TEACh:
Bringing Commitment, Diversity and Great Teaching to Clark County, New York City and Western Texas

June 2017

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TNTP respectfully submits this proposal for consideration of the Supporting Effective Educator Development (SEED) program in response to Absolute Priority 1 (*Supporting Effective Teachers*). In this proposal, we will also address Competitive Preference Priority 1 (*Promoting Diversity in the Educator Workforce*) and the contest's Invitational Priority (*Support for the Use of Micro-Credentials*).

TNTP's SEED project will use strategies supported by moderate, and in some cases, strong evidence, to recruit and prepare prospective teachers for three partners seeking to increase the number of highly effective teachers available to their highest need schools during and beyond the life of the grant. The diverse project sites are: (1) Nevada's largest and fastest-growing district, Clark County School District (**CCSD**); (2) the education service center for 33 districts and seven charter schools located in the small city and rural west Texas communities the Texas Education Agency identifies as Region 18 (**ESC18**); and (3) the country's largest school district, New York City Department of Education (**NYCDOE**). With our help, these distinct partners will launch cutting-edge teacher preparation programs aimed at increasing the number of diverse and highly effective teachers for students in high-need schools. During the grant, TNTP will work closely with each partner to customize our Teacher Effectiveness and Certification (TEACh) initiative, a proven model for attracting and training teachers, with the goal of establishing a *locally* operated, sustainable TEACh program. Specifically, TNTP will: (I) create a new, sustainable alternative certification program in each region focused on producing diverse and effective teachers for the highest priority subjects in participating districts; (II) support participating districts to implement systems and policies that attract and retain the best teachers; and (III) assist participating districts in running these programs, building their capacity to fully manage them. At this grant's conclusion, each participating district or consortium of districts will operate a rigorous alternative teacher certification program that will meet the needs of its most challenged schools by supplying the best new teachers and retaining its best teachers.

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TNTP is a national non-profit organization whose mission is to end educational inequality by providing excellent teachers to the students who need them most and by advancing policies and practices that ensure effective teaching in every classroom throughout the nation. Since 1997, we have been able to demonstrate high-quality implementation of scalable approaches, helping get great teachers to students who need them most. Through our rigorous Teaching Fellows and TNTP Academy programs,[1] we have prepared people to teach shortage subjects in challenging school environments for 20 years. In that time, we have trained more than 37,000 teachers for districts serving a concentration of students from low-income communities. Additionally, we have worked with school systems to staff over 25,000 vacancies, in some cases helping districts to triple their application volume. We estimate these initiatives benefitted over 13 million students. With support from a 2010 i3 Validation grant, we successfully showed that the TEACh model could operate with fidelity in seven large urban districts while we validated an innovative, two-part screen for novice teacher effectiveness.

A. Quality of the Project Design

A.1. Exceptional approach. While several organizations are equipped to recruit and train new teachers on behalf of districts experiencing chronic shortages, TNTP's approach is exceptional in that we will use SEED resources to build the infrastructure and capacity of our partners to maintain a high-quality teacher pipeline without our continued support. Building upon the lessons we have learned recruiting, selecting and preparing effective teachers for schools that struggle to attract and retain them, we believe the most effective teacher pipeline program is one that is integrated with a district's broader strategy for increasing teacher effectiveness. In this project, we will position our partners to either create or revamp

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[1] In a 2014 study that received a What Works Clearinghouse (WWC) rating of "meets WWC group design standards without reservations," novice TNTP trained teachers (with three years or less experience) were significantly more effective than other novice teachers, increasing student achievement in math by 0.13 standard deviations. Findings from this and other large-scale studies are detailed beginning on page 5.

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an existing pathway to teaching with TNTP's TEACh, positioning them to address some of their most pressing human capital challenges.

What is TEACh? TNTP's TEACh model pairs the highly selective Teaching Fellows recruitment programs with our performance-based teacher certification programs, TNTP Academy. Teaching Fellows programs are high-quality alternate route to certification programs that employ a rigorous selection and training process to recruit teachers for shortage subject areas and high-poverty schools. TNTP Academies are independent certification programs, specifically designed to prepare teachers to raise student achievement in high-poverty schools with a focus on the content demands of their state standards. Importantly, this certification path requires that candidates pass an assessment of effective teaching, drawing on multiple measure, and ensures that those recommended for state certification have shown they have what it takes to deliver great instruction. A rigorous, randomized-control trial study of TNTP's TEACh program showed that after just one year, TNTP Fellows are as capable at raising student achievement as teachers with comparable experience who were prepared in other programs, including traditional, university-based prep programs that take three or more years to complete.[2] The programs we propose to launch through this SEED grant will have the essential program components of TEACh: robust, competitive recruitment; rigorous preparation and development for teachers in high-need schools; and performance-based certification decisions. During the grant, we will work with our highly invested partners to tailor activities that effectively meet the teacher talent needs of their high-need schools while building their capacity to run them in-house.

Additionally, our track record at increasing the diversity and cultural competence of new teacher cohorts makes this model an exceptional approach. We know that educator diversity is a priority to any school system, but critically so when the student population itself is highly diverse. Over the years, we

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[2] Clark et al (2013).

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have helped our partners achieve a teacher workforce that is more representative in terms of race, language, gender and ties to the community through cutting edge recruitment. At the same time, we have worked to improve all new teachers' ability to be effective by developing their cultural awareness and the skill set to be an inclusive teacher. Our SEED project partners will customize these core strategies to fit their context, set goals around them, and monitor them for continuous improvement.

Competitive Preference Priority 1: Promoting Diversity in the Educator Workforce

With our partners, we will promote the value of diversity with a variety of strategies. This priority is aligned with our project goals (see page 23) and is built into our external evaluation (see page 34).

Improving Teachers' Cultural Competency. Culturally Responsive Teaching affirms the intrinsic value of students' lived experiences and acknowledges that those experiences shape not only what students know, but how they make meaning and learn. Culturally responsive teachers deliberately strive to know themselves and their own bias while also accessing students' culture to build bridges between what students know and the mastery of new knowledge, skills, and agency. In TNTP's own training programs or teachers and leaders, we integrate six key tenets, grounded in the work of Zaretta Hammond,[3] that we believe are at the heart of culturally responsive teaching:

- Know self
- Know students and the community
- Understand and acknowledge the social-political context

- Create a safe environment
- Build intellective capacity
- Consider the content

While these concepts are universal and can be adapted to any school setting, we know many districts have already embraced and invested in their own frameworks that define inclusive and culturally responsive teaching practices. Our goal is not to replace such frameworks, but to reinforce them by introducing them to new teacher candidates in a concrete, actionable way as early as possible in training.

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[3] Hammond (2014)

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For example, in our partnership with Boston Public Schools, we have co-designed a training sequence that incorporates these tenets as a foundation for new teachers understanding their role in the district's commitment to culturally and linguistically sustaining practices, Opportunity for All.[4]

Improving the recruitment, support, and retention of educators from diverse backgrounds. Even though nearly half of American public school students are students of color, over 80 percent of teachers are white.[5] The school systems in our project are significantly more diverse with anywhere from 74 to 85 percent of students of color enrolled, while the make-up of educators is nearly opposite. For us, the importance of increasing teacher diversity is not only for the sake of diversity itself but because it leads to improved student outcomes. A growing body of research has found that all students, but particularly students of color, benefit from diverse teachers. Non-black teachers of black students have significantly lower expectations for students than do black teachers.[6] Students of color are more likely to be enrolled in gifted programs,[7] less likely to be suspended,[8] less likely to drop out, more likely to aspire to attend four-year colleges,[9] and more likely to achieve at higher levels[10] if they have teachers of color. However, schools with the most at-risk students tend to be positioned last when it comes to filling an outsized number of vacancies, and principals take the candidates they can get.

Though our project sites have extremely different profiles, a challenge they share is that the local supply of teacher talent has not met their actual demand for years, leaving them little opportunity to be selective. By adopting the TEACh model, sites will incorporate robust, proactive recruitment strategies, casting the widest possible net to give district and school leaders access to diverse candidates with sought-after backgrounds and expertise. To tap the most qualified candidates with the backgrounds

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[4] Read more about BPS's Opportunity for All at http://www.bostonpublicschools.org/opportunity
[5] U.S. Department of Education (2016)
[6] Gershenson, Holt, & Papageorge (2016)
[7] Grissom & Redding (2016)
[8] Lindsay & Hart (2017)
[9] Gershenson, Hart, Lindsay, & Papageorge (2017)
[10] Dee (2004); Egalite, Kisida, & Winters (2015)

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needed to teach hard-to-staff vacancies (i.e., special education, bilingual, STEM), human capital teams will learn to maximize each recruitment dollar to ensure principals can select from a strong, diverse pool of teacher applicants reflective of its subject area vacancies.

TNTP's success training more than 37,000 teachers nationwide for high-poverty schools and high-priority subjects begins with a collaborative recruitment goal-setting process with our partners in district staffing teams. Then, we meticulously track and analyze our efforts so that processes can continuously improve. Our tracking shows that across TNTP Fellows programs in 2017, our strategies yielded interest from over 27,500 people and attracted over 10,000 applications in order to staff nearly 1,600 high-need teaching positions. The large applicant pool allowed us to be highly selective,[11] even in subject areas for which candidates are scarcest. In 2016, an average of 69 percent of TNTP's newly recruited teachers that started Pre-service Training were people of color, compared to 18 percent of all US teachers and 22 percent of early career US teachers. We have successfully helped the districts we support emulate our practices. As a result, the public districts of Boston and Dallas, each currently working with TNTP to integrate customized TEACh programs, have prioritized recruiting diverse cohorts of teachers in shortage subjects such as ESL, bilingual and special education. Each program's first cohort of TEACh candidates for these subjects was far more diverse than new teacher cohorts in previous years, with 47 percent minority candidates beginning training in Boston, and 74 percent in Dallas. In San Francisco, where SFUSD launched a similar program this year, 50 percent of its first cohort are people of color, far ahead of the district's Year 1 diversity recruitment target of 40 percent.

We will customize a recruiting process at every site based on research of the talent market. In recent years, we have improved our social media reach and learned to carefully monitor our internet postings to get a greater return on investment. We know from experience that high-impact marketing

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[11] Applicants are screened for academic qualifications and content knowledge as well as competencies suiting them for success in an intensive training environment and the mindset for serving in a high need school. In 2015, candidates had an average undergraduate GPA of 3.25 and 28 percent held advanced degrees.

designed for New York City may not work as well in Clark County or west Texas, so the actual

campaign strategies, as well as the priority subject areas, will vary. But the goal of building a large,

diverse candidate pool through exhaustive, systematic outreach, is one we know we can train partners to

achieve. The results we have seen from incorporating data-driven recruitment practices systematically

show that districts do not have to choose between the important priorities of diversity and desired

subject matter expertise.

A.2. Quality, Intensity and Duration of Training. Each TEACh site launched in this project will

operate a high-quality development experience for teacher candidates designed to prepare and support

them in the hard work of raising student achievement. All candidates will experience Pre-service

Training, Year 1 Support, and a pathway to Certification with structures through which TNTP has

developed effective teachers on behalf of districts around the nation.

Figure A.1 - TEACh Training Continuum

Pre-service Training
• Standards-aligned model lessons
• Skill-building sessions
• Practice teaching (feedback and coaching)

TEACh: First School Year
• Online content modules
• Competency-based coaching, (virtual and in-person)

Teaching Certification
• Standard state credential in 1 year for participants who pass a performance screen

A customized approach to a proven model. TNTP believes new teacher training can be most effective

when focused on the standards and curriculum teachers will be entrusted to teach. Taking advantage of

the in-house nature of this model, TNTP and our partners will ensure TEACh gives alternative route

teachers hands-on practice with the precise academic content for which they will be responsible. This

exposure will begin during candidates' **Pre-service Training** and continue through TNTP and district-

designed coursework, making use of an innovative online training platform.

The Pre-service Training allows for an intensively-paced, authentic practice teaching experience

in a local school. Pre-service Training is the first point during which candidates learn to craft lesson

plans aligned to their district's teaching standards, a skill set for which our trainers will maintain a very

high bar. Since 2012, TNTP has been a critical thought partner for districts and states (e.g., Boston, Fresno, Charlotte, Florida, Tennessee) adapting to new learning standards, and we have seen time and again that high-quality teaching content is crucial, especially for new teachers. Therefore, in Pre-service Training for CCSD and NYCDOE, we will provide exemplary CCSS-aligned lesson plans, assessment items, and other aligned resources that support teachers' developing skills in lesson design and delivery. In ESC18, TNTP staff will design parallel resources and supports for lessons anchored upon the college and career-ready standards adopted in that state. Training with model lessons and materials is critical for all content areas, even in early childhood instruction, for which many NYCDOE Fellows will train. These candidates will use rigorous, but age-appropriate, texts and math lessons designed to build students' foundational vocabulary and number sense. Fellows will learn to engage their very young learners in activities that pique their curiosity, nurture academic vocabulary, and prepare them for kindergarten learning.

During their first school year, TEACh participants, or "Fellows," will continue the focus on rigorous academic standards via **online coursework.** TNTP has a strong track record of leading valuable training activities by leveraging the skillful delivery of adjunct instructors—typically highly effective teachers in the same district. In recent years, TNTP has employed online training for Fellows and non-Fellows in six sites. This delivery system of the TEACh training content, which has the dual focus of developing teachers' subject area knowledge as well as their classroom methods, combines the convenience of online learning with the depth from current, effective classroom teachers' expertise.

With the support of the grant funds, we will design new, subject-specific courses, informed by TNTP's own best practices and customized for the needs of each district. Based on the priority vacancies in each project site, these courses will help fulfill pathways for teacher preparation in (CCSD) math and science (NYCDOE) secondary special education. All courses will be facilitated virtually by local teacher leaders or district instructional coaches who also support Fellows in person.

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Thus, we will strive to meaningfully link certification coursework to the actual experience of classroom teaching. In ESC 18, we will support the program to improve its existing alternative certification program courses across multiple high need subject areas (Bilingual, Special Education, Secondary Math and Science), using a blended online and in person model for delivery, infusing our high quality content and lessons learned for best practices in virtual learning. We know that the most useful professional development clearly shows educators how to get better and then allows them to practice with feedback, and well-designed, interactive courses can support this principle. For example, secondary math course content may focus on how to teach difficult standards to students who need common remediation. The course content includes research-based strategies as well as video clips featuring these techniques in action and guidance for appropriate execution. Course facilitation is highly interactive, with participants posting questions and responding to checks for understanding, all moderated by the course facilitator, a teacher selected for his or her deep experience teaching in the same field. In this example, the facilitator will assign participants to modify and upload upcoming lesson plans of their own incorporating some of the strategies taught and modeled in class. She will then provide feedback on participants' plans before they implement them.

The scalability of online training significantly mitigates the typical challenge of finding enough sufficient subject area experts to lead in-person professional development sessions. In the face of this challenge, many districts and prep programs resort to more general professional development or light-touch mentoring programs that do not do enough to set up teachers to give rigorous instruction to their students. TNTP will assist our project sites in identifying talented experts and training them to prepare others to deliver the rigorous academic content they know well. Instead of multiple instructors at each site, TNTP will invest in the design of online courses for each subject in each district. Each course has the ability to reach dozens of TEACh Fellows with facilitation by one or more teacher leaders in the

district. Participants' training in teaching to rigorous academic standards will continue through classroom coaching, both in-person and virtual, that complements the TEACh coursework.

Consistently during Pre-service Training and school-year professional development, TNTP will build the capacity of professional developers to provide support to Fellows consistent with the TEACh model: performance-based, practice and feedback-rich and specific to content and context. Each site will adapt activities defined by these guiding principles for new teacher development:

Core Element	Rationale
Sequential skills development	Rather than overwhelm brand new teachers with training that is a mile wide but an inch deep, TEACh prioritizes mastery of foundational skills before shifting to more advanced ones, such as differentiating instruction.
Intensive Practice	We train teachers like athletes, giving them multiple opportunities to practice, reflect, and improve so that essential instructional techniques become second nature.
Observations and rich feedback	To improve performance, we provide teachers with coaching for ample, useful feedback that helps them get better, faster. Coaches are trained to observe teaching, identify strengths and development areas, and provide clear, actionable feedback.
High standards	We are transparent about the high bar we set and hold for every teacher we train, ensuring that only those who meet that bar have the privilege to teach students.

While day-to-day training and coaching will be tailored to each district's curricula and teaching competency rubric, these elements will remain at the heart of each specific program as Fellows experience the following TEACh training features described below.

Foundation Skills. In our work, we have seen that new teachers possessing a strong grasp of certain instructional skills have the best chance to master advanced skills more quickly, achieve dramatic increases in their long-term effectiveness and ultimately produce meaningful academic gains for all students. Further, beginning teachers who fail to master these core skills rarely become effective practitioners later.[12] During the *Practice Teaching* component of Pre-service Training, coaches will observe teachers early and often, assess them and provide real-time feedback. The Pre-service Training stakes are high: at the end, only teachers demonstrating adequate proficiency of Foundation Skills and

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[12] TNTP (2014).

other district-designed instructional and management techniques will be recommended for school-year teaching positions.

Locally-designed performance screen. Our partners share our belief that it is far better for candidates to realize that teaching is not their calling during Pre-service Training than when they are a full-time teacher of record. We will work with partners to design or refine a performance assessment for Fellows aligned with their vision of effective teaching to be informed by the district's teacher observation rubric and other available measures. Fellows who pass the screen will have demonstrated readiness for state certification. We will also work with the district to ensure that key components, such as observation ratings, are normed across observers to accurately capture teachers' performance. Project staff will inform candidates about the performance screen early and often so that they understand what is at stake. Along the way, feedback structures such as coaching debriefs will not only reinforce expectations, but will help teachers gauge their own progress in developing a strong practice on their way to certification.

Effectiveness coaching. During Practice Teaching and in the first year, project team or district staff will coach Fellows intensively to deliver rich, standards-aligned content. We see coaches as the most critical line of support as new teachers practice the skills they learn in training. For example, TEACh coaches will help Fellows prepare lessons that link rich text, meaningful tasks and assessment strategies to the high expectations of the learning standards. Fellows will develop the habit of anticipating students' misconceptions and planning how to respond. During observations, coaches may use a variety of active real-time feedback strategies. Active coaching accelerates new teachers' development by allowing them to experience what works with their own students with immediacy. TNTP will also enable each project site to deliver virtual effectiveness coaching to TEACh participants. Just as an online platform has supported cost-effective, high-quality training, TNTP has found similar technology can allow us to reach more teachers with meaningful feedback on their own classroom practice. In TNTP's pilots, teachers

reported strong satisfaction with virtual coaching support and their skills progressed at the same rate as their counterparts who received only in-person coaching.

All of these program features help define the TEACh approach as well as the focus of our capacity-building work. As TNTP has worked to codify, evaluate and scale TEACh with the support of an i3 grant, and more recently with a 2015 SEED grant, we have trained and supported hundreds of teachers and district staff members to help execute these key program elements.

Developing Teacher-Leaders, too. Many of the structures described as part of our professional development approach rely on experienced content experts to select, train, coach and assess Fellows. TNTP has developed best practices for recruiting and training skilled and passionate seasonal staff members locally from among our partner districts' most talented teachers. In past partnerships, these individuals fulfilled part-time duties on top of their demanding teaching, coaching or central office roles in service to developing great new teachers for their own district. Despite the addition to their workload, many high-performing seasonal staffers returned year after year to work as Selectors or Pre-service Training instructors. Often, these returners reported that they valued the professional development they received while in these specialized roles. These anecdotes align with our findings from a study[13] spanning four large districts and surveying over 90,000 teachers. TNTP found that effective teachers thrive with high expectations and recognition for their classroom skills.

TNTP will support partners in identifying and cultivating Teacher-leaders who can help shape cohorts of new teachers that reflect their commitment and expertise, providing meaningful growth opportunities that do not require teachers to shift away from teaching. Districts will design roles that leverage teachers' familiarity with local needs, and TNTP will build sites' capacity to challenge and support them.

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[13] TNTP (2012).

Table A.2 – Seasonal Roles Created by TEACh

Recruitment Support	Instructional Support
• Recruitment Events Panelist • Application Pre-screener • Selector • Ambassador	• Pre-service Training Instructor • Online Coursework Facilitator • Part-time Effectiveness Coach

Invitational Priority: Support for the Use of Micro-Credentials. In this project, TNTP will pilot the use of Micro-Credentials as a way to incentivize advanced and targeted growth for teachers who have successfully completed the one-year TEACh program and other teachers selected by districts that opt in. Teachers who opt in will pursue a content-specific endorsement via TNTP's suite of Micro-Credentials. This endorsement is a competency-based approach to assessing the extent to which teachers understand, employ and find success with the instructional shifts required by demanding college and career-ready learning standards in a specific content area (e.g., elementary math).

In the pilot, we will work with project partners to determine the value such an endorsement should have within their system, such as by designating continuing education credits, providing entry to teacher-leadership roles or with financial awards. We will promote the opportunity and assess teachers' interest and capacity for these offerings over the grant period through surveys and enrollment records, informing our approach with Micro-Credentials in these and other settings in the future.

A.3. Essential Collaboration with Partners. For most of our history, TNTP has operated large-scale Teaching Fellows programs on behalf of school district clients seeking to employ our models, tools, and experienced consultants toward a solution to their most pressing teacher shortages. Over the years we have continuously improved our approach, but concluded that a sustainable solution to such complex, ongoing shortages must be multi-faceted and tailored to the local context. Our partners' teacher quality challenges are as diverse as their geography. Thus, our theory of action was born. By (a) entrusting our partners to customize our proven models for teacher recruitment, selection, development and support to

fit within their vision and schema for teacher quality, then (b) building their capacity to run these initiatives, we (c) enable districts to sustainably manage their teacher workforce needs.

This customization starts with building the supply of teachers that each site most crucially needs, for example, STEM teachers for CCSD and bilingual teachers for ESC18. But it goes beyond the focus on certain content areas to set up each program to be successful where it has not been historically. For example, while there is a dramatic and growing shortage of secondary special educators in New York City, the city is over-supplied with special educators certified for elementary. Thus, we will work with NYCDOE to design and incentivize a path for current city teachers to earn a second certification in secondary special education through TEACh. Similarly, training initiatives will be tailored to local standards and teaching expectations, ensuring our partners will invest in them even after the grant ends.

As detailed in the Management Plan beginning on page 23, a TNTP team will be based at each project site. This team will lead local management of the SEED project, but most aspects of program launch and operation will be completed collaboratively in partnership with our site-based counterpoints. By Year 2 of the grant, all aspects will be run by local staff as the TNTP team members pivot to long-term capacity-building. Already, each site's leadership has spent considerable time determining how current roles will strategically shift to take responsibility for implementing their TEACh program. TNTP will support senior leaders and their teams from each site in reallocating significant portions of their time from less effective initiatives to managing work in this approach. In aggregate, the project sites have committed to contribute ████████ of in-kind resources toward this project, about 80 percent of which supports local personnel dedicated to this work.

A.4. Focusing on students with the greatest needs. Better academic outcomes for students who have the most to gain from consistently great teaching is at the heart of our approach. We will grow the teacher talent pool in several ways—building a better pipeline, developing teacher quality and retaining top performers. No matter the means, the measuring stick for quality remains the same: demonstrated

ability in getting students to learn. With a greater number of proven performers in their workforce, districts can bring effective teachers to every school – including those with the greatest concentration of at-risk students. TEACh Fellows recommended for certification will be assessed for effectiveness using a performance screen with multiple measures that include student outcomes. Where student growth data are not available (e.g., in un-tested subjects) we will help our partners design a screen using measures that correlate with learning.[14] With this assessment as a culminating expectation for new teachers, we can be confident those who pass will have what it takes to improve outcomes for all students.

Table A.3 – High-Need Indicators Among Students Enrolled in Project Sites[15]

	ESC18	CCSD	NYCDOE	Project Total
% students economically disadvantaged	50.7	60.3	71.6	68.1 (984,925 students)
% students from rural communities	36.8	0	0	2.2 (32,348)
% graduation rate	83.3	72.1	72.6	70.9 (1,026,144 students)
% of English language learners	13.4	18.5	13.1	14.3 (207,118 students)
% of students with disabilities	13.8	12.0	19.0	17.1 (247,929 students)
% of Title I schools	84.6	76.7	84.8	83.0 (~1,200,000 students)
Number Students Enrolled	87,848	320,400	1,038,727	1,446,975

Today, close to 985,000 of the students in our partners' schools qualify as economically disadvantaged; an estimated 1,200,000 attend Title I schools that all too often correlate with the highest rates of teacher turnover and shortages in priority subjects. We know the students in these schools have the most to gain from consistent access to well-prepared teachers and rigorous content, which is what makes the potential impact of this project so tremendous.

A.5. Designed to Address the Needs of Target Population. By increasing the overall concentration of effective teachers, each district will be better able to meet the needs of its disadvantaged students for whom this access is most critical. It is well documented that a disproportionate number of low-income

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[14] Kane, McCaffrey, Miller, & Staiger (2013).

[15] All statistics collected from the respective state department of education websites for the latest available year.

students in public schools are taught by teachers who are less effective.[16] By working centrally in each

district to bring more new teachers in to the system with the background to teach shortage subjects,

training them in the TEACh model and screening them for effectiveness before they become certified,

districts will have access to effective new teachers for its hardest-to-staff roles. Each site's recruitment

messaging will target individuals who believe fundamentally that all students can learn. Serving at-risk

students is an explicit goal that program staff will discuss openly with prospective teachers. By

recruiting and preparing qualified individuals with an aligned mindset, we can break the pattern of

staffing less fortunate schools by chance alone. Reflecting this commitment, we will focus on the

outcome that each participating district will have access to the teacher pipeline it needs to staff its

schools equitably—even its hardest-to-staff vacancies in the poorest neighborhoods.

Finally, through our planned work with each site to strategically shift resources toward

developing and recognizing strong teachers from among their experienced ranks, we aim to set a course

for better retention rates of effective teachers. As our aforementioned study has shown, strong teachers

often consider leaving the district due to lack of opportunities for advancement and lack of recognition.

TNTP will work with districts to promote policies and practices that acknowledge and reward great

teachers consistently. By design, TEACh will offer various opportunities for teacher leadership that our

district partners desire as a means of recognizing and developing their top talent. For example, TNTP's

pilot of Micro-Credentials will provide participating districts with a way to: (1) determine which

teachers are implementing the instructional behaviors needed to meet the demands of today's college-

ready standards; (2) provide incentives for teachers who grow these important skills; and (3) use such

content-specific expertise as a way to select for teacher-leader roles.

Once districts have a better understanding of their teachers' appetite for this cutting-edge

professional development opportunity, they will work with TNTP to curate Micro-Credential

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[16] Chetty et al (2014); Goldhaber et al (2014); Sass et al (2012).

offerings—through TNTP and/or other providers with courses to fit teachers' needs. If both TEACh rookies and effective district veterans experience even a modest gain in terms of improved retention in response to strategies like these, high-need students stand to benefit the most.

B. Significance

B.1. Magnitude of results. The proposed project will enable TNTP to implement its TEACh model in three sites that include 35 districts and seven charter schools and employ approximately 99,000 teachers to educate nearly 1,447,000 students, about 83 percent of whom attend Title I schools. This unique project will build upon a proven model to elicit meaningful educational outcomes, aiming to recruit and enroll an estimated 1,275 teacher candidates during the grant period. While all of the participating districts' teachers and students will benefit from a sharpened focus on effective teaching, we estimate that TEACh Fellows will directly teach 100,130[17] students during the grant period. At the same time, TNTP and our partners stand to demonstrate something critical to the field: districts can operate this proven teacher prep model with fidelity. Further, this project will show the viability of innovations designed to meet the needs of small, remote and rural districts (as we will be positioned to do with ESC18) as well as approaches to address the urgent need of our country's largest urban district. By re-organizing central office teams to support a cohesive strategy, all three sites will set teacher quality on an upward trajectory that they have committed to continue after the project.

Through the project's approach to improve districts' access to well-prepared new teachers, TNTP is positioning its partners to increase student achievement in multiple ways. First, by using historical and landscape data to anticipate and prepare teachers suited for shortage teaching areas, these programs can stem the tremendous amount of learning lost when the school year begins with teaching

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[17] TNTP projects the number of students served using a teacher-student ratio of 1:53 based on multiple district programs we have run that included a mix of K-12, general and special education teachers. When factoring in multi-year retention statistics, also collected from district-based, K-12 alternative route programs, we estimate this number of students will be taught by participants by the end of the grant.

vacancies districts are forced to fill with either long-term substitutes or teachers teaching out of field.

Second, we aim to improve teacher retention in high-need schools by strategically recruiting candidates with roots in the community, preparing Fellows well for the challenges they will face, and supporting them once they are in the classroom. Finally, by establishing a reliably strong pipeline of teacher candidates, districts will put school leaders in position to more effectively manage their teacher talent, strategically hiring earlier in the year and when necessary, exiting a low performing teacher with the confidence that they can hire a strong replacement. In these ways, schools stand to have increasing access to strong teacher quality year over year, which has clear implications for student achievement.[18]

B.2. Cost-effectiveness. In this project, TNTP will use grant funds to create infrastructure such as tailor-made solutions to make complex processes more efficient at each district. Not only will these systems aid data-driven decision-making, which is inherently cost-effective, but they are a sustainable resource which will require only modest costs to revise and maintain in the long term. This approach is especially important in west Texas, where grant resources will bolster ESC18's ability to network and support its far-flung district and charter schools through one pipeline program. Over 30,000 students in this region live in rural communities and attend remote schools that face unique teacher hiring challenges. TEACh generates a modest amount of revenue through participant tuition, and we expect that the ongoing maintenance and costs to scale the program will be offset by this income. Overall, we estimate the federal cost per student in this project to be $157.33 which we will achieve through careful management of the budget and a steady focus on maximizing impact.

Teacher tracking system. The ability to collect, track and use data meaningfully is a critical part of any continuous improvement model. TNTP will use grant funds to build or enhance user-friendly, efficient data tracking systems that will aid the key processes described in this proposal, from recruitment and professional development to performance tracking and continuous improvement. Each local system will,

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[18] Jacob (2016).

for example, allow a staffing specialist to produce a real-time report showing the number of active applicants with the qualifications to teach high school science. TNTP's team will train district staffers to modify marketing strategies in response to these analytics. In addition to saving valuable time, the real savings that will come from this system is from the ability to use data to drive actions.

Virtual content. As described, we will create online courses with each district partner that fit into the in-house certification program. Online learning is uniquely cost-effective, especially when one considers how it supports scale, sustainability, and for our west Texas partners, connectivity for those in remote schools. Once coursework is created, it can be used with any number of learners with an internet connection. In addition, once coursework is created, it will continue to be available to learners, without the need to heavily staff or continuously pay for a significant amount of the work. Districts will invest in periodic revisions, true with any training curriculum, but this cost will not overwhelm a typical district budget for professional development.

Likewise, the greatest costs to developing a platform for virtual coaching are frontloaded. By using the SEED award to design such systems, grant funds will enable a sustainable means to developing district teachers' practice. Once a robust interface is in place for each TEACh region, the most powerful and costly element needed to sustain virtual coaching is the expert teacher-leadership that will remotely support novice teachers. Participating districts will ultimately cultivate these teacher leaders, thereby developing a meaningful career pathway as an added benefit. Through this project's evaluation, we plan to formally measure and analyze the effects of virtual coaching so that districts can employ this tool to its greatest possible effect without sacrificing teacher satisfaction or instructional quality.

B.3. Sustainability of the Project Objectives. As illustrated throughout this proposal, TNTP has had strong results creating pipeline and preparation programs on behalf of our district partners that share many of the challenges and demographic characteristics of the partners named in this proposal. Though

proud of our Fellows programs, and especially of those highly effective teachers who came into the profession through them and remain as teachers in high-need schools years later, this approach is intentionally different. By combining our effective model for teacher recruitment and preparation with our deep experience working with districts to improve human capital systems, we believe we can set a course for lasting change in Clark County, west Texas and New York City. In short, we mean to 1) close the revolving door that too many teachers go through—often exiting high-need schools soon after they arrive, and 2) improve the quality of new teachers to unlock student potential.

We will work behind the scenes with the leadership at each site to ensure that recruitment and new teacher development efforts fit into a larger vision for teacher talent management. In some cases, districts have made critical steps in this direction, but they have inadvertently allowed outdated systems and policies to remain that undermine this vision. For example, in Clark County, though district leaders understand the importance of retaining top performing teachers, outdated tracking systems and salary scales leave principals feeling they can do little to retain their top teachers. TNTP will make recommendations that ensure each district has adequate capacity to support not just the teacher pipeline, but teacher quality and teacher recognition as well. By supporting districts to attend to these aspects of teacher talent, they will do a better job of retaining top teachers.

We will be building the capacity of local staff to do this work throughout the grant period. Efforts will include recruiting and hiring qualified district staff, strategic planning and goal setting, new staff induction and ongoing training, transferring knowledge and tools developed over the course of initial implementation, and the development of accountability measures to ensure ongoing quality of implementation. Besides transferring knowledge and skills, we will establish tools and resources during this project that will stay in place after the grant sunsets. Technology tools designed especially for the districts' use will be their property to use and modify in perpetuity after the grant.

TNTP has previously executed capacity-building initiatives such as the restructuring of the Human Resources department in Denver Public Schools, assisting the merger of the Memphis City and Shelby County Schools, and managing the initial implementation of teacher evaluation systems in the Houston Independent School District and New York City Department of Education. Currently, we are engaged in four multi-year engagements focused on building districts' capacity to pivot and run major talent initiatives similar to the ambitious scope we have proposed here—a district-led school leadership residency in San Francisco and a teacher pipeline initiative in Boston, Dallas and San Francisco. In particular, these projects currently underway offer lessons for visionary district leaders who wish to boldly move away from systems that were created to address the needs of a different era. As a non-profit client service organization, we have seen the value these projects can have for others in the field. Our staff are positioned to share case studies informally across the field and more broadly via our public-facing blog (TNTP.org) and through published practice guides.

With our track record in similarly ambitious efforts, we are confident we can help these partners align human capital operations to a cohesive strategy to make districts a place where teachers' careers not only take root, but thrive. By doing this work at scale and tackling the variability we will encounter across these diverse settings, each with its unique challenges and opportunities, we expect to elicit meaningful new findings and recommendations for the field.

B.4. Dissemination of Lessons for the Field. TNTP has extensive experience evaluating its programs and disseminating knowledge to advance policy and practice. In the past, results of TNTP research have shaped the federal Race to the Top competition, which adopted many of TNTP's recommendations from *The Widget Effect* (2009); subsequently, a majority of states across the country have moved to adopt next generation teacher evaluations that incorporate multiple measures of performance. *The Irreplaceables* (2012) has received widespread media coverage, including editorials in seven of the top

ten newspapers in the country by distribution, and has jumpstarted a national conversation about the real teacher retention crisis—that is, when schools lose top teachers while retaining ineffective ones. We have also created and promoted formal and informal publications of special value to practitioners such as *Leap Year* (2013), which describes our approach to coaching teachers and *The Mirage* (2015), a revelatory examination of professional development. These and other guides and white papers can be downloaded for free at tntp.org. Via our online blog, (www.tntp.org/blog) which reached an audience of over 7,000 readers last year, we chronicled lessons learned from our work and that of our partners. To date, nine TNTP blog posts focused on stories from our federal grant-funded work (see Appendix F). In addition, the formal release of an independent evaluation of our work, such as when the American Institutes of Research (AIR) published the results of an extended study of our Fellows programs, prompted both AIR and TNTP to promote and comment on these findings in our respective public websites.[19]

Finally, we actively engage in forums that provide us the opportunity to share lessons and challenges from our large-scale projects with peer organizations. In recent years, we have presented at professional conferences including USED-sponsored Project Directors meetings and virtually, as panelists in i3 learning community webinars. As shown in our project goals, TNTP and our external evaluation partner, Education Analytics, are committed to publishing findings from this project that contribute to the knowledge base on supportive teacher talent management practices, particularly district-level strategies that can improve effective teacher retention in service to teacher quality overall.

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[19] Gerdemann et al (2017) and TNTP (2017), respectively.

C. Quality of the Management Plan

C.1. Specific, Measurable Goals, Objectives and Outcomes

<table>
<tr><td colspan="2">Goal 1: TRAIN NEW TEACHERS
Create a new, sustainable pipeline through a rigorous, locally-run, alternative route to certification program, recruiting and training 1,275 teacher candidates over the life of the grant with potential to be effective and/or highly effective new teachers in priority subjects.</td></tr>
<tr><th>Objectives</th><th>Measures</th></tr>
<tr>
<td>Design thorough recruitment and selection strategy and operations around the priorities of the local district(s).</td>
<td>

# of applications per vacancy received
# of teachers who begin teaching:

  in high-need schools
  in STEM teaching positions
  in other district-defined priority teaching positions (e.g., bilingual, special education)

</td>
</tr>
<tr>
<td>Promote diversity in the teacher workforce of each site with (a) customized strategies to improve teachers' cultural competency; and (b) enhanced strategies to recruit, support and retain teachers from diverse backgrounds.</td>
<td>

% applications received from people of color
# of teachers who begin teaching who are people of color
Teacher/program surveys
Retention rates of teachers of color (pre- and post-)
Observed indicators aligned with district inclusion goals, such as teachers' effective use of positive discipline practices

</td>
</tr>
<tr>
<td>Develop new teachers through each district's adaptation of TNTP's TEACh training model, customized around local curriculum and instructional priorities.</td>
<td>

# of teachers who successfully complete Pre-service Training
# of teachers who complete TEACh school year training

</td>
</tr>
<tr>
<td>Recommend teachers for certification only after they have met a rigorous performance bar that includes an assessment of effective teaching.</td>
<td>

# of teachers who pass performance screen
# of teachers who are on the path and/or have completed all requirements toward state certification

</td>
</tr>
<tr><td colspan="2">Outcomes: Each site will have a sufficient supply of diverse, effective and/or highly effective teachers to support strategic and equitable staffing across their schools—in the aggregate and within targeted subject areas.</td></tr>
<tr><td colspan="2">Goal 2: SUPPORT TEACHER QUALITY
Implement systems and policies to attract and retain more highly effective teachers.</td></tr>
<tr><th>Objectives</th><th>Measures</th></tr>
<tr>
<td>Implement strategies and promote policies that have been demonstrated to attract and retain a high-quality, diverse talent pool.</td>
<td>

District vacancy reports (including first day of school vacancies and school-year vacancies)
District evaluation ratings (using multiple measures such as principal and student surveys, observation ratings and student learning measures) for all first-year teachers (TEACh and other pipelines)

  Teacher survey responses
  Responses from exit surveys completed by teachers

</td>
</tr>
<tr>
<td>Revise policies and practices that ensure new teachers meet high standards for effectiveness and talent is distributed equitably across the district.</td>
<td>

☐ # of effective and/or highly effective TEACh teachers who begin teaching:

  for a second year
  for a third year

☐ # of effective and/or highly effective teachers who teach in high-need schools year-over-year

</td>
</tr>
<tr>
<td>Revise central staff roles to align with needs supporting teacher pipeline, teacher recognition/support and teacher quality and build these offices' capacity to run high-quality systems.</td>
<td>

Principal survey responses
Inter-rater reliability on classroom observations conducted by district staff and principals
Teacher survey responses

</td>
</tr>
</table>

Pilot the use of content-specific Micro-Credential in at least one site as part of a new or expanded pathway for teachers.	• Teacher interest surveys • Micro-Credential enrollment and completion data • Analysis of teacher performance on related skills among those who have completed Micro-Credentials

Outcomes: Students in partner districts will have more access to effective and/or highly effective teachers than they did prior to the project as sites will have a larger pool of potential talent to select from and will retain effective teachers at a higher rate than ineffective teachers.

<table>
<tr><td colspan="2" align="center">Goal 3: IMPROVE AND SUSTAIN
Monitor, evaluate, and improve upon TEACh to ensure partner districts are set up to run high-quality and cost-effective programs able to produce several thousand effective and/or highly effective teachers over the lifetime of these programs.</td></tr>
<tr><td align="center">Objectives</td><td align="center">Measures</td></tr>
<tr><td>Evaluate the program during the grant to provide feedback for ongoing improvement, define essential elements for the sake of replication and sustainability.

Build district capacity to sustain TEACh with systems for continuous improvement into perpetuity.

Execute an independent study of the project that helps to (a) codify critical program components for successful replication and (b) measure its effects on teacher effectiveness and retention.</td><td>• Year-over-year performance ratings for all first-year teachers
• Districts' Human Resources historical spending records
• Grant period spending (federal and non-federal funds)
• District sustainability plans
• All TEACh program implementation data including: teacher recruitment, teacher performance, student growth and other outcome measures, program budgets, teacher and principal survey responses, teacher retention and attrition information
• Comparative program evaluation data (showing program quality is sustained as TNTP releases implementation to districts)
• District partners' sustainability plans project anticipated recruitment targets through Academic year 2024-25</td></tr>
<tr><td>Disseminate findings from the project evaluation to reach a broad audience of researchers and practitioners.</td><td>• TNTP publications (i.e., blog posts, white papers, policy guides)
• Research partner publications (i.e., articles in scholarly journals, conference presentations)</td></tr>
</table>

Outcomes: Each site will adopt TEACh's core initiatives and will be able to sustain them in a way that is:

1. **cost-effective**, with new district expenses being offset by tuition revenue and/or reallocated funds from less strategic initiatives,
2. **influential**, with program best practices shared across each site so they can positively impact all new teachers, and
3. **high-quality**, with students benefiting from more effective and/or highly effective teachers than prior to the project.

The project will publish lessons and findings that have value for practitioners, researchers and policymakers.

C.2. Management Plan. TNTP and its partners have put together a strong team[20] that will position the project to achieve significant results. TNTP will be responsible for the project design, meeting project goals and grant management. Each district has identified staff members and teams that will be agents in

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[20] TNTP efficiently staffs major projects in different parts of the country through use of a national support team. Individuals who specialize in key functions, such as technology support and development, finance and communications, will support the work at the discretion of each site's Partner, helping to stretch local capacity.

this work, whose influence and responsibility for outcomes will increase over the grant period (for more information, see resumes in Appendix A).

Project Director. The project will be overseen by a member of TNTP's leadership team, **Lesley Guggenheim**, Vice President, Strategy and Recruitment. Ms. Guggenheim oversees TNTP's efforts to shape teacher training policy, recruit and select top-notch teachers and develop internal expertise around teacher effectiveness. Prior to her role as VP, Ms. Guggenheim spent several years directing TNTP's NYC Teaching Fellows contract, the largest alternative certification program in the country. Also, as a senior member of TNTP's Talent Management department, she managed a multi-year initiative with the New York City Department of Education to design a new evaluation and development system with principals and teachers. Over the course of three years, our team in NYC piloted the implementation of the new evaluation system while simultaneously building the district capacity to scale and implement the system across all schools once it left the pilot phase. Ms. Guggenheim is Project Director of TNTP's 2015 SEED project, in which we are working to build three major urban school districts' capacity to manage high-quality systems for teacher recruitment and preparation.

SEED Grant Management Team. Ms. Guggenheim will be supported by a core group of national staff members who will manage aspects of this grant according to their respective roles. Together, the members of this team have helped manage federal grants worth over 64 million dollars on behalf of TNTP. TNTP Partner **Liesl Groberg** had been Project Director for TNTP's 2010 i3 Validation grant and has managed six other federal grants, thus leading efforts to monitor progress in 19 TNTP program sites supported by these grants. **Cassandra Coddington, PhD**, Site Advisor, is TNTP's liaison with external evaluators. Dr. Coddington will familiarize our contracted evaluators with the program model to facilitate their ambitious scope of inquiry. On behalf of the project team, Dr. Coddington will ensure TNTP's external evaluators have the data and support they need to carry out evaluation plans. She has served in a similar capacity for TNTP's 2014 i3 Development grant (with researchers at RAND

Corporation), TNTP's 2010 i3 Validation grant (with American Institutes for Research (AIR)), 2013

School Leadership Program grant (with RAND) and a privately funded external evaluation (launched in

2013) in partnership with Cory Koedel at the University of Missouri. Financial Analyst **Allison**

Osborne will manage the budget for this project. In her senior role on TNTP's finance team, Ms.

Osborne is responsible for drafting and managing budgets for over 20 projects, totaling an estimated 20

million dollars from public and private sources annually. Additionally, she has overseen the spending

and conducts the financial monitoring and reporting for TNTP's current three-year SEED grant worth up

to $15,819,276 (including grant and district funds). In its second year, TNTP's spending is on course

with the project budget, and we are on track to spend all funds by the end of the grant.

Site-based Project Teams. At each district, a local team made up of TNTP and district personnel will

collaborate to meet the project milestones described in Table C.3 (beginning on page 28).

Table C.1 – Site-based Roles for the Project

TNTP Staff Member	Relevant Experience and Key Responsibilities for Project
Tim Hughes, Partner, CCSD (50% FTE); based in Las Vegas	• Currently oversees academic and coaching work for Nevada Teacher Corps, including curriculum implementation, assessment and intervention strategy and capacity building. • Will manage the Las Vegas-based SEED Site Director, oversee the budget for this site and report to the SEED Project Director.
Kelvey Oeser, Partner, ESC18 (50% FTE); based in Austin	• Has led TNTP partnerships with Texas districts and CMOs since 2013, helping clients to recruit, prepare and train teachers in multiple locales. • Will manage the west Texas-based Site Director, oversee the budget for this site and report to the SEED Project Director.
Christine Rhyner, Partner, NYC (50% FTE); based in NYC	• Currently oversees TNTP support of NYC Teaching Fellows to recruit, select and prepare approximately 500 – 1,200 alternative certification candidates annually for high-need schools. • Will manage NYC-based Site Director, oversee site budget, report to SEED Project Director.
Site Director[21] (100% FTE) • Site-based; reports to TNTP Partner at each site	• Jessica Box specializes in TNTP's academic services and oversees communications, training and operations for engagements with six school districts, typically liaising with the district's head of professional development and/or the Chief Academic Officer's team members. She has similar qualifications as those for this role (see resume, Appendix A). • Site Directors will take responsibility for capacity-building at their site, including: ensuring appropriate district staff are integrated in initiatives from day one; staff training is relevant, customized and high quality; and quality assurance over district-run initiatives.
Instruction Manager (83.3% FTE) • Site-based, reports to Site Director	• Meghan Church, current Director of TNTP's Baltimore City Teaching Residency, has similar qualifications as those required in this role, having overseen training, coaching and implementation of performance screens for ~400 new teachers (see resume in Appendix A). • Responsible for Pre-service Training, PD, coaching and observations at the site.

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[21] For TNTP roles other than Partners who have been assigned, TNTP will hire or assign staff as needed, choosing from internal or external candidates with qualifications most closely matching those profiled in Table C.1.

Pipeline Manager (50%; 83.3% FTE) • Site-based, reports to site's Partner	• Shauna Hart, who currently manages recruitment for TNTP's largest pipeline program, NYCTF, has similar qualifications as those for this role (see resume, Appendix A). • Will be responsible for systems of new teacher marketing, recruitment, selection, staffing and support of principals' hiring process at all three sites; and • Will work directly with district Director overseeing same functions.
Pipeline Support Staff (33,3; 6.6; and 10% FTE) • Site-based; report to Pipeline Manager	• Tabitha Hamon, current Program Manager for the TNTP's NYCTF program, has similar qualifications as those required in this role, supporting marketing and staffing initiatives in close collaboration with the NYCDOE (see resume, Appendix A). • Will be responsible for operations of new teacher marketing, recruitment, selection, staffing and support of principals' hiring process at the site; and • Will train recruitment specialists in TNTP's approaches, especially: implementation of new marketing strategies, application tracking software, norming on new teacher selection.
Sr. Effectiveness Coach (83.3% FTE) • Site-based; reports to Instruction Manager	• Elizabeth Blanco, who has coached a cohort of teachers in a cluster of Connecticut's turnaround schools, has similar qualifications as those for this role (see resume, Appendix A). • Will train district coaches and teacher trainers in TNTP's approaches, especially: norming observation standards among district staff; and • Will directly support caseload of teachers through coaching at the site in Year 1.
Analyst (100% FTE) • Reports to Site Directors	• Camilo Gonzalez is an Analyst for TNTP's Research and Evaluation team and has similar qualifications as those required in this role (see resume, Appendix A). • Drawing on the ability to conduct statistical analysis of data from different sources, will put information systems in place to support key program functions, e.g., performance screens; and • Will work with site counterparts to ensure systems are used with fidelity.

District Leadership. Recognizing that the project spans two domains of teaching quality and staffing, each site has identified leadership staff members who will lead design and implementation for both human capital and instructional functions.

Table C.2 – District Project Leaders

Clark County School District	
Kay Reich – Lead Project Facilitator • Provides specialized, ongoing support to new teachers, new teacher mentors and teacher leaders • Designs and facilitates targeted professional learning opportunities related to the development and onboarding of new teachers **Jennifer Varrato – Director II – Employee Onboarding and Development** • Oversees school staff onboarding and development including creation and facilitation of materials and trainings	**Jessica Bouchte – Alternative Routes to Licensure Coordinator** • Coordinates a rigorous, pre-service teacher preparation training program including: curriculum development and delivery, field placements and pre-service coaching, and presenter/cooperating teacher preparation and payment
Texas Region 18 Education Service Center	
John Thomas – Executive Director of Region 18 ESC • Manages a staff of 130 employees and a $42.5 MM budget • Oversees collaboration within the schools and communities in Region 18 to promote quality instruction and student growth	**Dewitt Smith – Superintendent/CEO of Wink-Loving Independent School District** • Oversees district operations, budget and teacher and principal evaluation systems • Designs and implements strategic goals and vision

Cindy Fouts – Coordinator of Certification Services of Region 18 ESC • Oversees and coordinates a teacher certification program that recruits, trains, and provides mentoring and support for beginning teachers			

New York City Department of Education	
Amy Way – Executive Director of the Office of Teacher Recruitment and Quality • Oversees strategic initiatives and day-to-day operations • Develops and implements strategic goals in recruitment and retention of high-quality teachers for NYC's 1,700+ schools **Nicole Chilla – Chief of Staff to Deputy Chancellor Phil Weinberg – Division of Teaching and Learning** • Designs strategic vision, mission and goal setting to establish citywide instructional priorities for multilevel educational stakeholders	**Xanthe Jory – Executive Director of Expansion, Policy and Performance – Division of Early Childhood Education** • Leads the teams responsible for Pre-K program assessment, accountability, policy development and operational program support. **Stephanie Hill – Senior Director of Teacher Recruitment** • Manages the district's work on teacher pipelines, selection and preparation • Leads key initiatives to improve the diversity of the teaching force

TNTP and partners will meet the project goals through the following project milestones.

Table C.3 – Goal-aligned Project Milestones

Goal 1: TRAIN NEW TEACHERS Create a new, sustainable pipeline through a rigorous, district-run, alternative route to certification program			
Objectives	**Staff Roles and Responsibilities**	**Milestones**	**Timelines**
A) Design thorough recruitment and selection strategy built around district priorities.	• Assess current technical systems used by participating districts and determine needs • District provides vacancy projections • TNTP Partners set goals with Districts; ensures a consistent high bar for selection, and that recruitment targets are met • District recruits Teacher-leaders for recruitment support roles; TNTP provides training and norming to Selection staff • Pipeline Manager, Asst. Pipeline Manager and District Staffing and Recruitment Director run recruitment campaigns, teacher selection • Site Director and Pipeline Manager support new teacher hiring process through principal and central office trainings	Technical build assessed	November 2017
		Conduct recruitment campaigns	Launches Nov. 2017, then annually with variable timelines in each site
		Screen and select cohort	Launches Dec. 2018, then annually with variable timelines in each site
		Early hiring targets and first day of school staffing targets met	Targets set Dec. 2017. Assess annually each quarter
B) Develop new teachers through TNTP's year-long training model, TEACh, customized around local curriculum and	• District staff nominate and select teacher leaders for Pre-service Training roles • Instruction Manager and Sr. Effectiveness Coach conduct staff training in advance of Pre-service Training • Instruction Manager and district PD staff run Pre-service Training	Pre-service Training conducted for new cohorts of Fellows. (Two per year in CCSD and NYCDOE; one each summer for ESC18.)	Variable timelines; annually as follows: Jan – Feb (CCSD, NYCDOE); June – Aug (ESC18); Sept – Nov (CCSD, NYCDOE)

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instructional priorities.	• District coaches orient all teachers new to the district with overview of the performance assessment, coaching support, other district expectations	100% of new teachers assessed for foundation skills before they begin teaching.	End of Pre-service Training
		New teachers prepared to start before the first day of school	Following Pre-service Training
C) Certify teachers who meet a rigorous performance bar that includes an assessment of effective teaching.	• TNTP Site Director and District Dir., Teaching & Learning customize District's performance assessment and align observation rubric as needed • Sr. Effectiveness Coach norms with District coaches and observers on observation rubric in advance of conducting regular observations and coaching sessions of all new teachers throughout the school year • District recruits teacher leaders for online course facilitation; TNTP trains these new instructors prior to the school year • New teachers complete online coursework through online platform • Project Director supports district in conducting performance assessment, coursework, and coaching for all program teachers	Staff trained to implement performance assessment	May – Aug 2018; ongoing refresher training annually in spring
		Program enrollees complete online coursework	Sept 2018 – May 2019, then annually for subsequent cohorts
		Performance-based certification decisions made	July 2019, then annually for subsequent cohorts

Goal 2: SUPPORT TEACHER QUALITY Implement systems and policies to attract and retain more highly effective teachers			
Objectives	**Staff Roles and Responsibilities**	**Milestones**	**Timelines**
A) Implement strategies and promote policies and that have been demonstrated to attract and retain a high-quality, diverse talent pool.	• TNTP Site Director, Pipeline Manager, and Analyst work with District staff to study historical pipeline data, including hiring timelines and trends, recruitment sources, teacher supply and demand, and retention data • TNTP develops a website, program brand, and marketing campaign to attract high-quality, high-potential applicants • TNTP Site Director works with district counterparts to develop opportunities for high-performing teachers to expand their reach within the district through TEACh (e.g. Pre-service Training summer staff; virtual instructional coaches; content seminar developers/facilitators)	District is able to accurately predict vacancies by subject area, grade level, and school type	Launches Oct. 2017, then annually with variable timelines in each site
		Marketing campaign attracts high-potential applicants who are committed to teaching and staying in the district	Launches Oct. 2017. Variable, annual timelines in each site
B) Revise policies and practices to ensure new teachers meet high standards for effectiveness and talent is distributed	• TNTP builds capacity of district central staff and school leaders to accurately evaluate and meaningfully support <u>all</u> new teachers to the district. TNTP makes recommendations for ways each district can scale aspects of TEACh	District staff who fill program related roles understand the expectations and have the skills needed to complete the work with fidelity	Ongoing as needed
		All first-year teachers receive training and support that help them improve	Ongoing as needed

equitably across the district.		All first-year teachers are accurately evaluated and held accountable for student performance	Ongoing
C) Revise central staff roles to align with needs supporting teacher pipeline, teacher recognition/suppo rt and teacher quality and build these offices' capacity to run high-quality systems.	• With each District's Chief HR Officer, TNTP Partner convenes a cross-departmental steering committee, establishing decision-making channels and objectives aimed at project's long-term oversight • TNTP Site Director and Instruction Manager work with district counterparts to develop a vision for excellent instruction for all first-year teachers	Central office steering committee launched, meeting series begins	November 2017, then quarterly throughout project
	• TNTP, in collaboration with each district, designs a performance assessment aligned to that vision and each district's evaluation system	First-year teachers understand the expectations they will be held accountable to	Complete by summer 2018; revised annually as needed
	• TNTP reviews hiring and staffing trends across the district and makes recommendations for ways to more equitably distribute existing and new talent across all schools	Only teachers who pass a rigorous performance-based assessment receive certification	Summer 2019 and each subsequent summer
	• TNTP Partner and Site Director develop job descriptions, expectations, and selection materials for all new/revised roles created by TEACh • TNTP trains central staff, formally and/or informally, throughout the course of the engagement to ensure a smooth transition of all program components	High-need schools have the talent they need to improve student outcomes	Ongoing
		Central staff report that the training and support they received from TNTP allowed them to complete their role in a high-quality way	Summer 2018; annually each subsequent summer
D) Pilot the use of content-specific Micro-Credentials in at least one site as part of a new or expanded pathway for teachers.	• With participating district offices of professional development, TNTP creates research questions and plans for pilot, including appropriate teacher recruitment and incentives • TNTP Site Directors support participating districts' promotion of new Micro-Credential courses and enrollment of interested teachers	Micro-Credential Pilot plan and recruitment targets set for all participating districts	November 2017
	• Participating teachers work toward Micro-Credential for up to five months from January through May or August through December. TNTP and district teams work together to align coaching supports to the Micro-Credentials teachers are pursuing	Launch enrollment process	November 2017; annually each subsequent fall
	• Teachers submit evidence to earn Micro-Credential by end of semester	Enrollment complete for Micro-Credential pathways	January 2018; biannually every 6 months (in advance of courses in spring or fall.)
	• On a rolling basis, scorers review evidence, grant Micro-Credentials to successful candidates and provide feedback to all participants	Participants evaluated and Micro-Credentials awarded	On a rolling basis through end of grant

| | • TNTP analyzes program data in service to making recommendations to sites for the ongoing use of Micro-Credentials | Findings shared with sites, SEED program, and publicly via TNTP blog | By end of grant |

Goal 3: IMPROVE AND SUSTAIN
Monitor and evaluate to ensure outcomes are achieved

Objectives	Staff Roles and Responsibilities	Milestones	Timelines
A) Evaluate the program during the grant to provide feedback for ongoing improvement, define essential elements for the sake of replication and sustainability.	• Project Director, supported by Grants Management Team publishes a Request for Proposals in accordance with TNTP procurement guidelines and Uniform Guidance	Evaluation firm selected and MOU completed	November 2017
	• Project Director and TNTP Partners work with District leaders to determine and share district performance targets with project stakeholders (e.g., project staff, USED, Ed Analytics)	Site goals calibrated	November 2017
	• Progress monitoring meeting schedule set with various working groups	Quarterly progress against project goals assessed	Ongoing starting in Jan 2018 and quarterly
	• Instruction, Pipeline Managers meet with District counterparts at least 2x month • Site-based teams (incl. district) meet quarterly • Evaluators provide TNTP with annual briefing on evaluation • Project Director leads annual project step-back • Annual Performance Report and check-in meetings with USED	Set targets and refine models based on evaluation outcomes	Annually – November
B) Build district capacity to sustain TEACh with systems for continuous improvement into perpetuity.	• TNTP and each district develop a timeline for ownership transition for each aspect of the work and identify staff needed to implement well • Establish plan for capacity building in each work stream • Year 1: collaborate on design; TNTP leads implementation with district "shadowing" • Year 2: collaborate on refining design, TNTP co-leads some implementation with district taking over some aspects entirely • Year 3: district leads implementation with TNTP support, mainly conducting quality assurance	Quarterly progress against project goals assessed	Ongoing starting in Jan 2018 and quarterly
	• Analyst supports TNTP Partners and District directors to complete comparative project budgets to analyze the effect of new expenses, savings and return on investments	Biannual assessment of progress toward cost-effectiveness goal	Twice annually starting in Jan 2018
	• District leadership with support from TNTP Partners uses program evaluation data and quarterly assessments to iterate on a long-term sustainability plan for implementation in year four (post-grant)	Sustainability plan is drafted and approved by key district clients by end of engagement	January 2020

C) Execute an independent study of the project that helps (a) codify critical program components for successful replication and (b) measure its effects on teacher effectiveness and retention.	• Site Directors and TNTP Analyst work with districts to secure and analyze historical data on teacher retention to understand projected retention • Evaluators assess and analyze effective teacher attrition and retention trends over the course of the grant • Evaluators assess fidelity to implementation over the course of the grant, including after TEACh implementation has phased into Districts	Measure projected retention and actual retention Annual interim report to TNTP (from Evaluators) Final report to TNTP based on independent study	Annually- November, and post-grant
E) Disseminate findings from the project evaluation and independent study to reach a broad audience of researchers and practitioners.	• Ed Analytics team shares findings from this study with academic audiences (via website, conferences and scholarly journals) • Project Director and other staff share lessons from this project via the TNTP blog • TNTP produces at least one formal publication based on findings	Three to four TNTP publications of preliminary findings and/or lessons from implementation (published in print for widespread, free download or on TNTP's blog) Three to four Ed Analytics publications with academic audiences	1-2 times annually and post-grant

C.3. Continuous improvement. Fundamentally, TNTP believes that if its work is not meeting its goals, then the work must change. TNTP has a strong track record of prioritizing continuous improvement. We systematize this priority in every project we undertake by setting measurable goals with clearly delineated objectives and time-bound benchmarks at the outset. Then, we dedicate capacity to the monitoring process. Knowing that in the face of day-to-day challenges, this monitoring process can seem less urgent to project staff, TNTP maintains full-time analyst support to pay attention to goals. These analysts keep program evaluation on the surface by facilitating quarterly meetings with project staff and relevant senior leadership. Project staff are expected to bring program data to these calls and in collaboration, the team will decide whether goals are on track or if course correction is needed.

Reports on every site's performance against its goals are reviewed regularly by members of TNTP senior management and where goals are off track, program managers must present an

intervention plan designed to improve. This process works well to ensure that project staff are consistently gathering and reflecting on the data needed to take timely action and keep even challenging objectives on track. For example, for over a decade, TNTP Teaching Fellows programs have relied on early application data to assess performance against recruitment targets. If these early benchmarks are not met in a particular site or for a particular subject area, TNTP intensifies or modifies certain strategies based on data and context. This data-driven approach explains why TNTP has been consistently successful recruiting for some of the most hard-to-staff positions and schools in the country.

TNTP has devised a parallel approach to track leading indicators expected to predict the success measures for each district's own teacher pipeline. Likewise, TNTP's Instruction Manager and Senior Effectiveness Manager will demonstrate how to translate meaningful classroom coaching interactions into teaching performance data that can help district staff to know what its biggest impact training needs are – and meet them. Processes like these will be more iterative at first, though over time, we anticipate district staff—who know their context, schools and teachers the best—will continue to use these data systems but will need to make fewer course corrections in their day-to-day work. This process for continuous improvement complements our plan for an independent study of this project and ensures that we make real-time corrections based on data while our increasing knowledge base of what districts can do to increase teacher quality will help the districts and us to operate with increasing efficiency.

D. Quality of the Project Evaluation Plan

As shown in our project's management plan, TNTP has devised a system of goals, objectives and milestones that will ensure we remain focused and produce evidence on our project's impact. A variety of measures will be collected by TNTP and its site based partners over the course of this grant to ensure we can be accountable to these ambitious goals and deliver evidence on key aspects of our theory of action that meet What Works Clearinghouse (WWC) standards with reservations. Complementing an

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internally-led effort by TNTP's Research & Evaluation team, we have set aside about $1,200,000—

eight percent of the project budget (10.8 percent of federal)—to contract with Education Analytics (EA),

a team experienced in supporting large-scale evaluations. EA will work with TNTP and their site-based

partners, CCSD, ESC18 and NYCDOE, to conduct an independent evaluation of TEACh. The EA

evaluation, led by Dr. Robert Meyer, Dr. Andrew Rice, Dr. Anthony Milanowski, and Dr. Peter Witham

(see resumes, Appendix A) will address the following four research questions:

Table D.1 - Project Evaluation Research Questions (RQ)

Research Questions	
RQ1	How is the TEACh program being implemented across partner districts, and to what extent does that implementation correspond to intended key implementation performance measures and activities?
RQ2	How does TEACh positively impact the teacher pipeline and teacher workforce in partner sites?
RQ3	What impact does TEACh have on instructional practice?
RQ4	What impact does TEACh have on student outcomes?

D.1. Methods Support Progress Monitoring. The researchers will conduct a mixed-methods

evaluation that provides timely information on TEACh implementation, monitors progress on key

metrics, and determines impact on key outcomes. EA will provide TNTP and partner sites formative

findings through multiple mechanisms (monthly calls, bi-annual briefings, and annual reports) to inform

mid-course corrections (see Table D.2 for a high-level timeline). EA will also develop research reports

(accessible to policymakers and practitioners) to be disseminated to the field through research

conferences and peer-reviewed journals.

Table D.2 – Program Evaluation Timeline

Activities	Year 1 2017-18	Year 2 2018-19	Year 3 2019-20
Establish Memoranda of Understanding and Data Use Agreements with Sites	X		
Finalize Evaluation Plan	X		
Develop Data Collection Instruments	X		
Collect Extant Data	X	X	
Collect Qualitative Data (Observations, Walkthrough, Surveys, Interviews, etc.)	X	X	

Data Cleaning and Analysis	X	X	X
Annual Formative Report	X	X	
Final Summative Report			X
Status updates/reports provided at monthly calls and bi-annual meetings with TNTP and Site Leadership.	X	X	X

Findings from RQ1 will provide TNTP and partner sites with performance feedback and periodic assessment of progress. EA will work collaboratively with TNTP and partner sites to establish minimum acceptable levels of implementation for key components of the TEACh theory of action: Pre-service Training, First School Year Training, and coaching supports. EA will utilize TNTP's logic model (see Appendix E) to specify the inputs, outputs, and immediate outcomes expected from the intervention, as well as the expected paths from the outputs and immediate outcomes to longer-term effects on educators, schools and students. EA will supplement TNTP's rich set of programmatic data through qualitative data collection including artifact collection; focus groups, interviews, and surveys with key district staff. To assess what it would take to implement this program at other sites, EA will collect information on requirements for sufficient implementation including: changes in time allocations, policy/procedures, additional human resources, and communication planning. EA will also assess what adaptations are needed to customize TEACh with each partner site. This work, along with discussions with program designers and analyses of the relationships between implementation measures and important intermediate outcomes, will also help identify key implementation mediators and moderators that limit or enhance implementation.

D.2. Evaluation Methods that Provide Valid, Reliable Data on Relevant Outcomes. EA will utilize a range of data sources to answer RQ 1-4 and determine the programs implementation and impact on goals and relevant outcomes (see Table D.3). To answer RQ 2-4, EA will collect administrative data sources at the state and district level including: TEACh and district administrative data systems (applicant demographics, vacancy data, new hire data including demographics, retention data, district-wide teacher characteristics ethnicity, experience, certification training, and retention data), district

evaluation data bases (teacher evaluation and observational ratings), and state and district student data systems (student-assessment, student attendance, and student discipline data, roster verification data, student-level demographic data, and staff/school linkage data).

Table D.3 – Research Questions, Outcome Measures, and Data

Question	Outcome Measures	Data Sources
RQ 1	Fidelity of implementation of project activities (e.g., Pre-service Training, First School Year Training, coaching supports)	o TEACh program data o Surveys, & focus groups o Site-visit observation
RQ 2	Number/proportion of teachers of color in the applicant pool & number / proportion hired; Number/proportion of teachers, including teachers of color, retained & effectiveness of teachers retained (as measured by teacher effectiveness ratings); Rates of teacher certification and re-certification for all teachers and for teachers of color (NYCDOE only)	o TNTP TEACh and district administrative data systems o District teacher evaluation systems data bases
RQ 3	District teaching practice ratings; Ratings on the CLASS (NYCDOE Early Childhood teachers only)	o District teacher evaluation systems data bases o Two observations of Early Childhood Education teachers done in the fall of 2019
RQ 4	Test score growth on state/district assessments;	o State and district student data systems

EA recognizes the need for valid and reliable performance data to achieve a rigorous evaluation which meets WWC standards, and given both TNTP and EA's extensive work with each site's (and respective state's) mature data systems, we are confident in the quality of these data. Regarding the data needed for determining impact on student outcomes, EA is the student growth provider for both NYCDOE and New York State, has collaborated with CCSD on large-scale research studies, and has extensive experience working with Texas state assessment data.

For the portion of the study involving NYC early childhood teachers, EA and TNTP will work with NYCDOE to obtain observations of the teachers in the study using the CLASS early childhood instrument. These observations will be done specifically for this research, and the resulting ratings will not be used for the evaluation of these teachers. This CLASS instrument has been independently

validated in over 6,000 classrooms,[22] with CLASS ratings shown to correlate with important student outcomes such as achievement gains.

D.3. Evaluation Methods that Can Meet WWC Standards with Reservations. The evaluation will use propensity score matching (PSM) to create matched samples of TEACh participants and non-participants which are baseline-equivalent with respect to important sample characteristics, allowing the evaluation to produce evidence that will meet WWC standards with reservations. The following matching factors will be used: **Vacancy Area**: Grade, Subject; **School / Childhood Center Characteristics**: Percentage of disadvantaged students, students of color, English learners, and prior year average percent of students proficient in reading/English language arts (ELA), quality ratings; and **Teacher Characteristics**: Experience, prior performance, as measured by the district's teacher evaluation system. Samples will be constructed so that treatment and comparison groups do not differ by more than .25 standard deviations on baseline characteristics, per WWC guidelines. In addition, we expect attrition to be low for this group of teachers because of the design of the program and close relationship with partner sites. The majority of attrition will be planned based on the performance screen and has already been taken into account in the estimates of sample size and power for each analysis.

RQ 2: How does TEACh positively impact the teacher pipeline and teacher workforce in partner sites? For CCSD and ESC18, two matched samples will be created based upon vacancy areas and school characteristics from the 2017-18 and 2018-19 school years. If data are available, we will also use prior years' ratios of hires to vacancies and school climate survey scores to equate the potential desirability of the schools in which the vacancies occur. Based upon assumptions of teachers trained (CCSD: 225, ESC18: 200), TEACh's pass rate (.9), and TEACh's hiring rate (.75), we estimate a total matched sample of 304 in CCSD and 270 in ESC18. Specific outcomes will include: i) The proportions of vacancies filled by teachers of color, ii) The proportions of vacancies in high need subjects filled by

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[22] Paro, Pianta, Stuhlman (2004); Pakarinen (2010).

teachers of color, iii) The proportions of vacancies that were filled by teachers who were both effective (as measured by district teacher evaluation systems) and of color, iv) The proportions of teachers hired that were retained by the beginning on the third year (Fall, 2019-20), by level of effectiveness as measured by district performance evaluation systems, and v) The proportions of teachers who were both effective and of color retained by the beginning of the third year.

For NYCDOE, a different variation of the PSM design will be used to determine the impact of TEACh for 100 early childhood educators in Year 2 (2018-19). Since TEACh will not be the only path for early childhood certification, a matched sample of 134 TEACh and non-TEACh participants will be using both teacher and Center characteristics. Specific comparisons will include: i) the rate of certification, ii) the rate of retention of these teachers at the beginning of the third year (2019-20), iii) the rates of certification and retention of early childhood teachers of color, and iv) the rates of retention of these teachers who are both effective (as measured by the district's evaluation process) and of color.

An additional analysis related to this research question will be conducted for the 200 teachers participating in the NYCDOE TEACh recertification program in the 2017-18 and 2018-19 school years. PSM will use vacancy areas, teacher characteristics and school characteristics leading to a matched sample of 270. Specific comparisons will include: i) the rate of retention of recertified teachers at the beginning of the third year (2019-20) by retention of teachers of similar experience levels by effectiveness rating, and ii) the retention of teachers of color in these high-need subjects.

In alignment with Competitive Preference Priority 1 – Promoting Diversity in the Educator Workforce, an additional exploratory analysis will examine TEACh's contribution to workforce diversity, though this is not intended to produce evidence meeting WWC standards. This analysis will examine whether the historical barrier of a lower pass-rate on state standardized certification exam for teachers of color is removed through TEACh's practice-based training and final performance assessment. To see if TEACh has the potential to improve pass rates for teachers of color while

maintaining or raising the effectiveness bar, the evaluation will track the percentage of TEACh participants who have failed state certification, and the increase in the percentage of teachers, especially teachers of color, in the applicant pools available to these sites due to participating in TEACh.

The exploratory analysis will also examine whether TEACh screens teachers in a more inclusive way. Using the full set of TEACh participants, additional analyses will compare the passing rates and score distributions on TEACh screens versus the state teacher certification tests by race, and assess whether teachers who failed the state test perform better on the TEACh screen. Where data are available, we will also analyze the ability of the TEACh screen test to predict teacher effectiveness, as measured by practice ratings and contribution to student achievement. The degree to which the screen test predicts better or worse by teacher race will also be analyzed. Results of these analyses will inform the field on a critical question related to teacher preparation and increasing workforce diversity while also providing valuable program implementation data on the effectiveness of the TEACh screen.

RQ 3: How does TEACh positively impact instructional practice? For ESC18 and CCSD, the two matched samples (CCSD: n=304, ESC18: n=270) based upon the vacancy areas and school characteristics described in Research Question 2 will be used to compare the average ratings on performance dimensions related to instructional practice (using the district teacher evaluation systems). For NYCDOE, the matched sample (n=134) based upon the teacher and Center characteristics described in Research Question 2 will be used to compare the average of the CLASS ratings of teachers. Ratings will be made at the beginning of the 2019-20 school year especially for this research. For the NYCDOE recertification exam, the matched sample (n=324) (assuming a 100% match given the number of teachers in NYCDOE) will be used to compare average instructional practice ratings made as part of NYCDOE's teacher evaluation process.

Results from ESC18, CCSD, and the NYCDOE recertification comparison will be treated as coming from a separate study, and the results combined across studies to provide an overall estimate of

the impact of TEACh participation on instructional practice. The results of the comparison in the NYCDOE early childhood will not be combined because of the difference in grade and the instrument used to assess practice.

RQ 4: Does TEACh have a positive impact on student outcomes? For ESC18 and CCSD, the matched sample based upon vacancy areas and teacher characteristics will be used to compare the average level of student achievement (*controlling for prior year achievement and student characteristics*) will be compared, with one modification. Because not all teachers hired will teach in tested subjects or grades, the samples will be smaller. We expect that the necessary student assessment data will be available for about 35 percent of teachers of the teachers in the matched samples, and thus a total matched sample of 200 (CCSD: n=106, ESC18: n=94).

Since NYCDOE does not have student achievement data for pre-K and K students, this research question will not be addressed for the group of early childhood TEACh participants. We will, however, explore using the 200 teachers that will participate in TEACh to become recertified. Using a matched sample based upon teacher and school characteristics, we will determine whether there are enough teachers in the matched samples for whom student assessment results are available. If sufficient numbers can be found (at least 20), we will compare the average level of student achievement, controlling for prior year achievement and student characteristics across the two samples.

Each site (ESC18, CCSD, and potentially NYCDOE) will be treated as a separate study and the results will be combined across studies to provide an overall estimate of the impact of TEACh participation on student achievement.

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