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Creating and Sustaining Urban Teacher Residencies:

A New Way to Recruit, Prepare, and Retain Effective Teachers in High-Needs Districts

Barnett Berry and Diana Montgomery
Center for Teaching Quality

Rachel Curtis, Mindy Hernandez, Judy Wurtzel
The Aspen Institute

Jon Snyder
Bank Street College

August 2008

This report is available for download at the websites of both organizations.

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Acknowledgements

The authors gratefully acknowledge the support of the Arthur Vining Davis Foundations and the MetLife Foundation for their funding to the National Council for Accreditation of Teacher Education to conduct this work in partnership with the Center for Teaching Quality. They also thank the Bill and Melinda Gates Foundation for their funding to support the work of the Aspen Institute Program on Education and Society. This paper represents the views of its authors and not of its funders.

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Executive Summary

Urban Teacher Residencies (UTRs) are an emerging innovation designed to embody best practices in recruitment, screening, preparation, placement, induction, and teacher leadership for urban school districts. As such, UTRs can be a key element of urban districts' portfolio of pathways into teaching and a lynchpin of a larger strategy to strengthen the districts' human capital system.

The debate continues to rage about the best way to recruit, prepare and induct teachers and the virtues of traditional university-based versus alternative preparation programs located in a variety of settings. Quality varies widely within each program type – and neither type of program is able to meet the urban districts' needs for high quality, diverse teachers in high needs subjects who are committed to a long-term career in high needs schools.

As a result, there is growing attention to UTRs as an additional pathway to improving teacher quality. A number of major school districts are considering launching programs, and with the recent passage of the federal Higher Education Opportunity Act, millions of dollars have been authorized to develop and support UTRs. This report examines two UTR programs, the Academy for Urban School Leadership (AUSL) in Chicago and the Boston Teacher Residency (BTR). The report aims to inform policymakers and practitioners about the design and financing of UTRs, the evidence of their impact, and the conditions relevant to their success and sustainability.

In UTRs, aspiring teachers – known as Residents – are selected according to rigorous criteria aligned with district needs. They integrate their master's level course work with an intensive, full-year classroom residency alongside an experienced Mentor. In their second year, they become a teacher with their own classroom while continuing to receive intensive mentoring.

UTRs are distinctive in that they:

- tightly weave together education theory and classroom practice
- focus on Residents learning alongside an experienced, trained Mentor
- group candidates in cohorts to cultivate professional learning community and foster collaboration
- build effective partnerships among school districts, higher education institutions and non-profit organizations
- serve school districts by recruiting and training teachers to meet specific district needs
- support Residents once they are hired as teachers of record
- establish and support differentiated career goals for experienced teachers

While these programs are quite new, there is promising evidence that UTRs are attracting a new pool of talented and diverse recruits, preparing them to be successful in urban classrooms, and keeping them in high needs schools and subjects. For example, school administrators rate UTR graduates' skills and competencies highly and 90 to 95 percent of graduates are still teaching after three years. While the jury is out on the effectiveness of UTR graduates in boosting student learning, both programs examined in this report have commissioned outside research on this question.

The costs of running a UTR generally fall into four major budget areas: upfront recruiting costs, preparation costs (which include financial support to Residents during their training year), induction costs, and the costs of running an effective program including coordination and communication among participants and partners. Thus far, the costs have been covered by a mix of private philanthropy, district funds and federal funds such as Americorps. In addition to the newly authorized Partnership Grants for the Establishment of Teacher Residencies in the Higher Education Opportunity Act, proposals for the reauthorization of No Child Left Behind would also support UTRs.

For successful UTRs, the expense of the program can be partially offset by the much higher retention of novice teachers, which results in significant cost savings. However, rethinking current uses of funds may be a key to UTR's long-term sustainability. Policymakers can consider strategies that include: (1) strategic reallocation of district spending on teacher professional development and alternative certification; (2) billing schools for actual (rather than average) teacher salaries, resulting in more funds to support Residents and Mentors; and (3) directing state funding for teacher preparation toward universities as well as non-profits and districts that can develop high-quality UTR programs.

For those interested in exploring whether a UTR might be an appropriate addition to their district's portfolio of preparation pathways, the report suggests six specific action steps to guide analysis of readiness to implement a successful program and direct attention toward important features for initiating and sustaining a successful UTR. These action steps are:

1. Assess the readiness of a school district, institution of higher education and/or a non-profit organization to undertake the work of developing a UTR.
2. Identify high-quality schools and classrooms in which to prepare Residents.
3. Define clear standards for high-quality teaching and support teachers' progress toward meeting those standards.
4. Develop teacher leaders and expand teachers' career options.
5. Collect evidence to improve programs and build political will.
6. Determine how UTRs can play a broader role in strengthening a district's human capital system

UTRs suggest a different way of doing business and call for attention to at least three key policy areas. First, policymakers should hold various preparation pathways to the same levels of accountability for quality assurance and require sound tools for assessing the readiness of recruits to serve children responsibly. Second, federal and state policymakers should target available teacher preparation funding to providers who are best able to respond to high-needs school districts. Third, districts should actively manage the portfolio of pathways into teaching, regularly assessing the quality and effectiveness of providers (traditional, alternative and UTR), in order to gain the mix of talent that best meets district needs in the most cost-effective ways.

The power and potential of UTRs lies in their commitment to address the real teacher supply and quality needs of urban school districts, leverage the best K – 12 educators as Mentors and teacher leaders, and promote redesigned schools organized for students and teachers to learn. As such, they provide a potential entry point for significant improvements not just in teacher preparation but in the full human capital systems of urban school districts.

Introduction

The urban teacher residency (UTR) model represents a powerful response to the longstanding challenges of how to recruit, prepare, and retain bright and capable teachers for high-needs urban schools. Chicago's Academy for Urban School Leadership (AUSL) and the Boston Teacher Residency (BTR) demonstrate promising approaches to attracting a new pool of talented and diverse recruits, preparing them to be successful in urban classrooms, and keeping them in high-needs schools and subjects.

Somewhat reflective of the medical residency model that pairs professional course work and embedded clinical experience, UTRs are founded on the belief that new teachers in urban schools should enter the classroom with a minimum of one year of guided clinical experience in an urban classroom. Residents integrate their master's level coursework with an intensive full-year classroom residency alongside experienced, prepared Mentors before becoming teachers of record in their own classrooms. Several core policy principles undergird UTRs, including: the selective recruitment of highly qualified candidates, the expectation that teachers are extensively prepared before they begin to teach, a focus on meeting the needs of high-needs school districts, and an approach that offers high-quality support for their graduates after they become teachers of record. As Edward Morris, Jr., an AUSL graduate who became a science teacher in a Chicago elementary school, noted about this kind of teacher education: "I had an insider's perspective on how to apply what I learned in the university classroom. The first year of teaching, I hit the ground running."[1]

Academic journals as well as the popular press are filled with conflicting evidence on the effectiveness of teacher education programs. While the debate continues to rage over how best to recruit and prepare teachers, researchers have documented that there is more variation within current traditional, university-based and alternative pathway programs (whether university-based or not) than between them.[2] This means quality teacher preparation programs are not about place (university-based or alternative institutions) but about embodying the characteristics of effective teacher development. UTRs are designed to capture many of the essential characteristics by demonstrating best practices in recruitment, screening, preparation, placement, induction, and teacher leadership. In doing so, they have the potential to transform teacher development — or in the more recent vernacular, human capital — systems in urban school districts. As such, UTRs can be a key element of urban districts' portfolio of pathways into teaching and a lynchpin of a larger strategy to strengthen their human capital.

Recognizing the promise of UTRs, policymakers and district leaders are paying increasing attention to this innovation. The development of additional UTRs or UTR-like programs over the coming years is very likely. Partnership Grants for the Establishment of Teacher Residencies in the Higher Education Opportunity Act recently passed by Congress authorizes millions of dollars for the development and support UTRs. Additional federal funding may become available if proposed NCLB changes to support UTRs are enacted. An Urban Teacher Residency Institute has been founded to provide assistance to the many districts exploring whether to launch their own UTRs. In addition, the National Council for the Accreditation of Teacher Education (NCATE) is considering whether their quality control standards can be adapted to these innovative preparation programs, and in so doing ensure accountability in UTRs and spur improvements in traditional teacher education.

This report, a collaboration between the Center for Teaching Quality and the Aspen Institute Education and Society Program, is intended to inform those interested in UTRs generally and those who may want to consider urban teacher residencies as an additional pathway to improve teaching quality in their community. It examines two of the most developed models[3] – AUSL in Chicago and BTR in Boston – by surfacing evidence on the design and impact of the programs, identifying lessons learned, and analyzing the policy implications for sustaining and spreading this bold idea.[4]

Why Urban Teacher Residencies

Teaching, as anyone who has done it can attest, is tough and perhaps especially so in traditionally underserved urban schools and communities. All teachers — but particularly those who teach in high-needs urban schools — need deep subject matter knowledge, understanding of how students learn and how to assess their learning, skills to work with special needs and second language learners, ability to engage and motivate diverse students, and strategies to reach out to families. The grinding reality for our nation's urban school districts is that they simply are not able to hire sufficient numbers of teachers who possess such knowledge and skills in underserved schools and hard-to-staff subject areas. Teacher retention is also a challenge: nationally, some studies indicate that 50 percent of all new teachers leave within the first five years[5]; others indicate that attrition rates for public school teachers are about 30 percent when taking into account those who leave, but later return, to classrooms.[6] Attrition rates are significantly higher for teachers in high-poverty schools and high-needs subject areas.[7]

Traditional teacher education and alternate pathways are able to meet some, but certainly not all, of the needs of most urban districts. While quality varies widely within each broad type of program, each approach offers strengths and some inherent structural challenges.

Traditional higher education-based programs, when well-designed and financially supported by their universities, offer opportunities for prospective teachers to simultaneously learn content and pedagogy. They can also connect clinical training to theories of teaching and human development. Research has shown that well-prepared novices with intensively supervised clinical experience are more likely to stay in teaching longer than those who enter the profession through programs with limited clinical experience.[8] Sound higher education-based programs offer significant clinical experiences in carefully selected schools and classrooms but ensure that prospective teachers are prepared to teach more than a specific district's *curriculum du jour*.

However, for many traditional, university-based programs there are also challenges, including:

- Difficulty consistently attracting high academic achievers and teacher candidates of color;
- Too few opportunities for prospective teachers to be taught by exemplary classroom teachers;
- Failure to target district needs in subjects such as math, science, and special education, as well as the need for English Language Learners teachers;

- Limited resources and structures to provide induction support for their graduates in a systematic way once they begin teaching; and
- Lack of accountability for the effectiveness of their graduates.

Over the last 10 years NCATE has promoted (and developed standards for) professional development schools (PDSs), created in partnership with local school districts, as a way to promote long-term clinical learning experiences for university-based teacher education students.[9] Many of the nation's schools of education have created PDSs — to create inquiry-based practice and ensure relevant training and supportive learning communities for their teacher candidates, while clustering them under the supervision of specially-selected seasoned teachers and university faculty who work in the K-12 schools. Traditionally, PDSs have dealt only with teacher preparation, though a few have begun to explore how they might support induction, as well. Several studies have shown that PDSs have produced greater student achievement gains, when compared to similar schools without university investments in teacher development.[10] However, these partnerships — driven primarily by universities — have been unevenly implemented, and no state has put into place the funding, governance, and accountability systems that could ensure uniform quality and sustainability. In addition, many programs claim the name of "professional development school" but do not include the structures and processes defined by the NCATE standards.

Programs providing alternate pathways to certification, are housed in a variety of settings: non-profit organizations, school districts or education "service centers," and within colleges and universities. These alternate pathways are often more nimble in redesigning and adapting for diverse recruits, many of whom are not the traditional population of college-aged students preparing for their first jobs. Well-designed alternate certification programs offer quicker ways to enter teaching, while also ensuring quality by requiring their graduates to meet standards before they begin to teach. Perhaps, most importantly, they are designed to connect tightly what recruits learn before they begin to teach and what they must do on the job — primarily by drawing on expert practitioners to teach the teacher education curriculum. The best alternate pathway programs have demonstrated that they can recruit academically able young people interested in devoting at least a few years to urban teaching and can more flexibly meet the needs of non-traditional candidates in the prospective teaching pool.

However, for alternate pathways to certification the challenges include:

- An abbreviated curriculum that leaves too few opportunities to learn how to teach diverse learners;[11]
- Insufficient clinical experiences prior to becoming the teacher of record;
- Too few opportunities to learn content and how to teach it simultaneously; and
- An overemphasis on preparing teachers for a singular context (e.g., a particular district) or a limited, prescriptive curriculum.

These structural limitations faced by both traditional higher education institutions and alternative preparation programs mean that too few teachers are prepared to succeed in urban classrooms. This is why UTRs can serve as a useful option in an urban district's portfolio of preparation pathways.

We are not proposing that residencies replace other preparation programs. The next generation of teachers will be made up of a mix of recent college graduates, career changers, those who want to try teaching for only a few years, and those who are committed to a career in teaching. This diverse group of men and women will want and need different things from a teacher preparation program. Districts have varied needs as well (e.g., meeting needs in math and science, placing energetic and committed teachers in start-up schools) and are seeking to recruit and retain a large and diverse workforce. Thus, there is no one pathway into teaching that is likely to meet the needs of all districts or prospective teachers. Rather, we propose that residencies are an important "third way" that policymakers, practitioners, and the public should consider in their efforts to ensure that they have a teaching workforce that is diverse and prepared to succeed.

Preparation programs each come with unique costs and benefits — and districts need to consider the full array of options and make informed decisions about how they invest in teachers and teaching. We posit that UTRs can make five distinctive contributions to a portfolio of preparation pathways. UTRs can provide:

1. Systems for preparing a critical mass of teachers who are highly capable, well-educated, and prepared to stay in the profession for more than just a few years;
2. Models for teacher learning that help transform both traditional, university-based and alternative certification programs;
3. Opportunities for universities and districts to capitalize on the expertise of their best teachers as teacher educators;
4. Entry points for reconfiguring a district's human capital system to bring a coherent approach to recruiting, preparing, supporting, and retaining quality teachers; and
5. Leverage for school reform that systemically focuses on improving school conditions that promote high quality teaching and high levels of student learning.

Urban Teacher Residencies Up Close

A national organization, the Urban Teacher Residency Institute (UTRI), was recently launched to build awareness of the model and its principles, to support communities in starting up programs, and to inform state and federal policy that can institutionalize its efforts.[12] UTRs can look quite different in terms of how they are designed and implemented. However, UTRI member programs are guided by a common set of principles that can serve to define the components of a high quality residency program, inform the design of new residencies, and distinguish teacher residencies from other kinds of preparation programs. For the UTRI, all residencies:

1. Weave education theory and classroom practice tightly together;
2. Focus on Resident learning alongside an experienced, trained Mentor;
3. Group candidates in cohorts to cultivate professional learning community and foster collaboration;
4. Build effective partnerships;
5. Serve school districts;
6. Support Residents once they are hired as teachers of record; and
7. Establish and support differentiated career goals for experienced teachers.

Guided by these principles, Boston and Chicago offer different applications of the UTR model, but both pair master's-level pedagogical training and education content with a rigorous full-year classroom practicum under the supervision of expert teachers who have been trained to mentor novices. UTRs provide teaching candidates with both the underlying theories of effective teaching and a year-long, in-school "residency" in which they practice and hone what they are learning alongside an effective veteran teacher in an urban classroom.

Residencies attract and recruit high-capacity committed college graduates and mid-career professionals who are interested in teaching in low-income schools. Generally, once a Resident is selected, she or he is placed in a school under the guidance of a Mentor who acts as the Resident's confidant and guide. In Boston, Residents are placed in host schools (Host schools are BPS schools that have been accepted to receive a group of Residents based on established selection criteria such as a supportive context and sufficient numbers of teachers who meet the requirements to serve as Mentors.) The BTR Resident works alongside the same Mentor for a full academic year. In Chicago, Residents switch schools or "training academies" mid-year, which gives them a chance to study under a new Mentor in a different grade level and school environment. Residents work in classrooms with Mentors while they complete their coursework in curriculum, teaching, and learning at partner universities. During this year, Residents gradually take on increasingly more complex classroom responsibilities. The Resident studies and works with her or his Mentor as she or he writes lesson plans, conducts classroom management, grades papers, and assesses student progress. The Mentor and Resident meet one-on-one to discuss these elements of teaching, and with the Mentor acting as a guide, the Resident begins writing lesson plans, leading classroom discussions, and gradually taking on the full responsibilities of a classroom teacher. As a Resident tackles each new aspect of teaching, the Resident and Mentor continually meet to discuss, review and assess progress.

After a year of this intense mentoring, Residents become teachers of record in their own classrooms in an urban high-needs school and continue to receive mentoring in the form of induction support for at least the next three years. Residents receive a stipend and a master's degree and credential at the end of the year and pledge to spend at least three or four years teaching in the Boston and Chicago school districts respectively.

The key program elements and components of the Boston and Chicago urban teacher residency programs are detailed in the Appendix.

Launching Urban Teacher Residencies

In *Boston*, then-Superintendent Tom Payzant, facing growing teacher shortages and under-prepared teachers, realized that the Boston Public School system (BPS) needed its own method of recruiting and preparing teachers. Needing more math, science and special education teachers, and more teachers of color, who could all implement complex instructional reforms, Payzant knew he could no longer solely rely on local universities and their teacher education programs. Recognizing the limitations of his own bureaucracy and the district's limited capacity to train teachers on the job, Payzant and other district leaders collaborated with the Executive Director of the Boston Plan for Excellence (BPE), Ellen Guiney, to develop a new approach to recruiting and preparing teachers with the skills and qualities needed for its high-needs schools. The new program was deliberately housed at the private, non-profit BPE. As one community leader told us:

> Tom Payzant wanted the BTR to be outside the system so it would not be subject to the district bureaucracy, which can suppress innovation as well as the annual district budget cutting process. It needed insulation.

Founded in 2003, BTR has a kind of "one-foot-in, one-foot-out" structure that enabled the program to act efficiently and independently of the district. The program's founding was aided by several factors: Payzant's long tenure and successful reform efforts in the district and his strong long-standing relationship with BPE — one of the nation's most effective local education funds.

Initial financial support came from outside funders who were essential in starting the program. But BTR's founders knew they could not rely on outside funding into perpetuity, and so the residency program was built on the premise that BPS would take on increasing fiscal responsibility for BTR until it ultimately became the majority funder by reallocating its professional development funds from a wide variety of local, state, and federal sources. (Today, approximately 60 percent of BTR's operating funds are provided by BPS.)

Importantly, BTR was created eight years into Payzant's tenure when a clear instructional strategy was in place — one on which the residency program could be built and organized. School districts typically are not well-suited for or successful in preparing teachers because superintendents come and go every few years making it difficult for a district to develop and implement a coherent instructional strategy. But, in this case, the district was prepared.

Today, BTR has changed the traditional consumer-producer relationship between school systems and institutions of higher education by giving BPS an alternative source of new teachers and ensuring quality control — an issue that has been extremely important to Payzant and Guiney as well as Director Jesse Solomon. There are advantages to preparing teachers in and for a single district. As Guiney noted:

> Universities have to prepare teachers for more than one district – this is their reality; but in doing so they do not prepare teachers adequately for Boston. How they are prepared has very little to do with what they need to teach.

Short-cut alternate approaches to university-based teacher education were not acceptable either. As Guiney noted, "One cannot learn all that you need to know in a few years, much less in a few weeks like (what is offered in a number of alternative pathway programs)." With BTR in place BPS is no longer totally dependent on institutions of higher education and alternative certification routes for its new teachers — thus creating an additional level of accountability and press for change.

BTR has grown each year in both numbers of Residents and staff while maintaining its inside-outside status with the district. It is able to be responsive as well as independent and flexible enough to alter curriculum and delivery in ways that most universities and districts cannot imagine.

As BTR completes its fifth year, it is working on several key program areas, in particular:

- Working in greater depth with fewer host schools (which are "model schools" that house many Mentors and Residents during Residents' preparation year) and placement schools (where Residents teach upon completion of their residency), which BTR leaders believe is essential to achieve classroom-by-classroom impact and to support transformation in BPS schools;
- Partnering in BPS's long-term human capital strategy by sharing learning from the BTR core model and supporting district-wide change; and
- Measuring BTR teacher effectiveness and impact on student achievement.

In *Chicago*, AUSL was founded in 2001 by a group of philanthropists, led by Mike Koldyke — a retired venture capitalist who has a uniquely deep understanding of the complexities of urban schools and the skills required to teach in them. Koldyke created the Golden Apple program in 1985, which offers scholarships for traditional college students to become teachers as well as annually recognizes ten outstanding teachers in Chicago and surrounding counties. The success of Golden Apple exposed new needs to Koldyke who learned that universities could not prepare enough qualified teachers for Chicago's 408,000 students. He also saw a need to recruit and prepare non-traditional, mid-career adults for teaching while capitalizing on the expertise of veterans — e.g., National Board Certified Teachers — in the district. AUSL was another brainchild of his — and he was able to "inspire and engage a group of business and community leaders to design a program that would significantly advance and reform the teaching profession."[13]

AUSL turned to National-Louis University (NLU) — which had in place both structures and processes to accommodate AUSL's needs. NLU reworked their Master of Arts in Teaching degree so that Residents could earn state certification while taking coursework that would equip them to teach in urban schools. The early success of AUSL has prompted district officials to evaluate its teacher education and alternative certification providers and to promote only the most effective ones on the district website.

In running the residency, AUSL quickly realized that without sound leadership and similarly-skilled colleagues its graduates would likely be stifled and not teach in accordance with their preparation or potential. Consequently, AUSL partnered with Chicago Public Schools (CPS) to become a school management organization under the district's Office of New Schools. Through this arrangement CPS has given AUSL authority to run low-performing CPS schools. AUSL hires the principals and administrative teams and is able to ensure administrative commitment to and support of teacher development and school improvement. In 2006 and 2007 the first turnaround schools run entirely by AUSL opened in Chicago. These schools are staffed with a critical mass of AUSL graduates and experienced principals and teachers (e.g., Chicago's Golden Apple Scholars and National Board Certified Teachers). A number of the principals hired for these turnaround schools are graduates of the New Leaders for New Schools program in which an internship in urban high-needs schools is an integral part of the preparation. (To date, one turnaround principal began as an AUSL Resident, himself.) AUSL aims to have a total of 20 turnaround schools up and running in Chicago by 2012. AUSL now functions as both a teacher preparation program and a school management organization and is considered by the district as a crucial part of its strategy to change the district's lowest performing schools.

Defining Principles of Urban Teacher Residencies

One way to understand the Boston and Chicago residency programs is to look at them through the lens of the Urban Teacher Residency Institute's principles for school residencies. What follows are excerpts from the Institute's guiding principles and examples from the programs that illustrate the principles in action.

First, *UTRs tightly weave education theory and classroom practice together.* Residents practice what is taught in courses and continuously test, reflect on, and improve their skills. They demonstrate their proficiency not only through course grades, but through performance-based assessments and projects that are informed by research and theory but grounded in actual classroom experiences. For example, a Resident teacher in Chicago studies lesson plan development in her University classes and then works with her Mentor to create a lesson plan for class. After the lesson plan is implemented, the Mentor reviews the lesson and possible improvements with the Resident.

Residents and university professors often compare their coursework with their classroom experience and report back the following week on how suggested strategies worked when implemented in their classroom settings. In Boston, course assignments include bringing in student work or videotaping classroom implementation of an instructional technique learned at the university. To support the tight integration of theory and practice, many of the professors are outstanding, experienced teachers in the district.

In Chicago, National-Louis University modified its traditional two-year teacher education program to integrate its coursework with the year-long AUSL teacher residency. Some changes were structural and logistical in nature —for example, all Residents attend classes on Fridays and sometimes after their school day. Other changes were more substantive; for example, changing the uni-

versity's format for lesson plans based on input of AUSL staff and Mentors. There is also a university liaison who works with the Residents' Mentor to collaboratively assess the Residents' work. In addition, NLU has modified course content and sequencing to better meet the preparation needs of Residents preparing in and for an urban school context.

Second, *UTRs focus on learning alongside an experienced, trained Mentor.* Residents work side by side with Mentors in a full-year classroom apprenticeship before taking on their own classrooms and becoming the "teacher of record." In Boston, each Resident is paired one-on-one with a Mentor. Chicago pairs one (and sometimes two) Residents with a Mentor. Mentors go beyond a focus on the technical aspects of teaching to cultivate a disposition of inquiry, focus attention on student thinking and understanding, and foster disciplined talk about problems of practice. For BTR, the minimum requirement for consideration as a Mentor is three years' teaching experience. Both programs look for Mentors who are reflective and able to talk about their practice, are collaborative, and are committed to their own continuous growth and improvement. AUSL has looked to National Board Certified Teachers — who have a proven track record of knowing how to analyze their classroom practices and improve student learning. Demonstrated success as a teacher as indicated by students' standardized test results is also a key indicator.

In Chicago, Residents spend four days a week in their Mentor's classroom, plus frequent coaching sessions after school. The fifth day is dedicated to their own coursework and seminars. In addition, BTR Mentors spend at least two hours per week with their Residents working one-on-one with structured protocols to guide and focus their work together. Boston Residents also spend four days a week in their Mentor's classroom, and one day per week engaged in coursework and seminars. In both programs, mentors participate in summer professional development sessions and continue to meet monthly for on-going professional development during the school year. Comments of Mentors themselves confirmed that their work with Residents has improved their own teaching practices. One Mentor, for example, shared this reflection:

> I didn't realize how much thought I put into my practice until I had to verbalize it. I also realized how little thought went into other things and how I need a clear reason for what I'm doing and why I'm doing it. … (Mentoring) has definitely improved my practice and makes me feel proud of what I've done.

Residents identified the power of a full-year mentoring program and noted consistently the valuable support they received from their Mentors and program directors. Residents experience a full-year school "lifecycle" from setting up classrooms to closing of the school year. They learn first-hand how to build culture and community, organize long-term instructional goals, create formative assessments, and use data to reflect upon their teaching practices. The depth of the relationships Residents and Mentors build over the year cements a strong bond of trust and respect. In recognition of the tremendous commitment of time and energy Mentors make, BTR pays its Mentors a $3,000 stipend while AUSL provides Mentors with a 20 percent annual salary supplement.

> "An important lesson AUSL has learned is the importance of professional development that is specifically focused on the knowledge and skills necessary to be an effective Mentor. A teacher who takes on this dual mission must be willing to divide equal attention between their students and their Resident. They also must be prepared to supervise and manage adults, which for many Mentors can be a surprising aspect of this job. The quality of our UTR rests in many ways on the skills, capacities, and commitment of our Mentor teachers."
>
> *--AUSL Mentor*

Third, UTRs organize teacher candidates in cohorts to cultivate professional learning communities and foster collaboration among new and experienced teachers. Unlike many university-based and alternative teacher education programs, Residents engage in a tightly prescribed sequence of coursework and clinical experiences together. Learning to teach is no longer a solo activity. The cohorts meet regularly and form an intellectual community that connects practice with coursework, as Residents work together in the same school "carry[ing] the conversation from place to place." Residents cite the cohort model as one of the reasons they chose a UTR over another preparation program.

The cohort model extends beyond the residency year as an effort is made to place residency graduates together as they assume teaching positions. In Chicago, clustering UTR Residents and graduates together in schools is an integral part of their school change strategy. One administrator explained:

> AUSL has set the standard in terms of recognizing the importance of linking the training of teachers and school redesign. You need to put a cluster of (Residents) in one building. … There need to be enough new transformative teachers to create a transforming environment.

The Importance of Like-Minded Colleagues

The importance of clustering UTR graduates as well as Residents was apparent in one BTR graduate's experience. BTR had introduced the strategy of taping lessons and watching with colleagues to examine and reflect on teaching. But, as she says, "not all teachers have that mindset" and "it's hard to find people with that lens." The graduate had embraced this BTR norm, explaining, "When something goes wrong, I now know what to do. I ask someone to videotape or observe the lesson."

Fourth, *UTRs build effective partnerships* — recognizing that no single district, university, or community organization alone can solve the problem of preparation and retention of high quality teachers for urban schools, UTRs build partnerships that bring together diverse organizations for the common goal of improving student achievement through high quality teaching. UTR program staff believe that their partnerships are absolutely crucial to supporting teacher learning over time and to impact long-lasting reform in urban schools.

For a district, partnering with a program like BPE or AUSL is critical because as non-profits, these programs are nimble. Faculty and consultants can be hired in timely ways, contracts can be executed efficiently, programming can be quickly adapted, and institutional turf can be mediated. Both BTR and AUSL exercise an entrepreneurial, can-do attitude and market their respective programs in sophisticated ways. Both act like small start-ups, less encumbered by the constraints experienced by the large bureaucracies of universities and school districts.

Fifth, *UTRs serve school districts*. UTRs exist to address community and school district problems while maintaining their independence from school systems so they are not beholden to district vagaries, internal politics, and bureaucratic dicta. As one program leader noted, admissions goals and priorities for UTRs are "consistent with the hiring objectives of the district" and the district "commits to hire graduates from the program." Residents learn the district's instructional initiatives and curriculum while they come to understand the history and context of the community in which they will teach.

AUSL and BTR place a priority on recruiting in the areas of science and mathematics, and BTR Residents graduate with a dual licensure in special education, all of which meet specific needs of the districts. In the 2007-08 cohort, almost 60 percent of BTR and 32 percent of AUSL recruits were being prepared to teach in high-need subjects. In addition, 55 percent of BTR and 57 percent of AUSL recruits in the 2007-08 cohorts were people of color. For administrators in Boston, BTR is the district's primary recruitment strategy for ensuring a diverse teaching force.

UTRs can also serve districts by informing them and pushing them to improve their practices. For example, BTR's work on new teacher screening and induction has spurred BPS to revamp the way it screens candidates and supports all of its novices.

BTR's development of teacher competencies informed the district's development of its Dimensions of Effective Teaching[14]. BTR, district professional development and teacher evaluations are all now being aligned to these teaching competencies. Chicago Public Schools, observing the success of AUSL's training academies and turnaround schools, plans to open its own turnaround schools in fall of 2008.

BTR's Selection Day

The culmination of the recruitment process for BTR is Selection Day, held at one of the Boston public schools. This is a day-long event that brings together representatives from the schools (teachers, Mentors, and principals), the district (human resource personnel), BTR staff, and members of the community to engage with BTR program applicants in an intensive process. Applicants participate in a variety of activities and interviews, including working with fellow applicants to solve a group problem, a five minute segment of teaching students, writing and math assessments, and one-on-one or team interviews. One Resident described the selection process as "overwhelming, but effective in helping applicants understand the program they were applying to." She described the day in this way:

"We spent an entire day at one of the Boston public high schools, working in small groups to discuss scenarios, having one-on-one interviews with BPS staff, and teaching a mini-lesson to a group of students. Each part of the day helped me understand what the different parts of my year would look like in BTR. When I was working with the small group to solve a dilemma, it was a great experience to start thinking about how as colleagues I would be working with other teachers to think about the best way to teach students. While interviewing with staff from BPS I got a better sense of what it was like to teach in an urban school setting, as well as what schools I would be interested in teaching in. The mini-lesson portion of the interview day was the most nerve-wracking! Being in front of a group of teenagers and presenting a five-minute lesson was a bit daunting. I had five minutes to grab their attention and impart information. Now that I have been teaching 8th graders for almost seven months, I realize how important those five minutes can be. Some days it can set the tone for the entire lesson."

-- BTR Resident

Sixth, *UTRs support Residents once they are hired as teachers of record*. UTRs recognize that even well prepared novices in high-needs schools demand long-term support and have only begun to embark upon a continuum of professional growth. Residents are surrounded by support at every step including Mentors, principals, university professors, university liaisons, and UTR staff members. For many it is this intense level of support that attracted them to the program.

UTRs work in partnership with school districts to continue to support Residents once they graduate and become teachers of record in their own classrooms through mentoring, professional development, and networking opportunities. UTRs have increasingly offered more sophisticated induction programs than found elsewhere. For example, in Chicago, after graduating from the residency program, individualized coaching and induction support continues through year two of teaching and additional professional development support is provided for graduates in years three and four. An induction coach works with the new teacher once or twice a week; new teachers are assigned a grade partner and cluster leader; there is common preparation time with grade level partners; and other preparation time is used for observations. Coaches are trained in using the cognitive coaching model. Because these teacher supports are all rooted in a common definition of quality teaching, they are beginning to pay dividends for the schools and the students served.

This support for beginning teachers is critical, particularly in the high-needs schools in which graduates are placed. As one university faculty member noted:

> AUSL is okay with putting teachers into low-performing schools, because AUSL believes teachers have to learn…what it's like to teach in those environments. But what AUSL does, is the second half of the equation —which has to be addressed. It provides strong support for teacher candidates in those low-performing schools. And you can't have one without the other. … Support in place for alt cert people needs to be very intentional and very careful and then they can succeed.

Seventh, *UTRs establish and support differentiated career roles for veteran teachers*. The UTRs have begun to "create opportunities for excellent veteran teachers to take on roles as Mentors, supervisors and instructors while still holding positions as K-12 classroom teachers." With AUSL Mentors earning a 20 percent salary supplement (and if they are NBCTs they earn even more), these experts can be recognized and rewarded substantially. Also, they can be offered meaningful leadership opportunities without becoming administrators. Both BTR and AUSL are beginning to see their most successful Residents become Mentors. As described earlier, AUSL is working with UIC to prepare Residents as instructional leaders and is forming an informal partnership with Chicago's New Leaders for New Schools in order to introduce excellent graduates to their school leadership program.

Leadership Opportunities for UTR Graduates

"As AUSL has grown, we have recognized the enormous talent that exists within our Mentor teachers. Three of our current Mentor coaches are past Mentor teachers. We have also tapped Mentor teachers to create writing and math benchmark assessments and curriculum to be used across our network schools. AUSL is working to increase leadership opportunities for our Mentor teachers while not taking them away from their important work of educating students and training Resident teachers."

--AUSL Mentor

The Effectiveness of UTRs

While UTRs appear to be a promising innovation, the critical questions are whether UTRs are making a difference in schools and classrooms and if so, can those differences be measured. While evidence is preliminary, it does suggest that this innovation holds promise for improving urban teacher and school quality. Several areas in which UTR outcomes might be expected and what is known to date about the impact of BTR and AUSL are described in this section.

Student Learning. Only a few years in operation, UTRs do not yet have sufficient data to determine the impact of their graduates on student learning. However, both BTR and AUSL see this question as the one that defines their success and are investing in the data and analysis to answer it. BTR has commissioned outside research to determine the impact of their graduates on student learning, drawing on the value-added methods of Harvard education economist Tom Kane. The study is matching individual teachers with data on students' test scores as one source of evidence of student growth and development.

In Chicago, AUSL is planning research to draw on school and grade level student achievement data in the AUSL turnaround schools in order to unpack the impact of AUSL's training and placement model. Both sites are seeking to go beyond the typical value-added models to provide a more comprehensive understanding of impacts on student learning, in part because standardized test score data are available for only a small number of Residents who teach tested subjects or grades. Also, program officials have come to understand how difficult it is to solely use standardized test score data to tease out statistically the effects of the multi-layered UTR model on teacher and student learning. While standardized test scores may be valuable, they still do not measure the full array of learning that UTR graduates are expected to support in their students.

Skills and Competencies. School administrators' assessments indicate that UTR graduates enter teaching with well-developed skills and competencies that enhance their effectiveness as teachers. Administrators report that UTR recruits, compared to both local teacher education graduates and alternative certified teachers, seem to be much better at reflecting on the quality of their teaching and collaboration with their colleagues. When asked to compare the effectiveness of BTR graduates to other first-year teachers, principals rated 88 percent of BTR graduates as effective or more effective than their counterparts, with a majority rated as "significantly more effective." Over 94 percent indicated their desire to hire additional BTR graduates. When a Chicago principal of a turnaround school was asked about the differences he sees in AUSL graduates and other beginning teachers, he echoed similar sentiments. He described how AUSL graduates "take advantage of the mentor coaches in sophisticated ways that other teachers do not; they know how to ask for and receive constructive feedback." He also noted that the AUSL teachers tend to be more reflective about their practice and better versed on the best practices, and "whenever you have a teacher like that you'll see impact in student achievement."

Additionally, clustering the Residents in schools and supporting them so they stay in the same schools over time seems to be fostering school cultures of consultation, shared learning, and data driven decision making—all essential practices for schools that want to improve teaching and learning.

A Student's Reflections on Teachers in a Turnaround School

I think the difference [after AUSL took over the school] is that these teachers care. Last year teachers didn't care. They use to just sit and watch… There was no learning. They taught only when they see the principal walk in. But this year teachers care a lot. They teach …like every second. They teach whatever needs to be learned.

5th Grade student at Harvard Elementary School (AUSL Turnaround School)

Hard to Staff Areas and Diversity. Both AUSL and BTR have been successful in recruiting high-caliber candidates of color – 57 percent of AUSL and 55 percent of BTR Residents are minorities. In Boston, BTR is a major source of African-American and Latino teachers. All UTR teachers teach in high-needs schools. Boston has also been particularly successful in recruiting and preparing teachers for high-need content areas. For example, 57 percent of BTR's middle and high school Residents teach mathematics or science — and every Resident receives a dual certification in special education.

Retention. UTRs, compared to both higher education and alternate preparation programs, retain their recruits for a longer period of time. After three years, 90 percent of BTR graduates and 95 percent of AUSL graduates are still teaching. While comparable data are not available for all recruits from university-based master's level programs and alternate pathways in the Boston and Chicago systems, we know that nationally about 30-50% of teachers leave within the first five years, and that number is significantly higher for teachers in high-poverty schools and certain subjects like math, science and special education.[15] By any standard, the current retention rates for the UTR programs are extremely high. Causes for the high retention rates likely include the high-quality preparation program, on-going support, the upfront commitment to teach in high-needs schools, and the financial penalties if those commitments are not honored.

Mentor Skill and Retention. The UTRs' investments in selecting, preparing and supporting the Mentors who work with Residents have further developed veteran teachers themselves. Mentors learn new instructional skills and how to spread their expertise to novices. Mentors and principals in the BTR and AUSL programs attested to the professional learning that occurs for Mentors as they analyze and reflect with Residents about their own practice or observed classroom instruction. These new roles for experienced teachers have led to renewed enthusiasm and motivation and contributed to the retention of some teachers who might have otherwise left the classroom or district. Finally, the leadership skills that Mentors develop are serving as a potential pipeline to leadership positions. Both BTR and AUSL recruit graduates of their own programs to become Mentors for new Residents. Each program has also created positions, often filled by Mentors, to manage and/or continue developing school-based or cross-school groups of Mentors.

Impact on the Human Capital System. While the UTRs are still relatively young programs, there are examples in Chicago and Boston of ways that BTR and AUSL have begun to impact their districts' human capital systems. BTR has spurred important changes in how BPS recruits and screens teachers. BTR and BPS staff members recruit side-by-side at career fairs and generally work in a coordinated way to direct potential teachers to appropriate preparation pathways based on individuals' strengths, interests, and needs. BTR and BPS have adopted one set of standards for teaching, and those standards are becoming an increasingly integral part of the professional development and teacher assessment systems throughout the district.

Chicago is a far more decentralized system than the smaller Boston district, yet impacts of AUSL are clear. AUSL is a significant part of the CPS plan for improving low-performing schools, with increasing numbers of turnaround schools being placed under AUSL governance. The close link between AUSL and National-Louis University has resulted in changes in the university's preparation program. The most direct change is in the course of study designed specifically for AUSL Residents. However, faculty report that the success of Residents in the AUSL training academies and high-needs CPS schools has prompted new kinds of clinical placements in other NLU preparation programs as well.

In both districts, recognition of the importance of supporting new teachers in hard-to-staff urban schools has led to a differentiated program of induction and mentoring that directs the most intensive resources to teachers in the highest-needs schools. For example, Chicago recently became the home of a New Teacher Center site, and the NTC mentors are placed in the regions with the greatest need for improvement in student learning. Boston has also adopted an intensive model of induction support with well-prepared induction coaches. At both sites, coordination between the UTR and the districts ensures that mentoring services complement rather than duplicate each other. Similarly, both UTRs' emphasis on new roles for exemplary teachers is starting to influence thinking on teacher career ladders in the two districts.

Budget and Financial Structures

Policymakers and community leaders considering whether a UTR should become one of the district's pathways into teaching will want to know how much these programs cost and how they are funded. The two UTR programs highlighted in this study demonstrate how different design and implementation decisions, as well as different district contexts, have profound impacts on total program costs.

In Boston, for example, BTR relies on BPS-operated host schools to provide the training site. BTR's primary costs are: half the salary for a teacher at each school to serve as a site director and stipends to the Mentors. AUSL has a very different approach in which the UTR has taken over operations of selected CPS schools, some of which serve as training academies while others are designated turnaround schools where large proportions of teachers hired are AUSL graduates.[16] CPS contributes a portion of the funds required to operate these schools, but AUSL must raise additional funds to fully support their operation. Another key difference, largely due to the fact that Chicago hires from many alternative certification programs while up to now Boston has not, is that Chicago pays Residents a slightly higher stipend.

Variation in the programs' scope and structure limits the relevance of direct comparisons of budget expenditures and revenue sources; however there are some commonalities that surface important issues about initiating and sustaining UTR programs.

BTR and AUSL each have four major budget areas: upfront recruiting costs; preparation costs, which include financial support to Residents during their training year; induction costs; and the costs of running an effective program which includes coordination and communication across programs and participants.

Both programs invest heavily in recruiting excellent candidates for their programs, in sharp contrast to traditional teacher preparation programs which rarely have been funded by their university administrators and state higher education agencies to proactively recruit top-notch teacher candidates.

Both BTR and AUSL invest heavily in the training and preparation of their Residents, including compensating faculty engaged in instruction and Mentors and faculty who assess candidates' progress and needs. Of note is the heavy investments both programs make in developing and supporting Mentors who work with Residents in their classrooms throughout the entire academic year. In contrast, some universities are making new investments in finding and preparing the right Mentors for their student teaching interns, but many are not funded sufficiently to recruit, prepare, and support master teachers for their teacher candidates.

UTR programs also provide significant financial support to Residents. They pay stipends and health benefits to Residents during their year of training, which helps to attract a diverse pool of qualified candidates in the high-need areas. Since Residents are not teachers of record and thus are not getting a teacher's salary and benefits, stipends and health benefits are necessary for UTRs to be competitive with other programs that target similar populations of candidates but enable them to earn a full teaching salary after only a brief preparation period. BTR and AUSL also offer other financial incentives to attract candidates and retain graduates. For example, in both programs, candidates are able to readily acquire loans to cover the cost of tuition to universities for the master's degree. Importantly, there are also built-in financial incentives for graduates to fulfill their teaching commitment in the districts' high-needs schools. BTR forgives a portion of Residents' tuition costs for each year of teaching. AUSL requires proportional repayment of the stipend with less than the contracted four years of teaching.

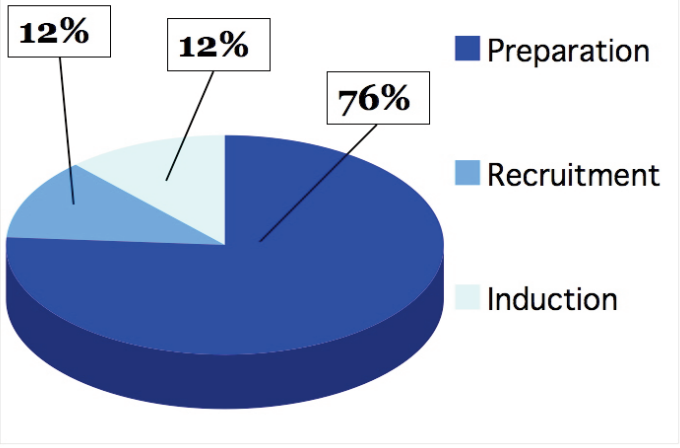
Induction is also a major area of investment, as both programs pay for a corps of induction coaches who support graduates in their beginning years as teachers.

Finally, while specifics vary, the programs share many common categories of administration costs, as a function of similar needs to support Residents and coordinate among schools, partners, and program participants. Each UTR employs staff to maintain program operations and has directors on site at each school where Residents are placed. Funds are required for positions that are dedicated primarily to planning and coordination, as well as embedded in the salaries of all who invest the time that is needed for partnerships to function effectively.

The sources of funding for the UTR programs are currently a mix of private and public resources. In both programs, private sector funds were the sole source for initiating the UTRs and continue to be one source for sustaining them. In Boston, private funds were invested in the start-up of BTR with an upfront commitment by the district to fund an increasingly larger portion each year. BTR had transitioned to primarily public sources of funding by 2007-08. AUSL continues to have a large portion of funds from philanthropy, which make an important contribution toward supporting the rapid increase in the number of turnaround schools that the program will operate.

A fiscal snapshot of BTR provides a window into how funding and costs play out in that program's budget. In 2007-08, expenditures for the 13-month BTR program totaled approximately $3.4 million with about 12 percent allocated to recruitment, 76 percent to preparation and 12 percent to induction expenditures. (See Figure 1 below.) These figures are based on dividing program administration and coordination costs across the three key program areas. These expenditures result in a total average cost per Resident of approximately $38,000.

Figure 1: BTR expenditures by program area

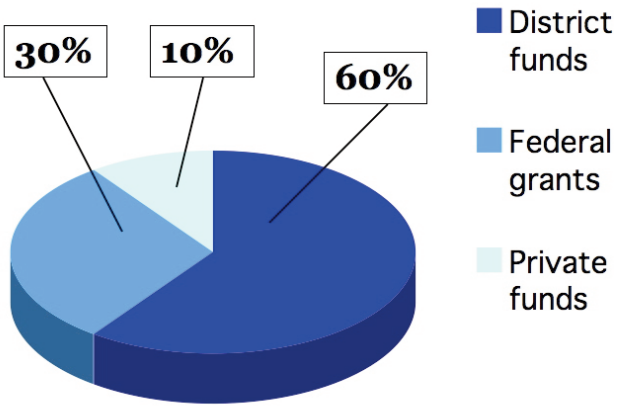


Boston provides a promising example of transitioning from private to more sustainable public funding. Currently, a significant portion of funds are public resources, with the district covering about half of the program costs and federal AmeriCorps and Transition to Teaching grants contributing a sizable portion of resources, as well.

In its first two years of funding, the BTR program was funded 100 percent through private funds. Strategic Grant Partners (SGP), a coalition of local family foundations, was the source of what Director Jesse Solomon equated to "venture capital" for the start-up of the UTR. Solomon commented, "Public funds…kicked in once we had some strong initial retention results." In addition, the Boston Plan for Excellence (BPE) provided significant in-kind support, including costs for office

space, administrative staff, and meetings. As noted earlier, BPS committed to fund a progressively increasing percentage of program costs over the first three years with the goal of becoming the majority funder by reallocating professional development funds. In 2007-08 approximately 90 percent of BTR's budget consisted of public sources of funding, including 60 percent from BPS, and an additional 30 percent in grants from the federal AmeriCorps and Transition to Teaching programs. The remaining 10 percent of funding was from private sources. (See Figure 2.)

Figure 2: BTR Sources of Funding



BTR Participants and Personnel

In the 2007-08 BTR program:

- Eighty-four Residents were placed for one year in a classroom with a Mentor in 14 host schools;
- In each host school, a half-time site director coordinated the school-based mentoring activities and served as a liaison to BTR program staff;
- About 25 instructors with varied affiliations (local universities, BPS staff, consultants) taught classes for the Residents;
- Eighty-five Residents were recruited for the incoming 2008-09 cohort;
- Eight BTR induction coaches supported 125 BTR graduates placed in BPS high-needs schools (a ratio of 1:16); and
- Eight program staff administered and implemented the BTR program.

Long-Term Financing of UTRs

The appeal and promise of the UTR model have been compelling to funders thus far. However, long-term sustainability of these and other UTRs will require stable sources of funds that support the work without placing undue constraints on their independence and responsiveness to changing contexts.

Federal funding will be available for the start up of new UTRs – but long-term sustainability will undoubtedly rely, in significant measure, on rethinking the use of existing state and district funds or different uses of federal funds such as Title I or Title II of the Elementary and Secondary School Act.[17] Based on data and analysis from Education Resource Strategies (ERS), an organization with a strong track record of analyzing urban district spending for teacher support, several strategies to support sustained district and state funding of UTRs emerge.[18]

1. Cost savings from reduced teacher attrition to redirect for support of UTRs

The current rate of attrition of new teachers in high-needs schools costs districts millions of dollars annually. BPS has reported that they lose about 47 percent of their novices in their first three years of teaching — costing them approximately $3.3 million annually.[19] Recent research conducted by the National Commission on Teaching and America's Future on the cost of teacher turnover shows that in the Chicago Public Schools the cost of a teacher leaving the district can be as much as $13,650 per teacher — and over 37 percent of teachers leave in their first five years. The study estimates the annual cost of all teacher turnover in CPS is $64.5 million, which reflects the districts' investments in recruitment, screening, placement, training and support of new teachers.

The much higher retention rates of BTR and AUSL graduates, 90 percent after three years for BTR and 95 percent after three years for AUSL, result in significant cost savings to the districts. While these savings only accrue over time and may be difficult for policymakers to see in districts' budgets, the savings are nonetheless real and quantifiable and can be taken into account in the financial sustainability equation. With retention rates nearly twice as high as typical urban districts, these UTRs could pay for themselves quickly.

2. Strategic reallocation of district teacher professional development funds

Districts may be able to directly fund UTRs by redirecting professional development dollars currently spent on new teacher support toward more effective uses. ERS's analyses of professional development spending in urban school districts find that districts spend between 2 and 6 percent of their operating budgets on professional development – and that much of this spending is neither focused nor aligned with the districts' strategic objectives. In Chicago the district spends about $250 million on professional development annually. However, expenditures on new and experienced teachers can range widely. While the era of one-shot workshops is waning, districts continue to spread professional development spending across a multitude of departments and initiatives, often with neither an explicit strategy nor an ability to assess impact. For example, a single school may benefit from district resources invested in math coaches as well as on teacher certification instructors and new

teacher mentors. All of them may focus on helping a novice teach more effectively but do so in duplicative or even conflicting ways.

By aligning new teacher support to district priorities, curricula and instructional materials and focusing that support on clusters of new teachers strategically placed in schools, UTRs offer an example of strategic use of resources for new teacher support. As districts' analyze the array of new teacher support strategies they have in place, they may find opportunities to eliminate repetition and direct resources toward the strategies with the most potential for impact.

In addition to investments in professional development, districts also commit millions of dollars to salary lane increases teachers earn by pursuing graduate credits. Many districts pay twice – providing tuition reimbursement to teachers for the cost of their graduate credits as well as providing salary increases upon attainment of graduate credits for the tenure of a teacher's career. For example, recently BPS spent $29 million in one year for additional coursework and graduate credits and degrees. This amount grows substantially if one calculates the credit attainment as an ongoing cost over the course of a teacher's career. In many districts, teachers can earn salary increases for a wide array of courses, some of which have little direct relationship to the content or students they teach. Tightening these policies might increase the impact of these investments on teaching and learning. Offering alternative ways for teachers to increase their salaries, such as through the job-embedded mentoring that UTRs offer, would result in more strategic use of a district's funds.

3. Change in practice of billing teachers at average salaries

UTRs might be also able to find fiscal support and sustainability from changes in the way districts bill for teacher salaries. Most districts' school budgets reflect the cost of each teacher using the district average—not the actual salary of the teachers in the school building. With this practice, the cost of highly-experienced teachers at certain schools are, in effect, subsidized by the lower cost of schools that have a larger portion of young, less expensive teachers. A modified funding and billing system could be adopted for more equitable funding. Funds could be distributed to schools based on a weighted student funding system in which dollars follow students to schools. If schools were then billed based on actual teacher salaries, those with larger proportions of inexperienced teachers would have more resources to invest in UTRs. Recouped dollars could go toward Resident stipends and tuition as well as Mentor salaries — or developing Mentors, if too few qualified teachers were available for this role.

4. Strategic reallocation of district spending on alternative certification

UTRs could also benefit from a more strategic reallocation of a district's alternative certification expenditures. School districts spend significant dollars to help uncertified or alternatively certified teachers meet state certification requirements. For example, in one large city the school district provided $3,850 in tuition reimbursements to first- and second-year TFA teachers. District support of alternative route teachers tends to be directed toward a small number of its total new teachers. And, while these teachers may bring value to the classroom compared to uncertified teachers they replace, they are likely to leave teaching at a higher rate than UTR graduates despite the district's investment.

Additionally, their training is not always specific to the district's curricula or instructional strategies as is the case with UTR models. While many districts may keep strong alternative certification programs in their preparation and induction portfolio, they could focus more of their resources on identifying which alternative certification candidates are more likely to stay and make deeper investments in their preparation so that they do.

5. Strategic reallocation of state funding for teacher preparation.

The cost of teacher preparation traditionally is borne by individual teacher candidates (in the form of tuition payments to their preparing institutions), the federal government (in terms of grants and loans to students to pursue their college and graduate studies), and state governments (in the form of subsidies they pay to support public colleges and universities within their states). State governments subsidize public teacher preparation programs to the tune of hundreds of millions of dollars a year (and 90 percent of all teachers are prepared in public institutions). Many state-supported education schools produce teachers that are in relatively low demand — e.g., elementary, social studies, and physical education. However, universities will be reimbursed all the same — no matter whether they are producing the math, science, special education, and bilingual teachers urban schools need. Researchers and reformers have long lamented the fact that university leaders use teacher education as a "cash cow" — preparing anyone who wants to get a degree with as little expense (and clinical training) possible and few skills and supports to teach in challenging public schools.

To further deepen the problem, of the approximately 200,000 licensed teachers graduating from university-based preparation programs annually, only about 70 percent of them actually end up teaching.[20] The return on this investment is compromised when 30% of the people universities are preparing never enter the profession and only a small proportion of the remaining 70% are prepared to teach in high need content areas and/or high needs schools. Consequently, the higher education community invests in teacher education students and graduates that widen the supply and demand gap. The percentages of teachers who do not graduate may include candidates who were appropriately counseled out of becoming teachers; however, this also demonstrates a costly form of quality assurance that could have occurred earlier with more attention to proper screening of those accepted into the program. As we will suggest in more detail later in the report, directing state funding for teacher preparation to programs with a demonstrated ability to meet the needs of urban districts could provide opportunities for additional support for UTRs and potentially strengthen other teacher preparation programs, as well.

Moreover, states could consider restructuring state certification requirements so that teachers can earn certification through participating in a UTR program, being a Mentor to a Resident, or other job-embedded work aligned with their districts' curricula. The money that districts and states currently spend on certification could be redirected toward UTRs.

Lessons Learned

The "right" implementation of a UTR program will vary based on the unique ecosystem of each district and community. But despite the two very different contexts in Boston and Chicago, there are some district and community pre-conditions that are important for any aspiring UTR to consider. We propose six action steps districts and their partners should take to understand, analyze and plan around the relevant conditions on the ground. It's worthwhile to note here that no district, including BPS and CPS, has all of the conditions detailed below in place. But the action steps below can guide an analysis of a district's readiness to implement a successful program and direct attention toward important features for initiating and sustaining a successful UTR.

1. Assess the readiness of a school district, institution of higher education and/or a non-profit organization to undertake the work of developing a UTR.

First, *districts* must have a sustained, well-developed teaching and learning infrastructure where good teaching and learning are clearly defined and consistently supported. Districts need well-aligned curricula, instructional materials, and pedagogical approaches, and the UTR must be part of the district's coherent framework and overall strategy for improving teacher quality. Diagnostic and summative assessments should be in place to inform instruction. In addition, districts should have a clear understanding of their particular teacher talent needs (e.g. more special education or middle school math and science teachers) and be able to communicate these to the UTR and its partners.

Second, *higher education institutions* must develop an organization-wide commitment to investing in teacher education and rewarding faculty who teach in Residency programs. The right kinds of pedagogical coursework need to be designed and faculty who teach the classes need to have expertise and experience in teaching in high-needs schools. There must be institutional support of faculty who work with UTRs — most commonly indicated through providing time to teach the courses and valuing their contributions in the university tenure decision-making process. The tenure incentives for most professors run counter to the needs of school-university partnerships. Many higher education faculty may be willing and able to support UTRs, but policymakers have not enacted the incentives and policy tools to encourage them to do so.

Third, *non-profit organizations* must have the expertise to lead teacher education efforts and a staff with the necessary content knowledge to help build teaching and learning programs. These "third-party" organizations play an important role that may be critical for bringing together partners from disparate institutions. School districts and institutions of higher education, in particular, may have similar goals for producing well-prepared teachers, but also bring their own bureaucracies, histories, and relationships that must be at least recognized and possibly overcome for a successful UTR partnership. Non-profits must have the capacity to serve as a boundary spanner between school districts and universities, and other parties. These organizations should have the capacity to raise funds to help launch and support the UTR, and its leaders need to understand the values, culture and interests of each partner and know how to negotiate necessary changes that must take place.

Assessing Readiness

Key Considerations

A. Who are the right partners to develop and implement the UTR?

B. What are the roles and responsibilities of each partner?

C. Which partner will lead the UTR and what will that entail?

D. To ensure effective collaboration, what issues will need to be negotiated and what new systems or structures will be needed to facilitate new ways of doing business?

2. Identify high-quality schools and classrooms in which to prepare Residents.

As for any new teacher, the school conditions under which Residents learn to teach influence their practice. Research has shown how certain working conditions – especially those factors related to trust and relationships among teachers and administrators — affect teachers' retention,[21] which impacts their effectiveness in the classroom. For UTRs to be successful districts must have a sufficient number of schools at all levels where the culture is collaborative and collegial for adults, encouraging and supportive of all students' learning and high performance, and constantly focused on learning and continuous improvement. This requires excellent school leaders and Mentors.

First, school administrators must know how to transform organizational structures to promote collaboration and integrate teacher learning with student learning. They should provide opportunities for teachers to take on leadership roles and provide time during the day to support teacher collaboration. UTRs have found time for teacher collaboration by "buying more of it" but could also consider adopting innovative school schedules such as those in Japan and other nations where teachers regularly have time for lesson study and novices have reduced teaching loads. UTRs demand a culture of excellence that drives constant learning and collaboration. Too few school leaders have the knowledge and skills required to create and sustain these conditions, therefore principals themselves may need training and support in promoting this type of working environment.

Second, there must be the necessary number of excellent teachers who can act as strong Mentors, and they should be working in high-needs areas. These criteria may sound basic at first, but the experiences of Boston and Chicago suggest that it is a challenge to meet them. Setting high expectations for the schools and classrooms that will serve as training sites is critical to ensuring program quality. AUSL has approached this challenge by taking over full operation of turnaround schools; BTR has a more embedded strategy of working with selected host schools that are BPS-operated.

Identifying High Quality Schools and Classrooms

Key Considerations

A. What schools at each level meet the quality criteria in terms of school culture and Mentor quality?

B. How does the number of schools that meet the criteria inform the UTR start-up and development plan?

C. What can the UTR, its partners or the district do to build the capacity of potential future sites?

3. Define clear standards for high-quality teaching and support teachers' progress toward meeting those standards.

A centerpiece of both BTR and AUSL's programs is a set of standards and common expectations for what high-quality teaching looks like. Standards, drawn from emerging research on teacher effectiveness, should drive the curriculum design of any UTR and the recruitment, selection, support and evaluation of Residents, Mentors and school-based program staff. While the UTRs prepare teachers for the district curriculum, they also attend to the underlying theory of the selected content and instructional strategies. By integrating educational theory with practice in specific curricula, teachers develop deeper understandings of how children think and learn and the rational for pedagogical approaches. This approach leads to sound knowledge of specific curricula, while also broadening teachers' knowledge of how the content and pedagogy intersect with the needs and developmental levels of their students. This level of understanding is critical for long-term success in the face of changing curricula and for adapting existing curricula to students' needs.

For teachers to be effective there should be coherence in the standards that guide their preparation and the standards to which they will be held accountable when placed as teachers in their own classrooms. In some cases, the UTR will develop the standards as part of developing the residency program. In other cases, the district in which Residents work will have standards that the UTR will either adopt or adapt. In still other instances, the UTR will partner with the district to develop standards collaboratively with the intention that these will be the standards for preparation, recruitment and selection, induction and tenure and teacher leadership decisions.

While there is no "best" way to do this, there are a few guiding principles that must drive whatever process the UTR pursues. Districts need to be clear about expectations for new teachers — recognizing that even a well-prepared teacher is not fully developed while also establishing clear standards that novices need to meet by the end of year one and for being rewarded tenure. An effective and sustainable UTR depends on having in place clear standards for high quality teaching that are consistent with or identical to the district's standards for all teachers. The district and the UTR and its partners need to work closely to ensure this coherence.

Defining Clear Standards

Key Considerations:

A. What are the expectations of the UTR for Residents' performance relative to standards at the end of the residency year? At the end of the first/second year of teaching?

B. How does the status of standards in the district influence the design and delivery of the UTR program?

C. What are the district's expectations for new teachers at the end of year one? In order to receive tenure?

D. What systems will be in place to track teachers' progress and support them in meeting expectations?

4. Develop teacher leaders and expand teachers' career options.

UTRs, by design, introduce a variety of teacher leadership roles: mentoring Residents, coordinating the work of school-based clusters of Mentors and Residents, and teaching UTR coursework. Developing teacher leaders allows districts to spread teaching expertise and keep its best educators, however it doing this well poses significant challenges as well as opportunities.

For example, UTR sites need a density of teacher and school leader talent that may require school districts to recruit and use teacher leaders differently. Historically teachers have been selected and placed individually in schools, often defined by district-union internal transfer rules and hiring practices. UTRs require districts to cluster cohorts of new teachers and Mentors and to focus recruitment and placement efforts on teams of teachers with key teacher leaders rather than on individuals.

In addition, there may be insufficient numbers of expert teachers who can mentor and prepare teachers. If so, the district, university, and community partners must actively cultivate teacher leaders and devise new policies that can free up time and space for their best teachers to be Mentors and teacher educators while still allowing them to teach. Currently, both AUSL and BTR are beginning to use their highest performing graduates as Mentors — offering a career pathway for its graduates. However, districts have done little to capitalize on these efforts by designing more expansive leadership roles and aligning professional compensation with their teacher development systems.

Attention to the importance of teacher leadership is on the rise for some institutions of higher education. However, many institutions of higher education could do more to prepare teacher leaders — especially in their roles as data coaches, assessment experts and teacher educators. Indeed, the Mentors UTRs are beginning to recruit and prepare could serve new roles in transforming university-based teacher education writ large.

Developing Leaders and Career Options

Key Considerations:

A. What teacher leadership roles does the UTR need to create to ensure the program's success?

B. What additional preparation and support are needed for teachers in leadership roles? Who is best positioned to provide it?

C. What school structures and policies must be in place to develop, implement, and support new teacher leader roles in schools where they are needed?

D. What are possible pathways from one UTR teacher leadership role to the next (e.g. how can a talented Mentor become a site director or teacher education faculty member)?

E. What might the pathway be for UTR graduates to assume increasingly senior teacher leadership roles within the UTR itself and in the district more broadly?

F. How can the UTR, districts, and universities collaborate to take full advantage of emerging teacher leaders?

5. Collect evidence to improve programs and build political will.

UTRs are beginning to assemble evidence on the effects of their programs on teacher retention and student achievement. These data will be critical for improving their efforts and attracting the support of policymakers, practitioners, and the public. UTRs must be able to quantify who they attract, how they are prepared, where they teach and under what conditions, how effective they are in helping students learn — both as individuals and as small teacher teams. UTRs need to demonstrate more clearly the cost-effectiveness of their programs in terms of both student learning and teacher retention. Each program has assembled an array of studies to assess their programs and begin telling their stories. However, no common database exists and no overarching evaluative framework exists. In fact, despite the enormous contributions and efforts of program administrators, we could not assemble some of the data we sought — and much of what we did collect was not available in any comparable form. Organizations such as NCATE and UTRI or accountability requirements in federal legislation could promote attention to gathering data on program's impacts and effectiveness.

Collecting Evidence and Building Political Will

Key Considerations

A. What are the right metrics to measure UTRs' effectiveness, and what is most informative for program improvement?

B. How might these measures correspond (or not) to those of the district?

C. How can data collection be systematically embedded in program activities?

6. Determine how UTRs can play a broader role in strengthening a district's human capital system.

AUSL and BTR demonstrate two approaches for how UTRs can go beyond preparing teachers to impact teacher quality and student achievement. In Chicago, AUSL has begun to manage turnaround schools and create the conditions where their Residents can effectively learn and thrive. As one of many organizations that partners with this large and fairly decentralized district to manage turnaround schools, AUSL has deep involvement in and impact on this subset of schools but limited impact on district-wide strategy. In Boston, on the other hand, BTR partnered with the central office to inform and shape district policies and practices, identifying system barriers and bringing to scale some of BTR's most promising practices. The choice of how the UTR can best engage with and impact the district depends, of course, on district context and needs as well as the leadership and capacity within the UTR.

Determining UTR's Broader Role

Key Considerations:

1. What are the district policies, practices and contextual features that promote or inhibit successful implementation of a UTR?
2. How can the UTR best address these issues (e.g. work with the district to address these issues, create conditions for the UTR and its graduates where these issues won't arise)?
3. What role can and should the UTR play given the district context and overall strategic plan and the funding and capacity limitations of the UTR?

Top Five Lessons Learned from AUSL Leadership

1. The importance of a collaborative, collegial relationship between the district and the UTR operator: The district needs to be the lead partner, especially in terms of mission alignment, strategic planning, and resources. In our case, the autonomy to govern schools (both training and placement sites) has been as important as the financial support the district has provided.
2. Need for a clear understanding of the goals and outcomes for the program: Identifying the skills, dispositions, and knowledge of a successful Resident graduate is necessary to inform the design of the program, from recruitment and admissions to university coursework and clinical experiences to graduate supports.
3. Need for performance measures with accountability systems: Setting clear expectations for the program's development influences program design and allows for continuous learning for the organization.
4. Long term funding plan: Teacher residencies, while a good investment long term, are costly in the short run; having a strategy to raise the necessary funds is critical to getting off the ground.
5. Strong relationship with university partner/credentialing agent: The effective alignment of university coursework, as well as the broader programmatic and financial support this partner can provide, are essential to maximizing the theory to practice element of a UTR.

Top Five Lessons Learned from BTR Leadership

Residency programs will prosper to the degree that they consider the following:

1. Make the residency program the cornerstone of a larger human capital framework in the district that includes the hiring and assessing of teachers and leaders, their on-going school-based support and professional development, the creation of new roles and opportunities for professional careers.
2. Define and study teacher effectiveness and measure the graduates by the progress of their students.
3. Make sure the program has an instructional reform agenda that is internally coherent, and has aligned assessments and professional development.
4. Don't layer the residency program over current review practices and spending patterns; instead, reallocate resources in order to make the effort sustainable. Redirect dollars in places like salary lanes and recertification requirements.
5. Partner with a strong local organization; the "one foot out" of the district will ensure creative tension needed for continuous reflection and improvement.

Policy Implications

UTRs suggest a different way of doing the business of preparing teachers. These programs also challenge policymakers, higher education officials, and school district administrators to think and act differently about recruiting, preparing, and supporting quality teachers for urban schools. Attention to three major areas is particularly important for creating and sustaining successful UTRs.

Demanding High Standards. State and local policymakers should hold various preparation pathways to the same high-quality assurance standards. Massachusetts offers a good example where school districts can certify teachers who meet or exceed the expectations held for those who matriculate through university-based programs. In addition, policymakers could invest in new teacher performance assessments that would certify candidates are indeed ready to teach in challenging urban schools. Such new tools — e.g., the Performance Assessment for California Teachers — would allow for a wide variety of recruits, who enter teaching through traditional and alternative pathways, to establish they are "ready" to serve children responsibly. Policymakers should be willing to pay teachers who demonstrate knowledge, skills and effective practices with students more than other recruits.

Creating Financial Incentives. Policymakers should target available teacher preparation funding to providers who are best able to respond to high-needs school districts. At the federal level, the funding authorized under the Partnership Grants for the Establishment of Teacher Residencies in the Higher Education Opportunity Act is a step in this direction, providing resources to enable districts, universities, and non-profit organizations to develop UTRs.

State policymakers should work to ensure that state investments in teacher education are preparing teachers committed and able to teach in the state's high needs schools. States may take different routes to this policy goal – but creating competition and accountability to prepare teachers that meet specific state and district needs is essential. States might consider redirecting funding currently available for post-baccalaureate teacher education towards preparing institutions – be they universities, education non-profits, teacher organizations or others – that can demonstrate their ability to prepare high quality candidates for high-needs schools and are willing to be held accountable for their results.

Also, as mentioned previously, local policymakers should allocate salary dollars so that high-needs schools with more novice teachers receive their fair share of average salary dollars, which would allow greater investment in recruitment, preparation and support of new teachers, including those in UTRs. These schools would then have funds to pay novice teachers stipends so that they can afford to spend a year preparing to teach, and districts would be able to invest more heavily in the on-site Mentors and teacher educators needed to prepare them. While districts currently tend to spend "extra" salary dollars on reducing class size, some researchers have concluded that deeper investments in recruiting and preparing more qualified teachers are a more cost-effective way to achieve better overall student learning results.[22]

Managing a Portfolio of Pathways. Increasingly, urban districts have – by plan or by default – a portfolio of pathways into teaching. UTRs are potentially a valuable addition to this portfolio. Districts should take steps to actively manage the portfolio to increase the odds that they can gain the mix of talent that best meets the needs of children for well-prepared and committed teachers in the most cost-effective way possible.

To accomplish this, district administrators should develop metrics to assess new teachers' performance and retention, report these data by preparation source and the cost to the district, forecast teacher workforce needs, and use this information to guide decisions about which programs to support and use for hiring. States should also use this data to guide funding and program approval decisions. Districts and preparing institutions should communicate findings to policymakers, teaching candidates and the public who ultimately fund their human capital system.

In Closing

The power and potential of UTRs lies in their commitment to: (1) address the real teacher supply and quality needs of school districts, (2) leverage the best K-12 educators as mentors and teacher educators in preparing the next generation of teachers, and (3) promote redesigned schools organized for students and teachers to learn. These commitments are simultaneously basic and revolutionary. They are not proprietary to UTRs; they are not new. But UTRs represent a renewed approach that can alter the current debate over university- based teacher education and alternate certification as well as expand the vision for recruiting, preparing, and retaining quality teachers for urban schools.

UTRs may cost more in upfront investments than most university-based and alternate pathways to certification, but they have potential to bring important benefits that reach well beyond the scope of most teacher preparation programs. Also, financial data suggest that successful UTRs could be quite cost-effective. The initial expense of a full-time, paid internship under the supervision of a master teacher can be offset by both the retention of novice teachers and their increased teaching effectiveness over time.

UTRs represent an approach to teacher preparation and retention that can shift the focus from the needs of preparing institutions and organizations to those of districts and schools, and the students they serve. We hope the data and issues raised in this report generate community dialogues on teacher preparation and retention and prompt policymakers to think differently about the human capital systems in urban public schools.

Appendix

Key elements and components of the BTR and AUSL programs

Urban Teacher Residency Program Elements and Components 2007-2008		
	Boston Teacher Residency	*Academy for Urban School Leadership*
Residents, Mentors, and Director Staff		
Total Residents AY '07-08	84	53
Applicants	450	219
Acceptance Rate	18%	24%
Total Number of teachers in district	4,979 (FY 07)	24,664 (FY 2006-07)
Target Population	Recent college graduates from top universities, career changers from other professions, and people who have demonstrated a commitment to Boston	College graduates and mid-career professionals
Percent of Residents in high need areas: math, science, special education, ELL	57% of middle/high school Residents; all Residents get dual licensure in special education	32%
Retention Rates	90% (after 3 years)	95% (after 3 years)
Resident Financial and Employment Agreement		
Resident Compensation:	$11,100 stipend & health insurance	$32,000 stipend & health insurance (Residents sign a contract to teach 4 years or repay their stipend.)
Resident Expense: Tuition for program	$10,000 (one-third forgiven for each year as a BPS teacher)	none
Tuition for master's degree	$3,700 (AmeriCorps funds used to reimburse U-MASS this amount)	$11,500 (Students may take out loans through the university financial office.)
Employment Commitment to District's)	Four years: one year of training and three years teaching in the BPS	Five years: one year of training and four years teaching in the CPS

Urban Teacher Residency Program Elements and Components 2007-2008		
	Boston Teacher Residency	*Academy for Urban School Leadership*
Program Components		
Length of Residency	13 months	12 months
Assessment Tool for Residents	BPS Dimensions of Effective Teaching + Massachusetts Professional Teaching Standards	Illinois Professional Teaching Standards
Program Components	**Year 1: July-August:** Classroom management and lesson planning courses, work in summer school classes or take content classes, depending on need. **Sept.-June:** Four days a week in host school with mentor teacher; continue graduate level coursework; develop a teaching portfolio, consisting of performance-based assessments aligned with program and district standards. **July (2nd summer):** Residents complete coursework for master's degree and work towards Special Education Licensure. **Year 2:** Graduates have a full-time, paid teaching position with induction support from BTR and BPS. Complete Special Education licensure.	**Year 1:** June-August: Full-time graduate level coursework delivered by university partners **Sept.-June:** Four days a week in training academy; continue graduate level coursework at training sites and university sites one day a week; develop a teaching portfolio, consisting of performance-based assessments aligned with program and district standards. **February:** Elementary Residents switch training academies and are assigned to a new mentor teacher. **Year 2:** Begin teaching in AUSL turnaround school or affiliate and receive coaching and induction from AUSL field coaches. **Year 3:** Coaching continues through AUSL coach
Resident Weekly Schedule	Four days a week with a mentor teacher; classwork all-day on Fridays and one afternoon a week.	Four days a week with a mentor teacher; graduate classes held one day a week
Certification Requirements and Licensure		
State Certification	BA, pass Massachusetts Test for Educator Licensure (MTEL): Communication and Literacy Skills and Subject Matter Tests, complete approved program	BA, pass Illinois Certification Testing System (ICTS): Basic Skills Test and Stat Content Area Test (for secondary teachers)
University Partnerships		
University	University of Massachusetts/Boston	National-Louis University (NLU) and University of Illinois at Chicago (UIC)
Degree Earned	Master's in Education (after one year)	NLU: Master's of Arts and Teaching (MAT) UIC: Master's in Educational Studies

Endnotes

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4. This study of Urban Teacher Residencies, was based on the following sources of information collected between October 2007 and April 2008: review of publicly accessible and internal program documents provided by the UTRs and the UTR Institute; an onsite visit to each of the UTR programs that included individual and focus group interviews of program staff, participants, and school personnel, as well as classroom observations; similar data collection from Bank Street College as a case of IHE-initiated partnership with urban schools; a financial analysis conducted by Education Resource Strategies; and commissioned essays from teachers representing various roles and positions: an experienced urban teacher, a mentor with a UTR program, and a UTR Resident.
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