

TR@TC--Teacher Residents at Teachers College, Columbia University

Teachers College, Columbia University (TC) is pleased to submit this proposal to the U.S. Office of Innovation and Improvement: Teacher Quality Partnership Grants Program in response to *Absolute Priority 2: Partnership Grants for the Establishment of Effective Teaching Residency Programs*. We are requesting funding in the amount of \$9,749,285.00 to support a teacher residency program over the five-year period beginning October, 2009.

Section I: Project Design

We propose a 14-month graduate-level program that will lead to New York State teacher certification and a Masters degree. The Teacher Residents at Teachers College, Columbia University Program (TR@TC) will recruit academically talented, diverse individuals—e.g., returning Peace Corps volunteers, veterans from the Armed Forces, and mid-career changers—and transform them into exemplary, highly qualified teachers of English as a Second Language (ESL) and Students with Disabilities (TSWD) who can capably meet the needs of children and youth attending schools in high-need, urban school districts such as New York City.

The goals of TR@TC are to:

- Recruit, prepare, and graduate an increasing number of academically talented, diverse candidates from under-represented groups each year as highly qualified ESL and TSWD teachers for high-need schools;
- Design and implement a 14-month teacher residency program for partnership schools that culminates in NYS teacher certification and a Masters of Arts degree;
- Collaborate with partners including NYC public schools and educators, school leaders, teacher education and Arts and Sciences faculty, and community-based organizations (CBOs), to implement and continually improve the teacher residency program;

- Design and implement innovative curricula for the preparation of teacher residents who are able to address the intersecting, complex, multiple needs presented by students in high-need schools;
- Support the professional development of teachers and leaders in partnership schools, and enhance the capacity of CBOs to work with teachers to meet the educational needs of communities;
- Design and implement a two-year induction program to support the success and retention of program graduates;
- Engage faculty in a review of the residency program and in the identification and consideration of lessons that can be applied to other teacher education programs at TC;
- Conduct on-going research on the impact of teacher residency programs on teacher retention and student learning.

These are ambitious but worthwhile goals whose achievement will not only benefit schools in New York City but the long-run development of TC.

Recruitment and Selection

Our primary recruitment goal is to attract the best candidates to TR@TC; we will look for candidates who possess the qualities that research has shown are related to student achievement, such as strong content preparation, high GPA's, attendance at quality undergraduate institutions, and commitment to service. However, our recruitment strategy will target specific groups such as returning Peace Corps volunteers, military veterans, and mid-career changers because of their maturity and diverse life experiences, which undoubtedly have afforded them much practice in working with people from all walks of life, solving problems, and juggling multiple responsibilities. In addition, returning Peace Corps volunteers and veterans have demonstrated a

commitment to service and have first-hand knowledge about working in diverse, challenging, resource-poor environments, making them ideal teacher candidates for teaching in high-need schools. Most importantly, the racial and cultural diversity of these three groups, especially the men and women of the Armed Forces, will support our goal to recruit and prepare exemplary teachers who are more representative of the student populations in urban, high-need schools and who can serve as positive role models for minority children and youth.

We have designed a rigorous, two-stage application process to identify and recruit candidates who demonstrate both strong content knowledge and a commitment to working in urban education. The first stage involves completion of a standard application to TC which allows both admissions officers and faculty to determine if candidates met core content knowledge requirements in their undergraduate and other formal schooling experiences. Candidates must demonstrate a minimum GPA of 3.0 in their undergraduate degree program, and submit two academic references, a personal statement, and a resume. The second stage applies specifically to TR@TC and will entail both a written application consisting of several short essay questions and a formal interview (in person or by phone) in which candidates have an opportunity to demonstrate their ability to effectively communicate their beliefs about education, schooling, the role of the teacher and the qualities and experiences they possess that can help them promote academic achievement in NYC public schools. A Program selection committee composed of school and university-based educators, will use a common rubric to assess and rank each candidate. This two-stage process will ensure that we only admit the candidates who can successfully handle the rigor of graduate study at TC, as well as the intensity of a residency program, while meeting the academic needs of NYC students.

Applicants who successfully meet these rigorous selection criteria will be:

- Enrolled in a degree-granting teacher certification program at TC, concurrent with the residency experience;
- Placed as a teacher resident in a partnership school for a full school year
- Assigned to work alongside an experienced and exemplary mentor teacher who will provide the resident with ongoing instruction, feedback, and guidance;
- Engaged in graduate coursework, professional study, and educational activities that are closely connected to and informed by classroom practice, school professional learning communities, district curriculum and learning standards, and students' needs, thus comprising a synergistic blend of practice and theory;
- Eligible to receive a living stipend upon completing the required application;
- Supported by a partnership that brings together urban schools and practitioners, university departments and faculty, and community leaders and organizations;
- Mentored, guided and supported by a Mentor Teacher and Residency Supervisor during the residency, and an Induction Mentor during the first two years of practice, all of whom have been carefully selected and trained;
- Required to commit to at least three years of service as a teacher in a high-need school—preferably in NYC—upon completion of the program and the attainment of certification;
- Supported and guided during the first two years of their teaching career through an induction program developed by TR@TC designed to meet the needs, enhance the skills, ensure the success, and increase the retention of new teachers in high-need schools.

Table 1 shows the anticipated recruitment schedule for four cohorts of teacher residents (TRs). However, in reviewing the table, it is important to keep in mind that each cohort will actually receive services for a total of three years.

Table 1: Recruitment Schedule

	2009-10	2010-11	2011-12	2012-13	2013-14
Cohort A	-	20			
Cohort B	-		40		
Cohort C	-			60	
Cohort D	-				60

The Eligible Partnership

The eligible partnership for the proposed project includes all the required partners, specifically a high-need LEA, a consortium of high-need schools served by the high-need LEA, a partner institution, programs of education within the partner institution, a department of Arts and Sciences within the partner institution, and a community partner.

The New York City Department of Education (NYCDOE) is the **high-need LEA** for the partnership. The NYCDOE operates the largest school system in the U.S., serving 1.1 million students in nearly 1,500 schools taught by 80,000 teachers. Over 80% of NYC public school students are racial/ethnic minorities, with Latino students accounting for nearly 40% of the total (School Matters, 2009). Immigrants make up a steadily-rising proportion of the school population, and dozens of languages are spoken in schools, the top four of which are Spanish, Chinese, Bengali and Arabic (Office of English Language Learners, 2009). Data for 2007 show that district-wide, 52.8% of students achieved the score of “proficient” or higher on the English Language Assessment test, 64.9% on the math test (School Matters, 2009). Statistics published by the Department (<http://schools.nyc.gov>) indicate that by the end of 2008, more than 300,000 of the total number of students were eligible for free or reduced price lunch, or about 30% of all students, which probably under-estimates the actual poverty rate because of under counts in secondary schools. Teacher need data show that in 2006-2007, 9.2% of NYC classes in core academic subjects were taught by teachers who were not highly qualified, compared to the NYS

average of 4.3% (NY State Board of Regents, 2008). (See Appendix A.1 for LEA eligibility data and Appendix A.2 for NYCDOE partnership letter)

The NYC schools in the **consortium of high-need schools** served by the LEA are listed in Table 2 below. These schools serve all grades preK-12, geographically represent three of the five boroughs of NYC, and are all led by principals who are Cahn Fellows, a program at TC for distinguished principals. Current Cahn Fellows were each sent letters which described TR@TC and invited their participation. Fifteen schools elected to join the partnership in response to the invitation, all of which meet at least one of the three requisite poverty criteria to establish their eligibility as high-need. Appendix A.3 shows the percentage of poor students these partnership schools serve, on average 83.75%. Additional schools will be added during the project using the same selection and eligibility criteria. (see Appendix A.4 for partnership letters),

Table 2: Consortium of High-Need Schools

School	Borough	Principal	Grades
ACORN Community High School	Brooklyn	██████████	9-12
The Bea Rodgers Intermediate School	Manhattan	██████████	6-8
Bronx Early Childhood Academy	Bronx	██████████	6-8
Brooklyn School for Collaborative Studies	Brooklyn	██████████	6-12
The Captain Manuel Rivera Jr. School	Bronx	██████████	K-8
The Caton School	Brooklyn	██████████	PK-3
Frederick Douglass Academy III	Bronx	██████████	6-12
High School for Violin and Dance	Bronx	██████████	9-12
The James M. Kieran School	Bronx	██████████	6-8
Juan Morel Campos	Brooklyn	██████████	K-5
The Parkchester School	Bronx	██████████	PK-5
The Sal Abbracciamento School	Brooklyn	██████████	K-5
The School for International Studies	Brooklyn	██████████	6-12
The Secondary School for Research	Brooklyn	██████████	6-12
The Thaddeus Stevens Elementary School	Brooklyn	██████████	PK-5

Teachers College, Columbia University (TC) will serve as **the partner IHE** and also the fiscal manager of the grant. The College is one of the country's foremost graduate schools of

education and has been preparing teachers and educational leaders since 1887. Its 5,000 graduate students study for a broad range of careers in education including curriculum and teaching, organizational leadership, counseling and clinical psychology, and arts and humanities, among others. More than 300 TC student teachers are placed in NYC schools every semester, meaning that hundreds of NYC public schools host one of our students each year. TC is also a leader in research on urban education and houses the Institute for Urban and Minority Education, the National Center for Restructuring Education, Schools and Teaching, and the Campaign for Educational Equity. Under President Susan Fuhrman, TC has made an institutional commitment to forge deeper and more coordinated relationships with New York City public schools. For example, the National Academy for Excellent Teaching works with 14 high-need secondary schools in Harlem and the Bronx to improve adolescent literacy. In addition, the College's new Office of School and Community Partnerships builds, expands and leverages TC involvement in area schools and has established partnerships with more than 25 schools in Upper Manhattan.

TR@TC represents a unique collaboration between two entities that operate at TC's interface with public schools. The **Office of Teacher Education** (OTE), works with the nine academic departments at the College to facilitate and support teacher education at TC. It is a central point of access and information for faculty, students and staff involved in the hundreds of student teacher placements made every year, and provides professional development and resources to faculty, students and teachers. OTE will help identify and engage a diverse range of faculty at TC to work with principals, mentors, and TRs in the partnership schools.

OTE collaborates with TC's **Cahn Fellows Program** which recognizes and supports outstanding public school principals in NYC. Only the top 2% of the principals nominated for Cahn Fellowships are selected each year into a network with other high-performing school

leaders, enabling them to influence educational practice on a scale larger than their own schools—while staying in their schools. Since the program's founding in 2002, 152 exemplary NYC school principals (15% of all principals in the city) have been awarded Fellowships, collectively impacting over 180,000 children every year. All of the Fellows have mentored a new NYC principal, a Cahn Ally, using their expertise to benefit this new generation of school leaders. Each of the schools in the TR@TC partnership is led by a Cahn Fellow.

The *ESL and TSWD* **programs of education within the partner IHE** will be directly involved in TR@TC. Other programs at the college will also offer institutional support to this collaboration through the *Teacher Education Policy Committee* (TEPC). TEPC brings together about 20 faculty from teacher certification programs across TC, representing all disciplines, core academic subjects and grade-levels. It advises the President and Dean on policy, research and practice related to teacher education, and has been instrumental in recommending and supporting changes in teacher education within the College, and shaping requirements for teacher certification within NYS. TEPC will be instrumental in connecting TC's education programs and faculty with the partnership, and will serve as the forum for reporting and discussing the feedback from the program evaluation.

The **arts and sciences department** working with the partnership is *Columbia's Center for New Media Teaching and Learning* (CCNMTL), a hub at Columbia for expanding the use of new media and technologies in all 18 schools of the university, especially the 27 arts and sciences departments (see Appendix A.5 for partnership letters from Columbia and CCNMTL). In its ten-year history CCNMTL has worked with over 4000 individual faculty members to create or use digital content and has launched 200 large projects (see Appendix A.6 for descriptions of learning projects). As the arts and sciences arm of the partnership, CCNMTL's

work will enrich both the content and pedagogical content knowledge of residents in TR@TC, as well as enhance their capacity to use new technologies to support teaching and learning.

Columbia Community Service (CCS) is **the community partner** for the project and has been working with young people and their families in the Harlem community for 62 years through its support of about 50 CBOs (see Appendix A.7 for CCS partnership letter; Appendix A.8 for list of selected CBOs). Besides annual fundraising efforts, the CCS Outreach Committee provides direct technical assistance to community partners to help them build local capacity and expertise in areas such as program evaluation and grant seeking. The majority of the agencies specifically target children and youth and provide them a wide range of educational supports. In addition to CBOs associated with CCS, 16 partnership schools also identified 11 CBOs with which they have a relationship (see Appendix A.9 for CBOs linked to partnership schools).

Needs Assessment of the High-Need LEA and the Partnership Schools

According to the NYCDOE Office of Recruitment and Quality, current (and persistent) teacher shortage areas include math, science, special education, Spanish, ESL, bilingual subjects and speech improvement. However, special education/TSWD and ESL teachers represent particular shortages facing NYC schools given the 158,000 students who require special education services and the more than 145,000 who are designated as English Language Learners (ELLs)

(<http://school.nyc.gov>).

Special Education. Not only has the number of students with IEPs increased, but the last large scale study of the NYCDOE Special Education Services, known as “The Hehir Report,” found that nearly half of students receiving such services are educated in school buildings alongside their non-disabled peers, and spend 80% or more of their day in general education classrooms (Hehir et al., 2005). Consequently, thousands of Collaborative Team Teaching (CTT)

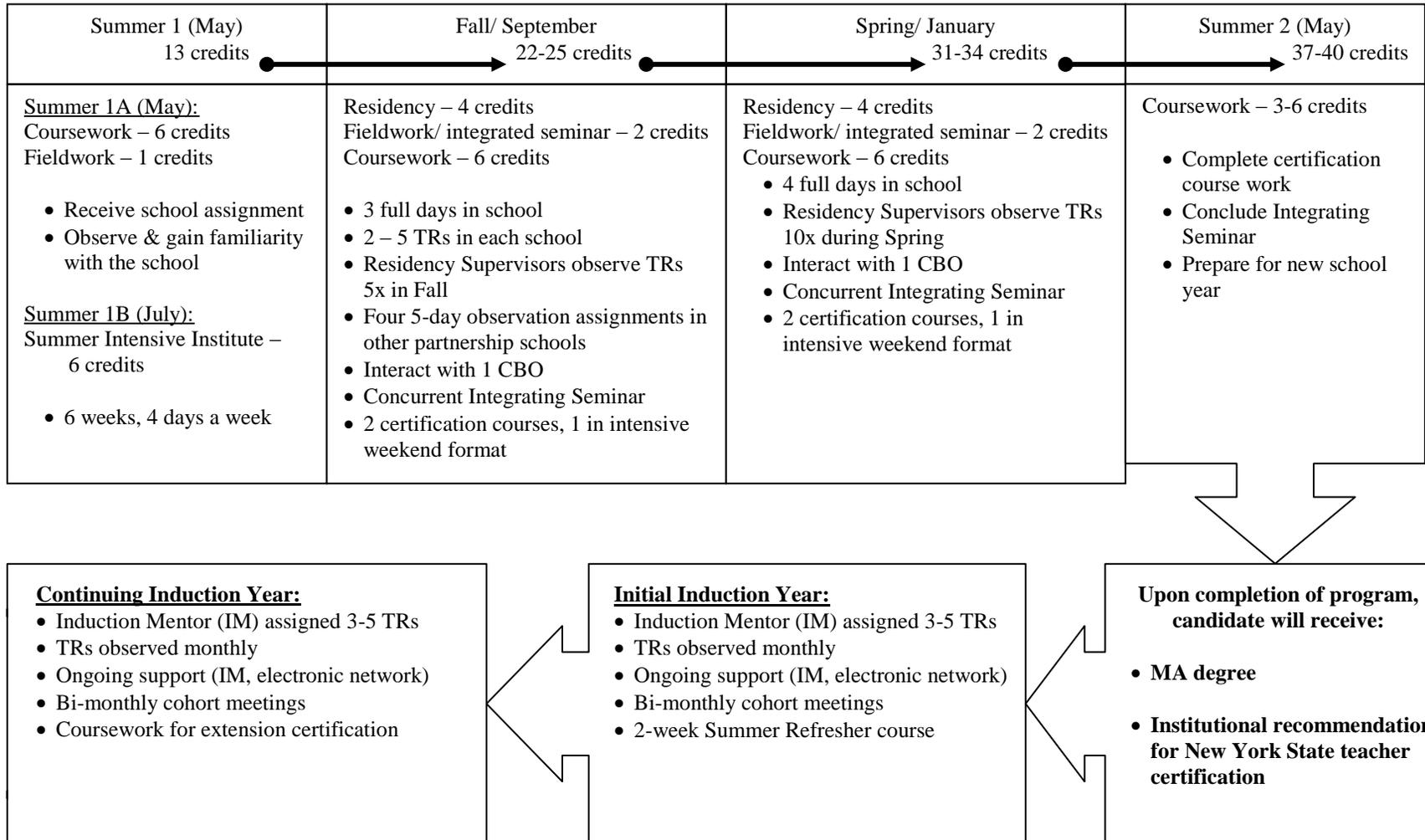
classrooms have been established at all grade levels; in these classrooms a general educator and a special educator engage in full-time team-teaching. This strategy, while effective, also heightens the need for highly-qualified special educators. In a memo dated July 2, 2009, Joel Klein, NYC Schools Chancellor notes that “Inclusion settings are at an all-time high,” while also acknowledging the need for “significant and substantial improvements in service to special education students” (<http://schools.nyc.gov>), further underscoring the need for preparing more highly qualified teachers to serve students with disabilities.

English Language Learners. In the last 30 years the percentage of ELLs in elementary, middle, and high schools has doubled, and more than 50% of all school children come from immigrant families (<http://schools.nyc.gov>). Twenty-six percent of NYC students now fall under the ELL designation. A recent report (Asian American Legal Defense and Education Fund, 2008) shows only one ESL teacher is available for every 116 ELLs, and one bilingual teacher for every 88 ELLs in NYC. These data highlight the severe shortage of teachers certified in ESL or able to work with ELLs, but do not fully illuminate another growing concern: the increasing number of ELLs who have been identified as requiring special education services (Zehler et al., 2003). The intersection of English language proficiency and academic issues with learning disabilities further exacerbates the ESL/TSWD teacher shortage. A needs assessment of the prospective TR@TC partnership schools further highlights the need for integrated ESL and TSWD teacher preparation. In a survey, 100% of the participating principals indicated TSWD as an area of high need for their schools; 86.7% indicated ESL.

Description of the Teacher Residency Program

The program will run each year for 14-months from May through June, followed by a two-year induction program. Figure 1 lays out a map for TR@TC, from program start through induction.

Figure 1: Teacher Residents at Teachers College—Program Timeline



Teacher Residents (TRs) will be engaged in: university coursework required by their specific certification area; an Intensive Summer Institute (ISI); a year-long residency experience anchored by an ongoing Integrating Seminar (ISed); school visits and observations; work with CBOs; and other professional development activities. The program will be labor-intensive and demanding in terms of both professional coursework and work in the field. However, the program has been organized and structured to ensure curricular coherence and to provide TRs with high levels of support throughout.

Summer 1A: May 1 to June 30. TRs enroll in two graduate-level courses required by their certification area. TRs will also receive their school assignments so that they can familiarize themselves with the schools in which they will become residents. During late May and early June, TRs will observe in their schools and meet with the principal, Mentor Teacher (MenT) and other teachers in the building, doing walkthroughs, and completing fieldwork requirements.

MenTs will be experienced teachers from the partnership schools who have been nominated by the principal, and have undergone a rigorous selection process which includes an application, an observation of their classroom practice and an interview. (It is anticipated that in later years of the project, prospective MenTs will submit self-annotated digitized video clips of their classroom in lieu of the observation as the VITAL platform is integrated into the Program and partnership schools become more familiar with this media technology. VITAL is described more fully further in the narrative.) Principals will be asked to nominate teachers who demonstrate exemplary practice and the ability to collaborate well with others. The application process has been designed to ensure that prospective MenTs' classroom practice align with the goals of the Program and with coursework, and to assess their ability to work with diverse learners, gather evidence about student learning using multiple measures—both formative and

summative—and use these data to inform instruction in order to improve learning outcomes for their students. The Program selection committee will select the MenTs.

Summer 1B: July 1 to August 15. TRs will participate in the ISI four days a week for six-weeks. ISI will be led and taught by the Master Teacher of Pedagogy and Clinical Practice (MasT), but will also involve the participation of other TC faculty, MenTs, principals, and other members of the partnership. The Intensive Summer Institute will focus on providing TRs with a solid foundation for their entry into schools and will integrate 1) knowledge of students from high-need communities who demonstrate “multiple vulnerabilities” (Rong & Preissle, 2009) such as poverty, learning issues, limited English proficiency, health issues, and so on; 2) cognitive development and learning theory; 3) multi-level instruction and interactive pedagogies; 4) classroom management; 5) district and state standards, regulations and expectations.

Fall. TRs are in their school assignments three full days a week. They will begin the residency at the same time as their MenT begins the school year—before the students have returned to school. While this period before schools officially open is brief, typically two or three days, it is a crucial planning and preparation time, and TRs will have the opportunity to observe and assist their MenT with preparations for the school year.

Each TR will be in a partnership school with at least one other TR from the same cohort. The purpose is to create a natural buddy system that will foster sharing and collaboration with peers. Every effort will be made to assign TRs to schools in groups of two to five. Each TR will also work with a Residency Supervisor during the residency year. Residency Supervisors will serve as a crucial intellectual bridge between the residency placements and the university, and will work closely with MenTs and TC faculty. In their role, they will need to balance guidance and instructional support to TRs, with critique and evaluation of TRs’ practice. Thus, their

perspective will be that of a critical friend and expert whose aim is to observe, dialogue and reflect with the TRs, offering specific feedback and suggesting solutions or alternative strategies to teaching dilemmas in order to encourage continuous improvement on the part of TRs.

Residency Supervisors will visit and observe TRs in their school placement at least five times from September to December, and ten times from January to the end of the school year. Like MenTs, Residency Supervisors will be carefully selected by the Office of Teacher Education upon completion of a rigorous application.

The strength of teacher residencies is that they offer teachers-in-preparation the opportunity to develop knowledge of one setting deeply and continuously over time, and to participate in every aspect of one classroom: instructional activities, routines, assessments, etc. While residencies clearly offer the possibility of in-depth learning, they are less able to offer breadth. To enrich the experience, TRs will also spend one day a week observing in other partnership schools and classrooms to become familiar with different school settings, grade levels, communities, and content pedagogies. However, ad hoc classroom observations can be fragmented and superficial unless carefully structured and reflective. Therefore each observation assignment will last five days during a continuous five-week period, allowing TRs the time they need to become familiar with a variety and range of schools. However, because the goal is not simply variety but breadth of understanding, assignments will also be tailored with the specific needs of each TR in mind so as to ensure that the observations round out the residency assignment and also meet NYS certification requirements for observation hours and for experience with more than one grade level. TRs will observe in at least four partnership schools for a total of at least 20 observation days over the school year.

Another goal of TR@TC is to use these partnership school observation assignments as a springboard to initiate the practice of “instructional,” or “education rounds” (Elmore, 2007). This practice is analogous to medical rounds whereby principals meet at regular intervals, each time at a different school, and spend the day observing classrooms and discussing instructional issues. The purpose of education rounds is to “stay in the descriptive voice,” “develop a body of evidence that can be used to diagnose the sources of the problem” and “keep ...focused on solving problems at the school and system levels rather than evaluating individuals” (Elmore, 2007, p. 21). We plan to introduce the idea of education rounds to school partners, beginning at the individual school level with the two-five MenTs and TRs in each school forming professional learning communities that have been found to effect student achievement (Corcoran & Silander, 2009). These groups can observe one another’s classrooms and begin to experiment with this potentially powerful mechanism for igniting classroom change and school improvement.

In addition to observing in different partnership schools, TRs will interact with CBOs that are associated with partnership schools or with Columbia Community Service. The purpose of the assignment is to help TRs gain insight into learning and teaching in less formal settings than schools, and to learn from community residents and teachers. The expectation is that TRs will connect to and support the activities of two CBOs, one during the fall and the other during the spring. The kind of support that TRs provide will vary according to the needs of the organization and the needs, interests and skills of each TR. E.g. TRs could help with the collection or analysis of evaluation data, tutoring and after-school support, or the development of curriculum materials.

TRs will spend Fridays on the TC campus. The majority of this time will be in ISed, a seminar designed to support them in developing their classroom practice, and building crucial research-to-practice and theory-to-practice connections. The seminar will also afford residents

some distance from their fieldwork—physical, intellectual and emotional—for reflection and for critical analysis of their practice. Workshops built into ISed will focus on skill development in, for example, the integration of technology and new media, or content literacy development. The overarching theme of ISed will be student learning and achievement, with an emphasis on large-effect practices such as student teaming (Bennett et al., 2005; Kulik & Kulik, 1992; Slavin, 1996), formative assessment (Black & Wiliam, 1998; Young, 2007; Perie, Marion, & Gong, 2007), and lesson design that attends to variations in student learning and offers students challenging tasks (Corcoran & Silander, 2009). Thus, ISed will focus on making content and concepts accessible to learners, and on evidence-based decision-making and instruction.

During the fall, TRs will also enroll in two courses according to the requirements of the degree and their certification area. At least one of these courses will be offered in an alternative, intensive weekend format. Courses will be offered by full-time teacher education faculty in the ESL and TSWD certification programs.

Spring. Spring mirrors the fall in that TRs will continue in their school-based residencies and will enroll in two additional courses according to degree and certification requirements. As in the fall, at least one of these courses will be offered in an alternative, intensive weekend format. ISed will also continue with the same overarching focus on student learning, i.e., evidence-based decision-making, and the gathering and application of data to enhance students' academic success. However, there will be some small but significant shifts in requirements.

First, when schools reopen after January 1, TRs will begin spending four days a week in their assigned schools. This additional time is intended to support more intense and focused work in the assigned classroom and with the MenTs. The shift also takes into account the growing experience and expertise of TRs and their development as teachers, and assumes that they are

ready to assume increasing responsibilities for planning and instruction. Second, the observations in the other partnership schools will no longer be required.

Summer 2A: May 15 to June 30. TRs will conclude program and school assignments, enroll for final courses and complete any remaining certification requirements. TRs will also continue in ISed, although its emphasis will shift to preparing for the year ahead and smoothly transitioning from the residency to their role as teachers of record.

The Induction Program

High-poverty, urban public schools turn over one-fifth of their teachers each year (Ingersoll, 2004). Retaining quality teachers in the classroom is a priority for high-need schools and induction programs can be critical to retaining new teachers in these schools (Humphrey et al, 2000; Smith & Ingersoll, 2004). The Program will work with TR graduates for two years beyond their graduation, into their second year as teachers of record, using a variety of structures and activities, both electronic and in-person, designed to support them and further their learning and development. Research also shows that induction programs that focus directly on teachers' classroom responsibilities and realities have the greatest impact on teacher retention (Fletcher, Strong, & Villar, 2008; Smith & Ingersoll, 2004). Thus, TC's induction support will be grounded in TRs' daily work, and emphasize topics and skills that are typically challenging for new teachers, e.g., classroom management, assessment, multi-level instruction. Induction will also concentrate on helping TRs to incorporate into their curricula large-effect practices shown by research to positively impact student achievement (Corcoran & Silander, 2009; Hattie, 2009). The primary goal of induction will be to support TRs in moving from ad hoc or inconsistent applications of evidence-based practices to deliberate, integrated and consistent implementation.

During both induction years, TRs will each be assigned an Induction Mentor (IMen) who will provide assistance and guidance according to needs. Induction Mentors will undergo a rigorous application similar to that for MenTs, and will be carefully selected for this important responsibility. The goal is for experienced teachers who are colleagues of newly hired TRs to assume the role of IMen and work with TRs on planning, classroom set-up and management, curriculum and assessment. IMens will visit TRs in their classroom at least monthly for the purpose of conducting observations and demonstration lessons, as well as co-planning or team-teaching. TRs and IMens across schools will all be networked electronically through a wiki space or google group, which will facilitate the exchange of relevant resources, and dialogue around teaching. TRs will also benefit from digital resources from TC's EdLab including: 1) the Online Journal Collection—a set of online serials of particular value to educators; 2) PocketKnowledge—the TC digital archive, a vast collection of educational resources and research developed at TC; and 3) the New Teacher Resource Collection—resources and tools tailored to meet the needs of beginning teachers.

Each IMen will mentor three-five TRs (although this number may be smaller in earlier years of the program, given the smaller size of the cohort), and will bring her/his cohort together every other month for support meetings and professional development. These meetings will also be open to newly hired peer teachers in TRs' schools so as to extend the impact of induction support offered by the Program. IMens will receive support for the mentoring work they will assume, e.g., release time, professional stipend, as informed by discussions with the principal and by NYCDOE guidelines.

The basic structure of the Induction program will remain consistent over both years. However, the Initial and the Continuing Induction years will each offer one unique activity tied to the developmental needs of TRs. At the end of the Initial Induction year, TRs will come together during the summer for a two-week refresher course. This course will provide a forum

for reflection, self evaluation, professional goal-setting, and re-tooling. The curriculum for the course will emerge from teaching dilemmas and questions raised by the TRs, but will also focus on deepening their knowledge of learners' multiple issues and needs, and honing their ability to capably meet these needs. The Continuing Induction year will conclude by encouraging TRs to build their expertise and begin the pursuit of an additional certification or extension.

The Distinguishing Features of TR@TC

The design of TR@TC has been informed by the experience of established teacher residency programs in Denver, Chicago, Boston, Florida, and Ohio and incorporates the basic structures and elements that have come to characterize teacher residency programs. However, research on the characteristics of exemplary teacher preparation programs tells us that “it is within the substance of teacher education programs and not only in their structural characteristics that clues about program effectiveness are to be found” (National Center for Research on Teacher Education, 1991; Zeichner & Conklin, 2009, p. 275), so that even programs that are similarly configured may produce very different outcomes. Therefore, the design of TR@TC emphasizes the substance of the program, giving priority to student learning, excellent teaching experiences, and rich learning opportunities. Several key features distinguish the Program from other teacher residency efforts, ensuring that TR@TC is 1) a comprehensive, coherent learning experience for residents, not simply one where residents accumulate credits, hours, and discrete skills; and 2) a generative experience that will engage residents in thinking about and understanding teaching and learning beyond classrooms and schools so that they can capably harness and connect with the curriculum of the communities and the multiple socio-educational contexts in which their students and their families live.

A core curriculum focusing on learners' multiple and integrated needs. The challenges that children in high-need areas face are not neatly compartmentalized, but are integrally linked and mutually exacerbating. In essence, the whole child is much more than the sum of the parts. A child who is a poor, immigrant, ELL with reading problems needs a teacher who does not see each of these needs as separate or hierarchical, but recognizes that she must attend to the child's *multiple needs simultaneously* and takes a developmental perspective on the child's progress. The TR@TC program will offer a curriculum that addresses, in an integrated manner, the multiple issues and needs that learners embody and bring into the classroom. TRs will examine issues relating to language, culture, socio-economic circumstances, immigration, context or environment, and education, not in isolation but in tandem. These elements will conceptually frame as well as undergird the entire program.

The curriculum will be introduced to the TR's in the Intensive Summer Institute, or ISI, prior the start of the school year, and will be intensified, deepened, extended, and reiterated throughout the residency year in a year-long Integrating Seminar on evidence-based decision-making (ISed), designed to support and unpack the TRs' everyday teaching experiences in the classroom. This curriculum will be integrally different from others based on similar topics because it will emphasize how *the interaction and intersection* of these issues in the lives of children impacts their learning and their academic achievement.

Exploring the practice of education rounds. Another important goal of the project is professional development and learning on the part of partnership school teachers and principals. Education rounds (Elmore, 2007) offer much promise for engaging principals and teachers as communities of learners, working together to thoughtfully, deliberately, and collectively examine mutually identified instructional issues for the purpose of understanding and ameliorating them.

Through the practice of education rounds, teachers and principals can hone or develop leadership skills such as the description and analysis of practice, relying on data versus opinion or judgment, generating and testing solutions, and focusing on teaching and students. As discussed earlier, the goal is to introduce the notion of education or instructional rounds to school partners by engaging TRs and their MenTs in experimenting with this practice as a way to think about, describe, diagnose, and solve specific teaching problems. The practice would begin small with TRs and MenTs in one school deciding together on an instructional issue that is perplexing, but could eventually grow to encompass two and more schools, and to include principals as well as teachers. Through Cahn Fellows, partnership school principals are already accustomed to collaborative research. Thus, they are well situated to embrace education rounds as a mechanism for extended professional learning among the members of their own school communities.

The use of empirically-based practices with large effects on achievement. To efficiently use the time we have with TR's, and to prepare them to accelerate learning and close achievement gaps, we will devote time to those practices which have been found to consistently have large effects on achievement. A few such practices have been described in this proposal, but faculty and the program leaders will monitor the research literature to keep abreast of new developments that have powerful effects, and incorporate them into the program. The knowledge base about learning and teaching is growing rapidly so the program must keep up. As a research-intensive university, TC demonstrates an exceptional capability for and commitment to empirically-based practice and research on teaching and learning. Thus, research opportunities are built into the project. Faculty from across the disciplines will compete for small awards to carry out scientifically-valid research with classroom teachers in TR@TC partnership schools and build the knowledge-base surrounding the impact of teacher residency programs.

Digital content learning. In keeping with the U.S. government's definition of quality teachers, and with research that has shown a relationship between student achievement and a teacher's subject matter coursework, particularly in mathematics (Floden & Meniketti, 2005), TRs are all required to demonstrate strong content background upon entry to the Program. However, research on teachers' content knowledge preparation also suggests that knowing a subject does not automatically translate into knowing how to teach that subject (Howard & Aleman, 2008), underscoring the importance of pedagogical content knowledge (Shulman, 1986). Analyses of teacher preparation program curricula also support the integration of content and concepts in courses and across disciplines.

CCNMTL's work with using technology to enhance content learning in different disciplines will help TC faculty, the TRs and our school partners re-examine traditional conceptions of content knowledge, disciplinarity, problem-solving, and teaching. CCNMTL will design a series of workshops, differentiated by discipline and approach, aimed at deepening TRs' content knowledge and making them knowledgeable and competent in the use of diverse technologies for classroom teaching. It will use simulations such as *Project Vietnam*, enabling students to discover, watch, annotate, edit, sub-collect, and create multimedia projects using digitized footage and full length interviews. Another option is the use of multimedia study environments such as *Global Classroom*, a master's course that engages students across the world in live simultaneous discussions about foremost issues in sustainable development.

TRs as well as school- and university-based educators in the partnership will not only acquire specific skills and the ability to use particular tools (such as visualization and modeling tools; real-time data collection tools; data sharing programs; annotation and study tools; media

archives; training environments), but, more importantly, they will cultivate the confidence and understanding needed to incorporate these and other technologies in their practices.

A deliberate focus on middle school learners. The program will focus on preparing secondary teachers, a deliberate decision based on evidence that it is students in the upper grades who are most in need of excellent teachers. The National Longitudinal Study of NCLB (Birman et al., 2007) found that a large percentage of secondary teachers are not highly qualified and often did not major in the subjects they are teaching. Minority and low-income students are more likely to be taught by teachers teaching out of field (Corcoran, 2007). This is extremely troubling given that in the 2005-2006 school year, 9.4% of students aged 16-24, 10.4% of Blacks, and 22.4% of Hispanics nationwide, had not received a high school diploma or its equivalent (Laird et al., 2007). Moreover, an emphasis on secondary ESL and TSWD teachers is especially important given the short supply of teachers in both areas prepared to manage the intersection between students' unique needs and the content knowledge demands of the curriculum as students advance in grade (Desimone & Parmar, 2006; Maccini & Gagnon, 2006; Pugach, 2005).

Too often secondary teacher preparation curricula are heavily tipped towards the high school years and pay short shrift to the middle grades, even though NYS secondary certification explicitly encompasses grades 7-12. The problem of unqualified teachers is particularly acute at the middle school level where teachers are much less likely than their high school counterparts to be highly qualified (Stullich, Eisner, & McCrary, 2007). Research on achievement among middle school students indicates that the public schools are failing large numbers of these students. For instance, in New York City, research shows that in 2005-2006, a majority of eighth graders could not read up to standards, a problem particularly acute in high-poverty schools where only 22% of eighth graders met the New York State ELA standards (New York City Coalition for Educational

Justice, 2007). Teachers also rarely report feeling prepared to work with middle school students even though research has shown that middle school teachers in urban schools must be both skilled and sensitive in order to respond to the unique needs of middle school students from diverse racial/ethnic and cultural backgrounds (National Middle School Association, 2003).

To ameliorate this problem, the ISI and ISed will deliberately differentiate between middle and high school students. The middle grades are a critical bridge between elementary and high school, and it is therefore imperative that TRs understand middle school learners in terms of their development and socio-emotional needs so as to design meaningful curricula and utilize instructional strategies that will build capacity and motivate them to meet rigorous standards.

Learning to teach using new media technologies. Video Interactions for Teaching and Learning or VITAL (http://ccnmtl.columbia.edu/portfolio/education/vital_early_childhoo.html) is a digital tool that provides a platform for teachers to study teaching practices by means of an online “third space” between the university classroom and the placement location. TRs will video each other teaching a class and then use VITAL to create multimedia essays incorporating video clips of their presentation as documentation for self-analyses. These multimedia essays can form the basis for conferences between MenTs or Residency Supervisors and TRs, and will be incorporated into the ISed curriculum as a mechanism for studying teaching and providing TRs feedback on their practice. This process of analysis has been shown to deepen and extend opportunities for reflection, acclimate students to the social dimensions of their own professional development, and provide ample opportunities for metacognitive discourse on learning, including innovative approaches to problem-solving and disciplinary content development (Rich & Hannafin, 2009). School partners will also be exposed to VITAL so that it can facilitate professional dialogue and critical reflection on the part of MenTs and principals.

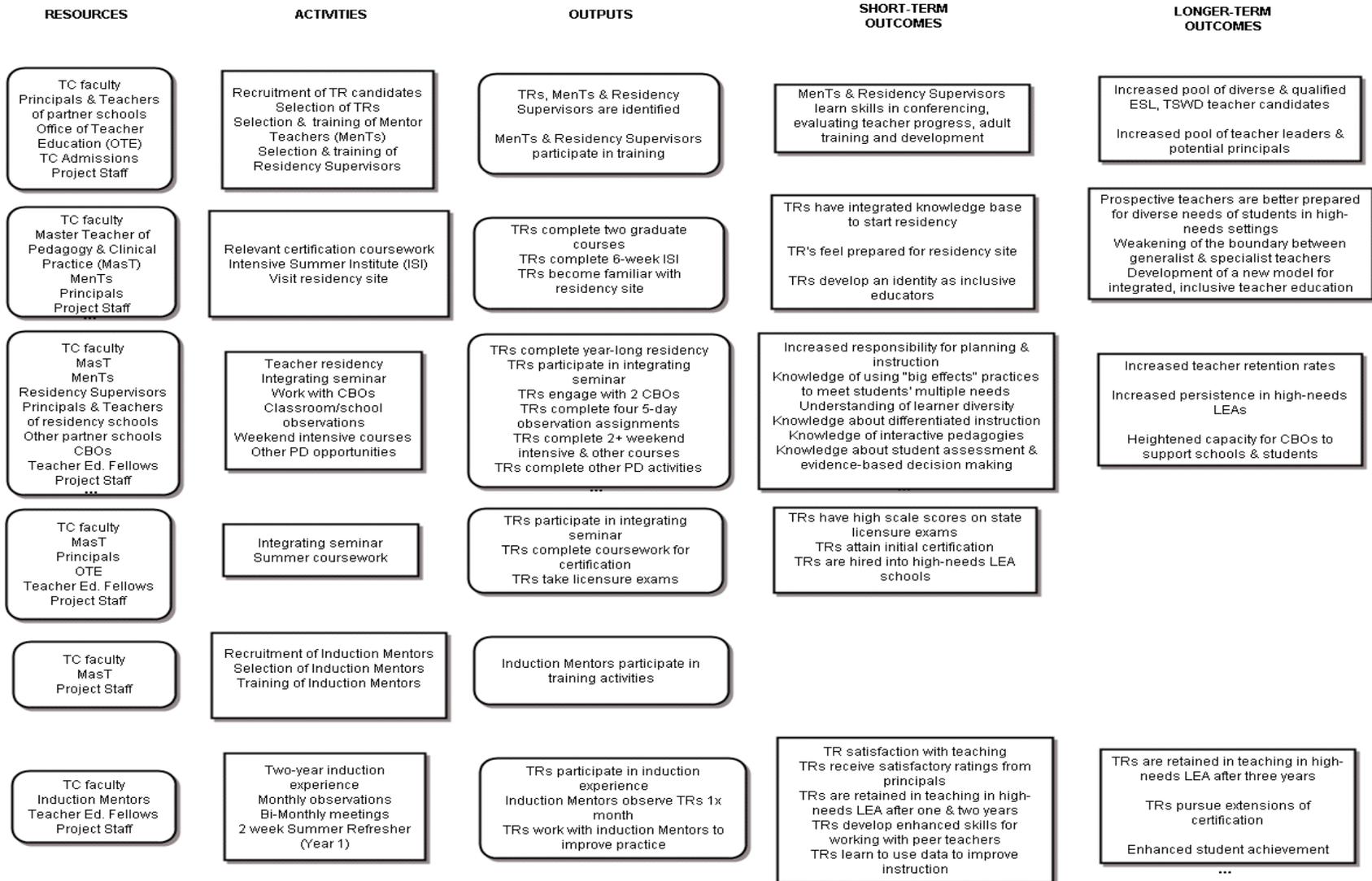
Besides VITAL, TRs will have access to a wide variety of digital resources through EdLab, a research, design, and development unit at TC (<http://edlab.tc.columbia.edu/>). Driven in part by new technologies of communication and knowledge representation, and in part by new understandings of how individuals and groups learn, EdLab pioneers new forms of educational tools, and processes and explores new possibilities for innovations in on-line learning.

Section II: Evaluation

The evaluation of the proposed teacher residency program will be both formative and summative, and both longitudinal and comparative. The project will collect and analyze data on the functioning and quality of program elements in the initial cohorts of residents and this will inform the refinement and improvement of these elements for subsequent cohorts. The evaluation will also gather data on the both short-term and long-term outcomes for program participants. The evaluation will be longitudinal in its effort to synchronize the collection of data on short-term and longer-term outcomes with the unfolding of the program over time, as there are distinct stages to the residency program. And it will be comparative in its intent to compare the outcomes observed for participants in the teacher residency program with outcomes for two comparable groups of program nonparticipants: (a) a matched set of applicants to the teacher residency program who were not selected, and (b) a matched set of participants in the regular preservice teacher education programs at TC.

Figure 2 displays the logic model for the teacher residency program which will guide the evaluation. Each row of the logic model reflects a distinctive set of program activities, with the resources that serve as inputs to the activities, the intended outputs for the targets of the activities and the desired short-term and long-term outcomes of the activities. The activities are arrayed in chronological order, with the activities at the top occurring prior to those at the bottom.

Figure 2: Logic model for TR@TC Program



The model reflects the design of the residency program for the initial cohort; formative data on outputs and outcomes may lead to revisions in the program activities as the program serves subsequent cohorts of teacher residents.

Summative Evaluation

The summative evaluation of the teacher residency program will have two components. The first will be descriptive, in which the outcomes for program participants are described in relation to the reporting requirements outlined in the RFA. Thus, the evaluation will generate descriptive data on program persistence and completion rates, scores on relevant state teacher certification exams, the percentage of participants who attain initial certification, and one- and three-year rates of retention in high-need settings in the partner LEA, among other measures.

The second component will be an impact analysis designed to address the question of what outcomes would have been observed for program participants in the absence of the residency program. The impact analysis will rely on contemporary statistical methods for analyzing program impacts in the absence of random assignment of individuals to the treatment group—here, participants in the residency program—or to a different condition, such as a traditional teacher education program.

Comparison groups. Prospective residents will apply to TR@TC based on clearly-stated criteria; but the selection of residents will occur via a holistic review process that will not reduce to a continuous scale with a cutoff score. Therefore, program participants and unselected applicants are likely to differ in a number of ways. We propose to use propensity score matching to identify program nonparticipants who will be matched with program participants.

The evaluation staff will gather data on the population of program applicants and other students admitted to the regular preservice teacher education programs at TC, including their

undergraduate degrees and GPA's, undergraduate college selectivity, age, prior professional experience, gender and racial and ethnic background. The first step in propensity score matching is to estimate a logistic regression equation predicting the probability of selection into the program on the basis of these observable characteristics of program participants and nonparticipants. For each individual participant and nonparticipant, the regression equation yields the estimated probability of being selected into the program based on his or her background characteristics.

The second step in propensity score matching is to match a program nonparticipant to each program participant on the basis of this probability, which is known as the propensity score. E.g. an African-American male with a high undergraduate GPA may have an 80% probability of being selected into the residency program. He would be matched with a nonparticipant with 80% probability of selection into the residency program. Similarly, a program participant with a 25% probability of selection would be matched with a nonparticipant whose probability score is as close to 25% as possible.

If the number of program participants and nonparticipants is relatively large, and their background characteristics are related to the probability of selection into the program, then the propensity score matching approach should “balance” the program participants with a group of program nonparticipants who are similar in the aggregate. Thus a comparison group is constructed that is as similar as possible to the “treatment” group on measured characteristics. Since the groups are equivalent at the outset of the program, the program impacts can be estimated by comparing the outcomes observed for the treatment and comparison groups.

There will be two different comparison groups. The first will be drawn from applicants to TR@TC who are not selected for the program. Analyses comparing program participants with

matched nonparticipants who also applied to the program will explicitly control for motivation and prior experience that might bear on subsequent success as a teacher.

It is possible, however, that applicants to the residency program who are not selected may be eligible for other nontraditional teacher preparation experiences at TC that share some of the features of the proposed residency program. Thus, even though the matching of program participants to nonselected applicants to the residency program heightens the internal validity of the analysis—by making participants and members of the comparison group “more equal” at the outset of the program—it may weaken the external validity of the analysis by comparing the experience of going through the residency program to a potentially similar set of experiences, rather than to the experience of participating in the “traditional” teacher preparation program.

For this reason, a second comparison group will be drawn from applicants to the relevant preexisting teacher preparation programs at TC. This second comparison group, however, may differ somewhat from program participants in motivation and other factors associated with actually applying to the program, which weakens the internal validity of the comparison. However, because the members of this second comparison group will participate in the preexisting teacher preparation programs at TC, comparison of their outcomes to those observed among program participants will enhance the external validity of the evaluation.

Three features of this design are worth noting. First, because the method depends on a persuasive model of the probability of selection into the program, we will seek to incorporate the most important determinants of selection via administrative records and data from application forms. Second, with small numbers of participants and nonparticipants matched on the basis of propensity scores, it is possible that the two groups will not be “balanced” on observable characteristics. If so, the observed outcomes could be statistically adjusted for the two groups to

reflect these initial differences in observed characteristics. There is also the option of combining cohorts to increase the sample size for the treatment and comparison groups.

Third, the analytic approach emphasizes internal validity more than external validity. That is, the method is designed to address the question of how the kinds of individuals who are selected for the residency program would have fared in the absence of the program, but none of the analyses will compare mature career-changers participating in the teacher residency program with 22-year-olds enrolling in an existing teacher education program.

Data sources for the evaluation. Teachers College will develop an individual tracking system to monitor the progress of program participants and comparison group members over time. This tracking system will contain information on participants' and matched nonparticipants' progress through their respective programs; graduation and completion of other requirements for teacher certification; and post-graduate employment. We will be able to ascertain the percentage of program completers and comparison group members who are retained in teaching within the New York City Department of Education one year and three years after initial employment. Moreover, we will be able to discern whether completers are teaching in schools that are judged to be high-need on the basis of factors such as the percentage of students eligible for free or reduced-price lunch and the percentage of teachers teaching out of license.

Candidates for teacher certification in New York State take New York State Teacher Certification Examinations (NYSTCE), designed to assess general knowledge in the liberal arts and sciences, professional and pedagogical knowledge and knowledge of content specialties. Scores are routinely reported to the candidate's home institution. In addition to contrasting the mean scaled scores of TR@TC participants with those of the two comparison groups, we will

tabulate the mean scaled scores for residency program participants and other teacher certification candidates at TC to see if mean scaled scores increase after the onset of the program.

Evaluation staff will also administer surveys to program participants and matched nonparticipants at two key points: the conclusion of the residency year, and the conclusion of the first and second induction years. As the logic model indicates, the outcomes to be assessed at the conclusion of the residency are candidates' reports of their knowledge and understanding of key features of teaching students with multiple simultaneous academic and social needs, including the candidates' abilities to diagnose such needs; their understandings of learner diversity; their knowledge about differentiated instruction; their knowledge of interactive pedagogies; and their knowledge about student assessment. The surveys will also assess candidates' reports of the extent to which they have assumed responsibility for planning and instruction in the classroom, and the extent to which they feel well-prepared to assume such responsibilities.

The primary outcomes to be assessed via surveys at the end of the first and second induction years are teachers' reports of their future employment plans, their sense of preparedness for and satisfaction with teaching, and two specific domains of professional knowledge: their knowledge of how to work collaboratively with peer teachers, and their knowledge of how to use data on student performance to improve instruction.

To the extent possible, these surveys will rely on existing items used successfully in other studies, such as the Schools and Staffing teacher surveys and studies of teacher induction conducted by the Consortium for Chicago Schools Research and the Teacher Pathways Project.

Formative Evaluation.

The primary purpose of the proposed formative evaluation is to inform the design and implementation of the program activities. Focus groups of six to eight people will provide

information on program implementation. At the conclusion of the training of Mentor Teachers, Residency Supervisors and Induction Mentors, focus groups will assess participants' perceptions of the quality of the training, and the extent to which it prepared them to carry out their responsibilities as mentors and supervisors, including. (a) evaluating the performance of participants in the teacher residency program; (b) conferencing and communicating with program participants; and (c) connecting program participants to resources that can enhance their development as classroom teachers.

Focus groups of program participants will be convened to obtain their assessments of which elements of the program are most valuable, and the elements which might benefit from revision. A focus group at the conclusion of the Intensive Summer Institute will assess the extent to which the program participants feel prepared for their residency sites, their emerging identities as teachers, and the extent to which they have an integrated knowledge base as they enter their residencies. This focus group will also ask them to comment on the features of ISI.

A subsequent focus group will be convened at the end of the teacher residency year. This will explore participants' perceptions of their experiences in the residency, their classroom observation assignments, and their engagement with CBOs, in addition to the ongoing integrating seminar which is an element of the residency program.

A third focus group with program participants will be convened at the end of the first year of the induction experience. This focus group will emphasize the induction experience, and the extent to which induction mentors and supervisors contributed to the development of participants as classroom teachers. This final focus group will also ask participants to reflect on all of the elements of the teacher residency program, their timing and sequencing, and to assess their strengths and weaknesses.

Section III: Management Plan

To ensure that we achieve the objectives of the proposed project on time and within budget, we have made careful decisions about personnel needs, feedback mechanisms and milestones that will provide a structure for ongoing communication and assessment, the scope and sequence of activities, and the marshalling of resources in addition to the funds requested.

Project Personnel.

A project team will assume major responsibility for the implementation and management of the project. This team will include both full- and part-time personnel, as well as several current TC staff, all but one of whom will have a percentage of their time allocated to the project for the duration of the grant.

The PI for the project will [REDACTED], who will assume the role of [REDACTED]. [REDACTED] is a well-known teacher education scholar who began her career as a teacher of children and adolescents in both general and special education settings. She has extensive experience in teacher preparation, both as a professor and as an administrator, and has conceptualized and successfully implemented several multi-year funded projects aimed at improving and diversifying the teaching force. [REDACTED] will devote 40% of her time to the project in the first three years, and 25% of her time in years 4 and 5.

[REDACTED] will allocate 10% of his time to the project during year 1 of the grant. The Office of Teacher Education reports directly to [REDACTED] who sits on the President's cabinet and has substantive and on-going involvement with academic program planning and development. [REDACTED] will be instrumental in program planning and in connecting the work of the project to the President and her cabinet.

A Project Coordinator—to be hired—will be responsible for bringing the project from conceptualization to implementation. The Project Coordinator will be the glue among all of the various partners and components of the project and thus takes responsibility for creating the structures needed for monitoring and coordination—such as listservs, regular meetings, committees or workgroups—and overseeing the activities that will support ongoing communication among all the partners, either as a whole group, or as constituent or task groups. As such, the Project Coordinator will convene and facilitate all meetings, oversee the program on a daily basis, and ensure the program progresses smoothly according to plans. The Project Coordinator will have a full-time position at TC.

The task of overseeing all the instructional components of the project will be assigned to a Master Teacher of Pedagogy and Clinical Practice (MasT) who will be hired to design and teach the Intensive Summer Institute and the Integrating Seminar, and to collaborate with faculty on the design and implementation of the intensive weekend seminars. The MasT will serve as the conceptual bridge between requirements of the teacher certification programs and the residency placements, and between university- and school-based educators in the partnership. Thus, the MasT should be an expert practitioner with extensive experience in urban, high-need schools, a deep understanding of teaching children and adults and a strong familiarity with state academic standards. The person sought for the position will also be expected to possess a doctoral degree so as to ensure a solid understanding of theory and research that can inform instruction and support high achievement for students, and the capacity to engage in empirical inquiry. This position will be full-time.

The project team will also include: 1) [REDACTED]

[REDACTED] and will devote 35% of her time to administering project budgets,

ensuring fiscal fidelity, and handling all reporting requirements; 2) [REDACTED] who will allocate 45% of her time to TR@TC for the recruitment, training and support of Mentor Teachers, Residency Supervisors and Induction Mentors; 3) [REDACTED], who will be responsible for ensuring that TRs understand and meet all certification requirements for a 20% time allocation; 4) [REDACTED] will allocate 15% of her time for the duration of the project. [REDACTED] will be leading TC's effort as a NCATE pilot site for the redesign of accreditation, and will be focusing on the teacher residency program as a component of that initiative; 5) [REDACTED] will have 20% of her time allocated to the project and will assist [REDACTED]. All five bring years of experience to the project and are well-qualified to assume their assigned responsibilities. The Office of Teacher Education has also allocated secretarial support to the project.

The Office of Teacher Education has been awarded two Teacher Education Fellows, both of whom will be assigned full-time to the project. Both Fellows will be advanced doctoral students in teacher education who have worked with preservice teachers and have a solid understanding of teacher preparation research, issues and practice. The Fellows will assist with curriculum development, instruction, and assessment. They will also oversee induction.

The project will employ a part-time Program Administrator responsible for logistical details for all meetings and activities, maintaining program data bases and electronic networks such as the Google group for the partnership, supervising clerical and graduate student assistance, and ensuring the Program interfaces smoothly with administrative offices across TC.

The remaining key person is [REDACTED] at TC. [REDACTED] is not a member of the project team but has assumed responsibility for the project evaluation, and designed the evaluation plan described in this narrative. [REDACTED] is an expert researcher with over 20 years of experience in designing and conducting empirical studies of school and student performance, achievement and school persistence, and urban school reform. He has conducted dozens of large scale evaluations, many of which have focused on the NYC school system and the students it serves, so he well understands the context within which TRs will be teaching and learning. [REDACTED] is not engaged with any teacher education program at TC and is a member of Human Development, a department that does not offer any teacher certification programs. He will not be involved in daily program operations and will not play any substantive role in the program beyond the evaluation. Thus, he will be conducting the evaluation as an objective, but informed, expert.

Ongoing Communication and Feedback Mechanisms

The complexity of the Program requires multiple structures designed to support continuous communication, mutual problem-solving, and timely feedback for the purpose of program refinement and improvement. These structures will be built into TR@TC from the start so that they are systemic and integral to the Program, and immediately initiate program routines and regularities. The most important structure will be regular meetings in order to carve out defined and planned-for space for partnership members to come together. There will be three kinds of meetings for: program management/oversight; progress updates; and evaluation/planning. Table 3 provides an overview of the management plan—structures and timeline—in relation to the program timeline and to the plan for evaluation described earlier.

Table 3: Timeline of TR@TC Program, Management and Evaluation

	Year 1 Oct09-Sep10			Year 2 2010-2011			Year 3 2011-2012			Year 4 2012-2013			Year 5 2013-2014			Year 6 2014-2015			Year 7 2015-2016		
	Sponsored Project Years															Un-sponsored Project Years					
	F	Sp	Su	F	Sp	Su	F	Sp	Su	F	Sp	Su	F	Sp	Su	F	Sp	S	F	Sp	S
Teacher Residency Timeline																					
Recruitment	CA	CA		CB	CB		CC	CC		CD	CD										
Program			CA	CA	CA	CA	CA	CB	CB	CB	CC	CC	CC	CD	CD	CD					
Induction Year 1							CA	CA		CB	CB		CC	CC		CD	CD				
Induction Year 2										CA	CA		CB	CB		CC	CC		CD	CD	
Management																					
Project Team Meetings	1/wk	1/wk	1/wk	1/wk	1/wk	1/wk	1/wk	1/wk	1/wk	1/wk	1/wk	1/wk	1/wk	1/wk	1/wk						
Steering Committee Meeting	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
TEPC	2/mo	2/mo	2/mo	2/mo	2/mo	2/mo	2/mo	2/mo	2/mo	2/mo	2/mo	2/mo	2/mo	2/mo	2/mo	2/mo	2/mo	2/mo			
Progress Updates: Supervisors, MenTs, IMents				X	X		X	X		X	X		X	X		X	X				
Retreat							X			X			X			X					
Report				X			X			X			X			X					9/14
Key																					
CA: Cohort A			CB: Cohort B			CC: Cohort C															
CD: Cohort D			Wk: Week			Mo: Month															

Table 3: Timeline of TR@TC Program, Management and Evaluation

	Year 1 Oct09-Sep10			Year 2 2010-2011			Year 3 2011-2012			Year 4 2012-2013			Year 5 2013-2014				
	Sponsored Project Years																
	F	Sp	Su	F	Sp	Su	F	Sp	Su	F	Sp	Su	F	Sp	Su		
Project Evaluation																	
Summative																	
Develop Tracking System	X	X															
Create Comparison Groups			CA			CB			CC			CD					
Track Data			X	X	X	X	X	X	X	X	X	X	X	X	X		
Administer Surveys						CA			CA			CA			CB		
									CB			CB			CC		
									CB			CC			CD		
Final report															9/14		
Formative																	
Focus Group: MenTs, Supervisors, IMens					X			X			X			X			
Focus Group: TR			CA			CA			CA			CB			CC		
						CB			CB			CC			CD		
									CC			CD					
Annual report			X			X			X			X			X		
Key																	
CA: Cohort A			CB: Cohort B			CC: Cohort C											
CD: Cohort D			Wk: Week			Mo: Month											

Program management/oversight meetings. The project team will meet every week since team members are responsible for ensuring the smooth functioning of all components of the Program and addressing both instructional and administrative concerns. These meetings will also ensure that team members are all on the same page in terms of issues, changes, policies, and finances. In addition to the project team, a Steering Committee will assume responsibility for program oversight. This Committee will be representative of partnership members and will include three from each of the following groups—principals, teachers, and teacher education faculty, plus a supervisor, and a CCS Outreach Committee member. The Project Director, Project Coordinator, and Master Teacher of Pedagogy and Clinical Practice will also sit on the committee. The expectation is that a TR graduate and an induction mentor will be added to the committee by project year two. The Steering Committee will meet three times each year and will be the policy, planning, and decision-making body for the project. Third, the Teacher Education Policy Committee (TEPC), which meets twice each month, will also be engaged in assessing program progress with particular attention to TRs' experience, as well as curriculum and instruction in the program. Their role will be to review the residency program and consider lessons applicable to other teacher education programs at TC. The Master Teacher will be included as a member of TEPC which is currently chaired by the Project Director, and at least one TEPC member will also serve on the Steering Committee.

Progress updates. Just as there is a need for cross-role or cross-institutional groups, there is also a need for within-role groups that allow for focused, topic-specific conversations. Thus, there will be three task-specific groups that will meet regularly to share progress updates, discuss issues and problems, and consider the best strategies for meeting the needs of TRs. Mentor Teachers, Residency Supervisors, and Induction Mentors will meet in within-role groups at least

once each fall and once each spring. These meetings will undoubtedly have a positive impact on TRs' experience and growth because they will benefit from many expert minds coming together to think through challenges and creatively solve teaching dilemmas. Mentors will also grow from the experience because they will learn from one another and hone their coaching, observation, supervision and evaluating skills, which can only enhance them professionally. These meetings will be facilitated by the project coordinator and by the Master Teacher.

Progress updates, project news, resources and materials will also be shared via a TR@TC google group. The group will be overseen by the Project Coordinator, and all partnership members will be encouraged to join the group and stay in the know electronically.

It is important to note that the overlap in membership across these management/oversight meetings and progress updates is deliberate: this strategy enhances and broadens communication across constituent groups; naturally integrates different perspectives in every discussion; and ensures coherence and connection across the partnership because partners and project team members remain up-to-date and informed about program activities and decisions. More importantly, project team members' participation in all the various discussions means that they will receive feedback directly and frequently from partnership members, feedback and assessment data that can then immediately inform program improvement or revision.

Evaluation and planning. Once a year, the program will host a retreat for all partnership members—principals, teachers and Mentor teachers, TRs, Residency Supervisors, TC faculty, Induction Mentors, project team members, CBO representatives, and NYCDOE representatives. During the retreat, which will occur in July right after the public schools close for the summer, participants will a) reflect on the year and evaluate all aspects of the program; b) attend professional development and re-tooling workshops; c) engage in collective analysis and solution

of problems raised by participants or the evaluation; and d) participate in collective program planning according to needs identified by the evaluation and by partnership schools. Meaningful improvement cannot occur in the absence of assessment, and the retreat will provide a deliberate structure that fosters self-examination and a careful analysis of accomplishments against needs for the purpose of moving both the program and the teachers forward. The retreat will also provide an annual opportunity to examine program progress in relation to the annual milestones we set for each cohort: recruitment, program completion, graduation and certification, and completion of two induction years/retention in the profession. Table 4 shows the timeline for milestones in relation to one cohort.

Table 4: Timeline for milestones for each cohort.

Milestones	Program Entry			Residency Year			Induction Year 1			Induction Year 2		
	F	Sp	Su	F	Sp	Su	F	Sp	Su	F	Sp	Su
Recruitment		▲										
Prog. Completion						▲						
Grad/Certification						▲						
Retention								▲			▲	

Ensuring a Quality Program

Research tells us that quality teachers have the greatest impact on student learning. Essential to a quality teacher residency program that produces excellent teachers is the caliber of the faculty with whom TRs will study. TRs will have the privilege of learning from faculty at Teachers College who are well-known for their quality teaching, their scholarly productivity, and their work in urban settings. Some of these faculty include:

- [REDACTED], an award-winning author and exemplary scholar. Well-known for her work in disability studies, [REDACTED] has extensive experience relevant to this project, including many years as a special education teacher and teacher educator in inclusive

programs. She is intimately familiar with special education in NYC schools, and has worked closely with teachers and principals as a staff developer and researcher.

- [REDACTED] who has an international reputation for her work in second language learnability and teachability, and is sought after for her expertise in TESOL—Teaching English to Speakers of Other Languages (ESL at TC).
- [REDACTED] who comes to the project as a disability studies teacher and researcher with experience in the middle grades. Her scholarly interests include inclusive schooling and the education of children with significant disabilities.
- [REDACTED] who brings valuable experience in K-12 settings and with preservice ESL teachers. Her research focuses on the complexities of teaching language and content to ELLs, and her expertise includes knowledge of ESL programs and models.

TC also brings a long history of teacher preparation and a reputation for producing stellar teachers. In fact, 70% of TC graduates who applied to the NYCDOE for positions beginning fall 2007 secured a teaching assignment. For the 2008-09 school year, 51% of TC graduates who applied for teaching posts in NYC schools were hired, compared to 30% of applicants from all other universities combined.

The excellent preparation that TRs receive will be enriched by the many resources available at TC. Beyond the activities and content integrated into the TR@TC curriculum, such as the work with digital content and new media, or access to a wide variety of on-line resources, TRs will have access to numerous professional development opportunities available at TC such as speakers, film series, dialogues and discussions, research presentations, conferences, etc. For example, every June, the Cahn Fellows Program at TC sponsors a Leadership Challenge Conference open to all educators associated with the TC community. Each fall, the Campaign for

Educational Equity holds a summit on critical issues relevant to achievement and accountability. Every year, the TC Reading and Writing Project sponsors dozens of “calendar days” that bring NYC and metropolitan area teachers together around literacy teaching and learning. These are just a few of the resources TR@TC can tap to enhance TRs’ education. TR@TC will also connect with federally-funded centers at the College so as to explore ways to extend the scope of the program. One would be the Center for Community College Research, which has conducted numerous studies on high school-to-college access and transitions. This kind of research is very relevant to the mission of TR@TC and to the work of school partners. Given its many strengths and accomplishments, TC is very confident about its ability to offer a strong, exemplary Teacher Quality Partnership program and achieve excellent results.

Section IV: Significance

Affecting System Change and Improvement

TR@TC will play a critical role in bringing about change and improvement in teacher preparation in NYC. It will do so in the following ways:

Increasing the recruitment and retention of high quality and experienced teachers in high-need schools. The Program addresses the single biggest influence on student learning—the quality of teachers. It will bring fresh talent and energy to 15+ high-need, high poverty schools in NYC, with the potential for impacting 5,700 students in five years. The rigorous application system, its intensive curriculum and its mentoring/induction systems will familiarize residents with the city and its district-specific norms, and target the issues that typically perplex new teachers, so they can enter their first year of teaching with the critical competencies and focus needed to handle the demands of challenging urban classrooms. These strategies are designed to

make TR@TC a robust and reliable teacher certification program that will place committed teachers in high-need schools for the long term.

TC is the ideal agent to pilot this system because its teachers are already in high demand. In New York State, more than half of all teachers are prepared by private institutions and TC is one of two such institutions that prepare the largest number of teachers hired by New York City. This program offers the opportunity to further develop TC's programs and make them even more responsive to the needs of NYC schools and it will create an innovative pathway into urban education for future generations of TC graduate students.

Broadening the knowledge base for research and practice in urban classrooms. Urban high-need classrooms boast a rich diversity of students who vary in their racial, ethnic, linguistic, developmental, and academic abilities. TR@TC is essential in connecting the pedagogical expertise of faculty at TC with the invaluable knowledge of classroom practitioners. TC faculty across discipline and grade-level boundaries will review, evaluate and apply insights afforded by TRs' experiences in the field. Through collaborative research with classroom teachers in the partnership schools, faculty will inform teaching and research on ELLs, subject matter knowledge, pedagogical content knowledge, language acquisition, differentiated teaching and learning, among others. The TC community will also benefit as TRs' experiences will enrich discussions in the university classroom.

Of particular interest will be data gained on ELL and TSWD teachers as educators have not yet developed adequate strategies for addressing these learning needs. Large proportions of the NYC student population receive special education and are designated ELL and/or learning disabled (Thomas & Collier, 2002) but few teachers feel prepared to adequately meet their needs (Darling-Hammond, 2002; DeSimone & Parmar 2006). TR@TC responds to this gap in

research/practice with a program of comprehensive and customized support for ESL and TSWD teachers. An integrated curriculum will build teachers' confidence in applying specialist knowledge and their capacity for responding flexibly to complex and diverse needs. As the Program applies prior knowledge and experience from TC, so too will it use, scale and replicate components of TR@TC for future endeavors. In so doing, TR@TC will increase the knowledge base for research and teaching undertaken at the College and enhance TC's contribution to the national discourse and policy-making on the specific challenges of urban education.

Advancing the purposeful use of new media and digital technologies in the professional preparation and on-going development of new and prospective teachers. In educational theory, it is commonly found that the most effective learning involves active participation that combines theory with hands-on practice. The Program's use of diverse technologies including real-time data collection, live discussions, simulations, video interactions and multimedia presentations will afford TRs engaging individual and collective reflection, new skills, and confidence in teaching and learning with technology. Digital resources also enable an adult learning culture in school settings, which are otherwise often chaotic and impersonal. The pilot extends the scope and reach of existing programs and acts as a demonstration and exploration of pedagogical and curricular possibility. Successful elements will inform pioneering initiatives in digital communication and evaluation at Columbia University (CCNMTL and EdLab), which reach to other schools and communities across the city, and would ultimately lead to the replication and scale-up of professional development resources across NYC and beyond.

Understanding and replicating successful Program elements. TR@TC is a valuable opportunity to pilot a new approach to teacher preparation at TC. The ongoing assessment and review of TR@TC by faculty representatives on the Teacher Education Policy Committee will

inform and strengthen the College's other teacher education programs. The formative and summative evaluation will measure the effectiveness of the Program and provide valuable data on student learning and outcomes. Future programs will use these findings to refine recruitment, mentoring, supervision, training and tools to deepen the understanding of pedagogical and organizational practices. Reports and publications resulting from the evaluation will inform the research fields of teacher education, teacher preparation, urban education, and higher education administration, among others. Additionally, faculty will share findings from their research projects at colloquia series open to the TC community and partnership schools.

Building Local Capacity

The Program is an opportunity to build capacity extensively throughout the partnership schools, school districts and surrounding communities. It proposes to do so in the following ways:

Developing school teachers and leaders. Successful university-school partnerships can change the life course for students in high poverty communities and at the same time strengthen the mission and reputation of the university (Rodin 2007). TR@TC forges mutually-beneficial partnerships with the participating schools, engaging participating teachers in high-quality professional development opportunities, research, networking, mentoring relationships and community partnerships. Other teachers in the partnership schools, who are not TR@TC graduates, will also have access to some of the induction and professional development activities. Participating school principals will also benefit from new knowledge and practices that can improve teaching and learning at school. They will benefit from access to university resources and from working with school- and university-based educators to shape teacher preparation. They will participate in research and learn from evaluations. Harnessing the input and expertise of school members will increase the chances of affecting responsive, extensive and

embedded change across the school. It will also provide insights and information for TC's Office of School and Community Partnerships, its Institute for Urban and Minority Education and its Campaign for Educational Equity.

Strengthening and expanding school communities. Collaborations involving CBOs working with CCS or with partnership schools will enhance academic and educational enrichment services for children and youth. These services can be extended to other partner schools and youth groups. In addition, the relationships forged between the schools and CBOs will help teachers and TRs engage parents and families in school life. Research on the impact of familial involvement on urban students' academic achievement has shown positive results, particularly for students from minority backgrounds (Epstein and Sanders, 2006; Garcia and Hasson, 2004; Hara, 1998; Jeynes, 2005, 2007; Mau, 1997; Pelletier and Brent, 2002), and has underscored the need for teachers to know how to work with the diversity of parents and families whose support is critical to their children's educations (Nieto, 2000). Teachers rarely report feeling prepared to work with the diversity of families and parents (Darling-Hammond, 2002), an issue that TR@TC is committed to address. A priority goal will be to forge strong relationships during the Program that will outlast their creators.

Improving special education and services to students with disabilities. MenTs in the partnership schools will develop new competencies at the annual retreat and TRs will bring their knowledge of ESL and TWSD pedagogy into the classroom. Again, the integrated approach is important as it will help break down traditional boundaries that often limit the applicability of specialist knowledge. Faculty research projects conducted in collaboration with practitioners will also illuminate how best to educate these children and to implement research-based practices. It is a top priority of the Program that collaborating teachers should benefit from participating in

research and effective professional development so that their capacity for educating ELLs and children with disabilities will grow.

The Importance and Magnitude of the Results

Number of people impacted. Ninety percent of Boston teacher residency graduates and 95% of teacher residency graduates from the Chicago program were still teaching three years later (Berry et. al, 2008). This compares with a national average of 50% retention among urban public school teachers (www.utruncated.org). It follows that if TR@TC meets its goals, over 170 graduates from the TC residency program will still be serving NYC public schools in 2014 (see Table 1). If so, the Program will impact at least 5,700 students in five years. In the process, it will have involved 180 MenTs and impacted their students as well. It also will affect the teaching and research of dozens of faculty and student teachers at TC.

Student achievement. The causes of achievement gaps between advantaged and disadvantaged students are numerous and complex, but within schools, teachers impact the learning of students more than any other factor including, facilities, curricula, class sizes, funding etc. (Ferguson & Womack, 1993; Goldhaber & Anthony, 2007). However, students from the most disadvantaged backgrounds are often taught by the least qualified teachers as measured by years of experience, certification level, and performance on standardized tests of general and teacher knowledge (Clotfelter, Ladd, & Vigdor, 2004; Darling-Hammond, 2000; Lankford, Loeb, & Wyckoff, 2002; Stullich et. al, 2007). TR@TC responds with strategies that will bring certified, experienced, knowledgeable teachers to schools where the achievement gaps are especially pronounced. High quality teachers can make a significant impact on student achievement in just a single school year (Hanushek, 1992; Kane, Rockoff, & Staiger, 2007). Furthermore, TR@TC will reach ESL and TWSD students who are especially at risk of

underachieving as teachers are usually ill-prepared to incorporate them in the general education classroom. According to city averages, this equates to nearly 800 special needs students and 740 ELLs in five years.

Teacher achievement. Some student teaching requirements for university-based programs are as short as ten weeks and are rarely longer than a college semester. New recruits are subsequently overwhelmed and unprepared for urban classroom realities. In contrast, TR@TC residents will have embedded time in classrooms four days a week and familiarity with several different schools, affording them a deep and well-rounded experience. They will learn from veteran teachers, and be members of close knit cohorts that will help them study, teach and reflect. In addition, MenTs will become skilled teacher educators whose work complements the Residents' coursework and builds local capacity.

Saving money. Researchers calculate that taxpayers pay on average between 25% and 200% of the annual salary and benefits of a teacher who leaves. The National Commission on Teaching and America's Future estimates the average cost to recruit, hire, prepare and lose a teacher at \$50,000. The Program will reach 180 teachers in five years. Judging by the average turnover rate (50%) and the track record of successful residency programs (90%), it could save 4 million in recruiting costs alone.

The Potential for Continued Support

In Year 3 of the Program, TC will commission a sustainability study by independent researchers. It will consider the value of TR@TC to the district and the partnership schools and investigate how principals might allocate funds for the Program from funds currently set aside in school budgets for mentoring, induction and PD. Since 2007 and the launch of the Empowerment Schools Initiative, which put "resources and decision making power...directly in the hands of

principals” (Children First, 2008-09, p. 18), NYC principals have had more authority and discretion for allocating their budgets. Studies have shown that through the reallocation of existing funds, schools can finance the expensive programs they need and use resources differently to improve student achievement (Odden & Archibald, 2000). The study will also explore possibilities for supporting residencies by revising and expanding other Government-run initiatives with which TC has long-established and successful relationships e.g. AmeriCorps. With demonstrated outcomes, data and evaluations, TEPC will be in a strong position to advocate for institutional commitment to a teacher residency model at Teachers College.

Ultimately, this project will produce 180 high quality teachers and so much more. The significance of TR@TC must be considered in the context of TC’s capacity, capability and mission to research and advance new knowledge about:

- innovative approaches to teacher preparation;
- large effect practices on student and teacher achievement;
- teaching and the use of digital content and new technologies;
- the potential of education rounds to reshape how we solve instructional issues.

Thus, the project is designed to be generative in nature, so as to qualitatively impact and reshape what we know about preparing quality teachers and about achieving excellent outcomes for students who have been underserved and left to lag behind, but who absolutely need and deserve more.

(Please see Appendix D for proposal narrative bibliography as per ████████████████████

recommendation. Thank you)