

Urban Teacher Residency United (UTRU)

SEED Proposal

Teacher Residencies: Redefining Preparation for High-Need School Districts

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Urban Teacher Residency United (UTRU)

Supporting Effective Educator Development (SEED) Grant Proposal 2015

Absolute Priority 1: Supporting Practices and Strategies for Which There Is Moderate Evidence of Effectiveness

Absolute Priority 2: Teacher or Principal Recruitment, Selection, and Preparation

Competitive Preference Priority 3: Promoting STEM Education

Competitive Preference Priority 4: Supporting High-Need Students

Teacher Residencies: Redefining Preparation for High-Need School Districts

INTRODUCTION: Preparing Effective Teachers Through the Residency Model

Through the ever-raging education reform debates, particularly those relating to the achievement gap and outcomes for urban and rural students, one fact remains clear: the single greatest in-school factor impacting student achievement is the quality of the student's teacher (NCCTQ, 2005). To best prepare those teachers for high-need classrooms requires an evidence-based, culturally relevant, long-range approach that marries theory and practice (Ball & Forzani, 2011). This historically has not been the norm; even now, thirty years after *A Nation at Risk* highlighted the glaring deficiencies in our educational system, proposed higher admissions standards for teacher education and intensified teacher training and support, the bar remains appallingly low. But the residency model, which pairs pre-service teachers with an effective, experienced mentor for a full-year immersive classroom experience that integrates master's level classwork, has shown promising positive impact in recruiting, preparing, developing, and sustaining high quality teachers for our country's neediest schools.

Created in 2007 to codify the model, influence policy, and develop standards of practice for residencies across the country, Urban Teacher Residency United (UTRU) has partnered with dozens of programs (see Appendix A, UTRU Network and Consulting Partners, Map) to develop and sustain high quality residencies with the ultimate goal of increased student achievement in

areas of highest need. With virtual staff across the country and partner programs spanning 15 states, UTRU is the only national nonprofit organization devoted to promoting the expansion and quality of residencies. Three-year retention rates for UTRU's network partner programs' 2,660 teachers is 84% - more than 30 percentage points higher than the typical rate in urban schools. Residency graduates are diverse and working in high need areas - 38% are teachers of color, and one third teach STEM subjects. UTRU stands as a pioneer in the world of teacher education, bringing the clinically-based preparation model to scale while remaining faithful to district needs.

UTRU now proposes the *Redefining Preparation* program to expand its effectiveness in developing, innovating and sustaining highly effective residency programs with a Supporting Effective Educator Development (SEED) project that will establish nine new residencies to support up to 450 effective residents and 450 high quality mentors in high need districts, evaluate the implementation and impact of the programs, and provide a first-of-its-kind virtual resource library to broadly disseminate best practices of the clinically-based preparation model.

The proposed three-year UTRU expansion, research, and dissemination initiative builds from extensive research on teacher effectiveness, integrating a validated model of teacher recruitment, preparation, and retention with significant operational and strategic planning support to create a pipeline of highly effective teachers - improving student learning and providing the foundation for further sharing of best practices. Combining the residency approach to teacher training with this level of support and codification, the proposed *Redefining Preparation* project will establish a professional teaching trajectory spanning numerous partnership models across several states, preparing high quality teachers to enter and stay in high need schools.

Specifically, with SEED finding, **UTRU's *Redefining Preparation* project will:**

- 1) Expand the reach and impact of the residency preparation model by preparing highly effective

teachers to work in high-need schools. All UTRU partners in the SEED project will **increase the number of effective new teachers prepared for high-need schools and in high-need areas such as STEM and ELL** (Absolute Priorities 1&2; Competitive Preference Priorities 3&4). UTRU will achieve this goal by:

- Selecting nine new residency programs utilizing robust selection criteria (AP2);
- Engaging those programs in UTRU’s New Site Development Program, which includes:
 - **A rigorous, competitive resident recruitment & selection process** (AP1&2; CPP 3&4);
 - A process for developing and/or ensuring **induction support for teachers in at least their first two years** as teacher of record (AP1&2);
 - Tailored professional development for experienced teachers that **recruits, selects, and supports effective teacher educators to act as mentors** to emerging teachers, resulting in professional growth and recognition, improved practice, and retention (AP2); and
 - An innovative **teacher preparation curriculum that integrates the classroom practicum** with university coursework (AP2).

2) Advance the quality and impact of nine new teacher residency programs by engaging them in UTRU’s thriving Next Generation Network (AP2). UTRU will achieve this goal by:

- Facilitating an in-person and virtual professional learning community, offering programming that:
 - **Examines problems of practice** related to short- and long-term implementation and impact;

- **Identifies barriers to success and scale** by focusing on financial and programmatic sustainability challenges;
 - **Uses data and assessments** to improve and measure program impact;
 - **Shares innovations** in the residency model and clinical preparation more broadly; and,
 - **Solves challenges** related to program implementation.
- 3) Conduct a rigorous evaluation on the residency programs' implementation and impact and distribute findings to a broad stakeholder audience (AP2). The evaluation will,
- In significant part, look at **impact of residency graduates on student achievement**;
 - **Examine teacher performance** and overall school impact; and,
 - **Assess program implementation**, analyzing survey, interview, and extant data.
- 4) **Improve and expand the reach and impact of the residency program model** through the curation and dissemination of best practices with a virtual library (AP2).

In year one, UTRU will partner with The University of Texas of the Permian Basin (UTPB), a Hispanic-serving institution in the third fastest-growing small city in the nation, to create an urban- and rural-serving residency; St. Paul Public Schools (SPPS), to develop a district-led residency initiative in Minnesota; and the Ewing Marion Kauffman Foundation and Kansas City Public Schools (KC), to create a foundation-district residency partnership serving a first-ever mix of both charter and public schools. In years two and three, UTRU will select six additional similarly diverse programs through a rigorous selection process (further described in Appendix B, UTRU's Criteria for Engagement). Foundational and potential partners for this opportunity have signed letters of support for the proposed project (Appendix C, Letters of Support).

Partnering with these nine programs over the course of the three-year SEED grant period, UTRU will train up to 450 novice teachers to become effective, long-term educators in the highest-need areas through the residency programs and continued graduate induction support. UTRU and partners will also train up to 450 effective, experienced teachers as resident mentors, coached and supported as they understand and execute the principles of adult learning; approximately 117,000 students in nine high-need districts across the country will directly benefit from the new teachers prepared in the proposed UTRU SEED residencies.

Absolute Priority 1: Supporting Practices and Strategies for Which There Is Moderate Evidence of Effectiveness

Through four key strategies, UTRU addresses the growing need to develop, innovate, and sustain high-quality teacher residency programs nationwide:

- *Strategic Consulting (New Site Development Program):* Develop highly effective, performance-based residency programs through research based technical assistance.
- *Next Generation Network:* Offer and facilitate responsive, innovative programming to improve impact and outcomes for a growing network of high quality residency programs.
- *Practice to Policy:* Bridge the gap between practice and policy by focusing on state and federal level reform initiatives, financial sustainability, and program scale.
- *Research & Evaluation:* Identify, explore, and disseminate best practices and lessons learned from residencies to influence teacher preparation practices nationwide, and to support the continuous improvement of other core strategy areas. (See Appendix D, UTRU Organizational and Core Materials, Four Pronged Strategy)

Effectiveness of the residency model. UTRU partner programs tackle a crucial school district problem in an innovative way: placing the locus of teaching preparation in classrooms, rather than the academy. The residency model blends a rigorous, full-year classroom apprenticeship for

emerging teachers with a carefully aligned sequence of masters-level coursework, either through an institution of higher education (IHE) or other certification provider. Residents learn alongside a residency-trained, high quality mentor teacher in the district in which he/she will eventually work. Coursework is tailored to the district context, with residents learning the district's core instructional initiatives and curriculum during the training year; UTRU partner residencies require candidates commit to teach for a minimum of three years in the district.

The effectiveness of residency programs, further detailed below, stems from a laser-sharp focus on the core elements of the model – which have been codified and reinforced by UTRU to ensure high quality programming across residency sites (Appendix D, UTRU Organizational and Core Materials, Logic Model):

- Rigorous recruitment and selection of residents;
- Targeted selection, training and support of mentors;
- Integrated masters coursework and residency training, bridging theory and practice;
- Intensive pre-service preparation focused on specific needs of teachers in diverse schools;
- Coordinated induction support; and,
- Strategic placement of graduates.

The residency model is unique in the multiple-component approach of the preparation programming and in how the core components are delivered in a school-based environment. Building on influential research on rigorous candidate selection and new teacher induction, the *Redefining Preparation* project will contribute significant research to how the core components of the residency model delivered in a clinical environment results in the preparation of effective new teachers. The logic model of the residency and the initial findings of UTRU partner program impact provide early evidence of the power of residency preparation model.

UTRU partner programs' impact. Preliminary research on UTRU partner programs across the country has shown the impact of these core elements in combination. Early impact data from the Memphis Teacher Residency (MTR), for instance, shows that MTR-trained teachers had higher student achievement gains than non-MTR teachers. MTR graduates are performing, on average, at a Level 5/Most Effective on the Tennessee Value-Added Assessment System (Tennessee Higher Education Commission Report, 2014). Denver Teacher Residency graduates outperformed all other novice teachers across all 12 indicators of the Denver Public Schools' Framework for Effective Teaching, and 97% of principals reported that they would be more likely to higher a candidate from DTR than from any other teacher education program. In California, Aspire Teacher Residency's (ATR) graduates performed significantly better than other first year teachers on the Aspire Teacher Effectiveness Framework in early results from the program's first two cohorts of residents; overall, in 2013, 90% of ATR graduates in their first and second year as teacher of record were rated at the Master (14%), Highly Effective (21%), and Effective (55%) levels (UTRU Network Impact Report, 2014). Similarly, Rockman et al. has shown significant gains in student growth against New York State summative measures for graduates of NYC's New Visions-Hunter College UTR program; longitudinal data shows that UTR residents and graduates have successfully increased academic achievement, often to a greater degree than other early career teachers. This data also suggests that having a UTR-trained teacher can narrow the performance gap between students on Individualized Education Plans and their peers (Rockman et al., 2015).

Highly competitive recruitment and selection process. Like the proven recruitment and selection process used by Teach for America (TFA), UTRU partner programs engage in a targeted admissions process to select residents – with attention to, and selection activities based

upon, both their leadership abilities and academic achievements but notably not their teaching background. Highly selective (last year, just 24% of applicants were admitted across UTRU's programs, far below the average at schools of education), residencies recruit talented and committed people from diverse backgrounds to fill the hiring needs of underserved, often high-poverty urban and rural districts. A 2004 Mathematica study of TFA's highly similar selection process showed strong evidence of effectiveness as defined in the SEED notice, with students of TFA math teachers performing significantly better than those of their non-TFA peers (Decker, 2004, Appendix E, Documentation of Moderate Evidence of Effectiveness).

The mentoring model. The educational research literature points strongly to the importance of the residency's intensive yearlong apprenticeship alongside an effective, experienced mentor teacher (Feiman-Nemser & Beasley, 1997). Mentors' work with residents is based on a cognitive apprenticeship model, grounded in sociocultural principles of adult learning; they assist the performance of residents and provide scaffolding and support as the novices move through increasingly challenging – but realistic – tasks (Feiman-Nemser & Beasley, 1997; Nyikos & Hashimoto, 1997; Wood, Bruner, & Ross, 1976; Vygotsky, 1978). UTRU partners construct the mentoring relationship as a year-long conversation based in practice through the effective use of observations, discussions, data collection and analysis, as well as co-teaching opportunities; residents gradually take on increasing levels of responsibility as their skills, knowledge and confidence grow.

Linking theory and practice. The integration of masters coursework with daily teaching activities in the UTRU partner programs enables residents and mentors to skillfully bridge theory and practice, a demonstrated factor in teachers' effect on student achievement (Cochran-Smith & Lytle, 1999), and allows for deeply contextualized learning embedded within the local school and

district priorities - which in turn enriches and improves residents' instructional practice (Hiebert, Gallimore, & Stigler, 2002; Darling-Hammond, 2006). Teachers who have had this type of relevant coursework coupled with extensive guided practical preparation in an urban classroom are more likely to teach in flexible, learner-centered ways and to support student learning (Baumgartner, Koerner, & Rust, 2002; Denton, 1982; Henry, 1983; Ross, Hughes, & Hill, 1981; Sunal, 1980, all cited in Darling-Hammond, 2006); research also shows that extensive preparation involving integrated field and coursework components lessens teacher attrition rates (Berry, 2001; Darling-Hammond, 2003, 2006; Darling-Hammond, Hudson, & Kirby, 1989; Henke, Chen, & Geis, 2000; Humphrey & Weschler, 2005).

Sustained induction supports. In their first years as teachers of record, UTRU partner residency graduates receive induction supports - significantly more guidance and coaching than is provided through traditional teacher education programs. UTRU's consulting on the development of comprehensive induction support is based in significant part on the New Teacher Center model, which has been proven to have positive impact on students learning (See Appendix E, Documentation of Moderate Evidence of Effectiveness for "Impacts of Comprehensive Teacher Induction," Glazerman, et al. 2010). Based on the large body of research showing the critical importance of such support in the first years of teaching to both retention and effectiveness, residency induction supports include rigorous selection and training of mentors teachers; resident-mentor interactions focused on instruction, and conducted in a learning cycle of observation, practice, and feedback; formal and informal assessment of resident and graduate performance; and additional school and residency program based support (Glazerman et al., 2010). The residency program curriculum often includes Critical Friends Groups, content-based learning communities, as well as Instructional Rounds, a set of protocols

and processes for observing, analyzing, discussing, and understanding instruction to improve student learning at scale. Residencies provide graduates with additional support and structures as they continue to use data to build instruction, build and sustain productive teams, and gain the skills necessary to move into leadership roles; coaching to build these communities of practice, as well as the opportunity for leadership development within schools, has been shown to have a positive impact on teacher retention and effectiveness, and participation in these cooperative working relationships is a key factor in positive teacher development (Bryk et al. 2010; Seashore Louis, Kruse, & Associates, 1995).

Retention. Roughly 50% of all new teachers leave underperforming urban districts within the first five years of their careers. General estimates point to losses of \$17,000 - \$20,000 for each teacher that leaves, a figure that does not reflect the accompanying negative impact on student learning; researchers estimate the national impact of teacher turnover at \$2.2 billion dollars (Ingersoll, 2015). This revolving door at the front end of the teacher career path is particularly concerning in light of considerable evidence that teachers become significantly more effective in increasing student achievement over their first three to five years, and continue to improve beyond (Papay and Kraft, 2015); districts lose teachers just as they are becoming effective. UTRU partner programs, however, have retained 83% of their graduates in the partner districts, increasing student achievement as their own skills grow through ongoing induction and peer support.

Ultimately, the *Redefining Preparation* project aims to implement practices in each of these areas that will be sustained by UTPB, Kansas City, St. Paul, and additional partners, and to codify learning so that they can be adopted by other agencies across the nation, including IHEs, districts, and nonprofit organizations. The proposal's strong evaluation component is designed

to capture the impact of this work, extending beyond the grant period, in order to best understand both the individual impact of each program on teacher growth and student learning.

A. SIGNIFICANCE

A1. National Significance

Seeing the power in a school-based teacher preparation model, in 2005, the three pioneering residency programs-- Boston Teacher Residency, Chicago Teacher Residency, and Colorado Boettcher Teachers Program-- formed the Coalition for Urban Teacher Residencies, to exchange best practices and share a common vision for how to scale and support the development of teacher residency programs in high-need urban districts nationwide. Quickly overwhelmed by the demand to develop new residency programs, they combined their resources and expertise to support the launch of a new organization, Urban Teacher Residency United (UTRU), in 2007.

At the same time, the National Council for the Accreditation of Teacher Education, now the Council for the Accreditation of Education Preparation (CAEP), launched a seminal report calling for the overhaul of teacher preparation to a clinical approach. The *Blue Ribbon Panel on Clinical Preparation and Partnerships for Improved Student Learning* featured residency programs as a core solution to teacher training and retention challenges. Spurred by this report and the early impact of the pioneering residency programs, a national movement around teacher residency preparation emerged - a movement that today UTRU is responsible for leading and nourishing as a core part of its mission.

As its initial task, UTRU began to codify the residency model and its core components, leading to standards for building highly effective, sustainable programs in high-need districts around the nation. This codification process took one year and engaged the three founding residency programs, as well as dozens of experts in the field of teacher preparation. The result was a comprehensive appraisal of high-quality teacher residency programs, and the identification

of the core components of the model that would result in high impact outcomes on student achievement and teacher effectiveness. Dozens of early adopters used UTRU's standards as the foundation for launching new residency programs, including many that were awarded US Department of Education grants through the Teacher Quality Partnership program. This early work still serves as the foundation for UTRU's new site development curriculum, but has evolved to be performance-based and effectiveness-driven, and to align to the standards movement, best practices in data literacy, and incorporate rigorous assessments of student and teacher performance. Today, UTRU's *Power Standards for Effectiveness Driven Residency Programs* are at the leading edge of transformed teacher preparation programming (see Appendix D, UTRU *Power Standards*.) The demand for the residency model continues to grow- new CAEP standards name clinical preparation as a core component of high quality teacher training (CAEP, 2013); the Council of Chief State School Officers is examining the state's role in new teacher preparation and has identified residencies as a promising innovation (CCSSO, 2012); the National Education Association has called for every new teacher to be prepared in a residency program (NEA, 2011), and the National Board for Professional Teaching Standards has put residency preparation forth as the future model for how effective teachers will be prepared (Thorpe, 2013 and 2014). UTRU is partnering with these organizations, states, and other education stakeholders nationwide to continue to advance and propel the movement, building on the early and promising impact of UTRU's partner residency programs, and disseminating the lessons so that future residencies benefit from this valuable knowledge. The addition of the nine residency programs proposed in the *Redefining Preparation* project will enhance the movement toward the residency model as the foundation for high quality teacher preparation, providing deeper understanding of the intricacies

of clinically-rich preparation and the impact of mentoring, induction, and integrated theory and practice.

A2. Potential contribution to the development and advancement of teacher and school leadership theory, knowledge, and practices.

Because UTRU is the only national nonprofit devoted to ensuring the quality, sustainability and expansion of residencies throughout the country, the outcomes of the *Redefining Preparation* project have significant implications for the field of teacher preparation. UTRU's demonstrated success in supporting the development of high-quality, effective residency programs will take on new significance with the addition of nine new partnerships across varied and often unique contexts. The University of Texas of the Permian Basin (UTPB) is the first known Hispanic-serving institution to launch a residency, and it will impact teacher preparation in both rural and urban settings in a wide swath of west Texas; the Kansas City residency is the first proposed residency partnership between a foundation and a public school system serving both public schools and charter management organizations (CMOs); St. Paul Public Schools is only the third urban public school district to found a residency program, and its plan to fully integrate the residency model into its human capital planning is groundbreaking. The partners in UTRU's current pipeline, which will become the SEED programs in year two and three of the grant, are similarly diverse in structure and focused on confronting the hiring and teacher quality concerns specific to their district contexts.

The residency programs that UTRU develops through its New Site Development Program are based upon the best and promising practices of over two dozen residency programs that UTRU has co-constructed over the last eight years, and are mapped to the *Power Standards*, allowing for innovation and adjustment based on local context. UTRU has intentionally developed a complementary cycle of continuous learning, both for teacher residencies and the field of teacher

preparation. Two of UTRU's core functions – to develop new residencies and to support existing programs – allow the organization to identify implementation successes and challenges in the field, codify these improvements in real time, and then implement the learning for newly developing residencies. No two programs are exactly the same for this reason; each generation of UTRU programming is better than the last, ensuring that districts and their partners are producing only the highest-quality teachers from the residencies that UTRU helps to build.

UTRU's mission also incorporates, as a key priority, the transformation of teacher preparation writ large. Residency programs now serve as key drivers in the teacher effectiveness movement, with proven results in both student achievement and retention. To propel the movement, to serve emerging programs, and to disseminate key learning from residency programs to all of teacher preparation, UTRU has recently launched a Research & Evaluation Department with support from the Bill & Melinda Gates Foundation. To kick off this initiative, UTRU is publishing *Clinically Oriented Teacher Preparation*, the first study in the nation that curates promising practices in clinical preparation in traditional and alternative settings. The residency programs proposed in this application, and the accompanying evaluation, will continue to increase the knowledge base around what works in clinically-based teacher preparation.

The proposed resource library will capture those learning, assembling best practices of the residency preparation model in hundreds of hours of video of co-teaching, mentor/resident instructional practice, coaching sessions, and examination of student work. This resource library will provide a much-needed foundation to intensify and expand rich clinically-based preparation. Nothing of this kind yet exists; it will serve as a roadmap for districts, IHEs, CMOs and others to build residencies and adopt the best practices in teacher preparation.

The proposed evaluation, conducted by American Institutes for Research (AIR), adds particular impact to the project; the ability to track, assess, analyze, and disseminate findings on recruitment, selection, training and support of pre-service, novice, and experienced teachers across such disparate geographic contexts will provide extensive knowledge for the field.

A3. The importance or magnitude of the results or outcomes, especially improvements in teaching and student achievement.

With the demonstrated effectiveness of residency programming previously detailed in this application, the addition of nine high quality programs, up to 450 newly prepared effective teachers, and up to 450 additional trained mentors - to serve both urban and rural districts with both public and charter schools, and to address the critical problems of teacher preparation in high-need areas for high-need students - is monumental. Learning from the project will impact 117,000 students across nine districts. The high retention rate of residency-trained teachers means that those teachers prepared through the *Redefining Preparation* project will continue to increase in effectiveness and improve student achievement in the high-need areas in their chosen district for years beyond the grant period, impacting thousands of additional students as well as teachers' professional learning communities and school-based teams.

In addition, upon successful completion of the NSDP and meeting of the *Power Standards*, the residencies developed through the SEED project will be invited to join UTRU's Next Generation Network. This growing network represents the most innovative and effective programs in the country, which embody and value learning, knowledge sharing, and innovation to prepare highly effective teachers for high need classrooms. The *Redefining Preparation* programs will continue to learn through Critical Learning Initiatives--inquiry cycles geared at collective problem-solving – and a yearly symposium, instructional rounds, and deep attention to data

collection, analysis and reporting. Teachers prepared through these programs will benefit from the shared knowledge and resources of an ever-growing network of effective and impactful programs across the country.

B. PROJECT DESIGN

Absolute Priority 2: Teacher or Principal Recruitment, Selection, and Preparation

The UTRU model. In 2009, UTRU developed the New Site Development Program (NSDP) to support cities starting new residency programs. NSDP is a two-year long program of support for school districts, nonprofits, and universities who are developing residency-based teacher preparation programs. NSDP combines an intensive series of learning institutes, as well as site-based and virtual individualized consulting services. Through the NSDP, UTRU provides training and support to residency programs in their design year and in the first year of program implementation, leveraging the learning of other effective teacher residency programs.

The NSDP is an action-oriented program that works with teams from cities that are building residency programs. During the Institute series, sites come together to learn as a cohort, creating a critical friends group that engages in thoughtful reflection and analysis of their emerging programs. In between Institutes, participants work with UTRU staff consultants to develop, modify, and strengthen specific aspects of program design. A core objective of the NSDP is to utilize UTRU's expertise, its *Power Standards*, and the lessons of existing programs to build residencies that are tailored to a local context, ensuring that local students are served. To date, 18 emerging residency programs have participated in the NSDP.

Institutes. In years one and two of the grant period, UTPB, Kansas City, and St. Paul will engage in the NSDP Institutes. UTRU has developed strong partnerships with these three

programs over the last 6-12 months, and they have been assessed and determined to be well-prepared to enter New Site Development programming this year.

Institutes are held every 8-10 weeks throughout the year, at UTRU's headquarters in Chicago and in cities of existing residency programs, so that participants can observe programs in action. In the weeks between sessions, teams submit work products for feedback from UTRU staff consultants with expertise in the specific content area of the assignment. These work products expand the work of each session and make up the critical building blocks of the programs. Each Institute includes time for the teams to develop, share, and receive feedback on the essential program documents, guidelines, and frameworks.

Scope and Sequence of Institutes. The content for the NSDP curriculum is organized into five distinct phases, each represented by an Institute (see Figure 1, UTRU New Site Development Program below).

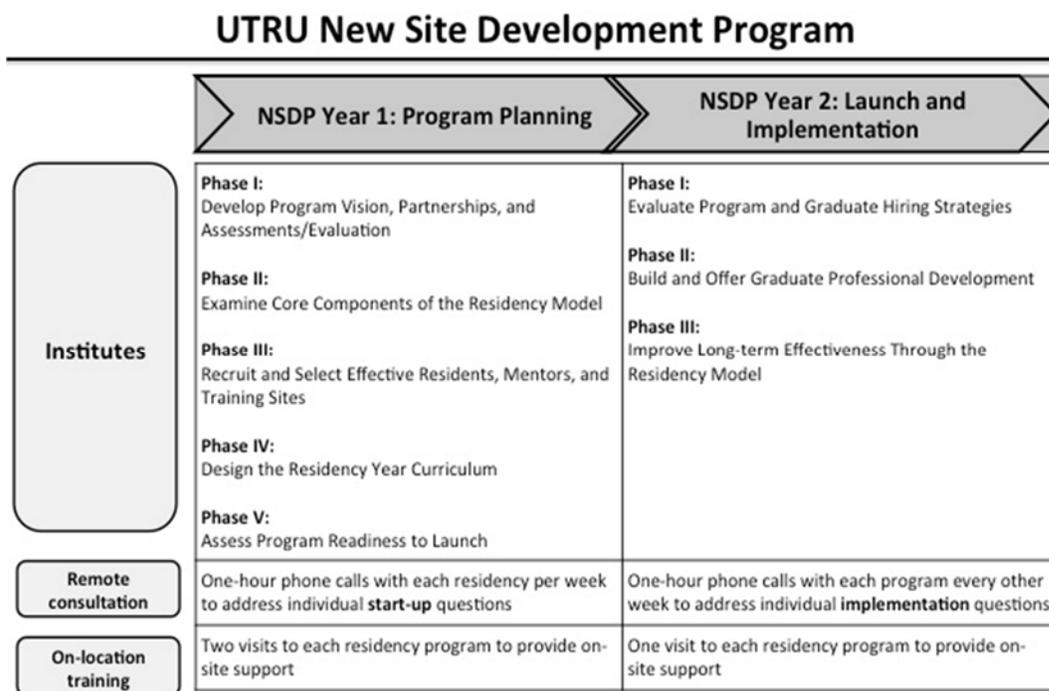
Year 1, Institute I: Develop Program Vision, Partnerships, and Assessments/ Evaluation.

NSDP programs will create impact goals that align to the district/CMO human capital strategy and all stakeholders' interests and initiatives. Program impact goals focus on accelerating student achievement and developing effective teachers. UTRU staff will facilitate sessions with program partners to develop and strengthen local partnerships, to clarify the mission and vision of the residency program, and to begin building a program management infrastructure that will guide the design, delivery and evaluation of an effectiveness driven residency program.

Institute II: Examine Core Components of the Residency Model. NSDP participants leverage the core components of the residency model to prepare program graduates to be classroom ready on day one. Participants will engage in an intensive learning institute and structured site visit to an effective residency program to examine the components of the residency

model: inter-institutional partnership between districts/CMOs, IHEs, teachers unions, and nonprofits; strategic recruitment and selection; clinical experience; mentoring; targeted candidate hiring; and new teacher induction.

Figure 1. UTRU New Site Development Program



Institute III: Recruit and Select Effective Residents, Mentors, and Training Sites.

Programs will participate in an intensive learning institute to develop a rigorous recruitment and selection process for residents, mentors, and training sites. This process will guide the program to recruit and select residents and mentors who demonstrate the dispositions, knowledge, and skills predictive of student achievement for the district/CMO and will be aligned to previously developed impact goals.

Institute IV: Design the Residency Year Curriculum. NSDP participants will identify strategies for engaging residents in meaningful clinical preparation and rigorous, ongoing assessment of effectiveness. Participants will learn about the close integration of theory and

practice characteristic of residency programs, as well as the content, pedagogy, and sequence of a high quality curriculum. Mapping backwards from their teacher effectiveness framework, participants will develop an evidence-based teacher preparation program that will ensure only those residents who demonstrate the ability to positively impact student learning will successfully complete the program and become a teacher of record.

Institute V Overview: Assess Program Readiness to Launch. UTRU staff will collaborate with program participants to conduct a comprehensive program inventory to ensure that key design components are in place for a successful program launch. This will also be the final quality checkpoint, where program partners will receive feedback from UTRU staff on the residency program's strength and challenge areas.

When programs demonstrate success on the Program Inventory they will enter the implementation phase and year two of the NSDP.

Year 2, Institute I: Evaluate Program and Graduate Hiring Strategies. UTRU will conduct an onsite visit of the program, observing resident and mentor teaching and learning in the residency model. UTRU and program staff will analyze implementation data together to develop and determine the best strategies for graduate placement and hiring.

Institute II: Build and Offer Graduate Professional Development. UTRU will facilitate multiple sessions onsite with Program Director, Design Team and Program Partners to examine all implementation data collected to date. The program will prioritize program needs, determine strategies to meet those needs and demonstrate impact to date with its stakeholders. UTRU will provide programming and technical assistance to guide the development of a Graduate Professional Development Plan.

Institute III: UTRU Annual Symposium. NSDP participants join UTRU Network

Programs to engage in hands-on working sessions to build network-wide knowledge and skills on a particular theme or topic area of critical importance to improving student achievement through teacher preparation. Symposium is an annual event that highlights and advances the key learning from UTRU's Critical Learning Initiative. UTRU invites experts from multiple arenas to share the latest research and promising practices in teacher preparation.

Throughout the NSDP, UTRU will continuously monitor the completion and quality of the design elements as well as track program achievement of implementation and impact targets. UTRU will use the data collected to provide real-time technical assistance to improve program outcomes. Upon successful completion of NSDP, program partners will be invited to join the UTRU Network.

Individualized Support. UTRU provides individualized support services to address the specific needs and dynamics of each developing program. This provides teams with in-depth consultation on particular aspects of their program design. Technical assistance may serve as a follow-up to work begun in an Institute session or may address a local implementation challenge.

Residencies that meet UTRU's standards for quality are invited to join the Next Generation Network (see Appendix D). Partners participate in professional development at Symposium and learn about model innovations at partner site visits throughout the year aimed at improving program quality. UTRU also commissions research on residency-based teacher preparation and promotes the model to policy makers in local, state and federal government.

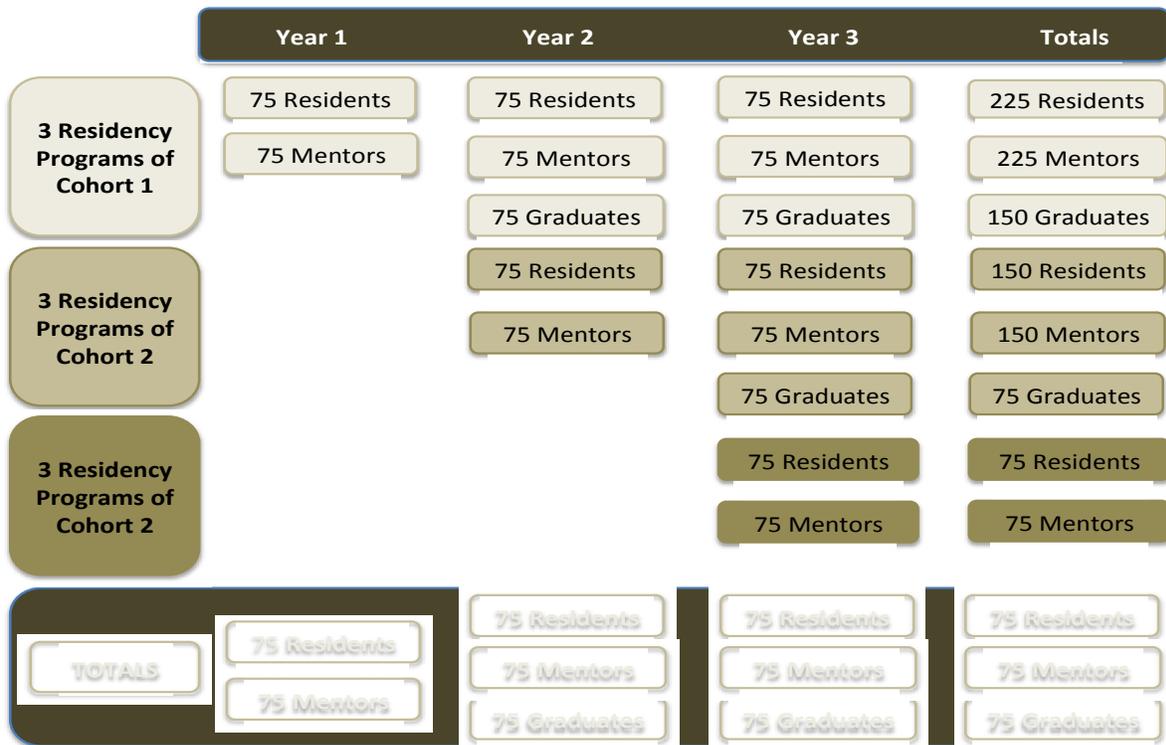
NDSP Site Selection. Like the residency programs that UTRU helps to develop, UTRU itself employs a rigorous selection process for assessing the readiness and potential of emerging partners; the three programs in this proposal have met each of these criteria, as UTRU has formed

deep partnerships with them over the course of the last 6-12 months. NSDP entrance criteria includes, but is not limited to: assessing whether or not programs have a data based rationale for residency program (need, scale, impact, and interest); if a plan exists for measuring resident and graduate effectiveness and retention; and if there is alignment of the residency program with existing human capital strategies (see Appendix B, Criteria for Engagement). The next six SEED partners that UTRU seeks to engage will also meet UTRU’s full selection criteria. Each indicator is based upon UTRU’s eight years of experience in developing residencies, and in creating a knowledge base around early indicators of program success.

Redefining Preparation Project Design

UTRU’s Redefining Preparation project will have a significant impact on partner programs over the three-year grant (see Figure 2).

Figure 2. Impact of the *Redefining Preparation Project Design*



Year One. In the first year of the SEED project, UTPB, Kansas City, and St. Paul will enter the New Site Development Program (NSDP). At the same time, UTRU will evaluate its pipeline of interested programs to gauge programs' readiness for entrance into the NSDP based on the entrance requirements aligned to UTRU's *Power Standards*.

Year Two. UTPB, Kansas City, and St. Paul will move on to year two of the NSDP, learning to effectively place and support graduates in high-needs schools and build a quality induction coaching program. Each program will prepare a second cohort of 25 residents in high-need areas, while supporting the 25 graduates in their first year as teacher of record with induction coaching. UTRU will choose three new promising residency programs to join the *Redefining Preparation* project and they will enter NSDP.

Year Three. The three new programs chosen in year two of the grant will move on to the second year of NSDP, providing induction support for the first 25 graduates in their first year as teacher of record while also developing a new cohort of 25 new residents and training mentors to support them. UTPB, SPPS, and KC will prepare their third set of 25 residents, while also providing induction coaching for their 50 graduates in their first and second years of teaching; assuming the three programs have fulfilled the requirements of NSDP, they will move into the Next Generation Network to gain and share knowledge with other high quality residency partners. UTRU will choose a third set of high potential residency programs for entrance into year one of the NSDP, adding another 25 residents to be prepared through this intensive, evidence-based model.

B1. Goals, objectives, and outcomes are clearly specified, aligned, and measurable. UTRU's goals for the *Redefining Preparation* project are described in Table 1 below.

Table 1. UTRU *Redefining Preparation* project goals and objectives

Goal 1: Increase the number of effective new teachers prepared for high-need schools and in high-need areas such as STEM and ELL	
Objectives	Outcomes
<ul style="list-style-type: none"> • Select nine new residency programs utilizing robust selection criteria • Engage them in UTRU’s New Site Development Program, which leads programs through the phases critical to the development of a high quality residency: <ul style="list-style-type: none"> -A rigorous, competitive resident recruitment & selection process for new residents -A process for developing and/or ensuring induction support for teachers in at least their first two years as teacher of record -Tailored professional development for experienced teachers that enables programs to recruit, select, and support effective teacher educators to act as mentors to emerging teachers -An innovative teacher preparation curriculum that integrates the classroom practicum with university coursework 	<ul style="list-style-type: none"> • Up to 450 new high quality residents in areas of highest need for their particular districts are prepared and supported in their pre-service apprenticeship, and integrated coursework informs and enhances their instruction • Up to 450 experienced, effective teachers in high-need areas are trained as mentors, and deepen their own practice through the process of working with another adult to examine and refine daily instructional moves.
Goal 2: Advance the quality and impact of new teacher residency programs by engaging them in UTRU’s thriving Next Generation Network; build capacity among the partners to fully implement, execute, and sustain their residency programs after the grant period ends.	
Objectives	Outcomes
<ul style="list-style-type: none"> • Work with UTPB, KC, and SPPS to ensure successful completion of NSDP Year One and Two, and meeting of UTRU’s Power Standards • Engage all three programs in the Next Generation Network • Participating mentors, teachers, and partners will commit to all elements of the UTRU program, the aim of which is to increase the number of highly effective teachers, thereby improving overall performance of the district. • All partners will organize and participate in facilitated communities of practice among grantees; this ongoing supportive communication will encourage partners to collaborate in solving problems and add 	<ul style="list-style-type: none"> • Three intensively prepared and evaluated programs will enter the Next Generation Network, informing their ongoing learning through deep engagement with veteran and emerging highest quality residencies. • The three programs’ 450 residents, 225 of them teachers of record, and mentors benefit from instructional rounds, CLIs, financial modeling, individualized supports and a network of smart, thoughtful, impactful residency programs with whom to work through challenges and share successes. • At the close of the grant period, all nine partners will be fully engaged in their particular place in the UTRU preparation continuum –whether

<p>innovations to their teacher development reform programs.</p> <ul style="list-style-type: none"> All partners will commit to sustainability by placing residents in paid positions, providing funding for released mentors, collaborating in mentor and school leader PD delivery, and gathering and analyzing program impact data. 	<p>NSDP Year One, NSDP Year Two, or the Next Generation Network.</p> <ul style="list-style-type: none"> Nine programs will successfully fundraise to sustain the program beyond the grant period and put in place structures to ensure financial stability All nine programs will be collecting and analyzing quantitative and qualitative data on program impact to understand their particular challenges, and have plans in place to do so beyond the scope of the grant.
<p>Goal 3: Conduct a rigorous evaluation on the residency programs’ implementation and impact and distribute findings to a broad stakeholder audience.</p>	
<p>Objectives</p>	<p>Outcomes</p>
<ul style="list-style-type: none"> In significant part, look at impact of residency graduates on student achievement; Examine teacher performance and overall school impact; and, Assess program implementation, analyzing survey, interview, and extant data. 	<ul style="list-style-type: none"> AIR and UTRU will see positive impacts from the nine residency partners in the SEED grant on student achievement, teacher performance, school climate and professional learning communities. UTRU and AIR will compile and disseminate the findings as part of the larger conversation about the movement toward clinically rich preparation generally, and residencies specifically, as the most effective means of teacher preparation and development.
<p>Goal 4: Build capacity among the partners to fully implement, execute, and sustain their residency programs after the grant period ends.</p>	
<p>Objectives</p>	<p>Outcomes</p>
<ul style="list-style-type: none"> Participating mentors, teachers, and partners will commit to all elements of the UTRU program, the aim of which is to increase the number of highly effective teachers, thereby improving overall performance of the district. All partners will organize and participate in facilitated communities of practice among grantees; this ongoing supportive communication will encourage partners to collaborate in solving problems and add innovations to their teacher development reform programs. All partners will commit to sustainability by placing residents in paid positions, providing funding for released mentors, collaborating in mentor and school leader PD delivery, and gathering and analyzing program impact data. 	<ul style="list-style-type: none"> At the close of the grant period, all nine partners are fully engaged in their particular place in the UTRU preparation continuum –whether NSDP Year One, NSDP Year Two, or the Next Generation Network. Nine programs are successfully fundraising to sustain the program beyond the federal grant period and have in place structures to ensure financial stability All nine programs are collecting and analyzing quantitative and qualitative data on program impact to understand their particular challenges, and have plans in place to do so beyond the scope of the grant.

Goal 5: Create open-source library to share learning	
Objectives	Outcomes
<ul style="list-style-type: none"> Partners commit to documenting practice, teaching and analysis, mentor-resident conversations and debriefing, and coursework UTRU and partners compile searchable library of video and document content 	<ul style="list-style-type: none"> The resource library is a much-used, easily accessible, highly beneficial tool for residency programs and other emerging teacher preparation programs to understand clinically-rich practice and its impact on teachers, students and school communities. Programs far beyond the UTRU network are taking advantage of the resources, and sharing knowledge of best practices for this type of preparation.

B2. Project is part of a comprehensive effort to improve teaching and learning and support rigorous academic standards for students.

Next Generation Network. Once programs have successfully completed the New Site

Development Program, UTRU invites them into its *Next Generation Network*, consisting of high quality residency programs that embody and value learning, knowledge sharing, and innovation.

These partners are part of a movement that proves and promotes the efficacy of the residency model, thereby advancing the teacher preparation reform movement writ large. They commit to preparing highly effective teachers for high need classrooms who are student-ready on day one.

UTRU offers Network partners an array of programming, services, and advocacy, acting as a hub of innovation in the teacher preparation, policy, and practice arenas. All programming is dynamic and responsive to the needs of the Network, and is designed to:

- **Strengthen the teacher residency movement** through robust advocacy and marketing support to create fertile ground for long-term sustainability.
- **Infuse the Network with innovations** informed by both promising practices from the field and the policy landscape.
- **Embolden Network partners as critical friends** within a professional community that prioritizes knowledge creation, acquisition, and sharing.

- **Strengthen program outcomes** by promoting the ongoing, meaningful use of program impact and implementation data.

Critical Learning Initiative. UTRU annually implements a Critical Learning Initiative (CLI) to connect network program improvement with issues of national significance, inject new learning and industry innovations into teacher residences, and solve programming challenges. This year, UTRU developed a CLI entitled “College and Career Ready Standards Alignment and Integration”, which will ensure alignment of resource and content pedagogy by assessing, identifying and developing technical support and programming around key competencies for ELA and math teachers and developing a curated set of standards-aligned resources and pedagogical practices. The CLI will also extend to the development and piloting of tools and systems to recruit, train, support and evaluate highly effective mentors and clinical faculty.

All of the residency programs developed through the *Redefining Preparation* project will be aligned to state standards as a result of this project, and residents and mentors involved in each program will both benefit from and have access to the suite of resources and practices designed.

Resource Library. By leveraging UTRU’s expertise on best practices in clinical preparation, as well core competencies of creating and sustaining strong, student-focused professional learning communities (PLCs), UTRU is well positioned to create the first of its kind online interactive platform and community of practice for teacher educators. With SEED grant support, UTRU will create the Teacher Education Collaborative (TEC), a virtual professional learning community for stakeholders from across the nation dedicated to transforming teacher preparation. It will serve to codify and disseminate best practices emerging from residencies, as well as other clinically-rich teacher preparation programs, and drive broad-based, systemic improvement in the field of teacher preparation. The TEC will significantly expand UTRU’s reach, create a mechanism to

scale best practices beyond the scope of the network of residencies, and influence the field of teacher preparation writ large.

The TEC will feature rich, dynamic content, including a video library of best practices in teacher preparation with accompanying resources and tools, live events such as webinars and virtual convenings, and articles, books, and research relevant to clinical preparation. Key learning from UTRU's research and experience building residencies will drive content, including findings from the *Building Effective Teacher Residencies* report, as well as the recent study on *Clinically-Oriented Teacher Preparation*. Key topics will include recruiting and selecting high-potential teacher candidates, increasing mentor selectivity and performance, reimagining coursework, driving teacher candidate effectiveness through coaching and feedback, and rigorous performance assessment. UTRU and high quality residency partners at all stages of development will contribute highly curated video, including examples of resident/mentor co-teaching, mentor training, induction coaching, NSDP Institutes and site visits, Next Generation Network instructional rounds, mentor-resident meetings to examine student work and assess student data, and integrated coursework.

The TEC will address several key barriers to innovation in teacher preparation. While UTRU sees tremendous innovation in clinical preparation within and beyond the network of programs, there currently is no mechanism in place to disseminate these practices in a meaningful way to a national audience. Another challenge is helping teacher educators identify and prioritize the levers that are most critical to driving new teacher effectiveness, and share these in visible and replicable ways. UTRU has done extensive research on these levers, and can create a comprehensive platform that brings these practices to life, particularly through the use of video.

As an online, interactive platform that can be accessed anywhere at anytime, the TEC will remove time, financial, and geographic barriers and will provide teacher educators with direct access to cutting-edge practices, professional development, and other support that will drive innovation. Reform-oriented teacher educators are hungry to collaborate with their peers, explore shared problems of practice, and mobilize around their common mission to improve student outcomes through high-quality teacher preparation. In conversations with innovative programs, both inside and outside the network, UTRU consistently hears about their desire to connect more frequently with other innovators in the field.

B3. Quality, intensity & duration of project's training or professional development services

UTRU's NSDP Institutes, ongoing commitment to its partner programs through the Next Generation Network and continued sharing of best practices will provide multiple years of intensive preparation and learning for the SEED programs as they move through the process of considering, planning, launching and further developing a residency program. It is a rigorous process, designed to ensure that all residencies formed under UTRU's auspices meet the high quality *Power Standards* the organization has created in partnership with established and effective residency programs.

Within the residency programs, the length and intensity of the novice teacher preparation – a full year alongside a mentor prior to becoming a teacher of record – is unique to the residency model, and one of the most critical elements of the model's quality. Teachers prepared through the UTPB, Kansas City, and St. Paul residencies, as well as the later SEED programs, will have the most rigorous training of any teachers in the country. Inclusive of the continued induction support, the residency model sustains ongoing learning for the most critical first few years of a teacher's career, setting the stage for longer retention and, most importantly, increasing effectiveness and impact on student learning.

B4 & B5. Project will prepare personnel for fields in which shortages have been demonstrated; and will serve or otherwise address the needs of disadvantaged individuals.

Competitive Preference Priority 3: Promoting STEM Education

Competitive Preference Priority 4: Supporting High-Need Students

The residency model was created to serve the district, addressing teacher shortages and/or quality concerns in areas of highest need; all UTRU programs prepare teachers for hard-to-fill teaching areas, based on districts' needs assessments. The SEED partners' individual programs seek to address a combination of gaps in these areas, as noted below.

Partners for Year 1

University of Texas of the Permian Basin (UTPB): The goal of the UTPB residency program is to train early career scientists and mathematicians, and those with experience in bilingual education, to teach secondary STEM and bilingual content. The program will serve 25 pre-service teachers per year, for a total of 75 new elementary, bilingual, and STEM teachers trained over the course of three years. UTPB will recruit from the ranks of highly qualified students from diverse backgrounds who may have encountered barriers to teaching. Program activities will result in an innovative, high quality teacher preparation program; increased forces of highly effective teachers specifically trained in STEM and bilingual disciplines teaching high-need students in high-need schools; and ultimately, increased K-12 achievement.

The UTPB teacher residency will focus on recruiting a diverse group of teachers from underrepresented populations to serve in high-needs schools. UTPB is a Hispanic Serving Institution (HSI), serving a remote, dispersed, and underserved region in West Texas, with a rapidly growing Hispanic population. As an HSI, UTPB is uniquely positioned to positively impact the numbers of Hispanics and other underrepresented minorities who obtain certification to teach in STEM and bilingual fields. Nearly 70% of UTPB's students are first generation college students, primarily from working class backgrounds. More than 60% of the student

population is female and 45% are classified as underrepresented minorities. Further, while 80% of students are Hispanic, only 26% of teachers are people of color (Texas Education Agency data, 2014).

UTPB's residency will address two of the region's greatest gaps--a shortage in highly qualified STEM and bilingual teachers. According to the U.S. Department of Education, Texas has designated teacher shortages in Bilingual Education/English as a Second Language (ESL), Foreign Languages, Mathematics, Science, and Special Education (TEA data, 2014), and Ector County Independent School District (ECISD), UTPB partner in the residency, currently has 49 job openings for K-12 teachers. Bilingual teacher recruitment and retention is also a concern; there are currently more than 40 open bilingual and ESL positions within ECISD alone. For last three years, the Texas Education Agency has approved bilingual educators as an area "of critical shortage" and has received approval from the USDOE to focus on recruiting teachers in this area. Many high performing STEM majors go into fields other than teaching (National Science Board, 2006) and, to compound the shortage, many of those who do enter the teaching profession leave to pursue other options within a couple of years (Committee on Prospering in the Global Economy of the 21st Century, 2006). ECISD's overall student competency rates in math and science range from 57% to 88%, which is 30% lower than the state average.

West Texas consistently experiences an influx of English Language Learners due to the economic boom, which attracts a diverse set of workers and their families. While Texas school districts are seeking more minority teachers in all subjects, the need in STEM and Bilingual/ESL is, perhaps, the largest. Because of the diversity in the student populations, the importance of matching this diversity in the educator population cannot be highlighted enough. In fact, upwards of 15% of students in Texas participate in programs for ELLs; the population of students in

ECISD mirrors these percentages, with anywhere from 10-16% of students participating in K-12 ESL and bilingual programs (TEA data, 2014).

Kansas City Teacher Residency (KCTR): UTRU is partnered with the Ewing Marion Kauffman Foundation to launch the first teacher residency in Kansas City, MO, to serve both the Kansas City Public Schools (KCPS) as well as local charter management organizations. KCTR will begin with 25 teacher residents and 25 highly qualified mentor teachers. The program is designed to meet the needs of the partner district and charter schools; KCTR will prioritize recruitment of candidates who are racially diverse, have experience in STEM subjects, and have experience in other high-need areas as defined by partner district and charter networks.

Kansas City is an unusual education landscape in that 42% of students attend public charter schools and 52% attend district schools. Both serve a high level of free and reduced lunch (FRL) populations; 89% of students in KCPS receive FRL. Principals and superintendents cite quality teacher/leader recruitment and retention as their biggest challenge. The academic results evidence a need for more effective teachers—the average KCPS ACT score is 16.1, which is 4.3 less than the national average, 5 points below the state average, and 7 points below a neighboring suburban district average.

The need for excellent teachers in Kansas City district and charter schools is high. District and charter networks need multiple pathways to recruit, select, and place teachers in high-need schools. As KCPS turns over 20-25 percent of teachers every year, they are prioritizing teacher retention within their human capital strategy, and nearby charters suffer the same problem. For instance, the Kauffman School, a growing network of schools in Kansas City, has a demand higher than the supply; the school went understaffed for the third year in a row due to lack of quality teacher pipelines and an unwavering commitment to high-quality teachers.

St. Paul Teacher Residency (SPTR): UTRU is also partnered with St. Paul Public Schools (SPPS) to develop a district-led residency. Enrollment and demographic information for SPPS shows a diverse population of 37,844 students, of which 78% are students of color, 72% receive free and reduced-price lunch, 34% are English learners, and 16% receive special education services; 32% are Asian, 30% Black, 22% White, 14% Latino and 2% American Indian.

Disparities in educational attainment are clearly underscored by the achievement gaps that exist among Minnesota's students. On the 2011 National Assessment of Educational Progress (NAEP) fourth-grade reading assessment, Minnesota had the nation's 8th-largest gap between Latino and White students (29 points), the 9th-largest between Black students and White students (30 points), and the 10th-largest gap between low-income students and middle-to-upper income students (29 points). Gaps are equally evident on state-administered assessments: In 2012, 69% of the state's White students met math proficiency benchmarks on the Minnesota Comprehensive Assessments (MCA), compared with only 59% of Asian students, 39% of Hispanic students, and 33% of Black students; 85% of White students met reading proficiency benchmarks, compared with 48% of Asian students, 54% of Hispanic students, and 46% of Black students.

The past five years have witnessed increases in the numbers of Minnesota students needing free or reduced price lunch, the numbers of students with special needs and students with limited English proficiency. Public schools are becoming more ethnically diverse as well, with the percentage of students representing non-white racial and ethnic groups increasing by 1 percent per year. Yet Minnesota's teacher workforce remains 96 percent white. This disparity in diversity of the teaching workforce and student population may affect student academic achievement of students of color and white students alike (Dee, 2001).

In 2012, Minnesota was approved for a waiver to the Elementary and Secondary Education

Act (ESEA), replacing the goal to have every student achieve proficiency by 2014 with the new goal of reducing the achievement gap by 50 percent within six years. The system used to determine whether schools are on track to meet this goal includes student proficiency, student growth, achievement gap reduction, and graduation rates; thirty-five of SPPS's 70 schools are in the bottom 25% of the state's high poverty and lowest performing.

A recent study of SPPS long-term staffing and financial needs showed that the quick rise in teacher retirements and depletion of young students choosing teaching as a career is going to be compounded at the state level. For ten years, SPPS needed to hire on average about 250 new teachers; since 2011, that number has increased to 400. The numbers of new teacher licenses awarded decreased by 7 percent between 2008 and 2013. In Special Education, there has been a 39.8% drop in the past five years, from 1,218 new SpEd licenses in 2009 to just 733 in 2014. Mathematics has dropped from 487 in 2009 to 251 in 2014, a 48.5% drop, and Natural Science has dropped 56.5% in the same time.

SPTR will address these shortages through intensive recruitment and preparation of residents in the identified critical areas, with a focus on residents of color and those with expertise in STEM and special education. SPPS is also currently studying the postsecondary articulation patterns of its high school graduates, who are predominantly students of color, in order to focus efforts on intentionally and strategically recruiting more teachers of color into the district. SPPS is working to identify articulation agreements between two-year colleges and local four-year college teacher preparation programs, so that students entering two-year colleges have an opportunity to learn about pathways to teaching and recruitment into SPPS. The district is also working with community-based organizations in St. Paul to identify strategies that will enable SPPS to bring knowledge about teacher licensure pathways to members of the broader community.

C. Management Plan and Personnel

CI. Qualifications of key personnel on the project.

UTRU, AIR, and the partnering residency programs are committed to the successful implementation and rigorous evaluation of the proposed project. Senior leadership from each organization will provide a strong staffing structure for the project (see Table 2.)

Table 2. Qualifications of Key Personnel

Key Personnel	Project Responsibility	Relevant Qualifications
UTRU		
<i>Jill Pitner, Chief Program Officer</i>	SEED Project Director	Co-developed Denver Teacher Residency; 20+ years as educator, teacher leader, staff developer and curriculum writer
<i>Christine Brennan Davis, New Site Development Director</i>	Execution of New Site Development Program	ELA Instructional Coach in Chicago PS, a New York City Teaching Fellow, and a Humanities teacher.
<i>Dr. Simone Earle, Associate Director of New Site Development</i>	NSDP execution	16+ years as educator and administrator in public and charter schools, PhD in Curriculum and Instruction with an emphasis on Urban Special Education
<i>Sudipti Kumar, Program Manager</i>	Support for New Site Development, Next Generation Network, and resource library	10+ years as urban teacher, education policy advocate, and district level teacher support; former NCTQ Lead Analyst, District Studies.
<i>Shari Dickstein Staub, Next Generation Network Director</i>	Program implementation, Network readiness, and library implementation	Former NYC teacher, adjunct NYU faculty, and a Teacher Education Advisor at Harvard GSE. MA in teaching from NYU, Ed.D. from Harvard.
<i>Kathleen Hayes, Director of Research & Evaluation</i>	Primary AIR liaison; assessment lead	15+ years of experience in K-12 public education; formerly at Consortium on Chicago School Research; proposed Ed.D. Teacher's College 2016.
<i>Anissa Listak, Executive Director</i>	Oversee recruitment of new residencies	Founded UTRU; 10+ years working with residency programs, including AUSL. Has developed 20+ new residencies.
<i>Tamara Azar, Chief External Relations Officer</i>	Policy, advocacy, and communications support; research and evaluation	10+ years of consulting to the US Department of Education on teacher quality issues; TFA alumnae
<i>John Ribolzi, Chief Operations Officer</i>	Oversee budget requirements and library production	15+ years working in private and public sector, including most recently with Chicago Public Schools

<i>Jenna Caldwell, Finance & Operations Manager</i>	Logistical support for all NSDP institutes	3+ years in the nonprofit sector, including as an AmeriCorps member in Chicago Public Schools
American Institutes for Research (AIR)		
<i>Dr. Andrew Wayne, Managing Research Analyst</i>	PI; leadership on all evaluation aspects; enforcement of rigorous quality standards	Researcher and policy expert on educator quality issues
<i>Dr. Eleanor Fulbeck, Research Analyst</i>	Project Director; primary UTRU liaison	Leads several evaluations of educator effectiveness reforms for AIR
University of Texas at Permian Basin (UTPB)		
<i>Dr. Frank Hernandez, Dean of the College of Education</i>	Oversight, program operations and development, Clinical Faculty Academy	Former Assoc. Dean at Hamline Univ School of Education and ED for the Ctr for Excellence in Urban Teaching; co-PI to develop Twin Cities Residency; former urban teacher, UTRU participant
<i>Dr. Roy Hurst, Professor of Science Education</i>	Steering Committee Chair	PI and Co-Director of the UTPB Robert Noyce Scholars Program funded through NSF; taught science at the undergraduate and graduate levels
<i>Dr. Warren Koepp, Mathematics Professor</i>	Design and implementation of content requirements for teacher candidates.	PhD in mathematics; Education Consultant specializing in K-12 mathematics content and pedagogy.
Kansas City Public Schools/Ewing Marion Kauffman Foundation		
<i>Jacqueline Erickson, EMKF Program Officer</i>	Project lead; hiring residency PD and formalizing residency partnerships	Education program officer overseeing human capital initiatives for large Kansas City-based foundation.
<i>Personnel TBD</i>		
St. Paul Public Schools		
<i>Dr. Silvy Un, Assistant Administrator Office of Leadership Development</i>	Planning Committee Lead	PhD in Curriculum and Instruction from UMinnesota and M.Ed from Boston College as a Donovan Urban Teaching Scholar; teaching and principal licensures
<i>Dr. Patrick Duffy</i>	Planning Committee Lead	EdD in Educational Policy and Administration and MED; former principal and curriculum coordinator
<i>Personnel TBD</i>		

C2. Adequacy of the management plan to achieve the objectives on time and within budget, including clearly defined responsibilities, timelines, and milestones for accomplishing project tasks.

There are four clear goals that UTRU will achieve in this project: (1) Increase the number of new teachers prepared for high-need schools and in high-need areas such as STEM and ELL, (2) Advance the quality and impact of nine new teacher residency programs through UTRU's Next Generation Network, (3) Conduct a rigorous evaluation on the residency programs' implementation and impact and disseminate findings, and, (4) Improve and expand the reach and impact of the residency program model with a virtual video library (see Table 3. Management Plan below).

C3. Management plan includes sufficient and reasonable resources to effectively carry out the proposed project, including the project evaluation.

UTRU. Since its founding in 2007, Urban Teacher Residency United has launched and supported more than 20 teacher residency programs. In 2014-15, UTRU is managing a portfolio of 25 Network and consulting clients and conducting a professional learning community of programs to share best practices and increase the impact of existing programs. UTRU is funded through fee-for-service and philanthropic sources, and successfully manages a \$2.1M budget annually.

UTRU is currently executing several ambitious externally-funded projects, including:

- Conducting New Site Development Program with up to four residency programs;
- Facilitating the Next Generation Network programming for existing residency programs;
- Implementing the Critical Learning Initiative to improve residency teacher preparation and integrate leading edge practices to address rigorous academic standards for students, funded by the Charles & Lynn Schusterman Foundation;
- Executing a Data Literacy Initiative funded by the Michael and Susan Dell Foundation;
- Expanding research and evaluation to include UTRU residency program impact as well as disseminate promising and best practices to residencies and the larger teacher preparation community, funded by the Bill and Melinda Gates Foundation.

American Institutes for Research: AIR will serve as an expert consultant in the design of the project and will assist UTRU in evaluating and improving the residency programs. AIR has 65 years of experience in evaluating education programs and policies and researching critical issues to ensure that educators have solid, accurate information to drive their decision-making. AIR's clients include school districts, state education agencies, the U.S. Department of Education, and private nonprofit and for-profit entities. Decision makers at all levels of the education system rely on AIR's evaluation services to assess and improve system performance, in general, as well as in critical areas such as afterschool services, district and school improvement, literacy, and educator quality. Highlights of AIR's qualifications to conduct this work include the following:

Knowledge of educator effectiveness reform. AIR is a team with a deep knowledge of educator effectiveness reform, including technical knowledge of educator evaluation metrics and systems, linking student-classroom-teacher data, modeling teacher retention, and describing educator effectiveness system reform and related impacts on educators and students.

Experience conducting teacher residency evaluations. AIR is currently conducting and has conducted several mixed-methods educator residency evaluations in UTRU's network, including the Denver Teacher Residency, Colorado Boettcher Teachers Program, and Jacksonville Teacher Residency Evaluations.

Table 3. Management Plan				
Activities	Year One Objectives	Year Two Objectives	Year Three Objectives	Responsibility
Goal 1: Increase the number of new teachers prepared for high-need schools and in high-need areas such as STEM and ELL				
1.1 Select nine partner residency programs from Residency Foundations through rigorous selection process	UTPB, SPPS, & KC formally selected for NSDP based on UTRU rigorous selection criteria	Formal selection of and engagement with three new residencies for NDSP based on UTRU’s rigorous selection criteria	Formal selection of and engagement with three new residencies for NDSP based on UTRU’s rigorous selection criteria	UTRU NSDP Director and Associate NSDP Director, CPO and ED
1.2 Engage programs in NSDP to ensure high quality resident and mentor selection and training, induction support and program sustainability	Deliver Program Planning Institutes, ongoing consultation and two site visits for UTPB, SPPS & KC	Deliver and conduct the Launch & Implementation Institutes, ongoing consultation and one site visit for UTPB, SPPS & KC; Deliver Program Planning Institutes, ongoing consultation, and two site visits for Year Two residencies	Deliver and conduct the Launch & Implementation Institutes, ongoing consultation and one site visit for Year Two residencies; Deliver Program Planning Institutes, ongoing consultation, and two site visits for Year Three residencies	UTRU ED, CPO, NSDP Director and Assoc Director, and Program Manager, with Finance & Operations staff for logistical support; residency partners
<i>1.2.1 Execute rigorous resident selection process</i>	UTPB, SPPS, & KC engage in rigorous process to select 25 residents each in district-specific high-need areas	Three new residencies engage in rigorous process to select 25 residents each in district-specific high-need areas; UTPB, SPPS, & KC select second cohort of 25 residents each	Three new residencies engage in rigorous process to select 25 residents each in district-specific high-need areas; Year Two partners select second cohort of 25 residents each; UTPB, SPPS, & KC select third cohort of 25 residents each	Residency Partner Program Directors and staff, with assistance from UTRU NSDP staff and Program Manager

1.2.2 <i>Recruit, select, and support effective teacher educators to act as mentors</i>	UTPB, SPPS, & KC develop and engage in rigorous process to select and train 25 experienced and effective subject-specific mentors each to guide residents	Year Two residencies develop and engage in rigorous process to select and train 25 high-quality mentors each to guide residents; UTPB, SPPS, & KC select and train 25 new mentors for second cohort	Year Three residencies develop and engage in rigorous process to select and train 25 high-quality mentors each to guide residents; Year Two residencies select and train 25 new mentors for second cohort; UTPB, SPPS, & KC select and train 25 new mentors for third cohort	Residency Program Directors and staff, with assistance from UTRU NSDP staff and Program Manager
1.2.3 <i>Execute teacher preparation curriculum that integrates the classroom practicum with university coursework</i>	UTPB, SPPS & KC, along with partners, implement resident curriculum integrating daily practice with university coursework	UTPB, SPPS & KC and Year Two residencies, along with partners, implement resident curriculum integrating daily practice with university coursework	All nine SEED residencies, along with partners, implement resident curriculum integrating daily practice with university coursework	Residency Program Directors, staff and partners, with assistance from UTRU NSDP staff and Program Manager
1.2.4 <i>Implement high quality induction support program</i>		UTPB, SPPS, & KC provide intensive induction support for first-year residency graduates	UTPB, SPPS, & KC provide intensive induction support for first- and second-year residency graduates; Year Two partners provide intensive induction support for first-year residency graduates	Residency Partner Program Directors and staff, with assistance from UTRU NSDP staff and Program Manager
Goal 2: Advance the quality and impact of nine new teacher residency programs by engaging them in UTRU's thriving Next Generation Network				
2.1 Facilitate an in-person and virtual community offering programming covering financial, operational and	UTRU delivers annual programming to existing network partners, codifies learnings and best practices,	UTRU delivers annual programming to existing network partners, codifies learnings and best practices, and shares them back to	UTRU invites UTPB, SPPS & KC to join the Next Generation Network (assuming quality performance throughout	UTRU Network Director, Program Manager, Chief External Relations Officer, and CPO; chosen Next Generation members

programmatic elements of the residency to ensure quality and sustainability	and shares them back to UTPB, SPPS & KC	UTPB, SPPS & KC, in addition to three new teacher residencies	NSDP and compliance with all SEED grant requirements); UTRU delivers annual programming to existing network partners, codifies learnings and best practices, and shares them back to nine new teacher residency programs	
Goal 3: Conduct a rigorous evaluation on the residency programs' implementation and impact and distribute findings to a broad stakeholder audience				
3.1 Assess program implementation	Develop and implement resident and school leader surveys; district/university partner interviews; and power standards rubric for UTPB, SPPS & KC	Implement resident and school leader surveys; district/university partner interviews; and power standards rubric for UTPB, SPPS & KC and Year Two partners; Develop and implement graduate survey for UTPB, SPSS & KC	Implement resident and school leader surveys; district/university partner interviews; and power standards rubric for all partners; Implement graduate survey for UTPB, SPPS & KC and Year Two partners	AIR; UTRU Director of Research & Evaluation; Chief External Relations Officer, Program Manager; residency partners
3.2 Measure and evaluate impact of residency graduates on student performance		Determine control group and examine student achievement and teacher evaluation data for UTPB, SPPS & KC	Determine control group and examine student and teacher data for Year Two residencies and UTPB, SPPS & KC	AIR; UTRU Director of R&E; Chief External Relations Officer, Program Manager; residency partners
3.2 Examine teacher performance and overall impact	Develop and implement resident and school leader surveys; district/university partner interviews; and power standards rubric for UTPB, SPPS & KC	Examine student and teacher data and implement resident and school leader surveys; district/university partner interviews; and power standards rubric for UTPB,	Examine student and teacher data and implement resident and school leader surveys; district/university partner interviews; and power standards rubric for all partners;	AIR; UTRU Director of R&E, Chief External Relations Officer, Program Manager; residency partners

		SPPS & KC and Year Two partners; Develop and implement graduate survey for UTPB, SPSS & KC	Develop and implement graduate survey for UTPB, SPPS & KC and Year Two partners	
3.4 Disseminate findings	Analyze findings and compile annual report for UTRU	Analyze findings and compile annual report for UTRU	Analyze findings and compile annual report for UTRU; Compile final report on SEED grantees for broad dissemination	AIR; UTRU Director of R&E and Chief External Relations Officer
Goal 4: Improve and expand the reach and impact of the residency program model through the curation and dissemination of best practices with a virtual library.				
4.1 Share video content to show effective practice, high quality coaching, and UTRU NSDP and Network support	UTRU creates formal working group to develop 3 year plan for capturing best and promising practices	Record, edit and curate content from resident-mentor meetings, co-teaching, mentor training, graduate induction coaching, NSDP Institutes, NSDP site visits, and Next Generation Network Instructional Rounds	Record, edit and curate content from resident-mentor meetings, co-teaching, mentor training, graduate induction coaching, NSDP Institutes, NSDP site visits, and Next Generation Network Instructional Rounds	UTRU Network Director, NSDP Director, Program Manager, Chief External Relations Officer and Finance & Operations staff; residency partners
4.2 Share resources on residency creation, development and sustainability		Develop and disseminate selected best practice resources from residencies and other clinical preparation	Develop and disseminate selected best practice resources from residencies and other clinical preparation	UTRU Network Director, NSDP Director, Program Manager, Chief External Relations Officer and Finance & Operations staff; residency partners

Experience conducting mixed-methods program evaluations. In conducting program evaluations, researchers at AIR employ quantitative and qualitative research methods using a wide variety of data collection techniques, including surveys, in-depth interviews, focus groups, experimental designs, as well as quasi-experimental designs.

Program Partners: UTRU will work with three residency program partners in the first year of the project to launch new teacher residency programs in partnering school districts: the University of Texas of Permian Basin, the Ewing Marion Kauffman Foundation of Kansas City, and St. Paul (MN) Public Schools (see Appendix F, Memoranda of Understanding). In Years two and three of the project, UTRU will follow our codified Criteria for Engagement process to identify and select six additional residency program partners. Each indicator of the Criteria for Engagement is based upon UTRU's eight years of experience in developing highly effective residencies, and on the research base of early indicators of program success. Letters of support expressing interest in partnering with UTRU from three potential partners, the University of Kentucky College of Education, Summit Schools, and The Learning Connection are provided in Appendix C.

Programs will be required to sign MOUs that detail how UTRU will support the residency partners to formalize their partnership with the high need LEA, IHE, and nonprofit partner (when applicable), create clear impact goals, determine roles and responsibilities, and create scaling and sustainability plans; implement rigorous recruitment and selection of residents and mentor teachers; revise and implement curriculum that integrates the content and pedagogy needed to be an effective teacher into a full year clinical experience; develop and implement evaluation and assessment tools to determine resident and graduate impact; provide comprehensive induction support for graduates when they are teacher of record; and participate fully in all UTRU and

SEED evaluation processes.

Feedback and Continuous Improvement. UTRU, AIR and partnering districts will use several mechanisms to track implementation and impact. To drive successful project implementation and identify actionable items for continuous improvement, UTRU will interact extensively with all project partners, including:

- Regular, structured check-in calls and meetings and periodic retreats with lead staff from UTRU, AIR and residency partners (LEA, IHE, and non-profit organization as applicable).
- Deliver UTRU's New Site Development Program, including five in-person and virtual Institutes in year one and three Institutes in year two, to deliver the programming supporting the core components of the residency model.
- Conduct Instructional Rounds with UTRU Next Generation Network residency programs to support program improvement and innovation.
- Collect and analyze multiple measures of resident progress, including observations, instructional rubric ratings, student surveys, and student outcomes, by the nonprofit partners as well as AIR.

D. Sustainability

D1. Project will build capacity and yield results that will extend beyond the grant period.

This initiative builds upon research showing that a clinically-based, cohort model of teacher development fosters increased collaborative learning and teacher satisfaction, which in turn leads to increased retention levels. Urban districts currently spend upwards of \$20,000 for the recruitment, hiring, training and support of each new teacher. Increasing retention rates - and ensuring that the teachers who remain are highly effective and consistently supported - will result in a continued return on the each of the involved districts' investments in their teachers.

Additionally, the creation of a rich resource library, participation in a network of like-minded

peers, ability to receive individualized consulting from UTRU around financial, organizational, programming and other issues, and ongoing learning through NSDP Institutes and beyond to the Network will ensure that residencies developed within UTRU's network have a foundation and blueprint for highly effective, sustainable programming long beyond the grant period. Currently, UTRU is engaged in a year-long project to identify and codify a long-term sustainable financial model for teacher residencies, funded by the Bill & Melinda Gates Foundation.

Kansas City. The Ewing Marion Kauffman Foundation will act as the initial funder for the Kansas City Teacher Residency in order to bolster community support, and will maximize connections in order to create a sustainable and diverse funding base for the residency. The Foundation participates in an education funding collaborative with five leading local foundations; these funders, along with the local business community, will be invited to support the residency. Through the first three years of the residency startup and beyond, the Kauffman Foundation will commit a sizable grant to the teacher residency and ensure the residency director has access to local connections to achieve the funding goals.

In addition to the funding support from the Kauffman Foundation and other organizations, senior leadership will make key stakeholder connections across the region. Program leaders are currently meeting with local community members to garner support and collaboration around the residency so that universities, school districts, funders, and community members will support the initiative and view it as an essential component for the Kansas City education ecosystem.

The Kauffman Foundation is supporting a portfolio approach to talent within Kansas City's education sector. The residency model achieves this by developing highly effective, new teachers to work in the highest-need district and charter schools. The Kansas City Teacher Residency is a key program in that portfolio - which includes program such as City Year, Teach For America,

Leading Educators, and New Leaders - to build multiple pipelines and avenues into and throughout a career in education.

St. Paul Public Schools. Participation in the UTRU residency foundations and NSDP will support SPPS in developing short-term and long-term sustainability plans. The district is currently working to establish a partnership with a local university, develop clear financial projections, work to identify reliable funding streams to support startup and long-term financial sustainability, and build the staffing model necessary to support the design and launch of an effective residency program.

The program will have sustained impact on St. Paul Public Schools through the recruiting and preparing of high demand candidates prepared in and committed to teaching long-term in the district, supported through the residency's intensive induction programming.

UTPB. The new residency program is the central organizational focus of UTPB and Ector County ISD's (ECISD) teacher preparation. These institutions have made a strong commitment to redefine the way Texas prepares its teachers. In addition to their leading role in teacher preparation in the region, the UTPB residency partners also maintain rigorous science and mathematics departments, graduating almost 100 young mathematicians and scientists every year. It is from this talented, yet previously untapped, pool of potential STEM teachers, that the UTPB Residency Program, along with statewide marketing efforts, will cultivate and prepare highly effective scientists and mathematicians who choose to teach in the area's high-need school district. Similar efforts will be made to draw bilingual educators to the program.

UTPB has a high degree of capacity and ability to implement this grant to address the Permian Basin's need for highly qualified mathematics and bilingual teachers. In addition to its growing student body, which has increased from 3,500 to over 5,500 in the last two years, UTPB

will leverage its partnerships with UTRU, local school districts and community leaders to help lead the residency. Overall, the proposed project design strengths include an active partner urban school district in ECISD, strong internal management and oversight infrastructure, and a strong, high-achieving state recognized university (UTPB) serving in a high-needs region.

This is not the first collaborative initiative between UTPB and ECISD. For more than twenty years, UTPB has provided ECISD with a large percentage of its new teaching staff and is currently one of only 15 Texas universities to meet NCATE accreditation standards. UTPB has also seen success with similar programs such as the Robert Noyce Scholars, the BEST 4 ELLs Programs, and the Permian Basin Math and Science Teachers' Academy. The NSF-funded UTPB Robert Noyce Scholars program prepares STEM majors and professionals to become effective teachers in high need schools and seeks to increase the number of STEM teachers from underrepresented populations. The program has seen a 77% increase in STEM teacher enrollment, 112% increase in certification of STEM majors, 180% increase in certification of females in STEM fields and an 800% increase of minority certification in STEM fields.

D2 & D3. Project is likely to yield findings and products that may be used by other agencies and organizations; applicant will disseminate information about results and outcomes of the proposed project in ways that will enable others to use the information or strategies.

Since its inception, UTRU has not only promoted and supported the growth of residencies, but has also committed to codifying the model and standards of quality, sharing best practices among network partners and beyond, and consulting with organizations to provide shared learning from residency partnerships of all types.

Redefining Preparation's findings will provide further insight, with a tight evaluation, into the most critical decision points, needed supports – from financial to logistical – and, most importantly, the methods and practices of those involved. The idea for a resource library

extends from UTRU’s existing commitment to proactively inform teachers, administrators, policy leaders and experts about the use of the residency model to drive student achievement.

Included in that commitment are:

- A video library of classroom instructional practices, to enable practitioners to see effective instruction associated with lessons for individual teacher’s pre-service and in-service preparation, training and reflection and to jumpstart schools’ and districts’ own reflective teaching processes;
- Regular participation in policy forums and other venues to assist state and national policymakers to support data driven teacher inquiry and raise student
- White papers that will be disseminated through the UTRU website, our partners’ websites and print media.
- Quarterly press releases and impact reports that combine strategies implemented, data on impact, and testimonials from residency program participants and host districts.

All resources will be maintained on UTRU and partner sites. This virtual resource library will serve as a strong mechanism for replication, providing potential partners with information and analysis on the UTRU model and its implications in various contexts and with differing partners. At the state and national level, as districts grapple with high rates of teacher turnover, concerns regarding quality and effectiveness, and the increasing gap between theory and practice – and the resulting impacts on student achievement – the SEED project resource library will ensure widespread sharing of essential, actionable information on the residency model.

E. Evaluation

Overview. AIR will conduct a multiple-methods evaluation designed to provide UTRU and participating sites with formative and summative feedback about the implementation and impact

of the residency programs established as part of SEED and their New Site Development Program

(NSDP) model. AIR will use survey and interview methods and extant data analysis to answer the research questions. Specifically, they will survey residents, graduates, mentors, and school leaders and interview district and university program staff to capture their perspectives of the programs and their implementation. AIR will also draw on extant data related to implementation and participation, including UTRU *Power Standards* rubric ratings, and human resources, program and teacher evaluation data. AIR will analyze student achievement and teacher evaluation data, conditioned on human resources data, to understand the impact of the programs on student learning and teacher effectiveness. Finally, AIR and UTRU will develop a standardized process for creating a resource library of successful residency practices (see Table 4. Research Questions and Data Sources below).

Data Sources

Resident, Graduate, and Mentor Surveys. Building on UTRU surveys, three linked online surveys will be administered to all teacher residents (1), graduates (2), and mentors (3) in each participating district. The surveys will be administered in April 2017 and 2018. The surveys will gather information from residents, graduates, and mentors about their training, satisfaction with the program, school climate, teacher collaboration, the quality of training and professional development, the extent to which their program meets the power standards, the quality of the mentor-mentee relationships, and the level of perceived support from school leaders and district/university program staff. The surveys will cover similar constructs on both program implementation fidelity and satisfaction with the program's components. AIR will work closely with UTRU to identify the core set of constructs and items for the surveys. Incentives and the online survey interface will enable follow-up with nonrespondents to ensure response rates are as high as possible.

School Leader Survey. AIR will gather school leader perspectives in the participating districts using the same survey approach and timeline. The school leader survey will provide information on implementation fidelity, teacher collaboration, instructional supports, and facilitators and barriers to success. The survey also will measure the extent to which school leaders are involved in the program’s implementation, their hiring decision-making processes, and their assessments of school climate. The team will work closely with UTRU staff to identify a core list of survey constructs for school leaders.

District and University Program Staff Interviews. With assistance from UTRU, AIR will identify between three and five key district and university program staff to interview.¹ These interviews will deepen AIR’s understanding of critical program components necessary for implementation. The approximately 30-minute interviews will be conducted by phone, in February of each year of the evaluation. The interview protocols will be semistructured, designed to gather open-ended responses about the constructs covered in the resident, graduate, mentor, and school leader surveys. Interviews will be recorded, with permission, and transcribed to ensure accuracy.

Extant Data. The evaluation will draw on existing data collected by participating districts and UTRU. Extant data will include: human resources data, program data, student achievement data, and, where available, teacher effectiveness data. From the districts’ human resources offices, we will request data on the teachers who are employed by the district, including years of

¹ It is our understanding that most residency programs have between three and five key district and university staff. However, if any program has more than five district and university staff involved with their residency program, we will work with the district leaders and UTRU to determine the three-to-five staff who are most essential to the program and invite them to participate in an interview.

service, date of hire and compensation history, as well as school, grade, and subjects taught. From the districts, partnering universities, and UTRU, we will request program data on the

Table 4. Research Questions and Data Sources

Research Questions*	Data Sources						
	Resident, Graduate and Mentor Surveys	School Leader Survey	District/ University Interviews	UTRU Power Standards Rubric	Student Achievement Data	Human Resources and Program Data	Teacher Evaluations
Stakeholder Perspectives							
Do residents/graduates feel supported by mentors, school leaders and district/university program staff?	X						
Do mentors feel supported by their school leaders and district/university program staff?	X						
What are the school leaders' and district/university program staff's perspectives about UTRU supports?		X	X				
Implementation							
Are programs implemented with fidelity at participating schools?	X	X		X			
Are the programs implemented with fidelity at the district and university levels?	X	X	X	X			
Do the programs meet UTRU power standards?	X	X	X	X			
What is the quality of the resident-mentor match?	X	X	X	X			
Are residents prepared to teach in their schools?	X	X	X	X			
What are the characteristics and qualifications of residency participants and placement schools?						X	X
Are the programs meeting recruitment and diversity goals?	X	X	X	X		X	X
Is a standardized procedure in place for creating a resource library?				X		X	X
Teacher and Student Outcomes							
Are graduates more likely to stay in the school and district than other new teachers after the first year of teaching?						X	
Do residents and graduates demonstrate effective teaching practices as measured by classroom observations?						X	X
What is the impact of graduates and mentors on student achievement? How does this vary by implementation fidelity?	X	X	X	X	X	X	X
<i>*Researchers will examine results in aggregate, as well as variation by program. Whenever possible, the researchers will examine changes over time.</i>							

recruitment, application and selection of residents, resident course performance, resident-mentor matching processes, performance on the UTRU *Power Standards* rubric, and priorities to include in the online resource library. From the districts, AIR will request data on student performance and growth in reading and mathematics as measured by the state standardized assessment and/or the assessments aligned with states' college and career ready standards. Additionally, we will request data on all teacher evaluations and classroom observations conducted since implementing the UTRU residency program. As part of NSDP, programs agree to provide all available data. AIR will work with them to ensure the data are linked at the teacher level.

Data Analysis

The data collected from these sources will be analyzed using the following approaches.

Examining Implementation. The AIR evaluation team will analyze survey, interview, and extant data to provide a picture of the implementation of the program overall and for each participating district. AIR will analyze the surveys to depict progress in implementing the residency programs. AIR will employ the Rasch model for ordered categories (Andrich, 1978; Rasch, 1980; Wright & Masters, 1982; Wright & Stone, 1979), allowing us to create valid scale scores for each of the survey constructs described previously. These scale scores, which are made up of multiple items that fit together from a theoretical perspective, provide a summary of the consistency and intensity of an individual's responses related to each of the measured constructs. As needed, AIR will also examine the distribution of responses on individual survey items. The team will disaggregate all results by teacher and principal characteristics (e.g., years of experience, grades served, evaluation rating). Using NVivo qualitative software, we will analyze interview transcripts inductively, incorporating a systematic method of managing data through reduction, organization, and connection (Dey, 1993; LeCompte, 2000).

AIR will use human resources and program data to describe the age, gender, years of education, college major, graduate performance, and years of teaching experience of residency program applicants and selected residents. The purpose of these descriptive analyses is threefold. First, the demographic profiles of the applicant pools each year will help program staff improve their recruitment efforts. Second, the distribution of resident demographic characteristics will be compared to traditional teacher demographic characteristics, one of several important comparisons between these two groups. Third, analyses will identify those characteristics that are most predictive of retention and performance in the first year as measured by grades in graduate courses and classroom observation scores.

AIR will support UTRU to assess how each new teacher residency program has successfully implemented the *Power Standards*. In particular, we will follow a rigorous and systematic process to support UTRU in reflecting on the standards they want to measure, listing and grouping the standards in the rubric, and applying the rubric (Allen, 2004). After UTRU has applied the rubric to new and existing programs, AIR will analyze the results, ultimately linking them to the proximal outcomes (e.g., satisfaction with the program) and distal outcomes (e.g., student achievement gains) of residency programs.

Finally, AIR will work with UTRU and participating districts to identify priority topics to include in the online resource library. AIR will work with UTRU to develop a standardized and transparent process for determining what exemplars are submitted to the online resource library and develop a submission protocol; how to publicize the resource library; how to devise a system for regularly updating the resource library; and, how to gather feedback from users to improve the resource library.

Examining Student and Teacher Outcomes. The proposed evaluation will draw on extant data to examine the effects of the programs on student achievement and the differences between residency graduates and non-residency teachers on teacher performance metrics and retention data that will be available for residency graduate teachers in year 3 of the grant.

Isolating the causal effect of participating in the UTRU residency program requires a strong and flexible research design. Those educators self-selecting into the UTRU residency model are likely different in observable and unobservable ways than teachers pursuing certification through traditional routes. These differences can bias estimates of program effectiveness.

Ideally we would use random assignment to create groups of treatment and comparison students. We will discuss with the partner districts opportunities for random assignment, however, this type of design may be impractical for two reasons. First, we would need to randomly assign students to UTRU resident graduates and non-resident teachers within buildings. The estimand in this analysis would be the difference between first year resident graduates and other non-resident first year teachers. Accordingly, this design is viable only if each school and grade where resident graduates teach has both first year traditional teachers and resident graduates. Second, residents teach elementary, middle, and high school grades. In middle and high school grades, students may have several different educators across different subject areas. To conduct a randomized experiment in this context we would have to impose significantly into student scheduling, which may be overly disruptive to the partner districts.

As an alternative to random assignment AIR will use propensity score matching,² which allows us to model the probability of students being assigned to residency graduates or to other

² We propose using an optimal matching algorithm that allows for matching one or more comparison students to each student receiving instruction from residency graduates.

first year teachers, creating an optimally balanced group of comparison students taught by non-residency teachers, and compare them to students taught by residency graduates. The team will use student demographic and prior achievement data and will work closely with UTRU and the partner districts to identify available data that can be used in the matching process. In this evaluation, the main advantage of propensity score matching over random assignment is that it imposes no additional burden on the district in assigning students to teachers, although the hope is that would still be as random as possible. And, this approach allows the creation of an optimally matched group of comparison students using data from the entire district. For example, if School A had one second grade class and it was taught by a resident graduate, AIR could still find second grade students from other schools with first year teachers (without actually randomly assigning students to different buildings) to serve as comparison students.³

In addition to estimating the causal impact of residents on student achievement, AIR will estimate the impact of mentor teachers on student achievement. Mentor teachers are expert teachers who are provided with additional training and support from the residency to train and support resident teachers. As a result, their own effectiveness may benefit from the additional training and support, as well as the pedagogical relationship they build with the residents. The AIR team will examine the effects of residency participation on mentor teachers and their students using a difference in differences approach, comparing resident mentors to non-mentor teachers in the same grade level and with similar levels of experience⁴ and evaluating the change

³ One might consider matching UTRU resident graduates to non-resident graduates as another option. We chose not to pursue this matching procedure for two reasons. First, there are far fewer potential comparison teachers than there are potential comparison students, which may limit our ability to find matched comparison teachers, with balance in their propensity score distributions and observed covariates, for all UTRU resident graduate teachers. Second, and perhaps most importantly, teacher-level data is much more limited than student-level data, which may also compromise the quality of the matching process. Moreover, much of the pertinent teacher-level data that we would traditionally match on (e.g., performance in graduate school) is post-treatment data. Accordingly, such a match could attenuate the estimated treatment effect.

⁴ Mentor teacher and student achievement data will be available for analysis in each year of the grant.

in observed effects between the pre-residency period (planning year), where mentors are not overseeing residents, and post-residency period. To the extent possible AIR will use a similar propensity score matching approach described above to create the comparison group of mentor teachers.⁵

Finally, AIR will investigate the impact of the UTRU residency program model in each participating district on increasing the quality of new teachers, specifically in hard-to-serve schools and subjects. The team will compare the characteristics of the residency graduates to the characteristics of other traditionally certified new teachers as part of a descriptive analysis, using available human resources data including undergraduate and graduate academic performance, demographics, and retention data.⁶ AIR also will compare these groups of teachers on the characteristics of the schools in which they work using available school level demographic and academic performance data.

Communicating and Reporting

The implementation of the new residency programs will be multifaceted and evolving. Therefore, it is especially important that the AIR team closely coordinates its work with UTRU staff as well as with other stakeholders to ensure the evaluation findings are relevant and informative to decision making. At project initiation, the evaluation leads and UTRU leads will meet in person to discuss the proposed evaluation plan and to make changes to better meet district and stakeholder needs. The AIR principal investigator and project director will meet monthly with key UTRU staff.

⁵ If the data available for matching mentor teachers and non-mentor teachers is too limited, the assumption of strong ignorability (i.e., equivalence between the two groups conditional on the propensity score) is unlikely to hold.

⁶ Retention data will be limited to one year, although research suggests this is a critical year for turnover of new teachers (Ingersoll, Merrill & Stuckey, 2014).

Throughout the evaluation, AIR will provide UTRU with ongoing feedback through regular presentations and brief reports presenting findings in an accessible format and providing concrete guidance for the ongoing development and implementation of the UTRU teacher residency model and for new residency programs. Sixty days after the conclusion of each major data collection activity, the AIR team will present key findings from that activity and recommendations for improvement. The report will be accompanied by video conferences to facilitate conversation about the findings between the project director and UTRU stakeholders.

Annual reports will synthesize findings across data sources. Evaluation topics will be explored fully so that stakeholders understand key findings, which will clearly convey meaning in the context of program design and implementation. Discussions of findings also will address conditions and circumstances associated with variance across school settings and over time. The reports will be written in clear and accessible language and will avoid technical jargon that might mask findings. The organizational structure of the reports will be logical, and formatting approaches will visually convey report structure and key points. The principal investigator and project director will meet in-person annually to present and discuss findings from these reports. *Project Timeline.* The evaluation will begin in October 2015 and conclude in September 2018 (see Appendix G, Timeline of Major Evaluation Activities).