student body than did the existing teaching force. As a staff member from one program summarized: “It’s about diversifying. Our goal is to increase the quantity, quality, and diversity of the teacher pipeline.” Recruitment goals were informed by the projected hiring needs in the upcoming year at each program’s partner organization, as well as past TEACH program experiences and the programs’ own objectives for diversity based on their community context. For the two programs for which we were able to collect demographic information, cohorts were indeed more diverse than other new teacher hires (see Chapter Three for more specifics related to cohort diversity).

However, staff across all three programs reported that recruiting Latinx candidates was a challenge in both years. As a staff member in one program stated, “We’ve got to figure out how we reach the Latinx community and pool of candidates, particularly those that are multilingual. . . . If our ultimate goal is for students to be able to see themselves and what they can be through the adults who are most closely connected to them, we’ve got to do a much better job at recruiting candidates . . . that are Latinx.” There were some specific strategies that programs employed in their attempts to attract this group of applicants. For instance, programs connected with Latinx community-based organizations, a Hispanic chamber of commerce, churches, and local Spanish radio stations, among other organizations. In one case, a current Latinx cohort member of a program reached out to potential applicants, serving as an ambassador for the program. Despite these attempts, at the conclusion of our data collection, all three programs struggled in this dimension; as one

program staff member stated, “I still feel like we’re at a loss at that area of how do we bring in Hispanic educators.” Interviewees were not clear about why they had a more difficult time recruiting Latinx candidates than others. We see these findings echoed in the impact section of this report, detailed in the next chapter.

Two programs in particular capitalized on within-district recruitment, as related to the type of partner organization with which they were linked. Programs sought to make use of relationships with their partner organizations when recruiting candidates—a strategy that was not emphasized as much in previous iterations of TEACH (Kaufman et al., 2020). For example, from the beginning District B directed recruitment toward current and former district employees. Some nuances of this approach were explained by one Program B staff member as follows:

We got a lot of interest from current and former [District B] employees last year, which was exciting. We did a lot of targeting recruitment with that group. We found out that HR actually has a list of subs and TAs that have bachelor’s degrees but for some reason don’t have a teaching license. So, we are able to do very targeted recruitment with that group.

This strategy turned out to be useful for District B, as the same employee later noted that retention during PST in Year 1 was better for current and former District B employees compared with nonemployees.⁵ Indeed, about half the Program B teaching candidates whom we interviewed at the end of the second year had previously worked at district schools in some capacity.

Similarly, Program A also highlighted a push to recruit locally and from within the district:

A lot of our campaigns were focused on individuals who already had relationships or roots in District A. We looked specifically at paraprofessionals within [the] district, substitute teachers within [the] district, and apprentice teachers. . . . So, a lot of this was done, I mean, honestly, word-of-mouth within the district. We pushed out a lot of communication just internally within the district.

As noted above, teaching candidates themselves also found the locality of the program to be appealing.

Program C was the only program of the three that was not embedded within a school district, which served as a connection to existing pipelines of qualified candidates for Programs A and B. Despite not having this natural pipeline built into the partnership, staff members at Program C were diligent about networking with principals and with the two districts with which they worked. Nonprofit C had existing connections with principals in its region, given the nature of its other work, and it used those connections to seek potential candidates. Program C staff noted that going into the recruitment process for Cohort 3, they were exploring options for recruiting current SPED aides from a nearby school district.

The state’s elimination of lateral entry pathways likely contributed to recruitment in one program’s second cohort. Separate from Program B, District B had an internal lateral entry program that allowed professionals who held bachelor’s degrees to move into a teaching position by fulfilling a specific set of requirements (e.g., completing coursework) over the course of three years. Soon after Program B started, the state eliminated lateral entry pathways. Teaching candidates and program staff alike reported that this change led to a greater need for the TEACH program. One teaching candidate said, “Last year . . . they were going to start changing the requirements for lateral entry. And so, that pushed me more toward [Program B].” Several interviewees who had considered lateral entry in the past also believed Program B was a better option: “If I had gone with the lateral entry program that we had before the residency, I would have had to go take additional

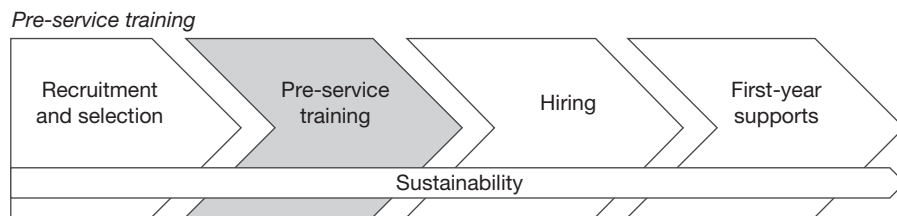
⁵ Documents collected from Program B indicate that 29 of the 88 candidates enrolled in Program B’s Cohort 2 were previous district employees. According to the program’s analyses, 97 percent of these candidates completed their first school year, in comparison with 86 percent of candidates who were not previously employed by the district.

classes while I was in school working. With the residency program, we are still taking classes, but it was really just an easier pathway to get into the classroom than what I saw the lateral entry had been.”

Despite the increase of candidates who were funneled to Program B when lateral entry was eliminated, one staff person reported that this effect could be short-lived: “I actually think the impact . . . last year was large because they weren’t granting lateral entry licenses. I don’t think the impact is as big going forward as anticipated.” This interviewee felt that other organizations involved in teacher preparation would adjust to the changes and provide other pathways for prospective teachers.

On a related note, TNTP served as an ear to the ground for policy changes relevant to all three organizational partners. TNTP staff members’ close interest in and attention to policy shifts that may affect the program or region more broadly were added benefits of the partnership. There were echoes of this in the other two programs as well.

Pre-Service Training



While the length of programs’ PST varied from five weeks to nine, the components were largely the same. PST consisted of field experience—where candidates taught students during summer school programs and received feedback from coaches—in-person training, and online coursework. Candidates typically spent one half of the day in summer school, either teaching, supporting a lead classroom teacher, or observing. During the other half of the day, they attended training sessions on teacher skills, curriculum, and equity with fellow candidates. Uniquely, Program C candidates also spent two to three weeks in June as teachers’ aides prior to summer teaching. Program B candidates were required to spend one day in a district classroom before they started PST. All three PSTs underwent substantial changes to their content, structure, and leadership in the second year. This section summarizes main themes that emerged from interviews with teaching candidates, principals, and program staff about PST. While the following section highlights some areas for improvement, according to collected documents, candidates overall reported that they had a positive attitude toward their PST experience.

All three programs centered culturally responsive teaching in their PST; candidates appeared to value this content, and some trainers noted benefits of receiving support to teach it. At the beginning of each partnership and throughout the continuous development of the programs, TNTP staff took stock of what its partner organization wanted to focus on during candidates’ training. The program team, including members from TNTP and the partner organization, then codeveloped content using TNTPs experience in other TEACH programs as a model. Equity and culturally responsive teaching emerged as important in all three programs and therefore was a focus across PSTs.

Interviewees from all programs mentioned a focal text, *Culturally Responsive Teaching and the Brain* by Zaretta Hammond, and coaches and candidates alike rated it favorably during interviews. One candidate in Program C said, “There’s a book that talks about racism and its effects on students—*Culturally Responsive Teaching and the Brain*. It is an amazing book, and I was really grateful that we read that in the program.”

One TNTP staff member reported that culturally responsive teaching was a push from TNTP broadly, but we also heard that the desire for it came from the partner organizations themselves. As one TNTP-based staff member in Program A stated:

[We're] making sure that throughout our summer training, and throughout the year, we're having conversations and integrating District A's core values into our curriculum. . . . For example, equity is one. . . . It means that making sure in the curriculum, the content of the course curriculum intentionally focuses in on things like culturally responsive teaching. Talking about uncovering hidden biases. There's conversations that we're having with [candidates] and sessions around teaching diverse learners. . . . Those values are infused throughout every aspect of our program.

While interviewees had positive feedback about the equity and culturally responsive teaching content included in PST, some also said training would benefit from a greater emphasis on these topics. This was partially because candidates were coming from a variety of different backgrounds and had differing degrees of prior exposure to these concepts.

In addition to candidates, some coaches received additional training related to culturally responsive teaching content. A coach in Program A, who attended an in-depth training related to culturally responsive teaching in the second year, recounted, "There were some [candidates for whom] this was the first time someone sat down and actually had conversations about equity, about oppression, and about biases and implicit biases. I don't think I had the knowledge to navigate those types of conversations."

Programs updated their training content for the second cohort, a move that interviewed candidates and coaches generally approved of. In response to feedback from candidates, coaches, and principals in the first year, programs revised PST content substantially for the second cohort. In Program C, staff reported conducting a "deep coursework audit" on all the in-person and online PST content and revising it to ensure it aligned with the certification tests candidates were required to take and with more specific skills needed for being a SPED or ESL teacher. Interviewed staff from both Programs A and C stated that they placed a greater emphasis on understanding the local community for Cohort 2; Program C candidates participated in online modules focused on understanding the local context (e.g., student demographics, neighborhood history) prior to even beginning PST. One Cohort 2 candidate reported, "The model that [Program C] uses is very localized. They give us a lot of training that is really specific to the populations that we serve. There's a lot of cultural relevancy to it."

In Program A, interviewees stated that PST content was revised between the first and second years to have a greater emphasis on the district's adopted curriculum. While some Program A staff had mixed feelings about whether or not this was emphasized at the expense of pedagogical skills, one coach felt that candidates were having a "better impact" because they were entering the classroom comfortable with the district's curriculum. Several interviewed principals also said that they appreciated candidates' familiarity with their curriculum. Program B adjusted their PST content to strengthen candidates' "teacher skills" (e.g., checks for understanding). This approach was also reflected in our previous report on similar TEACH programs, in which programs tailored their PST content in the second year to meet the needs of their context (Kaufman et al., 2020).

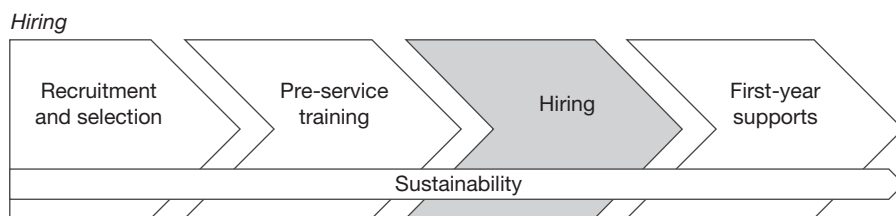
Interviewed candidates described classroom time as a beneficial component of their training, but felt underprepared when their classroom experiences were not aligned with their school-year positions. When asked about the most helpful components of PST, candidates consistently talked about their time in the classroom; this was a particularly salient experience for candidates who were switching careers and had limited prior experience working with children. One candidate explained, "I think everything about teaching summer school is helpful. . . . There is no substitute for it." However, many candidates and principals, particularly in Cohort 1, expressed a desire for a teaching experience that more closely matched candidates' school-year teaching responsibilities. During PST, candidates often taught for less time (i.e., one to two hours per day) than they would in a typical school day, in classes that were notably smaller, and in different subject areas, grade levels, or parts of the community than they would teach in during the school year. The programs had little control over the amount of time and the subject that candidates were able to teach during PST,

as they typically relied on the summer school structures of their partner organization. In Nonprofit C, the consortium did not have its own summer school program to use, the way that the two district partners did. Therefore, they partnered with external summer school programs for the first two cohorts, which similarly left the program itself with limited control over the structure of TEACH candidates' classroom experiences.

The differences between the summer and school-year classrooms led some candidates to feel underprepared. In Program A, a candidate felt that some of her cohort members actually left teaching during their first year because the summer training did not adequately prepare them: "Those [candidates] quit because they were teaching in the hardest place to teach in [District A]. . . . When you teach the 'easy ones' during the summer school and then get put into the 'hard ones,' you're not ready." One Program B candidate noted that the summer teaching experience "wasn't really applicable because it wasn't the grades we were teaching, or the content area." One Program C candidate said they did not have enough time teaching, explaining that they taught in five minute "bursts." To make the summer experience more realistic, Program A expanded summer teaching to regions in the district where teachers were regularly hired. Program C networked directly with schools where candidates were typically hired, so that some candidates could actually complete their summer teaching in a tailored experience *at* the school.

Interviewees from all three programs reported that they needed more staff to effectively run PST once TNTP supports diminished. As staff from the partner organizations transitioned to lead PST—as part of the planned, gradual exit of TNTP—interviewees at all programs expressed that their internal capacity was not robust enough to manage without the greater extent of TNTP supports. One individual from District B explained, "I worry that there are not enough people who have been allocated to this work in order for it truly to be able to move forward successfully"—a concern that would grow as teams prepared to take over entirely in the third year. In District A, one person managed the logistics of PST and interfacing with the candidates; both were large responsibilities that were previously managed by two separate individuals. Similarly, Program C had one lead instructor responsible for planning training sessions and managing all coaches in Year 2, which some interviewees described as "too much." Additional challenges with sustainability are described in detail at the end of this chapter.

Hiring



The TEACH programs in our study did not place candidates into teaching positions during the school year. Rather, they supported candidates entering districts' and/or charter schools' existing hiring channels. All three programs, though, provided some degree of hiring supports, including assistance with resumes, mock interviews, and introductions to principals. The majority of teaching candidates were hired into teaching positions prior to the beginning of their school years, though some were hired into positions outside of their intended certification area. Interviewees reported that building relationships with principals facilitated hiring. Principals themselves had mixed reviews about whether or not they would hire from their TEACH program again.

Most candidates were hired into appropriate teaching positions prior to the start of the school year, with some exceptions. In this sense, hiring was an overall success across this iteration of TEACH, though there was variation among programs. In Program A, in Year 1, all passing candidates were hired within a

week of completing PST; and in the second year, only four of 82 candidates were *not* hired prior to the start of the school year. In Program B, in both Year 1 and Year 2, all candidates who passed the PST phase (including passing their state assessments) were hired by principals before the start of the school year. Candidates in Programs A and B were hired into classrooms that aligned with their intended certification areas.

Program C, the smallest program, reported the greatest challenges with the hiring phase. During Year 1, all Program C candidates were eventually hired, but not all of them had positions that aligned with their desired area of certification. For instance, some candidates were hoping to be certified in mild to moderate SPED, but were not teaching in mild to moderate classrooms. They faced a similar challenge in the second year: All but one candidate was hired, but not all those who were hired were in classrooms that reflected their certification needs. Mismatches like these could complicate candidates' certification processes, as they were required to log a certain number of hours teaching in a qualifying classroom.

For Programs A and B, projections of teacher needs were from their district partners, which appeared mostly accurate when it came time for teaching candidates to find positions. In Program C, program staff had to generate predictions based on a variety of data sources, including connections at school districts and individual school principals with whom they partnered. This could create complications, such as this one described by a staff member: “[A district we partner with] made some changes in the way they were staffing, the way they were modeling how they serve English language learners. Those decisions didn’t trickle into information that was shared with [us] about how that might impact ESL vacancies for the year.” Staff at Program C were experienced in networking across schools and districts, but predicting staffing needs without the consolidated guidance that the other programs received from their district partner may have contributed to hiring challenges. As Program C noted in a document reflecting on successes and challenges with Cohort 1, “There is a gap between projected needs for our hiring partners and actual resident hiring.”

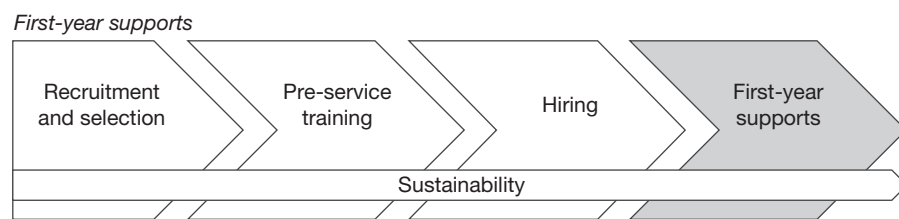
Staff at each program depended on relationships with principals to facilitate hiring. Throughout interviews, we heard that principals could be reticent to hire new, unlicensed teachers if they had other options. Therefore, bringing principals into the fold and building their trust was a key dimension of hiring in all three programs. Where program staff had strong existing relationships with principals, they leveraged them. One TNTTP staff member working with Program B said, “I’ve been in the district for a while, so I do know a lot of principals and I’ve done a lot of work with them, so getting them to talk about [the program] was my avenue. I built on who I knew.” In two of the three programs, staff created online candidate folders or portfolios that they would email to principals to give them a broader picture of the candidates, beyond their resumes (which often showed that candidates had limited teaching experience, if any). In two programs, the staff also invited principals to visit their PST sessions, where they could observe candidates working within their summer school classrooms. These strategies were intended to improve principals’ awareness of and comfort with the programs’ candidates. Some interviewees felt these efforts were successful. For example, one principal who hired a Program A candidate stated, “Honestly, since we do have access to be able to do that [observe summer classrooms], I think you get a much better feel of how they’re going to be in the classroom versus just asking a certified teacher that you don’t know.” As noted in the “Recruitment and Selection” section, candidates themselves also sometimes had preexisting relationships with principals, because they had worked in the district in a different capacity.

Interviewed principals offered mixed reviews about whether or not they would hire from the TEACH program again. District A and B principals who hired from the programs did not always agree that they would do so again in the future. In Program A, principals with whom we spoke were mixed, with a nearly even split between principals saying they would and would not hire from the program again. District B principals were the least likely to report that they would hire from the program again. After one year with a resident in their school, a District B principal told us, “I looked at a couple of [program] resumes but, just to be honest, I was a little bit gun shy based on the experience from last year.” One common theme to emerge from

interviews with principals in District B was that they wished their teaching candidates received more support from the program during the school year; this could be related to some significant coaching challenges that Program B faced, as we will discuss in the next section, “First-Year Supports.” These findings suggest that there is importance not only in building but also in maintaining good relationships with hiring principals; these relationships, which are rooted in hiring outreach, also depend on developing consistently positive experiences throughout the school year.

However, feedback from interviewed principals associated with Program C was generally positive. During both years of the study, all interviewed principals agreed that they would hire a Program C teaching candidate again. One principal reported that they would hire from Program C in the future “because of the reputation that [program] has built for itself. I think all our experience reaffirms that reputation. Overall, we’ve been really happy with the quality of the candidates and the ways in which they’ve been positive members of our community.” In this way, principals’ positive experiences with the program may contribute to a smoother hiring cycle for future cohorts. It should be noted that principals were often connected to the organization in ways *beyond* hiring Program C candidates—a fact that suggests preexisting relationships with the organization may have strengthened their trust in hiring the candidates.

First-Year Supports



Across all three programs, candidates received a combination of first-year supports from three program sources: online training modules, in-person meetings, and coaching. Each program required candidates to complete a set of online modules, which began before or during PST and continued through at least a portion of the school year. As in previous research, candidates expressed that they were not impressed with the online modules and sometimes found them to be “busy work” (Kaufman et al., 2020). Candidates were also expected to attend in-person meetings throughout their first year of teaching; these meetings varied in their frequency and focus, but could include pedagogical training as well as logistical supports (e.g., keeping candidates apprised of timelines for certification benchmarks). The bulk of candidate support fell to in-person instructional coaches, which is the primary focus of this section. The programs faced different constraints in terms of recruiting coaches, but the majority of recruits had previous coaching experience. In practice, coaching varied from program to program and, as we will discuss below, changed based on shifts in partner or program structures.

Teaching candidates valued in-person training that was tailored to their needs and connected them with cohort members. Each program had regular opportunities for candidates to meet and attend professional development in person. Programs B and C expected all candidates to participate in these trainings; Program A offered optional training, which supplemented the district’s required training for new teachers. The frequency of these meetings varied from once a quarter to twice a month. The reported usefulness of in-person meetings varied within and across programs, though candidates consistently spoke positively of training that was tailored to their needs.

Interview feedback about in-person program meetings was more positive in Cohort 2 than Cohort 1. After multiple candidates described the training as too broad in the first year, Program C added specialized seminars

with content specialists to supplement in-person full-cohort training.⁶ In addition, Program C offered affinity groups for their candidates; these were typically candidate-led meetings that were rooted in teachers' identities. All Program C Cohort 2 teaching candidates whom we interviewed had positive feedback surrounding their in-person meetings. One described them as "really relevant," and another stated that "nothing else really compares." Similarly, in Program A, almost all candidates in the second year spoke highly of their in-person sessions, in which candidates chose from a slate of different professional development offerings.⁷ These candidates also highlighted the usefulness of the test-prep that Program A offered. Program B candidates provided more mixed feedback about their monthly cohort meetings, but several reported they were helpful in preparing for certification tests.

Candidates noted that it was valuable to have the time to reconnect in person with their cohort members. As one put it, "One of its biggest strengths is the relationship we have with our cohort members because our family and friends really can't understand. We can say what we're doing, but you go to a cohort member, they understand exactly what we're going through. We really help each other." This was a common theme across programs and was echoed in the programs' own surveys of their candidates (e.g., 86 percent of candidates in Program C Cohort 2 agreed that they were part of a collaborative and supportive cohort).

The coaching model varied widely in both years, which meant that candidates in different programs received notably different supports. Previous research about TEACH indicates that coaching can vary program by program (Kaufman et al., 2020), but does not provide deep understanding of the dimensions upon which they varied. That is a unique contribution of this report; in this section, we briefly summarize program-by-program variation in coaching during Cohort 1. Programs' approach to coaching in the second cohort diverged as well, but this was likely associated with their partner organizations taking greater ownership, as discussed in the next subsection.

Programs' Cohort 1 coaching varied across several dimensions, including the number of candidates per coach (ranging from two to nine in Program C, to 21 to 25 candidates per coach in Program A). Potentially related to this spread in case load, coaches visited their candidates at different frequencies, with Program C coaches visiting most frequently (weekly) and Programs A and B coaches visiting between once a week and once a month, based on perceived teacher need. Coaching logs also indicated that the amount of time spent with each teacher per session varied by program. For instance, in Program B in Year 1, coaches spent an average of 45 minutes with their candidates during each visit; the time in Program A was 55 minutes, and in Program C it was 73 minutes.⁸ This variation in frequency of and time per visit added up over the course of a year, leading to vastly different amounts of time with coaches. For instance, a candidate could receive as much as 44 hours of direct coaching time in Program C, while a candidate in Program B could have received as little as seven hours over the course of the same year.

Coaches' most commonly used practices also differed by program. We included 24 categories of coaching practices in our log, as well as an option for "other," and requested coaches to report which were "primary" practices during each of their sessions with candidates. The coaching practices most used in some programs were used very little—if at all—in others. For example, Program A coaches reported that "providing emotional support" was a primary practice in at least a quarter of their coaching sessions, whereas Program C

⁶ In another example of Program C networking across organizations in their community, the content specialists worked for local universities.

⁷ In the second year, the TEACH program limited its own in-person sessions to certification test preparation; Program A candidates, like all new District A teachers, were required to attend district-provided trainings.

⁸ This spread in the number of minutes spent with each candidate was similar in the second year, though we have fewer data due to COVID-19, and limited data for coaches in Program B who started later in the year.

coaches reported this was primary in fewer than 5 percent of their sessions. The most common practice used in Programs B and C was “observing instructional practice,” whereas the most commonly reported practice in Program A was “guiding teacher’s reflection on practice.”

The variations described above suggest that there was likely limited prescription regarding a coaching model across programs. Differences between programs could be interpreted positively as indicating flexibility in the TEACH programs’ approach to coaching; we know, for instance, that coaching in each program needed to be adapted to local context. Interpreted in another way, the differences may also indicate a lack of direction related to the structure of coaching across programs. Despite the variation in coaching across the programs, candidates overwhelmingly reported that their experiences with coaches were positive and important to their development as teachers.

When coaching shifted from TNTP to partners’ management, success varied as a function of the local partners’ capacity. In District B, not only did coaching management shift from TNTP to the district in the second cohort—as was planned—but the entire program was moved from within the teaching and learning department to the HR department. Some program interviewees were concerned about this move and reported that it shifted attention away from the training and support aspect of the program. Amid this shift, as well as other high-level leadership changes at the district, the program was not able to assign coaches to Cohort 2 teaching candidates until *after* their winter break. Some candidates reported that they did not see a coach until the spring of their first year in the classroom. During this time, program staff reported conducting “triage” to “put out fires”: When they learned a resident was struggling, someone from the program would reach out in a support role. They also held office hours. Despite these efforts, the consistency of support that had been provided to Cohort 1 candidates did not exist for Cohort 2; interviewed candidates, principals, and program staff expressed frustration about the limited support. It is important to note that despite these challenges in Cohort 2, candidates across both years in Program B reported that their coaches were a valuable support.

In Program A, coaching also changed from the first to second cohort, though less dramatically. For the first cohort, there were three program-specific, TNTP-managed coaches, each serving 21–25 teaching candidates. A benefit of this structure was that there was consistency in the messaging and support that candidates received. However, in interviews, coaches revealed that they were spread thin across this heavy coaching load. For the second cohort, coaching was absorbed into the district’s existing structures for supporting first-year teachers. With this change, 26 District A coaches assisted Cohort 2 candidates (the coaches worked with nonprogram teachers as well). Two of the three Program A coaches from Cohort 1 took leadership positions among the district’s coaches during Cohort 2. When these shifts occurred, coaching logs suggest that candidates received nine more minutes with their coaches per visit, on average. With this change of coaching staff, the most common coaching practices shifted as well; on average, Program A coaches for the second cohort reported discussing classroom management significantly more than coaches had in the first year; they also reported providing less emotional support to teachers. Interviewees did not report any perceived changes in coaching quality.

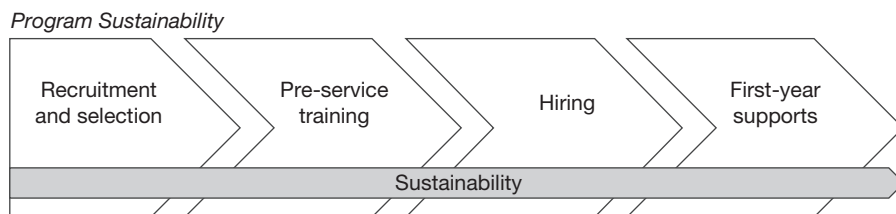
Program C was the only program in which coaching remained generally consistent from the first to second cohort. As noted in the introduction to our “Implementation” section below, Program C was a unique partnership in that the teacher preparation program was not intended to be embedded within a larger district at the end of the grant term. Instead, Program C was managed by a small organization (which we refer to as Nonprofit C) that needed to hire staff to meet program needs, including the hiring of coaches; from the start of the program, the coaches were employed by Nonprofit C. The majority of these coaches remained in their positions throughout our data collection window, building knowledge of the program and of candidates’ needs. In another example of Nonprofit C staff’s experience with networking, they hired some *school* staff members to train with them and coach their candidates; we called this “school-embedded coaching.” Candidates

who had a school-embedded coach on their campus were pleased with the amount of knowledge their coach could offer about their school contexts, and that they were easy to access when needed.

More coaching time overall, as well as time coaches and candidates spent reviewing data and student work, were correlated with student achievement growth. Our research team calculated correlations between logged coaching practices and candidates' students' achievement gains for the first cohort.⁹ The results, which are detailed in the technical appendix (Huguet et al., 2021; Table A.7), are noncausal, and we caution readers that we have a limited number of coaching logs and include only Cohort 1 data in our calculations.¹⁰ Despite these limitations, we believe the results are useful to consider, as they spark questions about what practices coaches emphasized with different teachers, and why.

With the aforementioned caveats in mind, we identified some notable trends. First, more time spent coaching teachers overall was associated with greater student achievement growth. In terms of how that time was spent, the one coaching practice that was *positively* associated with student achievement growth was spending a larger proportion of coaching time reviewing data and student work with teaching candidates. Coaching practices that were *negatively* associated with student achievement included spending a larger proportion of time conducting observations of instructional practice, discussing differentiation, providing small group support to students, and discussing time management. This may be because these practices were more commonly used with candidates who were already struggling in the classroom, and again we caution that these are correlations and not causal.

Program Sustainability



As noted earlier, the TEACH programs were modeled so that the balance of ownership between TNTP and each grantee changed over time. The grantees took on increasing responsibility and authority over the course of the grant in anticipation of the departure of TNTP resources and support. The goal was for each program to independently maintain its pipeline after the end of the grant. In the first year, TNTP provided leadership and more hands-on support; in the second year, TNTP worked in conjunction with each grantee to continue developing the program; and in the third year, TNTP served as an advisor to grantees before withdrawing support and resources. During all three years, Programs A and B were careful to brand the program as belonging to their district partner, both during internal district conversations and in public-facing outreach.

We conceptualized sustainability in our evaluation as the degree to which each program would be positioned to continue in the district or region after TNTP had transitioned out of its advising role. We did not focus on “fidelity” to the original program design over time, as the programs were intended to become customized to their partner organizations’ needs. We considered the financial sustainability of the program—from interviewees’ perspectives—as well as the relationship between each program and its respective district(s), principals, and current and former candidates. We sought to understand the alignment of each program with district or regional

⁹ Additional methodological detail, sample sizes, and findings from these analyses are provided in Huguet et al. (2021).

¹⁰ The same data were not available for Cohort 2 due to COVID-19 disruptions.

priorities, the reputation of each program among relevant stakeholders, and the balance of ownership between each program and TNTP. Throughout this section, please keep in mind that our data collection was limited to the first two cohorts in each program, and we cannot speak to how the program developed in subsequent years.

Financial sustainability was a primary concern across all three programs. Partner organizations made significant progress toward ensuring the long-term viability of their respective programs but faced noteworthy financial challenges. Two grantees (District B, Nonprofit C) had the ability to certify residents from the inaugural year of their programs, while one (District A) was unable to certify in the first year of the program.¹¹ This ability to grant certification allowed programs to provide a valuable service that could generate program revenue. Though District A was attempting to make cuts to its operating budget at the conclusion of our data collection, and some interviewees still expressed concern about how the district would afford to fund the program, district interviewees reported that they were committed to incorporating the program into the district's existing operations to ensure sustainability. Still, District A received foundation funding for candidate stipends during the first years of the program, and it was unclear to what extent those or similar funds would be available in future years.

Program B interviewees expressed concern that, moving forward, the program simply could not continue to be run the same way due to their financial constraints. These constraints were affecting the entire district and not isolated to this relatively new program. Interviewees anticipated that District B would need to make significant changes to the program in order for it to be viable long-term. Program B developed a sustainability plan in partnership with a well-known consulting firm (which completed the work pro bono). Explained one interviewee, "They came out with recommendations for what they thought the staffing model should be, [and made other suggestions]." Interviewees were not clear on how closely the program would follow this sustainability plan.

The question of financial sustainability for Program C involved unique circumstances. Program C could not rely on district funding for overhead and other expenses, nor could it spread the responsibilities and costs of running the program across various departments, as might be possible in a district. As one interviewee explained, "We're a startup nonprofit . . . so there's no infrastructure, there's nothing that a district has, there's no tax base, we didn't have an office space, none of that stuff." There was a question about whether the target number of residents needed to ensure financial sustainability for Program C was reasonable, given the limited need for teachers in the region. The program estimated that it would need to enroll over 40 teaching candidates for the program to be self-sustaining, but it faced challenges getting smaller cohorts of 20 hired in the first two years.¹² Toward the end of our data collection, the program received a large grant to help with costs in the short term; however, long-term financial sustainability was still in question at the conclusion of the grant period.

One program struggled more than the others in taking ownership of the program from TNTP. District B experienced difficulty in assuming full management of Program B. TNTP was fully managing the program at the time of our first interviews in fall 2018, when the program was housed in the district's teaching and learning department. During the second year of data collection, as noted earlier, District B moved the program into the HR department, which resulted in disruption to the existing roles and responsibilities of program staff. "It just hasn't been a regular routine yet," said one interviewee. There were also changes in district leadership, which left some program staff feeling as if their advocates in the district were no longer there: "All of these people that we've sort of lost along the way, that were really good champions of the program. . . . I think the turnover was really crushing." In terms of first-year supports, Program C did not assign coaches for Cohort 2

¹¹ As noted earlier, a bill passed by the state legislature during the second program year enabled the district to credential Cohort 2 candidates and future candidates through a two-year certification process.

¹² While outside of our data collection efforts, our research team learned that in Cohort 3, Program C reached this target number of 40 candidates.

candidates until halfway through the 2019–2020 school year, as discussed in more detail in the “First-Year Supports” section above. In addition, without TNTP leading the phase, District B appeared to have difficulty organizing and executing recruitment for Cohort 3. One program interviewee reported in our final interview, “I have a lot of concerns about what the quality of teachers will be, how prepared they will be to enter the classroom and how supported they will be throughout the year. And then, what that means for retention.”

Though not without challenges, District A and Nonprofit C both assumed ownership of their respective programs from TNTP in all phases. Interviewees stated that hiring for key positions during the second year of the grant seemed important to the success of this transition. During the final year of the grant, Nonprofit C faced some difficulty in establishing new technological tools, as they could not afford to adopt some of the software and platforms that TNTP had used previously. Nonprofit C staff in key positions remained consistent in their roles for the duration of the grant, and despite the financial challenges the program faced—primarily due to their small size and lack of internal district supports—they were able to take full ownership of the program prior to the close of Year 3.

Unlike Nonprofit C, which hired staff to work full time on the program, District A incorporated the program into its *existing* district infrastructure to enable this transition. Explained one interviewee about Program A, “It’s really tightly integrated with the district priorities, and with their curriculum, with the stuff that we know they care about, their core values, that it looks and feels like [the district].” By the time we spoke with interviewees in the final year of the evaluation, District A was leading most of the work and had integrated most Program A activities into the district’s workflows. Though TNTP was still present in its advising role during the final year of the grant—and the district could not perform all tasks in the same manner as their TNTP counterparts had—District A and TNTP interviewees all agreed that the district had the capacity to fully manage the work to support the program moving forward.

A state-level policy shift may contribute to one program’s chances of longer-term sustainability. As noted earlier, Program A was unique among the three programs because it was initially unable to certify teaching candidates. They now consider the first year of the program to be a “pilot,” as they were learning and improving the program as they prepared to be able to certify. This was due to state-level policy restrictions. At the time of our data collection, the district employed many “emergency” certified teachers, including Program A teaching candidates. Due to the depth of the teacher shortage in their region, these individuals had been approved to temporarily teach in the district without credentials; they were not required to enroll in teacher training programs such as Program A. The benefits of participating in the program for candidates in Cohort 1 were the training and support themselves—not a certificate that could be used into the future.

During the second year, however, District A petitioned for a state-level policy change that would allow it to certify teachers through a two-year program proposed by the district. The program revised the arc of its training and supports to span two years and to meet state requirements, and it invited former Program A candidates to return to the program if they wished to earn certification (six Cohort 1 candidates did return to the program in order to do so). The change in requirements was overwhelmingly viewed as a positive step, though we hypothesize that the changing expectations may have been a contributing factor in some Cohort 2 teaching candidates opting out of the program while they continued to teach (noted in Table 2.2, at the outset of this chapter).

Given that Program A could certify teachers in the second cohort and in the future, it might be able to make more concrete demands of its teaching candidates (e.g., requiring the completion of online modules) in order for them to meet certification requirements. In addition, emergency credentials were easily accessible for elementary teachers, so Program A trained elementary teachers exclusively in its first two cohorts; however, with the addition of certification, it may be able to attract and support more teaching candidates for additional positions (interviewees discussed adding SPED as well as secondary subjects). The ability to certify would open possibilities for a program-related revenue stream in the future. When asked if there was

any intention to institute tuition for Program A once it was offering certification, one program staff member stated, “We hope so. We hope it’ll be a revenue generator and a cost neutral program to the district.”

As noted in an earlier section, TNTTP played a role in listening for policy changes and advising its partners. One TNTTP interviewee in Program A emphasized that much of her time was actually spent supporting policy changes: “[I] spent a great deal of time during the legislative cycle, helping to support passing a bill to ensure that we are able to become a prep program that was recognized by the state.” These policy connections—in Program A as well as the other two programs—may have supported program sustainability. It is unclear if the programs will have access to individuals with the policy expertise that the TNTTP staff brought.

Implementation Themes Summarized

These five program dimensions—recruitment and selection, PST, hiring, first-year supports, and sustainability—intersect with different levels of implementation, including the candidate level, the programs themselves, the partner organizations they are embedded within, and the broader policy environment. Findings at the candidate level echoed those from our recent TEACH report (Kaufman et al., 2020). For instance, candidates reported that they were drawn to the program because it was affordable and relatively quick. Candidates appreciated training content that was customized to their programs’ and locations’ needs, and found training to be useful when it directly supported their path to certification. Teachers highly valued the opportunity to teach in summer school classrooms. Culturally relevant teaching was a greater focus in this iteration of TEACH than in previously studied programs, and candidates reported that this was valuable content.

As expected with any large change, each program faced some challenges in transitioning fully to the purview of the partner organization. At Nonprofit C, staff were primarily concerned about financial sustainability of their small program, particularly as it did not have a larger district that it would be absorbed into. Program B faced numerous challenges, including a lack of coaching for Cohort 2, that appear to have been associated with the transition from TNTTP to District B ownership. A major focus of our data collection was coaching; we found that it varied greatly by program—so much so that two candidates from different programs could receive dramatically different supports during their first year in the classroom. Using coaching logs and student achievement data, we were able to calculate particular coaching practices that were associated with student achievement (e.g., data use discussions were correlated with improved student achievement), though we caution that those findings are exploratory and not causal.

Unlike previous research into TEACH implementation, many of our findings were related to the type of organization that the programs partnered with. Programs A and B were embedded within larger school districts, while Program C was run by a smaller, nonprofit organization. These partnerships affected program capacity. For instance, Program A could rely on the District A talent department to manage some recruitment and selection duties. This was not the case in Program C. There were some benefits to partnering with a small organization, though: Program C coaching was the most consistent from year to year, and it did not have to manage the organizational shocks that can come from the district level, such as changes in leadership.

Our findings also highlight ways that the policy environment can affect the implementation of programs such as TEACH. Specific policy changes directly influenced both Programs A and B in obvious ways. In the three programs, interviewees suggested that TNTTP was key to monitoring for policy changes, big and small.

Limitations of Implementation Analyses

The majority of our findings rely on interview data, which we recognize are based on perceptions. Therefore, we sought to confirm or disconfirm interviewee accounts with information from other interviews, documents,

or coaching logs whenever possible. Sampling is another limitation of this analysis, particularly the sampling of our teaching candidate interviewees; we sampled only a subset of teaching candidates and principals who hired them. Thus, for Program A in particular in the second year, when there was notable attrition during the year, we could not speak with candidates who dropped out of the program *prior* to our interviews. This may have introduced bias to the perspectives that we heard. Our coaching log data are also limited in their purview, as not all coaches completed a log for all weeks, as we had designed. In District B, coaching did not begin until midyear for the second cohort, meaning that we are missing a large portion of the data we had hoped to collect via the logs. In Program A, Cohort 2, we were allowed to administer logs for only one candidate per coach, even though coaches could see multiple candidates; this, too, limited the scope of the data. Another limitation is that we did not collect in-depth school-level data; the school context undoubtedly influenced candidates' experiences. And last, these findings—along with the impact findings that we share in the following chapter—are necessarily limited to the three programs that were part of this project and may not generalize to other contexts.

Impact of TEACH

In this section, we describe our findings regarding the impacts of TEACH. We measured impacts in several ways. Because TEACH recruited individuals who may not have entered teaching through traditional pathways, the programs contributed to the supply of new teachers in participating districts, including in some cases in specific roles identified by the participating districts as priority areas for hiring. A related goal was to recruit candidates who were more racially diverse than the existing teaching force. We gauged the extent of this impact by describing the numbers and characteristics of candidates recruited through the program and/or the subjects that they taught, with comparisons with non-TEACH hiring in each program in the same period.

Once recruited, the TEACH programs aimed to prepare and support new teachers to be highly effective and to remain in teaching. To examine this aspect of the program, we compared the professional trajectories and impacts of newly hired TEACH candidates with those of other newly hired teachers (i.e., comparison teachers) working in similar circumstances within each district. We conducted these analyses using an estimation approach that involves “doubly robust” propensity score weighting. This approach involved two steps. First, we produced teacher- or student-level weights (depending on the outcome being analyzed) based on observable student, classroom, and school characteristics, such as past performance on standardized tests, demographic characteristics, participation in special programs, and other observable covariates.¹ These weights were used to make the groups that were compared (TEACH teachers versus comparison teachers or students taught by TEACH teachers or by comparison teachers) look the same on observed characteristics to the extent possible. Second, in addition to including the propensity score weights in our outcome models, we also included the variables used in producing the weights as controls. This additional step helped to control any lingering differences between groups. This approach is generally consistent with meeting What Works Clearinghouse Standards with Reservations and Elementary and Secondary School Act Tier II evidence, two frameworks that assess the rigor of evidence based on the design of studies.

Huguet et al. (2021) contains tables that present the differences in observable characteristics between students taught by TEACH and non-TEACH teachers, before and after applying propensity score weights. The results show that prior to weighting there were some large and statistically significant differences between the two groups of students with, for example, students taught by TEACH teachers generally performing less well than students taught by non-TEACH teachers. The propensity score weights were largely successful in reducing these differences to be small in magnitude and statistically insignificant. However, if students or teachers in our comparison groups differed on other important dimensions that were not measured by our data, that could potentially still skew our results.

¹ Analyses examining student achievement as the outcome are conducted at the student level and compare students taught by TEACH with those taught by comparison teachers. Propensity scores for these analyses are calculated at the student level. Analyses examining teacher retention as the outcome are conducted at the teacher level and involve comparing TEACH and comparison teachers using teacher-level propensity scores.

We considered TEACH teachers and comparison teachers' impacts on student achievement gains (in tested subjects) and also rates of teacher retention in the districts. When considering which outcomes analyses were primary (i.e., testing our initially established research questions) versus exploratory (i.e., examining other indicators to inform hypothesis generation), we followed Kaufman et al.'s (2020) evaluation of the TEACH program. Our primary achievement outcomes were focused on impacts of TEACH teachers after their second year on the job, since second-year outcomes reflect the relative performance of teachers in the year after they had completed the entire TEACH program.² However, the lack of spring state assessment data in districts due to COVID-19 in school year 2019–2020 means we have only a limited picture of achievement impacts of teachers' second year on the job. We have more complete data about candidates' effects on achievement during their first year on the job, while they were still actively receiving program supports. We consider these first-year achievement outcomes exploratory. While we have more complete data on teacher retention outcomes, including after the 2019–2020 school year, we acknowledge the unique stresses imposed by the COVID-19 pandemic. Again, first-year retention estimates are considered exploratory.

Finally, we produced program specific estimates as well as overall, meta-analytic averages across programs. For effects on student outcomes, we average results from state standardized tests in the 2018–2019 school year in Programs A and B. Program C was too small to produce reliable estimates. As all first-year achievement estimates are considered exploratory, these program-specific and average results are also considered exploratory. We were able to obtain data on an alternative measure of student achievement from Program A only in 2019–2020; thus, the second-year results from this single district are considered as our primary achievement outcome. For effects on teacher retention we produced meta-analytic averages only in Programs A and C, as Program B was unable to provide data on retention. The meta-analytic average after two years on the job across Programs A and C is considered our primary retention outcome as it is the outcome that includes the greatest number of teachers. Thus, program-specific second-year retention results are considered exploratory as are all first-year results. Please see Huguet et al. (2021) for a detailed description of our statistical approach, samples, and additional results.

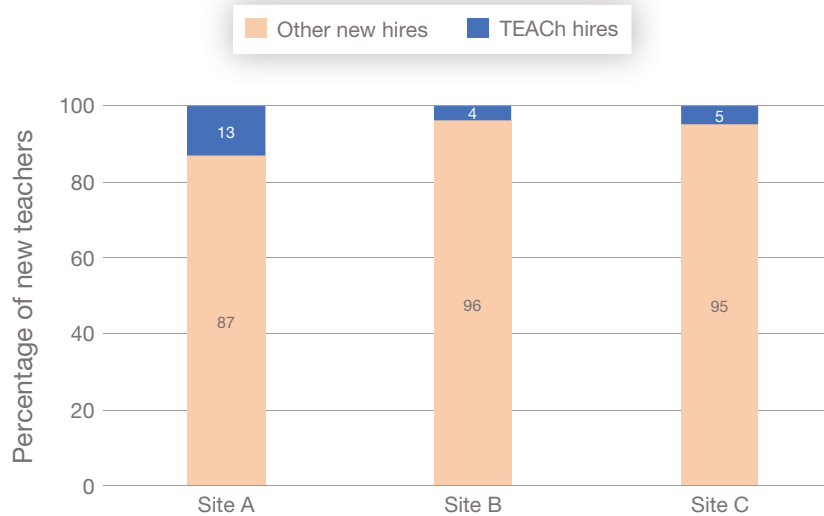
Contributions to Districts' Teacher Recruitment Efforts

TEACH recruited a somewhat more diverse set of teachers and those in hard-to-staff subjects areas than other hiring pathways in the district. TEACH contributed a substantial portion of all new hires in Program A, but a more modest portion of hires in Programs B and C. Figure 3.1 details the relative proportions of both TEACH and other new teachers hired in each district. Overall, across all participating districts and both cohorts, TEACH supplied around 8 percent of all teachers hired across grades K–12. In Program A, TEACH was a particularly large pathway, hiring 13 percent of all teachers. In Programs B and C, TEACH contributed 4 percent and 5 percent of all new teacher hires, respectively.

The proportion of district schools that received a TEACH hire during the study period varied. In Program A, approximately 38 percent of schools hired a TEACH candidate at some point during the study period. In Program C, this figure was 16 percent of schools. In Program B, where we had data only on Cohort 1, 16 percent of schools hired a TEACH teacher candidate. Around 82 percent of TEACH teacher candidates were hired alongside a fellow candidate teacher from the same cohort in the same school. Additional detail on these and other recruitment outcomes are provided in Huguet et al. (2021).

² We focus on relative TEACH teacher performance in each year to help gauge program impacts but appreciate that prior research literature has shown that, in absolute terms, all second-year teachers generally have more impact on their students' achievement than first-year teachers (e.g., Boyd et al., 2006; Clotfelter, Ladd, and Vigdor, 2010).

FIGURE 3.1
Proportion of TEACH Candidates and Other First-Year Teachers, by Program



NOTE: Program B results are shown only for recruiting in the first year of the program where data are available.

One priority of the TEACH program was to increase the diversity of the teaching force in partnering districts and programs. Figure 3.2 presents the racial/ethnic breakdown of new teachers in each program, as a proportion of TEACH candidates or non-TEACH teachers hired.³ In both Programs A and C, candidates were somewhat more diverse in that a smaller proportion identified as White and a greater proportion identified as Black. A greater proportion of non-TEACH teachers, however, identified as Latinx in both districts. This echoes the implementation findings in Chapter Two, where we highlight the challenges in recruiting Latinx candidates that interviewees reported. We unfortunately do not have demographic data for comparison teachers in Program B.

In addition to demographic diversity, TEACH programs focused on hiring teachers to fill specific, hard-to-staff teaching positions. These positions were identified by the partner organization in consultation with TNTP. Program A did not prioritize particular teacher roles in the first two cohorts, other than to focus on elementary-level teachers; this was due to certification limitations described in Chapter Two.⁴ As discussed in Chapter Two, Program B sought to recruit secondary math and elementary teachers in the first cohort, the cohort for which we have data. In the first cohort, Program C sought to hire more teachers to fill roles in SPED instruction, ESL instruction, and elementary education. For the second cohort, Program C also sought to hire more teachers in secondary math, in addition to the existing subject areas.

Administrative data from the programs indicate that, consistent with the program's priorities, TEACH recruited proportionally more candidates in their identified hard-to-staff positions compared with other new teachers. Table 3.1 presents the results. In Program B, 20 percent of TEACH candidates taught secondary math, while only 13 percent of other new, non-TEACH teachers taught secondary math courses. In

³ The White, Black, Latinx, and other categories presented in Figure 3.2 are mutually exclusive.

⁴ As discussed in Chapter Two, the program at Program A would be able to certify teachers—including in other subject areas—in years subsequent to our data collection. This change was due to an update in state policy.

FIGURE 3.2
Proportion of TEACH Candidates and Other First-Year Teachers, by Program and Race/Ethnicity

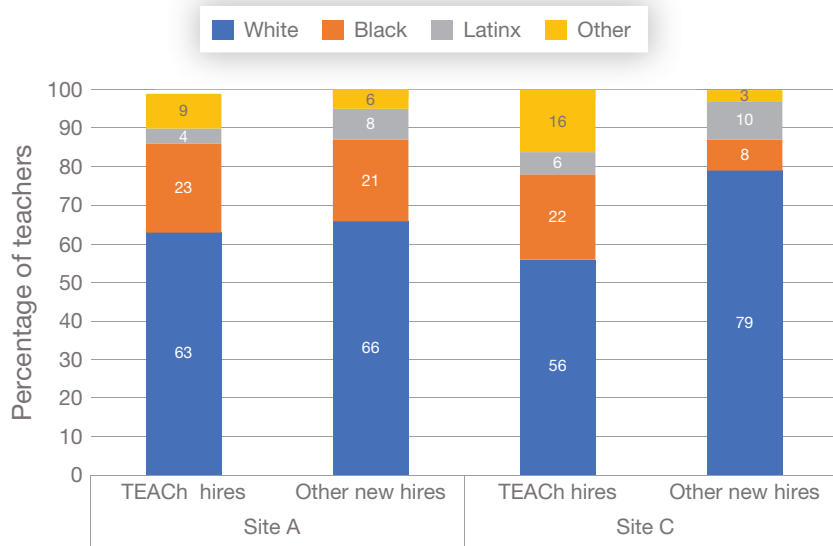


TABLE 3.1
Proportion of Hard-to-Staff Positions Filled, by Program

Position	TEACH	Non-TEACH
Panel A: Program B		
Secondary Math	20%	13%
Panel B: Program C		
SPED	50%	19%
English Language Learner	34%	5%
Secondary Math	9%	9%

NOTE: Program B contained a total of 42 TEACH teachers (of all types) and 967 non-TEACH teachers. Program C contained 32 TEACH teachers and 678 non-TEACH teachers.

Program C, we observe that 50 percent of TEACH candidates hired were SPED teachers, versus 19 percent of non-TEACH teachers hired in Program C. Thirty-four percent of program candidates hired in Program C were ESL teachers, versus just 5 percent of non-TEACH teachers hired in Program C. Finally, 9 percent of TEACH candidates and non-TEACH teachers hired in Program C worked in secondary math.

Achievement Outcomes for Students of TEACH Teachers

To evaluate the programs’ contributions to student achievement, we compared achievement gains made by students of TEACH candidates with those of comparable students of comparable teachers hired in the same incoming cohort in each program. We were able to evaluate whether the first cohort of candidates in all

TABLE 3.2
TEACH Student Achievement Gains Relative to Students of Comparison First-Year Teachers, Overall and by District and Achievement Exam

	Meta-Analytic Average of Programs A and B		Program A		Program B		Program C	
	ELA	Math	ELA	Math	ELA	Math	ELA	Math
Panel A: Cohort 1 Year 1 (School Year 2018–2019)								
State Tests	–0.012 (0.018)	–0.010 (–0.015)	0.002 (0.029)	0.058 (0.042)	–0.021 (0.024)	–0.020 (0.016)	–	–
<i>N</i> (Students)			3,002	3,013	8,131	8,021	1,235	491
<i>N</i> (TEACH)			30	32	17	25	5	3
<i>N</i> (Non-TEACH)			97	99	215	205	24	14
Spring MAP outcomes for the same sample		n/a	–0.023 (0.034)	0.005 (0.049)		n/a		n/a
<i>N</i> (Students)			3,002	3,013				
<i>N</i> (TEACH)			30	32				
<i>N</i> (Non-TEACH)			97	99				
Panel B: Cohort 1 Year 1 Full MAP Sample								
Spring MAP		n/a	–0.043 (0.034)	–0.018 (0.044)		n/a		n/a
<i>N</i> (Students)			4,371	4,587				
<i>N</i> (TEACH)			46	49				
<i>N</i> (Non-TEACH)			160	169				

NOTES: Each estimate is the result of a separate regression of the relevant student achievement outcome on an indicator for being a TEACH teacher. Panel headers indicate cohort, and row and column headers indicate student achievement outcome. All models in Programs A and B include propensity score weights and student and school covariates. Program C estimates were not made because samples were too small to support reliable estimates. All test outcomes are standardized by grade and district.

three programs were more effective in their first year on the job than other first-year teachers, as measured by state standardized tests. However, due to the lack of state standardized tests in school year 2019–2020, we were able to evaluate academic outcomes in that school year only in Program A, where we could access MAP data; Program A administered the fall and winter waves of the MAP before schools were closed due to the pandemic. Thus, for 2019–2020 we were able to estimate first-year effects for the second cohort of program candidates and second-year effects of the first cohort of TEACH teachers only in Program A. Overall, we found no evidence that first-year candidates' performance differed from that of comparison teachers, but some evidence from Program A does suggest that second-year TEACH teachers may have been more effective than comparison teachers.

First-year TEACH candidates' student achievement gains were not significantly different from those of other teachers. Table 3.2 shows our estimates of the difference in achievement gains between program candidates' students in their first year and the students of other first-year teachers in each district. For state standardized achievement exams, we have data from Cohort 1 in each of three programs in school year 2018–2019. We were unable to provide reliable estimates on ELA and math outcomes for Program C due to very small sample sizes. All estimates of state standardized tests are not statistically significant. Estimates in Program A are nearly zero for ELA and a positive 0.058 SD for math. In Programs B estimates are slightly

negative and are -0.021 SD and -0.020 SD in ELA and math, respectively. When averaged together, estimates for both ELA and math are very close to zero and not statistically significant.

For the MAP assessments, we have first-year data from Cohorts 1 and 2 in Program A in school years 2018–2019 and 2019–2020. Estimates of effectiveness can differ between state standardized tests and MAP assessments for several reasons. First, the content of the two tests can differ as each test assesses overlapping but not completely aligned ELA and math constructs and skills, with the adaptive aspect of the MAP assessment potentially capturing more information about off-grade-level skills at the upper and lower bounds of student ability. Second, the MAP is meant to be a low-stakes formative assessment, while state tests are high-stakes summative assessments that feed into states' accountability systems. Past research has shown that the high stakes nature of summative tests can alter teacher and student behavior and thus test performance (Simzar et al., 2015; Corcoran, Jennings, and Beveridge, 2011). Third, MAP in Program A is given to all students in grades K–10, while students take the state assessments only in grades 3 through 8. Thus, MAP can be used to identify the effect of teachers who teach ELA and math outside the grades 3 through 8 grade band. In the case of Program A, this means that we could also include students in grades K–2. Finally, the MAP assessment measures achievement growth over a period of time (regardless of student starting point), rather than the mastery of grade-level standards as a typical standardized assessment would.

Because of the differences between tests, we compared TEACH effectiveness as measured on MAP in Program A in two different samples. Looking at the 2018–2019 school year, when Cohort 1 TEACH teachers were in their first year, we first estimated the effect of TEACH teachers on spring MAP outcomes using the same sample of students who took the state standardized tests. In this manner, differences between state test and MAP estimates would arise from differences in the tests, not students. In the MAP results that used the same sample of students, ELA and math point estimates are less positive than the estimates for the state test outcomes, but are similarly not statistically significant. When looking instead at the full sample of students who took the MAP test that year (which includes students in additional grade levels K–2), point estimates once again are more negative, but are again statistically insignificant. In other words, the use of the MAP test outcome rather than the state outcome yields some directional differences in estimated effects, but these differences may simply be due to random noise. Overall, across all programs and test outcomes, we found no detectable effect of program candidates on student outcomes during their first year in the classroom.⁵

In the one program where outcome measures were available, there is some evidence of differential positive effects of second-year TEACH teachers on student achievement. Table 3.3. shows our estimate of the difference in achievement gains in classrooms taught by Cohort 1 TEACH teachers' in their second year of teaching and students of other second-year teachers in District A. These results indicate differences in achievement impacts from just half a year of instruction, since our best available outcome data are MAP test scores from the winter 2020 administration of the MAP tests, prior to the pandemic. In math, TEACH teachers in District A appear to be significantly more effective than comparison teachers, with an estimated differential effect of 0.076 SD in achievement. The contribution of this TEACH effect is equivalent to raising the median student's achievement rank from the 50th percentile to the 53rd percentile in one school year. In ELA, we do not identify any statistically significant difference in TEACH teachers' student outcomes, but our point estimates are directionally positive at 0.014 SD.

Overall, these results provide some evidence that teachers who have completed the TEACH program at Program A were more effective than comparison teachers in their second year of service. However, we cannot assess whether this effect is consistent across contexts.

⁵ We also examined, but do not include in Table 3.2, effects for Cohort 2 TEACH candidates in their first year on the job using winter MAP test results from SY 2019–2020. Similar to our other first-year effect estimates, there were no significant or substantive differential effects for this group.

TABLE 3.3
TEACH Student Achievement Gains Relative to Students of
Comparison Second-Year Teachers in Program A

	Program A	
	ELA	Math
Winter MAP (Full Sample)	0.014 (0.038)	0.076 ^a (0.033)
<i>N</i> (Students)	3,653	3,715
<i>N</i> (TEACH Teachers)	37	35
<i>N</i> (Non-TEACH Teachers)	129	127

NOTES: Each estimate is the result of a separate regression of the relevant student achievement outcome on an indicator for being a TEACH teacher. Column headers indicate student achievement outcome. All models include propensity score weights and student and school covariates. All test score outcomes are standardized by grade and district. Please see Huguet et al. (2021) for details on the model. Sample sizes are as follows: *N* (ELA) = 3,653, *N* (Math) = 3,715.

^a indicates $p < 0.05$.

Retention Outcomes for TEACH Teachers

Given the high rates of teacher turnover experienced by schools, particularly urban schools, and the disruptive effect of high turnover on student achievement, we looked at the relative rate of retention of TEACH teachers in the first two years of service compared with other novice teachers hired in the same year. Due to data limitations we could not obtain retention data for Program B.

TEACH teachers were not significantly different from non-TEACH teachers hired in the same year in terms of the rate at which they remained teaching in the district. Overall, there is insufficient evidence to suggest that TEACH teachers were differentially more or less likely to stay as compared with their non-TEACH novice counterparts. While most estimates were positive, they were statistically insignificant. The imprecision of the estimates is due to the relatively small number of TEACH teachers in the programs, a limitation that was particularly applicable to Program C. However, this imprecision also means that we cannot rule out the potential for modest differences in TEACH teacher retention, though we lack statistical power to reliably detect and attribute differences to the program.

In Table 3.4 we describe the adjusted rates of retention in the district for TEACH teachers, both overall and in each of the two programs where comparable retention data were available. Overall, there were no statistically significant differences between TEACH and comparison teachers in first-year retention rates. This is the case both individually for each program and cohort and when averaging across programs and/or cohorts. When averaged across all program and cohort estimates, the point estimate for differential TEACH retention was a positive difference of 3.6 percentage points higher retention, but this directional difference was not statistically significant and could be the result of random variation rather than a true TEACH program effect. As a point of reference, after one year, 81 and 74 percent of Cohort 1 and Cohort 2 non-TEACH teachers, respectively, remained in the district. The magnitude of the difference we estimated in TEACH retention therefore has the potential to be substantively important, even though it was not statistically significant.

Table 3.5 shows the results for Cohort 1 after their second year of teaching. Here the results diverge by program. Point estimates in Program A are large and positive, but not statistically significant. In contrast, in Program C, point estimates for retention are large and negative, but not statistically significant. When averaged, the overall retention rate is a statistically insignificant 5.4 percentage points higher for TEACH teachers. As a point of reference, the average retention rate of Cohort 1 non-TEACH teachers after two years was 61 percent.

TABLE 3.4
TEACh First-Year Retention Relative to Comparison Teachers

	Meta-Analytic Average	Program A	Program C
Panel A: Cohort Specific Results			
Cohort 1	-0.001 (0.056)	0.019 (0.062)	-0.096 (0.136)
Cohort 2	0.084 (0.064)	0.079 (0.065)	0.301 (0.421)
Panel B: Cross Cohort Result			
Meta-Analytic Average	0.036 (0.042)	0.048 (0.045)	-0.058 (0.129)

NOTES: Each estimate is the result of a separate regression of an indicator for remaining in the district after the first year of being a TEACh teacher and can be interpreted as a percentage difference in retention. Column headers indicate programs included in the analyses. All models include propensity score weights; student and school covariates were used in program specific regressions. Fixed effect meta-analytic average models were used employed in column 1. Please see Huguet et al. (2021) for details on the models. Sample sizes are as follows: N (Cohort 1 Program A) = 385, N (Cohort 1 Program C) = 154, N (Cohort 2 Program A) = 320, N (Cohort 1 Program C) = 174

TABLE 3.5
TEACh Second-Year Retention in the District Relative to Comparison Teachers

	Cross-Program Average	Program A	Program C
Cohort 1	0.054 (0.061)	0.120 (0.070)	-0.148 (0.122)

NOTES: Each estimate is the result of a separate regression of an indicator for remaining in the district after the first year of being a TEACh teacher. Column headers indicate programs included in the analyses or meta-analytic model. All models include propensity score weights; student and school covariates were used in program specific regressions. Fixed effect meta-analytic average models were used in column 1. Please see Huguet et al. (2021) for details on the models. Sample sizes are as follows: N (Cohort 1 Program A) = 385, N (Cohort 1 Program C) = 154.

Summary of Impact Findings

In this chapter we descriptively analyzed the characteristics of TEACh teachers, estimated the differential effect of TEACh teachers in ELA and math, and estimated the probability of retention within the first two years, compared with other teachers hired in the partnering districts in the same year. The available data suggest that TEACh candidates were more diverse in terms of race/ethnicity, as a smaller proportion identified as White and greater proportion identified as Black compared with other new teachers. As noted, however, candidates in two programs were *less* likely than non-TEACh teachers to identify as Latinx. TEACh also made headway in filling hard-to-staff positions in line with program-specific goals. TEACh was able to recruit a higher proportion of SPED and ESL candidates in programs that prioritized filling those positions. TEACh was also able to recruit a higher proportion of secondary math teachers in programs that adopted that priority.

Efforts to estimate the differential effect of TEACh teachers over other new hires on student achievement were hindered by a lack of statewide standardized testing data in the 2019–2020 school year due to the COVID-19 pandemic. In Program A, we were able to overcome this data limitation by analyzing MAP assessments. Across all available assessments, TEACh candidates did not show differential effectiveness in their first year in the classroom. Meta-analytic averages of state standardized tests from 2018–2019 were near

zero and statistically insignificant in ELA and math. Estimates from MAP in 2019–2020 in Program A were directionally negative and statistically insignificant. We did, however, find that TEACH candidates in Program A were differentially more effective at raising math scores on MAP during their second year of service. Compared with other teachers hired at the same time, teachers who had been through the TEACH program raised math scores by a 0.076 SD ($p < 0.05$). Estimates on ELA MAP scores were not statistically significant.

Finally, we found no differential rates of retention between TEACH teachers and other teachers hired in the same school year. Meta-analytic averages across the two districts where we have data were directionally positive but statistically insignificant after one and two years in the classroom. The relatively low number of TEACH teachers, particularly in Program C, contributed to the imprecision of our estimates.

Limitations

Our analyses of the impacts of TEACH are limited in several important respects. First, as with many studies fielded in the 2019–2020 school year, the data on student achievement was limited due to the COVID-19 pandemic. These data limitations hindered our ability to analyze the first-year effect of the second cohort of TEACH candidates, and the second-year effect of the first cohort in two of three programs. The latter limitation is particularly unfortunate as second-year effects represent the first point in time when full effects of the TEACH program can be estimated, after the full training program is complete. Second, our analyses may not fully reflect or be properly representative of potential program impacts because the hiring of TEACH candidates may influence the other types of teachers that the districts hires outside of the TEACH program. We observed only the teachers hired, not those who applied, and this hindered our ability to understand how TEACH’s contributions to the teacher supply affected the overall quality of new teachers entering the district. Given that TEACH seeks to enlist new applicants who would not otherwise have gone into teaching, it is plausible that districts could as a consequence have had the luxury to be more selective in whom they hired, including among comparison teachers not trained through TEACH. Our methodology would not detect those effects, and in fact, if present, such effects would make it harder to find a differentially positive effect of TEACH teachers. Third, our analyses, and especially our retention and second year effect analyses, have limited statistical power. The second-year effects were limited because of the lack of student achievement data in all districts. The retention effects were limited because of the relatively small number of TEACH teachers. It is possible that we failed to detect true differences in performance or retention that were either small or moderate in size.

A last broad category of limitations rests on the assumptions of the “doubly robust” propensity score weighting approach, which is nonexperimental. This approach makes TEACH teachers and their students comparable with non-TEACH teachers and their students on observable characteristics. Though we include a rich set of observed variables in our models, including prior performance of students on standardized tests, differences on unobserved characteristics could have affected our results. Further, due to imperfect data, we were not able to match all teachers to students with the student-link files, and we must also assume that this rate of missingness is unrelated to TEACH status after applying the propensity score weighting model and controlling for covariates. We discuss these and other limitations in more detail in Huguet et al. (2021).

Conclusion

The TEACH program aims to address a significant and growing challenge facing many districts nationwide related to recruiting, developing, and retaining a sufficient number of high-quality teachers. TEACH also aims to recruit more diverse teachers that better mirror the demographics of the students that they serve. The program fills a potential niche in teacher recruitment by reducing barriers (of time, money, and training) to entry to the profession and thereby facilitating the recruitment of individuals who might not otherwise have begun teaching, while providing them with a variety of training and supports. In the following, we summarize key findings related to the implementation and impact of TEACH and conclude by discussing policy implications of our findings and considerations for future research.

Implementation Findings

By and large, the program was implemented as intended, yielding the recruitment and training outcomes targeted by TNTP, though important challenges arose and required adaptation along the way. In Chapter Two, we addressed five specific dimensions of program implementation, including (1) recruitment and selection, (2) PST, (3) hiring, (4) first-year supports, and (5) program sustainability. We attended to these findings at four different levels relevant to implementation—the candidates, the programs themselves, the partner organizations that the programs were embedded within, and the broader policy environment. In each category, successes and challenges emerged; we emphasize in all cases that our findings are not “final,” as our data collection focused only on Cohorts 1 and 2. It is likely that program staff have already addressed some of the issues that we identified.

Teaching candidates often discussed the types of training and support that they found most and least useful, both during PST and the school year. Overall, they appreciated content that was customized to the program and its location’s specific needs; for example, some teachers we spoke with thought that the online modules about their local communities (which were instituted for Cohort 2 in some programs) were particularly useful. They also found training to be valuable when it directly supported their needs, such as the training that expressly prepared them for certification assessments. Finally, candidates who mentioned the programs’ focus on culturally relevant teaching were pleased with its inclusion. Those intending to implement similar programs should consider how they can develop training content that feels applicable to candidate needs prior to the first cohort.

Program-level findings suggest areas where future iterations could benefit from greater reflection and planning. During the first and second year of data collection, all programs struggled, to some degree, to transition the program away from TNTP management as planned. Program B, in particular, had a difficult time fully transitioning the program to the district’s purview. All programs reported that they would not have enough staff to adequately cover PST once TNTP exited.

Other program-level findings relate to challenges that emerged in coaching, a key dimension of candidates’ first-year supports. The coaching varied greatly across programs—meaning that candidates in two different programs could receive vastly different supports. Their coaching differed in important ways, including

frequency, amount of time per session, and practices that the coaches used. While coaching can vary for intentional reasons—such as tailoring to each program’s needs—this variation also might have been based on a lack of detailed guidance about coaching expectations when planning the programs.

Many of our findings were related to the type of organization that TNTP partnered with. In Programs A and B, the programs were embedded within larger school districts. Program C, however, was managed by a small nonprofit organization. This was both a challenge and a benefit; in terms of challenges, Program C was not developed to be embedded within a larger district, as Programs A and B were. This meant that it did not have the same access to hiring projections or direct access to the same pool of internal candidates that the districts had (e.g., teachers’ aides and substitute teachers). They also could not transition some program responsibilities to other departments, as could be possible in districts (e.g., an existing HR department completely absorbing program recruitment responsibilities). Financial sustainability was a particularly salient concern for Program C. Program C leveraged its skills in networking to minimize any challenges presented by these differences. Program C also benefited from its small size. Of the three programs, its coaching was the most consistent from year to year, as it had hired coaches in Cohort 1 who also remained in their positions for Cohort 2. Program C also did not have to manage the organizational shocks that can come from the district level; for instance, Program B had to adjust when district leadership moved their program from the teaching and learning department to HR. Those developing similar programs should weigh the costs and benefits of small organizations versus large district partnerships.

Finally, our implementation findings also highlight ways that broader policy changes can affect programs such as TEACH. When the legislature ended lateral entry teacher preparation in Program B’s state, the program’s recruitment benefited—albeit perhaps not for the long term. The newly granted ability to certify teachers changed important characteristics of Program A, including shifting from a one- to a two-year program; the accompanying changing requirements may have contributed to some candidate attrition in Cohort 2. TNTP was critically involved in monitoring the policy landscape, and all three programs would benefit from longer-term staff who incorporate this responsibility into their positions.

Impact Summary

Our analyses of impacts indicated that TEACH contributed meaningfully to new teacher hiring in participating districts, with TEACH hires also being somewhat more demographically diverse and more likely to fill priority hard-to-staff roles than teachers hired through other pathways. Our analyses further indicated that TEACH teachers remained working in the district at rates that were not statistically different than other first-year hires after two years of service. TEACH teachers also had no statistically significant impacts on students’ academic achievement gains after their first year compared with other first-year hires. However, in one program where we were able to evaluate TEACH teachers’ effects in their second year on the job—after they had fully completed the program—we found that TEACH teachers were significantly more effective in improving students’ mathematics achievement, although there was no significant difference in ELA achievement. Overall, our findings are consistent with prior research that has demonstrated that teachers recruited and trained through TNTP’s programs tend to be at least as effective and are sometimes measurably more effective than other teachers whom districts hire through traditional pathways.

Implications and Next Steps

Our results build upon—and are broadly consistent with—prior research about the number and quality of teachers recruited and trained through TNTP’s alternative teacher certification programs. They further

substantiate the capacity of TNTP to establish alternative teacher recruitment and development programs that meaningfully augment districts' traditional pathways with diverse cohorts of equally effective teachers. Some TEACH candidates in this study had prior experience working in their districts, but would not have been eligible to work as full-time teachers absent the programs. Many reported that the reduced cost (relative to a traditional teacher-preparation program), the streamlined certification process, and the opportunity to train and work locally were key to facilitating their transition into teaching. These findings speak to the viability and potential value of alternative certification pathways for addressing teacher shortages, as well as their potential to enhance the diversity of teacher recruits, as is evidenced in our impact findings.

However, while the TEACH program was implemented with an eye toward sustainability, our findings suggest that without some kind of continued external funding and/or technical assistance, maintaining a program such as TEACH may be unrealistic for many partners. Interviews of program staff from this study, as well as findings from our other recent TEACH study (Kaufman et al., 2020), suggest that economies of scale may be important to establishing an alternative recruitment, training, and certification program that is financially sustainable over time. Our findings also suggest that the type of organizational partner managing the program matters and that there are trade-offs that must be considered when deciding to partner with a smaller organization that operates outside of a district versus a larger district. Future research would benefit from further investigations into the influence that organizational structure can have over program development and impact.

Our findings and other prior research indicate that programs managed by TNTP have been successful in recruiting novice teachers who are at least as effective as other new hires and often more diverse in terms of their racial/ethnic backgrounds. They have also been successful in recruiting for hard-to-staff positions compared with traditional district efforts. However, we lack sufficient data to assess whether programs that were initially established and run by TNTP can be successfully handed off to their partner organizations and remain similarly successful. Future research might explicitly examine the effectiveness of programs established by TNTP that have since transitioned, either partially or fully, to the partner organizations' management. Understanding the key components of effective alternative teacher preparation programs, as well as how best to support those establishing locally run pathways of this type, will be key to assessing how such programs can best be implemented in more contexts and over the longer term.

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