

LOS ANGELES URBAN TEACHER RESIDENCY PROGRAM TRANSFORMATION INITIATIVE

CALIFORNIA STATE UNIVERSITY LOS ANGELES PARTNERSHIP

Teacher Quality Partnership Grant Program, CFDA Number 84.336S

Absolute Priority 2: Partnership Grants for Effective Teaching Residency Programs

A. Project Significance

California State University Los Angeles (CSULA) and its partners, the Center for Collaborative Education (CCE), Families In Schools (FIS), WestEd, and three California urban public school districts—Los Angeles Unified School District (LAUSD), Alhambra Unified School District (AUSD), and Montebello Unified School District (MUSD), request a total of \$11,064,077 over five years to substantially expand the scope and reach of the Los Angeles Urban Teacher Residency (LAUTR), a field-based teacher preparation and credentialing program designed to equip future teachers to close the achievement gap through excellence, equity and innovation. After nearly five years of early development and success through our first Teacher Quality Partnership (TQP) grant, CSULA is proposing to expand and transform LAUTR to become the primary teacher preparation model within our Charter College of Education (CCOE). The LAUTR Transformation Initiative (LAUTR-TI) will include three strands of teacher residency preparation—(1) secondary mathematics and science (the original strand), (2) secondary special education, and a (3) blended program of elementary education and special education (SPED). *In response to the 100K in 10 Initiative*, each strand will integrate a specialization in Science, Technology, Engineering and Mathematics (STEM), leading to a state preliminary teacher credential and a Master’s degree in Integrated STEM Education. LAUTR-TI’s total annual enrollment will increase more than three-fold from cohorts of 20 Residents to 75; over the life of the grant, LAUTR-TI will graduate and place 275 new teachers trained in STEM disciplines.

CSULA and our partners share a social justice mission. The partners commit to graduating teachers who are responsible for dramatically increasing student achievement through equity, high expectations, and innovative, research-based high quality instruction. The partners are keenly aware that student achievement in high-need districts will only increase if there is a steady pipeline of teachers prepared to effectively teach the district's diverse learners and assume lead roles in transforming schools to provide high expectations and high support for each and every student. Each district views LAUTR-TI as a core strategy in attaining its goals.

LAUTR-TI will work closely with the California Commission on Teacher Credentialing (CCTC) to ensure that all candidates meet the requirements for both teacher certification and induction. Residents will be prepared and credentialed to teach in an urban classroom within 12 months and attain a Master's degree in Integrated STEM Education within 18 months. The residency strands will integrate theory and practice in a blend of graduate-level coursework, project- and place-based experiences, and collaborative professional learning through highly supported cohort communities. Mentor and faculty teaching styles will model the equitable and democratic learning and classrooms that we seek to build. We aim to have student learning growth in first- and second-year LAUTR-TI graduate classrooms surpass that of their first- and second-year colleagues in traditional university-based programs.

The foundation of our residency model is exemplified in a National Council on the Accreditation of Teacher Education (NCATE) report that promotes "long-term, serious clinical learning experiences for teacher education students, created in partnership with local schools and districts" (Berry, Montgomery, & Snyder, 2008). When teachers attend a traditional university-based preparation program, their field experience in classrooms is often brief, with relatively little time to make connections to their planned practice. In our Teacher Residency model,

Residents are paired for an entire school year with mentor teachers who assist them in their development as they gradually take on lead teacher responsibilities. By giving potential teachers genuine pedagogical experience while learning the theoretical underpinnings, better prepared teachers emerge ready to take on the unique challenges of the classroom. One hundred percent of surveyed Induction Principals reported in our LAUTR external evaluation that compared to typical first-year teachers, LAUTR first-year teachers during their first induction year addressed challenges to student learning in the school and community more effectively.

Through our first TQP grant, we have used the formative and summative assessments from our evaluation partner, WestEd, to further refine and strengthen our proposed LAUTR-TI model—for example, shifting broad recruitment strategies to targeted recruitment of high-performing seniors in undergraduate programs; creating greater synergy in philosophy and practice among course instructors, mentor teachers, and field coordinators; and creating “signature projects,” aligned with Common Core State Standards (CCSS), for every course to ensure application of theory within residency classrooms. After almost five years of program design, implementation, and refinement, LAUTR-TI is a strong program providing LAUSD with an annual pipeline of highly qualified new teachers who are placed in high-need schools, supported in their first two years of teaching, and who stay in classrooms at a higher rate than traditionally trained teachers.

With this backdrop, CSULA and its partners are primed to launch LAUTR-TI as a lever to change how CSULA approaches all teacher preparation. CSULA leadership, including the Charter College of Education’s new Dean, has determined that LAUTR-TI will become the standard teacher-training model for all CCOE teacher preparation and certification programs. Through this proposed transformation, we seek to (1) revamp every CCOE teacher preparation

strand to be based upon the LAUTR-TI model, (2) infuse a STEM curriculum integration model across all teacher preparation strands, and (3) expand LAUTR-TI's reach to additional urban districts within Los Angeles County, thereby extending LAUTR-TI's impact in how districts plan for new teacher pipelines.

These three residency strands, each with an integrated STEM focus, were determined as the target population for new teachers through a needs assessment with each of our partner districts. Each district expressed common needs—a shortage of secondary math and high school teachers, and a need for teachers in secondary special education and elementary education with strong backgrounds in STEM. Districts noted that elementary and secondary special education teachers have felt historically underprepared to teach STEM disciplines, leaving elementary students and students with disabilities at a disadvantage in developing interest in STEM, leading to few students prepared to enroll in advanced STEM courses in high school.

District data is supported by state and national data. A report by the Committee on the Evaluation Framework for Successful K–12 Education (2012) states that one of the three major goals of the nation in addressing challenges facing K–12 education in STEM is to "increase STEM literacy for all students." Yet, the CSU Center for Teacher Quality surveyed over 12,500 California elementary teachers on how well prepared they felt to teach various subjects, and found that first-year teachers consistently report themselves as better prepared to teach reading than science. Moreover, comparison with a sampling of more experienced teachers suggests that teachers' perception of their ability to teach science does not improve with time, with experienced teachers reporting nearly identical levels of self-assessment in teaching science as first-year teachers. These data mirror national findings—the 2012 National Survey of Science and Mathematics Education (NSSME) found that only 44% of K–2 teachers and 33% of grades

3–5 teachers felt very well prepared to teach science, as opposed to 74% and 86% respectively for reading/language arts and 76% and 78% for mathematics. Further, only 3–4% of K–5 teachers reported that they were very well prepared to teach engineering, and less than a third of K–5 teachers felt very well prepared to teach life, earth, and physical sciences (Trygstad et al, 2013).

Similar data has been found in special education. The National Council on Teacher Quality found that, “While special educators should be valued for their critical role in working with students with disabilities and special needs,...” this role does “not mitigate the need for special education teachers to know content” (NCTQ 2014). Yet, LAUSD data shows that less than a third of special educators teaching in high schools meet NCLB compliance for the subject areas they teach. Failure to ensure that teachers are well trained in content areas deprives special education students of access to STEM fields in high school and career.

LAUTR-TI is a groundbreaking partnership across three different colleges in the university, the Charter College of Education (CCOE), the College of Natural and Social Sciences (including math and science), and the College of Engineering, Computer Science, and Technology. LAUTR-TI will build upon and integrate current CCOE initiatives. For example, LAUTR-TI will continue to partner with the Mathematics & Science Teacher Initiative (MSTI), a project funded by the CSU Chancellor's Office to address the serious shortage of mathematics and science teachers through increasing the number of math and science teachers graduating from CSULA. In another CCOE initiative, the Bechtel Foundation-funded Engineering by Design (EbD) and Engineering is Elementary (EiE) programs and curricula will be integrated into the LAUTR-TI curriculum for all three strands. Over five years, the LAUTR-TI will graduate a pool

of 275 teachers with the experience and knowledge of content specific teaching with a focus. We aspire to have our graduates be among the best-trained teachers in partner districts.

Program Need

According to the California Department of Education, using 2012–2013 and 2013–2014 data (depending on most recent data available), enrollment and demographics for our three partner districts indicate high percentages of students of color, English Learners (ELs), low-income students, and students with disabilities, well above the minimum threshold for a high-need district:

Student Demographics	LAUSD	MUSD	AUSD
Total Enrollment	653,826	29,951	17,826
Latino	74%	96%	43%
Black	9%	<1%	<1%
Asian & PI	6%	2%	52%
White	9%	1%	2%
Multi-Race	1%	<1%	2%
% with Disabilities	13%	11%	8%
% English Learners	29%	31%	25%
% Free/Reduced Lunch	79%	90%	73%
2012 Poverty Data: % aged 5–17 in poverty	30.9%	29.8%	26.8%

According to the LAUSD Personnel Research and Assessment Office, 1.96% of LAUSD teachers in the district’s high-need schools started the 2012–2013 school year teaching out of field (lacking certification), above the B3 threshold of 1.4% stated in the Federal Register, while in AUSD, 1.4% of teachers were teaching out of field, which meets the requirement.

Across the nation, up to 50% of new teachers leave the school within which they teach and/or the profession entirely within the first five years of their teaching career (Berry, Montgomery, et al, 2008). Attrition rates for new teachers are highest in urban schools with high percentages of low-income students. In Los Angeles, the overall annual teacher attrition rate stands at 5%. An estimated 15–16% of Montebello teachers will retire in the next five years. The sheer cost of

turnover is high as annual expenses involved with recruitment, hiring, administrative processing, and continued professional development in many urban districts are substantial (Carroll, 2007). In a recent study conducted by the National Comprehensive Center for Teacher Quality, only 42% of first-year teachers felt “very prepared” for their first year of teaching. Research indicates that hiring well-prepared teachers and providing them with significant support reduces first-year attrition by 50 percent (Black, Neel, & Benson, 2008). Studies indicate that teachers will stay at a school if they feel they can be effective with the students they serve and when they feel they are provided the support to teach well (Johnson, 2006). There is some initial evidence that teacher residency programs are making a difference. For example, most teacher residency graduates (88%) are rated by their administrators as effective or more effective than their first-year counterparts. Indicators find that 90–95% of teacher residency graduates are still teaching after three years (Berry, Montgomery, & Snyder, 2008), a figure which far exceeds the comparable rates for newly hired teachers in urban districts nationwide (Ingersoll 2001). *This national trend held true with LAUTR’s first cohort—90% of Cohort 1 graduates are still teaching within LAUSD after three years, heading into their fourth year.*

B. Project Design

Expanded and Reshaped LAUTR-TI

LAUTR-TI will combine a year-long supervised clinical residency with a mentor teacher, a rigorous master’s-level coursework sequence in Integrated STEM education, and a two-year induction program to prepare and support new teachers to teach in the Los Angeles, Alhambra, and Montebello Unified School Districts.

LAUTR is currently in its fifth year of operation. LAUTR’s model was informed greatly through an initial partnership with the successful Boston Teacher Residency (BTR), one of the

oldest teacher residencies in the nation. BTR staff assisted the LAUTR team through its first year of planning, development, and launch. Through almost five years of operation, LAUTR has successfully launched four cohorts of teacher Residents (approximately 20 Residents annually) and provided these graduates with significant induction support. WestEd, our evaluation partner, has documented the value of LAUTR over these four cohorts. Analysis of annual survey results has been consistently positive about the residency program and induction support over the first three cohorts. On a five-point scale (1 = Very poorly prepared, 2 = Poorly prepared, 3 = Prepared, 4 = Well prepared, 5 = Very well prepared), Residents and graduate new teachers (inductees) felt they were prepared to very well prepared (item averages ranged from 3.00 to 4.53) across a wide range of indicators of effective teachers, including teaching the subject to which they were assigned, teaching in high poverty schools, using a variety of instructional methods, and teaching students who are ELs and students with learning difficulties. One LAUTR inductee noted, “This program has truly made me see teaching in a whole different light. I never knew there were such interactive, inquiry-based ways to teach mathematics to urban youth.”

Residency and induction principals confirmed these self-assessments, providing similar ratings of the preparedness of LAUTR Residents and graduates to teach in a high-needs classroom, with ranges of 3.14 to 3.83 (across the cohorts and type of principal) on a four-point scale. Most importantly, residency principals would consider hiring a LAUTR-prepared teacher over one prepared by a traditional teacher preparation program, rating Residents’ performance on the LAUSD hiring criteria highly, with scores ranging from 3.25 to 3.67 (the range across three cohorts) on a four-point scale. Similarly, induction principals would consider hiring LAUTR teachers based on their experience with LAUTR first-year teachers, with scores across two cohorts ranging from 3.50 to 3.57 on a four-point scale.

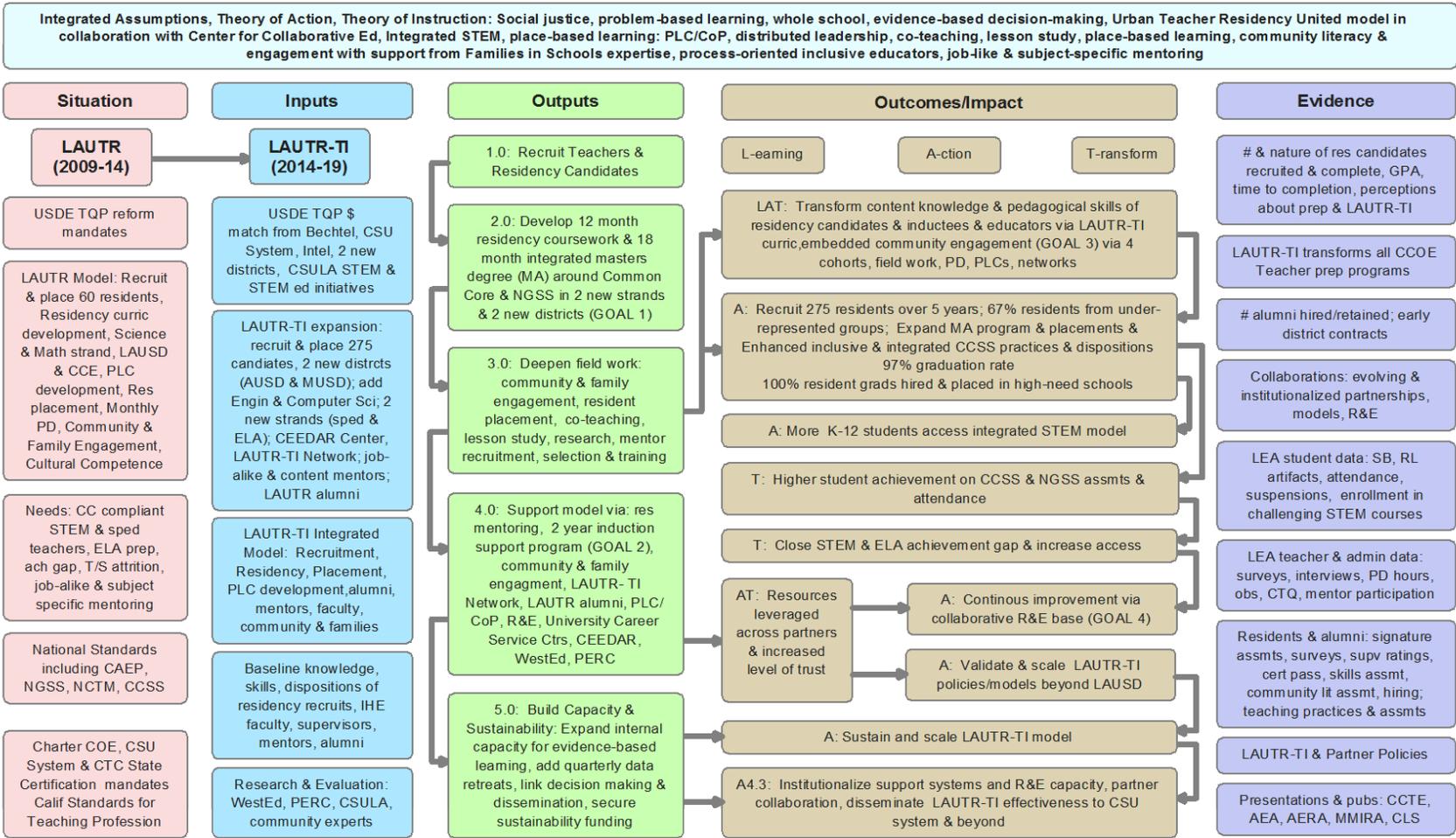
“I have had great success with the LAUTR Program. I have been fortunate to bring on 3 LAUTR candidates. They are well-prepared from Day 1.”—LAUTR Induction Principal

LAUSD calculated the impact of early cohorts of four TQP teacher residency programs serving LAUSD, and concluded that in 2011–2012, 80% of CSULA first-year teachers had attained predicted academic growth over time with their students, a similar percent to that attained for all LAUSD teachers (82%), the vast majority of whom are veteran teachers, a promising finding.

Based on our early success, CSULA and its partners are now proposing to expand LAUTR-TI to become the primary teacher preparation model at the Charter College of Education (CCOE). This expansion will further transform the culture and practice of CCOE’s model for preparing all future teacher candidates. LAUTR-TI seeks to graduate new teachers who share a social justice mission and who are prepared to work for equitable and strong student achievement inside and outside their classroom. We believe that every teacher is a change agent who is responsible for and capable of assisting every student to learn at high levels. LAUTR-TI expects every graduate to demonstrate the following:

- Hold all students to high expectations, and persist in helping students to achieve them
- Build inclusive classrooms in which all students are well served
- Strive toward equity in learning across student subgroups by using data to change practices
- Display strong content and standards knowledge in teaching subject matter
- Know the cultural contexts in which students live and embed them in the curriculum
- Differentiate instruction based on student needs and learning styles
- Model professional collaboration with colleagues to improve instructional practice
- Value parents as active partners, and engage them in multiple ways

Our theory of action, or logic model, will be as follows:



LAUTR-TI will consist of the following components:

- A teacher residency program framed by social justice, equity and opportunity for every student, and an expectation that every student should be prepared upon high school graduation for college, meaningful career, and civic participation in a multicultural world
- An expansion to three strands—secondary math and science, secondary special education (SPED), and blended elementary education and SPED, each with an Integrated STEM specialization
- Aggressive recruitment of recent college graduates with strong GPAs and demonstrated aptitude and passion for service to children, as well as mid-career professionals, and a rigorous selection process that ensures a strong and diverse class of Residents for each cohort
- Strategic selection of LAUTR-TI site schools that demonstrate evidence of professional collaboration and a commitment to school transformation
- A year-long supervised field experience in site schools, with Residents placed in cohorts and paired with mentor teachers who provide close guidance to Residents to build their skills, knowledge, and capacity to effectively teach by the end of the residency experience
- A curriculum—to be delivered over five semesters and a winter intercession (18 months)—that combines theory and practice, and is aligned with the field classroom experience
- An Action Research component that empowers teachers to learn to collect and analyze data about their own practice to better impact student achievement.
- A portfolio-based approach to graduation, emphasizing mastery over key competencies, leading to a Preliminary Credential and Master’s degree in Integrated STEM Education
- A strong two-year induction program of cohort inquiry groups, professional development, and consultation to provide intensive support during the first critical years of teaching.

The Goals and Objectives of the Los Angeles Urban Teacher Residency

Addressing Absolute Priority 2, LAUTR-TI will be a year-long teacher residency that emphasizes clinical learning in high-need classrooms with close supervision by experienced mentors, embedded within an 18-month Master’s degree of Integrated STEM Education.

Goal 1. To expand and deepen a Master’s level teacher credentialing residency program to include three strands, each with a specialization in STEM integration, that prepares 275 outstanding teachers for three high need districts.

<i>Objective A. Plan and design the program</i>	
1a. Establish Project Management Team	By 10/15/14
1b. Establish Advisory Board	By 11/14
2. Hire Induction Director and SPED Field Coordinator	By 12/14
3. Establish Curriculum Committee and ensure all courses are focused on STEM Integration, Common Core, NGSS	By 4/15 & revised annually
4. Design and strengthen the LAUTR-TI residency and induction experiences	By 4/15 & revised annually

Objective A. Plan and design the program

- Establish the Project Management Team (PMT) and Advisory Board, with a biweekly (PMT) and quarterly (Advisory Board) meeting schedule to manage and coordinate LAUTR-TI
- Hire the Elementary Field Coordinator and Special Education Field Coordinator
- Create a curriculum committee led by CCOE Curriculum & Instruction Division Chair, and including LAUTR-TI (CSULA and CCE) staff, partner district representatives, FIS staff, and CCOE faculty. Further develop curriculum for all three strands, ensuring strong STEM curriculum integration and integration of related CSULA STEM initiatives
- Use evidence-based lessons learned to strengthen the residency and induction experience, including guidelines for mentor-resident relationships, gradual release of responsibility model to Residents becoming lead teachers, and tools including lesson and unit plan templates

Outcomes: LAUTR-TI strengthens existing curriculum, residency, and induction model for secondary math-science, while expanding the program to include two new strands—secondary special education and elementary education/SPED, each with a STEM specialization.

Objective B. Develop and implement marketing plan for recruitment and selection of

Residents, schools, and mentors



Objective B: Develop and implement marketing plan	
Resident Selection	
1. Coordinate recruitment with district HR Departments; emphasis on high performing recent college graduates of color	By 11/14 & annually
2. Advertising and information sessions completed	By 2/10 & annually
3. Paper screen to create second round of candidates	By 2/15 & annually
4. Conduct multiple Selection Days	By 4/15 & annually
5. Selection Committee selects cohort of 25 Residents for each of 2 strands in 1 st year, 75 in subsequent 3 cohorts	By 5/15 & annually
School Site and Mentor Selection	
1. LAUTR-TI schools and additional schools serving high-need student populations that have demonstrated academic progress or high performance are recruited & selected to become sites	By 4/15 & annually
2. LAUTR-TI works with the principal to identify top teachers to apply to become mentor teachers	By 4/15 & annually
3. Applicants complete application and submit portfolio, demonstrate lesson, and participate in interview	By 5/15 & annually
4. Mentors are selected by the Selection Committee to enable clusters of candidates, an average of 4–5 per site	By 6/15 & annually

1. Resident Recruitment and Selection

- Coordinate recruitment with LAUSD, MAUSD and AUSD Human Resources (HR) Departments, with a goal of recruiting high performing recent college graduates and mid-career professionals and an emphasis upon recruiting candidates of color
- Design advertising and conduct information sessions, with applications disseminated
- Paper screen applications to produce a list of second round candidates

- Conduct Selection Day that includes interviews, mini-lesson demonstrations, and assessments of candidates’ cultural competence.
- Convene the Selection Committee to select cohorts for each of three strands. The first cohort will consist of 50 Residents within Secondary Math & Science and Secondary Special Education, as the Elementary/SPED strand will not be fully developed until 2016. Cohorts 2–4 will include the Elementary/SPED strand as total enrollment increases to 75 Residents.

2. *School Recruitment and Selection*

- Collaborate with district leadership and community leaders to recruit and select schools serving high-need student populations that have demonstrated academic progress and/or high performance, CCSS integration, and community engagement to become LAUTR-TI sites

3. *Mentor Recruitment and Selection*

- Work with the principal of each school to identify and recruit top teachers (whose students demonstrate high academic growth, are skilled in CCSS integration, and are teacher leaders), with a minimum of five years teaching experience to apply to become mentor teachers
- Conduct an application process that includes a paper application with a portfolio on instructional practice, submission of video and/or classroom observation, and interview
- Convene Selection Committee comprised of LAUTR-TI staff and PMT to select mentors

Outcomes: 15 school sites and 50 Residents are selected for the first cohort, and 75 Residents for each of the subsequent three cohorts, of whom at least 67% are people of color.

Objective C. Select and prepare one cohort of 50 Residents and three cohorts of 75 Residents

<i>Objective C: Select and prepare cohorts</i>	
<i>Mentor Support</i> Convene two-day Mentor Leadership institute and monthly meetings during the school year to build mentor skills on consultation. Provide training in Cognitive Coaching	7/15
<i>Resident Support</i>	

1. Annually, place Residents in peer cohorts in up to 15 school sites, each with a mentor teacher	By 6/15
2. Train all Residents in building PLCs, and establish expectations to engage in school-wide activities	By 8/15
3. Conduct practicum	8/15–6/16
4. Provide five semesters and a winter intercession of graduate-level coursework that includes STEM	Beginning 7/15 & ending 12/16
5. Residents defend portfolios in second year	July
6. All 75 Residents complete program and are recommended for state credentialing, become a first-year teacher, and are recommended to receive a <i>Master's degree in Integrated STEM Education</i>	Residents complete credential by 7/16, begin teaching 8/16, and complete Master's 12/16

Mentor Support

- Convene a two-day summer Mentor Leadership institute and monthly meetings during the school year to build mentor skills on consultation and guidance, share successful practices, and problem solve dilemmas. Provide mentors with training in Cognitive Coaching (Costa & Garmston 2002), which complements our collaborative preparation model.

Resident Experiences

- Place Residents in peer cohorts in up to 10–15 school sites (averaging 5 Residents per school site), with each Resident matched with a mentor teacher
- *Train all Residents in building strong professional learning communities*, and establish expectations for them to be engaged in school-wide professional activities
- *Conduct a 10-month practicum placement mid-August-mid-June*
- *Provide five semesters and a winter intercession (18 months) of graduate-level coursework that includes STEM content expertise as well as teaching skills and knowledge development*
- All Residents complete field work and defense of portfolios, as well as California Teacher Performance Assessments (CalTPA), in the second July. Successful Residents are recommended for credentialing, become a first-year teacher that August, and are recommended to receive a Masters degree in December of the second year

Outcomes: By the end of five years, 267 Residents (a 97% overall graduation rate) comprising four LAUTR-TI cohorts are prepared as highly qualified teachers for high-need schools in three urban districts, have successfully passed CalTPA, and are credentialed, with a minimum 95% graduation rate in each strand.

Goal 2. To establish and sustain a robust two-year teacher induction program

Objective A. Assist Residents in getting hired in a high-need district and school in clusters, and prepare them for first-year teaching

Objective A: Assist Residents in getting hired, and prepare them for first-year teaching	
1. Induction staff build relationships with Residents	By 6/16 & annually
2. Assist Residents with resume development, interview preparation, and pursuing openings	By 6/16 & annually
3. LAUTR-TI works with District HR to designate graduates as priority candidates for hire; schedules Residents for District HR screening and interviewing	By 6/16 & annually
4. Coordinate hiring placement with Districts	By 7/16 & annually
5. Conduct workshops for first-year teachers on start-up	By 8/16 & annually

- LAUTR-TI Induction staff build relationships with Residents during their residency year
- Assist Residents with resume development, interview preparation, and pursuing openings
- Coordinate with each district’s HR department to designate LAUTR-TI Residents/graduates as priority candidates for hire; schedule Residents for district HR screening and interviewing
- Coordinate hiring with districts to optimize placement in clusters in select schools
- Once Residents accept a teaching position, conduct workshops with Residents on preparing for first-year teaching, including setting up the classroom, routines and procedures

Outcomes: 100% of LAUTR-TI graduates are hired and placed in high-need schools.

Objective B: Establish newly inducted teacher cohorts as professional learning communities

Objective B. Establish newly inducted teacher cohorts as PLCs	
1. Work with each school that accepts LAUTR-TI graduates to provide inductees with teacher mentors and monthly cohort meetings	By 9/16 & annually

2. Provide Inductees with onsite coaching, monthly PD opportunities and a website of resources	By 9/16 & annually
3. Establish Alumni Network of web resources, listserv discussion group, and periodic convenings	By 9/17 & ongoing

- Work with each program school to provide new inductees with mentors and conduct monthly support groups (led by mentor teachers)
- Provide LAUTR-TI Inductees onsite coaching, monthly network meetings on sharing effective practice, and a website of resources for their first two years.
- Launch an Alumni Network of web resources, listserv discussion group, and annual convenings to continue LAUTR-TI graduate affiliation over time

Outcomes: Retention of LAUTR-TI teachers will be 95% after one year and 90% after 3 years.

Goal 3. To ensure parent and community engagement in all phases of the program

Goal 3: To ensure community engagement in all phases of the program	
1. Families In Schools constructs and teaches course on cultural literacy and parent/community engagement	By 8/15 & annually
2. Effective strategies for community and parent engagement are integrated in all projects/assessments	By 6/15 & annually

- Families In Schools will co-construct and teach coursework and experiences focused on developing cultural literacy and strategies for parent and community engagement
- Effective strategies for community and parent engagement will be integrated in all projects

Outcomes: Principal and Resident surveys indicate Residents have a high level of understanding of community/parent engagement and demonstrate effective engagement strategies.

Goal 4. To assure performance feedback and periodic assessment of progress toward achieving intended outcomes for all Residents, mentors, schools, and districts

Goal IV: To assure continuous program improvement for all participants		
1. Districts provide LAUTR-TI partners with annual teacher employment and retention data	9/16 & annually	WestEd
2. Teacher reflections and interviews are conducted to assess new teacher satisfaction and progress	Annually in spring	WestEd, PERC

3. Student achievement in classes taught by graduates is compared to district and school performance levels	By 9/17 & annually	WestEd
4. WestEd provides formative data for use by PMT to engage in program improvement	Quarterly	WestEd, PERC, PMT

- Districts provide LAUTR-TI partners with annual teacher employment and retention data
- Survey new teachers to assess induction activities and new teacher satisfaction and progress
- Track student achievement in classes taught by LAUTR-TI graduates, and compare to district-wide and school performance levels
- WestEd and CCOE’s Program Evaluation & Research Collaborative (PERC) will provide periodic data analyses for use by LAUTR-TI staff, PMT, and advisory board to engage in continuous program improvement

Outcomes: Eighty percent of LAUTR-TI inductees’ students achieve at or above predicted

Academic Growth over Time (AGT) during the first two years of teaching.

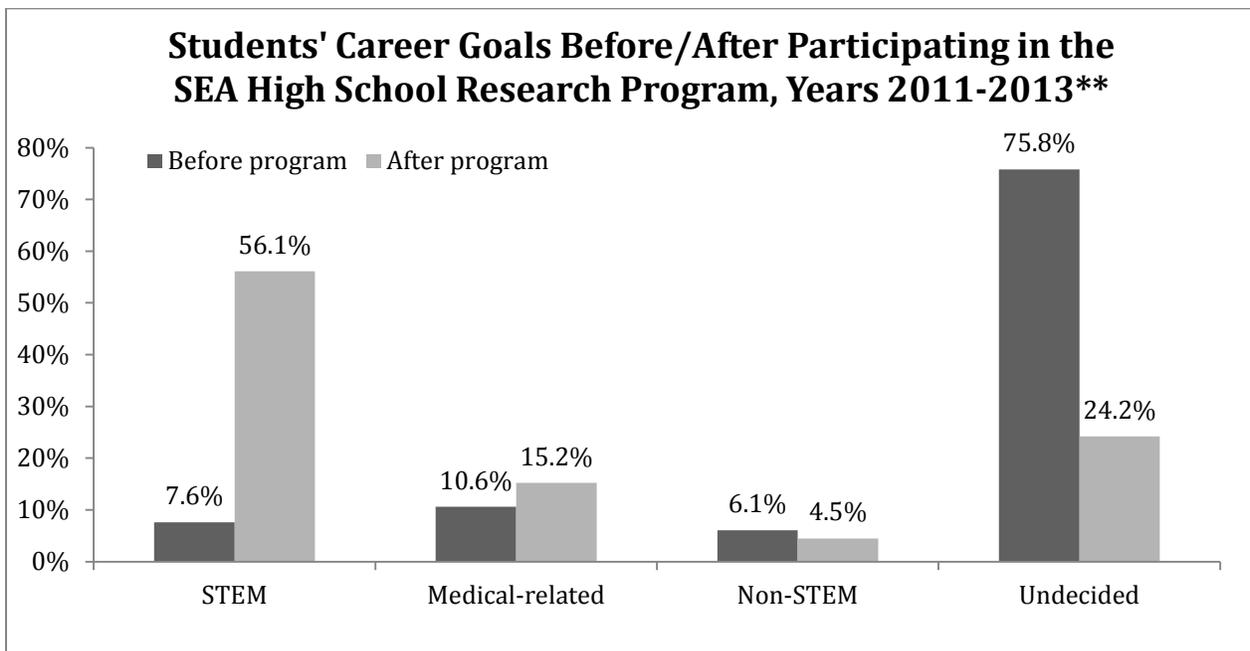
Detailed Description of Program Components

Admissions Priorities—STEM and Diversity in Residents

LAUTR-TI has established two priorities. ***One, in response to Competitive Preference Priority 1: STEM Education, we will prepare educators for teaching in STEM subjects and integrating STEM throughout the curriculum in elementary grades and special education.*** Arvedson (2014), LAUTR-TI’s STEM Expert, notes that, “The National Science Board (2010) reports a strong correlation between students who take advanced science and math courses in high school and their enrollment and success in four year college institutions...Early exposure to STEM fields may motivate students to enroll in more advanced science and math courses when they are available in middle and high school (Bybee & Fuchs, 2006).... However, in a formative timeframe for elementary school aged children, the number of K–5 teachers that are educated [in] STEM is substantially underrepresented. A lack of STEM subject matter expertise and

experiences, coupled with high anxiety and low self-efficacy can lead to low teacher effectiveness (p. 35).” Arvedson further notes that, “STEM concepts such as scientific inquiry, problem-based learning, engineering design and technological activities should encompass the methodology that every elementary pre-service teacher receives in their teacher education.....”

LAUTR-TI’s STEM focus will build upon the STEM work already conducted at CSULA. CCOE coordinates the annual Satellites and Education Conference, in which educators and students are brought together with government (NASA and NOAA) and industry resources to undertake scientific inquiry projects and help students learn potential careers in the space-based industry. MY SPACE Teams (Multinational Youth Studying Practice Applications for Climactic Events) of high school students and their teachers research a global climate issue and present a report at the conference. CCOE has successfully partnered with entities such as Raytheon, Lockheed Martin, Lunar Rocket & Rover, and Garvey Space Corporation to bring the STEM disciplines alive in college and K–12 classrooms. Pre- and post-surveys have found this integrative, project-based experience makes a difference in students’ orientation to STEM fields.



***Data were collected from the pre/post surveys of student career interests from 2011 to 2013.*

The unique Integration in STEM Education Master's degree will involve courses in STEM methods and content knowledge, engineering by design, technology and blended learning, subject area integration across STEM, teaching applications, and use of satellite data to engage learners. Emphasis will be placed upon project-based and inquiry learning. STEM courses will be taught by faculty in the College of Engineering, Computer Science, and Technology, which has been ranked among the 10 best public engineering programs west of the Mississippi; as well as faculty in the College of Natural and Social Sciences (for math & science courses), which has won more Outstanding Professor Awards than any other academic unit in the CSU system. The program goal is to increase content knowledge and instructional skills of Residents to teach integrated, inclusive STEM education.

Second, LAUTR-TI has set a goal of having 67% of all Residents be candidates of color.

This goal, which is aligned to CSULA's status as a Hispanic Serving Institution, reflects the belief that teachers within every school & district should be representative of the cultural, racial-ethnic, and language backgrounds of the students they teach.

Teaching Resident Recruitment and Selection Process

LAUTR-TI will recruit, select, train, and graduate diverse cohorts of teachers specifically picked to serve in each partner district's high-needs schools and areas. As we shape LAUTR-TI, we will use key lessons learned from WestEd's past LAUTR evaluation findings:

- 1) *The quality of the applicant pool is directly correlated to high graduation, placement, and retention rates, and the effectiveness of the new teacher.* Thus, LAUTR-TI will focus on recruiting soon-to-be and recent college graduates in the top third of their graduating class.
- 2) *The most effective LAUTR graduates have been those with strong content backgrounds, an ability to communicate well, and a commitment to service.* We will partner with Career Service

Centers at select colleges to recruit STEM seniors, as well as mid-career changers with strong STEM backgrounds, with good communication skills and a commitment to serve.

3) *Dispositions play a significant role in Resident graduates' success in the early years of teaching.* LAUTR-TI has adopted a set of Habits of Mind (asset-based thinking, commitment to partnerships, persistence, advocacy, inquiry, and personal responsibility) that will be integrated into Selection Day activities. Applicants' disposition scores will factor into Resident selection.

A rigorous selection process will be used. The partnership has identified the following criteria that all applicants must fulfill: (1) able to articulate a philosophy of education grounded in equity and social justice; (2) strong content background; (3) evidence of working collaboratively; (4) service to the community; (5) grasp of data-based inquiry; (6) an assets-based orientation to family and community; (7) effective communication skills; (8) completion of a Bachelor's degree with at least a 3.0 GPA; and (8) commitment to three years of teaching in LAUSD, MUSD or AUSD upon certification. There will be a multi-step selection process:

- Step 1: Initial application and screening to meet minimum requirements
- Step 2: Interview by LAUTR-TI staff
- Step 3: Participation in a Selection Day, including teaching a mini-lesson to students, analysis of a video of a classroom; small group discussion, and group problem-solving
- Step 4: Rubric scoring of candidates that includes education background, work experience, Selection Day ratings, dispositions assessment, and quality of communications. A Selection Committee (representing all partners) will be trained on inter-rater reliability scoring
- Step 5: Selection and confirmation of selected cohort; a waiting list will be established for qualified candidates who were not selected in case a finalist decides not to pursue LAUTR-TI

School Site Selection

Schools will be selected using the following criteria: (1) serves a high-need student population (high percentages of free/reduced lunch, Black, Latino, ELL, and special education students); (2) has demonstrated achievement growth and/or is performing at a high level, (3) can identify a cohort of qualified mentor teachers; (4) demonstrates innovation and professional collaboration; (5) is engaged with families and the community; and (6) and is willing to support a cohort of Residents. Selected schools will give an understanding of how innovative schools work.

The Mentor Program

LAUTR-TI will have a rigorous and competitive process for selecting mentors within partner schools. Selection criteria will include: (1) an education philosophy grounded in equity; (2) strong content background; (3) evidence of effective and differentiated instructional practice; (4) an ability to articulate teaching “moves,” (5) exemplary use of data-based inquiry and formative assessments to inform instruction; (6) evidence of ability to lead and collaborate with others; (7) demonstration of LAUTR-TI’s Habits of Mind; (8) evidence of work with parents and community; (9) demonstration of effective communication skills; (10) a minimum of five years of teaching experience; (11) possession of a Master’s Degree and Clear credential; and (12) a strong endorsement from his/her school principal.

The selection process will include review of application materials, interviews, classroom observations and/or videotapes of classroom instruction, and review of lesson/unit plans.

Selected Mentors will receive a [REDACTED] annual stipend. Mentors will be required to participate in a two-day Mentoring and Leadership course to be convened in the summer that includes training in Cognitive Coaching, with 3-hour monthly follow-up sessions during the year. Mentors will be expected to integrate Residents into the school-based PLCs in which they participate. One

Mentor within each school will receive an additional [REDACTED] stipend and be freed from at least one class/course to (1) coordinate and convene a PLC designated for the LAUTR-TI Residents and inductees in that school, and (2) coordinate and convene all teacher mentors within the school. Resident/inductee PLCs will meet biweekly, focusing on problems of practice, looking at student work, engaging in data-based inquiry cycles, and conducting classroom visits. Mentor PLCs will meet monthly to share successes, problem-solve dilemmas, and learn new tools.

California Standards for the Teaching Profession

Both the Residency and coursework will be rooted in the CCTC-approved and research-based California Standards for the Teaching Profession. The framework includes six standards—(1) Engaging and supporting all students in learning, (2) Creating and maintaining effective environments for student learning, (3) Understanding and organizing subject matter for student learning, (4) Planning instruction and designing learning experiences for all students, (5) Assessing students for learning, and (6) Developing as a professional educator—with multiple elements under each standard.

The Residency

The year-long classroom field experience will pair Residents with experienced, highly effective Mentor teachers to learn teaching skills and knowledge from an effective practitioner. Residents will work in mentor classrooms four days a week, and take courses on the fifth day plus one afternoon per week. The Mentor and Resident relationship is expected and supported to be one of Co-Teaching, that is, two teachers who work together with groups of students and share the planning, organization, delivery and assessment of instruction, and design of the physical space (<http://www.stcloudstate.edu/coe/tqe/coteaching/default.asp>). Over the year, the Mentor and Resident will engage in a variety of co-teaching methods, including one teach, one observe; one

teach, one assist; station teaching; parallel teaching (same material to two groups of students); supplemental teaching (one teacher works with struggling students); differentiated teaching (different methods of presenting same material); and team teaching. Through a gradual release of responsibility model, it is expected that every Resident-mentor pair will evolve to encompass all co-teaching models. Residents and mentors will have a minimum of two hours weekly of “sacred meeting time” to plan instruction, provide coaching around teaching practice, examine data, analyze student work, and collaborate on projects and assignments.

All Residents will be expected to be the lead teacher for a minimum of 200 hours. During the first two months, Residents collaborate with Mentors on a variety of classroom roles and responsibilities. Residents undertake their first Lead Teaching Week in November in which they take full responsibility for planning and teaching a series of four continuous lessons in their classroom. Experiences during this week will support Residents to develop professional learning goals for the remainder of the school year as they take on increasing levels of responsibility. By the spring, each Resident is expected to teach 50% of the full teaching load and every day. In secondary classrooms, lead teaching will be expected to take place within at least two courses/classrooms to ensure the Resident experiences lead teaching in more than one setting. Residents are expected to engage in data inquiry cycles to assess students’ attainment of standards, identify gaps, and design instructional strategies to address them.

The field coordinators (Field Director, Elementary Education Field Coordinator, SPED Field Coordinator) will meet regularly with mentor and Resident pairs, as well as with the cohort of mentors and Residents in each school site to share successes, identify and problem solve challenges, and introduce new tools and resources, as well as conduct workshops in gap areas.

Quarterly, course instructors, field coordinators, and mentor teachers will meet to ensure alignment and synergy between courses, signature assignments, and the field experience.

Rigorous Graduate-Level Coursework

LAUTR-TI Residents will complete five semesters of a rigorous and tailored Master's level coursework sequence. The course sequence is founded upon the state teaching professional standards, with a strong emphasis on effective instruction of special education and ELs.

Residents will take all their courses as a cohort to model and practice PLCs and enable shared learning. ***Responding to Competitive Preference Priority 2, all coursework will prepare***

Residents to design their curriculum, instruction, and assessments based on the Common Core

State Standards (CCSS) and the Next Generation Science Standards (NGSS). All three

districts have committed to both sets of standards. Residents will be thoroughly immersed in CCSS and NGSS, learning their philosophical underpinnings, and the “shifts” each set of standards embraces in the disciplines of mathematics, science, and literacy across the disciplines.

Residents will learn how to construct CCSS- and NGSS-based curriculum, plan effective instruction and projects to teach to standards, and design varied assessments.

Courses will focus on standards-based teaching, teaching students with special needs (including participation on individualized education program teams), teaching ELs, literacy within the content area, advanced content methods, STEM courses (those listed on page 20), curriculum and assessment design, effective classroom management, cultural competency, community engagement, teacher leadership and PLCs. Every course will be tailored to integrate the residency through use of signature assignments that enable Residents to apply theory to practice in their classrooms (e.g., for a course on Classroom Assessment: *Design a culminating performance assessment for a unit you will be teaching in which students must demonstrate their*

new knowledge and skill, focused on higher order thinking skills. Articulate the assessment guidelines, instructions, and rubric.) A weekly seminar will analyze links between the knowledge and skills gleaned from coursework and its application in the residency.

Project-based learning will be embedded across all courses, as research has found that hands-on application and construction of learning engages students more fully than teacher-centered instructional practices (Thomas, 2000). All courses will emphasize interdisciplinary connections for STEM. Learning STEM content and skills through interdisciplinary study of real-world dilemmas and applications demonstrates everyday STEM connections to students. CSU's Engineering by Design and Engineering is Elementary coursework, both of which emphasize an interdisciplinary approach to the teaching of engineering, will be integrated into the coursework.

Embedded across the coursework will be a strong focus on literacy in STEM disciplines. Specific areas of literacy practices will include embedding critical thinking in reading, writing, speaking, and performing; giving students authentic, meaningful, culturally relevant work in literacy; using ongoing, multiple forms of data collection and assessment to assess literacy progress; developing a coherent, school-wide literacy approach; teaching literacy through explicit instruction, modeling, and guided practice; early vocabulary building, and scaffolding from simple to complex text when introducing new concepts. CSU's Center for Advancement of Reading (CAR), which is dedicated to excellence in literacy instruction, will assist LAUTR-TI staff in providing effective literacy training, including literacy across STEM disciplines.

Effective practices for ELs will be a critical theme. Theoretical frameworks around cognition, language development, and second language learning will be presented, and Residents will learn the relationships across language, academic, and content knowledge as they design learning environments and opportunities for all students.

Families In Schools (FIS) will work with CSULA and CCE to develop curriculum that includes both coursework and experiences that lead to a fluent literacy of their students' cultures, languages, and communities. All Residents will be required to demonstrate evidence of their cultural literacy and ability to engage diverse families and communities through a completed family or community project, assessed by community partners.

Teacher leadership and data inquiry will also be key course components. Residents will learn and practice PLC tools to drive conversations about improving instruction, including using a data inquiry cycle to gather data on student learning gaps and develop strategies to address them, protocols for assessing student and teacher work, and peer observation. Work by Newmann and Wehlage (1995) suggests successful schools function as PLCs in which teachers collaborate, take collective responsibility for student learning, and strive for continuous improvement.

Graduation

LAUTR-TI is a competency-based program. We have designed a set of performance assessments to evaluate Residents' progress toward meeting the teaching standards. These assessments include each course's signature assignment, evidence of competency over standards, assessment of teaching effectiveness by the Mentor and principal, assessment of contributions to the school community, and a completed assessment from the CCTC's CalTPA. The portfolio will be assessed by LAUTR-TI staff to determine whether to recommend a candidate for certification and confer a Master's degree in Integrated STEM Education.

The Induction Program

LAUTR-TI will provide Residents with support as they prepare for graduation and become teachers of record. Our two-year induction program for every LAUTR-TI graduate will be informed by WestEd's evaluation feedback, including the following:

- 1) *Inductee-Induction staff relationships are important in order to facilitate all stages of induction—job search, preparing to teach, the first two years of teaching.* Thus, the Induction Director and staff will build relationships with Residents during their residency so that trust has been built by the spring as Residents prepare to apply for their first teaching position.
- 2) *The first stage of induction involves assisting LAUTR-TI soon-to-be graduates to gain their first teaching position.* WestEd’s evaluation found that LAUTR Residents felt the role played by LAUTR staff in assisting them to gain their first teaching positions was critical—navigating the district bureaucracy, help in resume building and submitting applications, collaborating with HR to arrange interviews, and preparing for interviews and demonstration lessons. The LAUTR-TI partnership will proactively assist graduate placement in clusters within high-need, reform-minded schools. We will identify schools that promote a culture of shared practice among new and veteran teachers. LAUTR-TI strives for a 100% hire rate of qualified graduates into positions that match their skills and content knowledge.
- 3) *Once hired into a teaching position, induction includes preparation prior to the start of the school year of a LAUTR-TI graduate’s first teaching assignment.* First-year teachers need ample support to prepare for the first weeks of school. The spring before, prospective inductees will engage in learning walks and classroom observations in other schools to view a variety of teaching styles, classroom management approaches, and routines and rituals to assist in crafting their own approach to their first classroom. Over the summer, induction staff will conduct workshops on setting up a classroom, classroom routines and procedures, classroom management, community building activities, and differentiating instruction.
- 4) *Continuing the cohort model into induction provides LAUTR-TI graduates with a support network they can rely on during the fast-paced, high-stress first two years of teaching.* At both

the school and network levels, the emphasis will be placed on developing PLCs to support newly inducted teachers. An email discussion group will be set up for inductees across schools to share successes, gain feedback, and search for resources. Study groups on inductee-identified topics will be led regionally and meet monthly. New teachers will examine data and engage in the inquiry cycle to better understand student learning challenges and effective instructional responses, engage in lesson study planning, and critique videotapes of classroom instruction.

5) *Induction needs to include a range of activities designed to meet varied and unique needs of inductees.* Induction support will include onsite classroom observation and consultation, as well as cohort network activities. Contextualized professional development will include research-based training in differentiated instruction, classroom management, lesson/unit planning, second language acquisition strategies for ELs, literacy strategies for STEM content areas, and designing formative assessments. Consultations will include designing lessons/units, and identifying strategies for assisting struggling students. Inductees will meet with current Residents to share instructional successes and challenges, forging a connection among cohorts.

LAUTR-TI's induction support will prepare our first- and second-year teachers to engage in each district's educator evaluation system. The goal of an effective educator evaluation system is to promote constructive dialogue on teaching practice and impact on student learning outcomes through the following process: teacher self-assessment, lesson design and implementation, development of an individual growth plan, and regular observations and feedback on progress.

All three partner districts operate a state-approved Beginning Teacher Support & Assessment (BTSA) program which assists teachers with a Preliminary Credential to fulfill the requirements for obtaining a Professional Clear Teaching Credential. LAUTR-TI will collaborate with each district to help them provide more focused BTSA support to LAUTR-TI new teachers.

Stipends and Repayments

LAUTR-TI will develop a contract with each incoming Resident that outlines their responsibilities and commitments to the program. Each Resident will receive a stipend of [REDACTED], representing a livable wage for Los Angeles. This stipend will be treated as a forgivable loan, and shall be given to Residents in five installments through program completion. In return, Residents will be contractually required to teach a minimum of three years in a high-need school and high-need subject or area within a partner district upon receiving a teaching credential. All LAUTR-TI graduates will be required to provide the program with proof of employment. The contract will include repayment obligations should participants fail to complete the program that will require graduates to repay LAUTR-TI proportionately to unfulfilled required teaching time.

Collaboration of Strong Partnerships

LAUTR-TI's partners embody energetic and authentic school reform organizations:

California State University Los Angeles, Charter College of Education (CCOE) is a unique higher education institution well suited for urban teacher residencies. CCOE enjoys special charter status, establishing it as a center for reform efforts and permitting its faculty flexibility in developing new programs. Its mission is to enable educators to ensure the maximum learning and achievement potential of culturally and linguistically diverse urban learners. CCOE first launched LAUTR in 2009, in partnership with CCE, LAUSD, and several community partners, with the goal of creating a residency-based teacher preparation program focused on social justice, and designed to create high quality teachers for LAUSD. Based on early success, we now seek to expand and transform LAUTR-TI so as to maximize impact within Los Angeles County districts.

Center for Collaborative Education (CCE) has a mission to transform schools and districts to ensure that all students succeed. CCE has worked in LAUSD since 2004 to assist community

partners, LAUSD, and United Teachers Los Angeles to establish the Pilot School model, in which schools have charter-like freedom to be more innovative. CCE partnered with LAUSD and CSULA to launch the Los Angeles Principal Residency Network (LAPRN) to prepare new leaders for LAUSD's autonomous schools. A recent study found that, "Graduates of LAPRN were 50 percent more likely than CSULA traditional graduates to report that their primary job status was teacher leader, assistant principal, or principal (Hafner et al, 2013)."

The Evaluation Research Program at *WestEd*, an educational research organization, will serve as the external evaluator. WestEd has previously partnered with CSULA and CCE as external evaluator on federal grants for LAPRN, the first iteration of LAUTR, and a current Los Angeles New Administrators Leadership Program. The WestEd team provides sound, timely evaluation data on grant progress that has been invaluable to improving program delivery.

Families In Schools (FIS) works with LAUSD schools and communities to engage families and teachers in training that relies on community assets. FIS has worked with CCE and CSULA on principal leadership preparation programs, and the first iteration of LAUTR, including creating and teaching a course on cultural literacy and strategies to engage families and communities.

Los Angeles Unified School District (LAUSD), a partner in the first LAUTR iteration, is the second largest school district in the nation. Superintendent Deasy's All Youth Achieving agenda has set ambitious goals that include 100% graduation and proficiency for every student. The district has created frameworks to support effective teaching through the creation of the LAUSD Teaching and Learning Framework and the Educator Growth & Development Cycle.

Montebello Unified School District (MUSD) has embraced the following beliefs to guide the district: Creating a culture of collaboration, expression, high expectations, and relationships; committing to educational equity and student success; promoting rigor, relevance, and

relationships; continually refining efforts for the benefit of all students; and educating graduates to be Critical Thinkers, Communicators, Collaborators, and Creators.

Alhambra Unified School District (AUSD) strives to ensure the educational success of all students by having a comprehensive educational program where students can learn and become productive members of a diverse society. Their Core Beliefs include that the district will provide an equitable quality education for each child; embrace, respect, and promote cultural diversity; and strive to ensure that many aspects of educating children are important.

Resource Assessment

The Partnership is committed to establishing a broad base of funding over the grant period to ensure the development of a sound financial base to continue and sustain the program. Funds from the US ED Teacher Quality Partnership Grants Program will help launch the expansion of LAUTR-TI. Simultaneously, **CSULA has already secured all required one-to-one match funds for LAUTR-TI.** Bechtel Corporation has pledged a substantial amount of funds over a five-year period to support innovation within the CSU system, including a pledge of up to \$5 million toward the match requirement to support the success of LAUTR-TI. In addition, the Montebello Unified School District has pledged [REDACTED] per year for the four cohorts, or [REDACTED] total, to support five Residents per cohort for a total of 20 Residents over four cohorts.

We estimate an additional \$10 million in match funds will be secured through in-kind staffing and institutional resources over the five years. In-kind contributions will include CSULA's Deans of the three participating colleges, the Faculty Chair of the CCOE Curriculum & Instruction division, and all faculty teaching LAUTR-TI courses.

Each core partner organization is committed to the sustainability of LAUTR-TI and will continue to provide in-kind staffing support to continue LAUTR-TI activities post-grant

completion, as well as engage in building a sustainable financial model. CSULA intends to have LAUTR-TI become a permanent fixture in preparing teachers, providing a steady pipeline of new teachers to partner districts who are prepared to effectively teach and participate in transforming their schools. We intend to create the financial base for the program, using multiple and varied city, state, federal, and foundation funds, that enables program sustainability. In particular, the Montebello Unified School District model of partially funding the cost of Residents who commit to teach in the district for a minimum of three years beyond graduation, providing half the cost of preparing a teacher through the residency model, is a cornerstone to sustaining the program beyond federal funding. Over the life of this grant, LAUTR-TI will conduct outreach to multiple urban districts to promote this type of sustainable partnership.

C. Management Plan

This initiative has multiple partner organizations, including CSULA, CCE, WestEd, LAUSD, MUSD, AUSD, and FIS. Each partner brings unique expertise to the initiative, and has made specific commitments that will heighten the initiative's impact and effectiveness.

In the spirit of partnership, LAUTR-TI TI will have **two Co-Principal Investigators** who will oversee project management and coordination. **Dr. A.Deer Williams** (53% time), Associate Professor at California State University-Los Angeles's Charter College of Education will serve as the Principal Investigator. Dr. Williams served as the Curriculum Director for CSULA's first LAUTR federal grant for three years, prior to becoming a Co-Principal Investigator for the past two years. He has overseen much of the redesign of CSULA Charter College of Education's teacher preparation curriculum to focus on the blending of theory and application in the classroom. Dr. Williams also oversaw the transition from a quarter to semester system for the college, the latter of which is much more amenable to a teacher residency model. **Dr. Dan**

French, (20% time), Executive Director of the Center for Collaborative Education, has worked with LAUSD since 2006 and helped to establish the Los Angeles Pilot Schools, the Boston and Los Angeles Principal Residency Networks, and was Co-Principal Investigator for the first federal LAUTR grant. He has also partnered with LAUSD to launch a new Los Angeles New Administrators Leadership Program, designed to provide induction leadership development to new school leaders. Prior, Dr. French was the Director of Curriculum & Instruction for the Massachusetts Department of Elementary & Secondary Education.

A **Project Management Team** (PMT), facilitated by the Co-PIs, will plan each project step, check on project progress, and refine project activities based on ongoing feedback from WestEd. Upon grant launch, several full-day project design and development retreat days will be scheduled to more fully map out the full scope of the initiative, and begin to create project materials, including recruitment and marketing materials, LAUTR-TI Residents and Mentors Handbook, portfolio assessment process. Subsequently, and through the life of the grant, the PMT will meet twice per month through face-to-face and conference call meetings, with structured agendas guiding each meeting, decisions recorded, and minutes taken and distributed to ensure team understanding, agreement, and follow-through on decisions made. One key task of the PMT will be a quarterly review of all project activities, timeline, and deliverables to ensure that the project is on schedule, and, if roadblocks arise, to make appropriate adjustments while ensuring fidelity of implementation. Semi-annually, a full-day retreat will be held to conduct a timely review of all WestEd formative feedback and identify successes, challenges, and gaps, and revise our action plan. The Project Management Team will consist of Drs. Williams and French, as well as the following project staff members:

- **Dr. Paula Arvedson** (CSULA, 26% time) will serve as the **STEM Expert and Faculty Program Coordinator for the Elementary/SPED** (Multiple Subject/SPED) with STEM Specialization strand. Dr. Arvedson current teaches Mathematics Methods courses. Her research and teaching focuses on ways to integrate STEM and child development in ways that are pedagogically sound and relevant to today's society. She is the CCOE Coordinator for the annual Satellites and Education Conference (described above), in which educators and students alike explore STEM fields and undertake STEM-inquiry-based research. As the Faculty Program Coordinator for the Elementary/SPED strand, her role is to ensure alignment with state credentialing requirements within all courses, and enable coordination and integration among course instructors and between course instructors and mentor teachers (these responsibilities are common for all three faculty program coordinators).
- **Dr. Kimberly Persiani** (CSULA, 40% time) will serve as the **Faculty Program Coordinator for the Secondary Math & Science (Single Subject) strand**. Dr. Persiani is the CCOE's CalTPA Coordinator, and will coordinate all Residents work on preparing for and passing these performance-based teacher assessments.
- **Dr. Leila Ricci** (CSULA, 26% time) will serve as the **Faculty Program Coordinator for the Secondary SPED** (Single Subject SPED) with STEM Specialization strand. She has researched and written on the topic of "Co-Teaching in an Urban Residency: Enhancing Differentiation in Math and Science Classrooms."

LAUTR-TI will also have field staff for recruitment, field work experience, and induction:

- **Maria Chan** (CCE full-time) will serve as the **Project Director and Induction Director**. As Project Director, Ms. Chan will be responsible for overall daily project management and coordination. She will ensure coordination and seamless integration among the residency

experience and coursework; manage partnership coordination with the three partner districts; and ensure fidelity of implementation across all areas. As Induction Director, she will coordinate LAUTR-TI graduate hiring into teaching positions within the three partner districts, preparing first-time teachers to lead their own classrooms, and ensuring ongoing support of the graduates through their first two years of teaching. Ms. Chan previously served as Induction Director for the first LAUTR initiative. Prior, she was a Response to Intervention & Instruction Specialist and Lead Teacher for LAUSD.

- **Yvonne Ribas** (CCE, full-time) will serve as the **Recruitment Director**, and will be responsible for all recruitment activities, with a focus on recruiting top quartile STEM seniors from high quality universities, as well as STEM mid-career changers. She will work closely with the Human Resources Departments of each partner district. Ms. Ribas served as the Recruitment Director in the first LAUTR initiative. She is a former teacher and literacy coordinator, and has written on teacher beliefs in linguistically diverse classrooms.
- **Esmeralda Mora** (CCE, full-time) will serve as the **Field Director**, and will be responsible for identifying and selecting school sites and mentors, matching mentors with Residents, providing overall support and supervision to Residents, coordinating Lead Weeks, and ensuring every Resident is making progress. She will be the primary support for Residents in the Secondary Math & Science strand. Ms. Mora served as the Field Director in the first LAUTR initiative. Prior, she has been a Teaching and Learning Specialist.
- An **Elementary/SPED Specialist** (CCE, full-time) will be hired to work with the Field Director to coordinate the field experience for the Residents in the Elementary/SPED strand. S/he will ensure that Residents in the Elementary/SPED strand are fully engaged in teaching STEM disciplines in elementary inclusion classrooms.

- A **Special Education Field Coordinator** (CCE, full-time) will be hired to work with the Field Director to coordinate the field experience for the Residents in the Secondary Special Education strand. S/he will ensure that Residents in the Secondary Special Education strand experience opportunities of teaching in inclusion STEM classrooms.
- **Al Heredia**, Project Evaluator from WestEd, will be responsible for all project evaluation, including providing both formative feedback to use in continuous program improvement, and summative evaluative data. Mr. Heredia is Project Director of the Evaluation Research Program at WestEd.
- **CCOE's Program Evaluation & Research Collaborative (PERC)** staff will serve as internal evaluators to leverage the work of the external evaluators and build capacity for sustainability of evaluation after this grant cycle sunsets. PERC's Lead Evaluator, **Simeon Slovacek**, will manage staff assignments.

An LAUTR-TI Advisory Board will meet quarterly to provide oversight guidance on all aspects of the initiative. Representation on the Advisory Board will include the leaders of all partner organizations—CSULA, CCE, WestEd, FIS, LAUSD, AUSD, MUSD—and the Project Management Team. Initially, the Advisory Board will provide guidance on project design across all aspects—recruitment and selection of Residents, schools, and mentors; coursework; the “residency” experience; proficiency-based graduation guidelines; and the induction experience. At subsequent quarterly meetings, the Advisory Board will review the Timeline of Milestones below, ensuring that the project is on schedule, and if roadblocks arise, appropriate adjustments are made while ensuring the quality of the initiative. The external evaluator, WestEd, will provide the Advisory Board with ongoing formative and summative evaluation feedback to use in their assessment of progress and to use in supporting continuous improvement.

Los Angeles Urban Teacher Residency Milestones

MILESTONES	TIMELINE	LEAD	BENCHMARKS
Goal 1. To expand and deepen a Master’s level teacher credentialing residency program to include three strands, each with a specialization in STEM integration, that prepares 275 outstanding teachers for three high need districts.			
<i>Objective A. Plan and design the program</i>			
1a. Establish Project Management Team	By 10/15/14	Co-PIs	Schedule of meetings established
1b. Establish Advisory Board	By 11/14	Co-PIs	Advisory Bd. formed & meeting
2. Hire Induction Director and SPED Field Coordinator	By 12/14	Co-PIs	Staff hired and on board
3. Establish Curriculum Committee and ensure all courses are focused on STEM Integration, Common Core, NGSS	By 4/15 & revised annually	CSULA Co-PI	STEM-, Common Core, NGSS-aligned LAUTR-TI course curriculum
4. Design and strengthen the residency and induction experiences	By 4/15 & revised annually	Field Director	LAUTR-TI Handbook completed
<i>Objective B: Develop and implement marketing plan for recruitment and selection of Residents, schools, and mentors</i>			
<i>Resident Selection</i>			
1. Coordinate recruitment with LAUSD, MAUSD and AUSD HR Departments; emphasis on high performing recent college graduates of color	By 11/14 & annually	Recruit. Dir.	Written recruitment policy among LAUTR-TI and partner districts
2. Advertising and information sessions completed	By 2/10 & annually	Recruit. Dir.	# of sessions & participants
3. Paper screen to create second round of candidates	By 2/15 & annually	Recruit. Dir.	Paper screen ratings
4. Conduct multiple Selection Days	By 4/15 & annually	Recruit. Dir.	Selection Day ratings
5. Selection Committee selects cohort of 25 Residents for each of 3 strands	By 5/15 & annually	Recruit. Dir.	Final cohort rosters and waiting lists
<i>School Site and Mentor Selection</i>			
1. LAUTR-TI schools and additional schools serving high-need student populations that have demonstrated academic progress or high performance are recruited & selected to become LAUTR-TI sites	By 4/15 & annually	Field Dir.	Schools selected

2. LAUTR-TI works with the principal to identify top teachers to apply to become mentor teachers	By 4/15 & annually	Field Dir.	List of mentor applicants
3. Applicants complete application and submit portfolio, demonstrate lesson, and participate in interview	By 5/15 & annually	Field Dir.	Mentor applicant ratings
4. Mentors are selected by the Selection Committee to accommodate clusters of candidates, an average of 4–5 per site	By 6/15 & annually	Field Dir.	Roster of mentors selected
Objective C: Select and prepare one cohort of 50 Residents and three cohorts of 75 Residents each, for a total of 275 Residents			
Mentor Support Convene two-day Mentor Leadership institute and monthly meetings throughout the school year to build mentor skills on consultation and guidance. Provide training in Cognitive Coaching	7/15 & ongoing annually	Field Dir.	Institute and monthly meeting agendas and evaluations
Resident Support 1. Annually, place Residents in peer cohorts in up to 15 school sites, each with a mentor teacher	By 6/15 & annually	Field Dir.	Roster of placements & pairings
2. Train all Residents in building PLCs, and establish expectations to engage in school-wide activities	By 8/15 & annually	Field Dir.	Workshop agendas & evaluations
3. Commence pre-practicum portion of residency	By 8/15 & annually	Field Dir.	Logs of Field Dir. school visits
4. Engage in practicum portion of residency	By 11/15 & annually	Field Dir.	LAUTR-TI staff observational feedback to Residents
5. Provide five semesters and a winter intercession of graduate-level coursework that includes STEM	Beginning 7/15 & ending 12/16	Co-PIs and Project Dir.	Course schedule and Resident evaluations
6. All 75 Residents complete program and are recommended for state credentialing, become a first-year teacher, and are recommended to receive a <i>Master's degree in Integrated STEM Education</i>	Residents complete credential by end of 7/16, begin teaching 8/16, and complete Master's by 12/16	Co-PIs & Project Dir.	Roster of Residents completing credentials, hired as first-year teachers, and completing Master's
Goal II: To establish and sustain a robust two-year teacher induction program			
Objective A. Assist Residents in getting hired in a high-need district and school, and preparing them for first-year teaching			
1. Induction staff build relationships with Residents	By 6/16 & annually	Induct. Dir.	Induction Dir. correspondence
2. Assist Residents with resume development, interview	By 6/16 & annually	Induct. Dir.	Workshop agendas & evaluations

preparation, and pursuing openings			
3. LAUTR-TI works with District HR to designate graduates as priority candidates for hire; schedules Residents for District HR screening and interviewing	By 6/16 & annually	Induction Dir.	Database on cohort grads, schedules for screening and interviewing
4. Coordinate hiring placement with Districts	By 7/16 & annually	Induct. Dir.	Database on graduate hires
5. Conduct workshops for first-year teachers on start-up	By 8/16 & annually	Induct Dir.	Workshop agendas & evaluations
Objective B. Establish newly inducted teacher cohorts as professional learning communities			
1. Work with each school that accepts LAUTR-TI graduates to provide inductees with teacher mentors and monthly cohort meetings	By 9/16 & annually	Induct. Dir.	Database of inductees and mentor pairing; schedule of each site's inductee meeting schedule
2. Provide Inductees with onsite coaching, monthly PD opportunities and a website of resources	By 9/16 & annually	Induct. Dir.	Logs of site visits, monthly PD agendas and evaluations
3. Establish Alumni Network of web resources, listserv discussion group, and periodic convenings	By 9/17 & ongoing	Induct. Dir.	Alumni website; records of online discussion groups & convenings
Goal III: To ensure community engagement in all phases of the program			
1. Families In Schools constructs and teaches course on cultural literacy and parent/community engagement	By 8/15 & annually	FIS	Evidence of courses taught by FIS
2. Effective strategies for community and parent engagement are integrated in all projects/assessments	By 6/15 & annually	CSULA Co-PI	Evidence of curriculum integration of parent/community engagement
Goal IV: To assure continuous program improvement for all participants, including Residents, inductees, mentor teachers, course instructors, and LAUTR-TI staff			
1. Districts provide LAUTR-TI partners with annual teacher employment and retention data	9/16 & annually	WestEd	Database on annual teacher employment & retention
2. Teacher reflections and interviews are conducted to assess new teacher satisfaction and progress	Annually in spring	WestEd	Formative evaluation reporting n LAUTR participant experiences in and perceptions of the program.
3. Student achievement in classes taught by graduates is compared to district and school performance levels	By 9/17 & annually	WestEd	Evaluation reporting on student achievement
4. WestEd provides formative data for use by PMT to engage in program improvement	Quarterly	WestEd & Co-PIs	Formative evaluation reports on all aspects of LAUTR-TI

D. Project Evaluation

WestEd will evaluate the LAUTR Transformation Initiative. Our evaluation approach will be objective- and performance-driven, and include mixed-methods utilizing both quantitative and qualitative data and models (REF). We will collect and analyze quantitative data on GPRA, HEA, and LAUTR-TI project performance measures; on proposed LAUTR-TI goals, objectives and outcomes; and for a Quasi-Experimental Design (QED) assessing whether LAUTR-TI results in improved teacher and student outcomes relative to traditional teacher preparation programs. We will compare findings on performance measures for LAUTR-TI participants with national and state standards of excellence in teacher preparation, as well as to the outcomes of other credentialing programs, using chi-square or analysis of variance to examine statistical significance as appropriate. The CSU Center for Teaching Quality (CTQ) will provide CSU teacher candidate comparison group data for the QED at the CSU and state level. We will collect and analyze qualitative data to explicate quantitative findings and maintain all data in a longitudinal database to gauge progress and allow for within- and cross-cohort comparisons. For the duration of the study, WestEd will provide annual summaries of the quantitative teacher and student outcomes measures described above, including the GPRA and HEA performance measures. We will report progress on measures and evaluative findings to multiple audiences, including ED and program stakeholders, via Annual Performance Reports (APR), narrative reports, and timely presentations.

The impact of teacher residency programs on teacher quality and student achievement is of import not only to CSULA but also to the CSU Chancellor's Office. Our evaluation plan fits into a broader context for investments in teacher preparation programs in the 23 campus CSU system. As well, CTQ, hosted by the CSU Chancellor's office, has put in place longitudinal data

collection on all CSU teacher candidates from the point of application to placement, and beyond. For this reason, our plan fits into a natural analytic frame that allows contrasts to be examined both within and across campuses. After the TQP awards are made, WestEd will collaborate with SRI International, also a proposed evaluator on several other CSU TQP grant applications, to identify opportunities to examine program contrasts and further data collection efficiencies.

Recruitment and Selection. To gauge progress on recruitment and selection, we will assess project measures on recruitment targets; selection rates; candidates from underrepresented groups; candidates with STEM- and education-related backgrounds (based on prior employment, career path, major, advanced degrees, and granting institutions); GPA; California Subject Examination Test (CSET) results; Selection Day ratings; declared subject matter preparation area and certification; motivations for selecting preparation via LAUTR-TI and teaching as a career; and attitudes and beliefs about teaching STEM subjects. These data will be collected from program documents and from candidates via annual surveys.

Teacher Preparation. Measures assessed related to teacher preparation include GPRA *Short-Term Performance Measure 1: Persistence: the percentage of program participants who were not scheduled to graduate in the previous reporting period and persisted in the postsecondary program in the current reporting period.* Data for the measure will be collected via LAUTR-TI archival program data. Project measures regarding teacher preparation will also assess candidates' specific subject matter preparation area; similarity of mentor-candidate certification; quality of preparation (i.e., the extent to which different preparation components contribute to candidate-perceived self-efficacy for teaching); candidate progression in teaching responsibility, as measured by time spent teaching and breadth and depth of instruction (e.g., lesson planning and teaching versus unit planning and teaching); and teaching practices learned as measured by

pedagogical methods employed (e.g., instructional practices aligned to the Common Core or Next Generation Science Standards). Data on these measures will be collected via review of preparation program documents, semi-annual surveys of residency candidates and mentors, and mentor-candidate logs documenting residency activities.

Graduation and Certification. GPRA and HEA each require measures related to graduation and certification. We will assess GPRA *Performance Measure 1: Graduation: the percentage of program completers who (1) attain initial certification/licensure by passing all necessary certification/licensure assessments and attain a Master's degree within two years of beginning the program* by obtaining from LAUTR-TI archives data on degrees and specific teaching certifications (including authorized subject matter and grade spans) obtained by candidates and dates awarded, in order to gauge whether they were obtained within the measure-specified timeframe. We will verify data on degrees and certifications obtained with those from CTQ. To assess passing of initial and necessary certification/licensure assessments for GPRA *Performance Measure 3: Improved Scores: the percentage of grantees that report improved scaled scores on assessments for initial State certification or licensure of teachers* and the HEA measure, *improvements in the pass rates and scaled scores for initial state certification or licensure of teachers*, we will obtain teacher preparation candidates' scores on the state licensure exams, the CSETs, from LAUTR-TI program documents (as the programs are responsible are for verifying passing of assessments) and verify the scores with those archived by CTQ. HEA also requires a measure on *achievement for all prospective and new teachers, as measured by the eligible partnership*. To assess achievement for prospective teachers, we will collect results from the California Teacher Performance Assessment (CalTPA) directly from the preparation program and verify with data from CTQ. (See "Placement" below with regard to new teachers.)

Placement. As noted above, HEA requires a measure on *achievement for all prospective and new teachers, as measured by the eligible partnership*. For new teachers we will collect results from teacher evaluation protocols compiled by district human resources (HR) departments (e.g., performance review results from the LAUSD Educator Growth and Development Cycle), a process which will be formalized with data sharing MOUs between WestEd and LAUTR-TI and each participating district (LAUSD, MUSD, and AUSD). HEA also requires measures regarding hiring, subject areas taught, and placement in high need areas and schools. Specifically we will assess the percentage of highly qualified teachers (1) *hired by the high-need LEA participating in the eligible partnership* (100% target), namely, LAUSD, MUSD, and AUSD; (2) *who are members of underrepresented groups* (e.g., African-American, Hispanic/Latino, or Native Hawaiian or other Pacific Islander; 67% target); (3) *who teach high-need academic subject areas of mathematics and science* (67%, with a single subject credential); (4) *who teach in high-need areas, specifically special education* (67%); and (5) *who teach in high-need schools* (100%), *disaggregated by the elementary school* (33%) *and secondary school levels* (67%) in LAUSD, MUSD, and AUSD. All related data will be collected annually from the preparation program and surveys of its graduates and will be verified with data from district HR departments and CTQ.

Retention. We will assess measures of retention, specifically, *teacher retention in the first three years of a teacher's career* (90% target), an HEA measure, and three GPRA measures: *Short-Term Performance Measure 2: Employment Retention: the percentage of beginning teachers who are retained in teaching in the partner high-need LEA one year after being hired by the LEA*; *Performance Measure 2: Employment Retention: the percentage of beginning teachers who are retained in teaching in the partner high-need LEA three years after being hired by the high-need LEA*; and *Efficiency Measure: Employment Retention: the cost of a successful*

outcome where success is defined as retention of the teacher in the partner high-need LEA three years after the teacher is hired by the high-need LEA. We will calculate annual retention rates using the initial number of graduates per cohort, not the number of teachers remaining in the cohort in the prior year. Annually we will collect data directly from partner district HR departments on all LAUTR school and teaching placements to determine LAUTR teachers retained in teaching from each cohort. We will gather information on which teachers resigned a teaching position or obtained a non-teaching position and what new position within or outside the district the former teacher assumed. Analyzing these data will yield findings for all retention measures. Budget reporting of grant, match, and in-kind expenditures in APRs will provide the fiscal data necessary to determine the per capita cost of teacher retention.

Using a QED to Analyze Student and Teacher Outcomes . In alignment with GPRA

Performance Measure 4: Student Learning: the percentage of grantees that report improved aggregate learning outcomes of students taught by new teachers we will calculate the learning outcomes of students taught by LAUTR graduates, as well as select teacher outcomes resulting from participation in LAUTR, using a QED. In the final year of the evaluation, we will use the QED to address whether the LAUTR-TI model is more effective at preparing teachers than traditional teacher preparation programs. Waiting until the final year of the evaluation will allow us to pool data from all available appropriate cohorts to increase our sample size. The teacher outcome variables for the QED will be measures of teacher preparation drawn from the Survey of First-Year CSU Teaching Graduates and the Survey of School Principals and Supervisors of First-Year CSU Teaching Graduates (available through CTQ, and offering a basis for comparing LAUTR-TI teachers to teachers statewide in traditional programs), teacher performance as measured by the CalTPA, teacher placement in a high-needs school, and teacher retention.

Student outcomes will include scores from English language arts (ELA) and mathematics Smarter Balanced assessments and future science assessments to be used in California (i.e., NGSS-based assessments or science California Standards Tests).

A central challenge in estimating the relationship between teacher residency programs and teacher and student outcomes is disentangling the effects of the program from the effect of participant selection. For example, does the program improve teacher instructional practice, retention in the profession, and student learning, or would the types of prospective teachers who apply and are admitted to the residency program exhibit these desirable outcomes no matter what type of preparation program they attended? To address this threat of selection bias, we propose to utilize a Euclidean distance matching technique to identify an appropriate sample of candidates from traditional teacher preparation programs at CSULA. The purpose of matching is to create groups that are equivalent on the observable pre-intervention variables known to be related to the outcomes of interest so that post-intervention differences can be causally attributed to the preparation program (Shadish, Cook, & Campbell, 2002). There are two other matching algorithms used frequently by researchers to identify comparison groups: propensity score matching and Mahalanobis distance matching (Guo & Fraser, 2010; Stuart, 2010). Propensity score matching is the most well-known method but requires a large sample size to reliably create well-matched comparison groups (Luellen, Shadish, & Clark, 2005). When the number of treatment teachers is small (as is the case with LAUTR), scaled Euclidean and Mahalanobis distance matching are better options (Judkins, 2013). We plan to use scaled Euclidean distance matching because it will allow us to more heavily weight the baseline achievement measures than the demographic variables when identifying matches. In addition, we will utilize a one-to-many matching strategy (i.e., each LAUTR teacher will be matched to multiple comparison

teachers), if possible, in order to improve the statistical power of the analyses (Shadish et al., 2002). Once we have the data, we will confirm that Euclidean distance matching is the optimal matching technique given the size and composition of the treatment group. We will also consider Mahalanobis distance matching, propensity score matching, and propensity score weighting.

For teacher level outcomes, we will identify teachers in traditional preparation programs as matches for LAUTR-TI teachers based on all available pre-treatment candidate background characteristics, financial information, and program information that are available from the CSU application process. For student level outcomes, we will further restrict the pool of matched teachers by forcing exact matches on the grade level and subject of candidates' teaching placement and additionally matches on the aggregate demographic and prior achievement characteristics of teachers' placement classrooms and schools. For student outcomes, it is necessary to match the characteristics of candidates' teaching placement because LAUTR-TI prepares new teachers in multiple subjects and grade levels, and the scaling of the Smarter Balanced assessments and the future science assessments will necessitate limiting the pool of potential comparison teachers to teachers assigned to the same courses or grades as the program graduates. For example, comparison teachers assigned to grade 4 will be the only potential matches for program graduates teaching the same grade whereas comparison teachers assigned to Algebra I will be the only potential matches for program graduates teaching the same course. Additionally matching on the aggregate demographic and prior achievement characteristics of teachers' placement classroom and schools will help ensure baseline equivalence of student outcomes between students in LAUTR-TI and comparison teachers' classrooms. This is particularly important given the fact that LAUTR-TI is designed to place teachers in high-needs schools.

Following the matching, we will calculate the standardized difference in the teacher-level means (i.e., the mean difference between the treatment and comparison groups divided by the pooled standard deviation) for each continuous achievement measure used in the matching process. This type of numerical balance diagnostic will determine the quality of the matches. In accordance with What Works Clearinghouse (WWC; U.S. Department of Education, 2014) guidelines for baseline equivalence, we will investigate the possibility of identifying a different pool of comparison teacher candidates if the differences between the treatment and comparison teacher candidates on the achievement measures are greater than 0.25 standard deviations.

Teacher-level impact analyses will pool outcomes across grade-levels and subject areas because the teacher outcomes (preparation, performance, placement and retention) are measured consistently across teachers. We will compare outcomes for LAUTR-TI-prepared teachers to those of the matched sample using additional regression adjustment, controlling for key, pre-treatment, candidate-level characteristics. Since matching generally produces similar, but not identical, treatment and control groups, analyzing the matched samples using regression models with additional controls helps minimize any bias due to inexact matching and is consistent with WWC guidelines (Rubin & Thomas, 2000; U.S. Department of Education, 2014).

For student outcomes, we will use hierarchical linear modeling (HLM; Raudenbush & Bryk, 2002) to account appropriately for the nesting of students within classrooms and schools. The benefits of HLM are well documented for calculating accurate standard errors and significance tests with nested data. However, given the research demonstrating that estimation problems with HLM are more likely to occur when the number of higher-level units (i.e., the number of classrooms) is below 30 (Maas & Hox, 2005), we may encounter difficulties with the proposed analyses for some of the courses or grade levels with fewer program graduates. If estimation

problems do occur using HLM, we will conduct regression analyses with a robust variance estimator that relaxes the assumption that the students' scores are independent within classes (White, 1980). The student-level impact analyses will be conducted separately for each course and grade level. The impact analyses will include all variables used in the matching algorithm to select the comparison groups as control variables. After conducting the individual student-level impact analyses, we will calculate effect sizes based on each analysis. To calculate the effect sizes, we will divide the differences between the means for the students taught by program graduates and comparison students over their respective pooled standard deviations (WWC, 2014). This standardization method means that each grade level difference will be based on standard deviation units, which allows differences across courses and grades to be compared to one another. We will use meta-analysis to calculate an overall impact estimate in each year of the grade by averaging the impact estimates across courses and grades (Lipsey & Wilson, 2001), to gauge progress on attainment of the following measure: *annually, the difference between the mean achievement for students of LAUTR-TI-prepared teachers and matched students of matched comparison teachers will be equal to or greater than an effect size of 0.20 after accounting for control variables*. An effect size of 0.20 would be equivalent to teachers moving students from the 50th to the 58th percentile while comparison teacher students remained at the 50th percentile (Lipsey et al., 2012). Furthermore, an effect size of 0.20 is likely attainable based on a review of impact estimates from studies on prior interventions (Hill, Bloom, Black, & Lipsey, 2008).

Project Implementation. In collaboration with PERC, we will collect data on program implementation, including the collaboration among partners, the development of new curriculum, the selection of mentor teachers, and the operationalization of the MA in Integrated

STEM Education. A clear understanding of LAUTR-TI will enable us to suggest ways in which outcomes may be related to specific LAUTR-TI components, highlighting which components may be most critical, for whom, and under which conditions. Monitoring the implementation fidelity of an intervention requires a clear account of the model in theory, the particular context of implementation, and a nuanced and dynamic picture of what is actually happening. Our evaluation will attend to each of these three components: (1) we will ground the evaluation in LAUTR-TI's well-articulated logic model; (2) we will review program documents and interview key stakeholders to develop a meaningful picture of the LAUTR-TI context, and (3) to assess the extent to which LAUTR-TI components are being implemented, we will interview Mentors, Residents, principals, faculty, and staff, using protocols with open and closed-ended questions about how participants experience the program.

To facilitate acquisition of comparison teacher data for a QED we will develop a data sharing MOU with the CTQ. Beginning in early 2014, CTQ began developing an integrated data collection system that consolidates several existing but previously unconnected data collection efforts across all 23 CSU campuses. The CTQ is implementing a longitudinal data system that compiles measures of professional educator practice as well as evidence of improved student learning into a coherent, centralized system. CTQ data elements are: (1) CSU program applicant data (e.g., undergraduate institution and GPA; CSET results; demographic information); (2) CSU program completer and credential data; (3) school placement data; (4) CSU Teacher Preparation Exit Evaluation results; (5) teacher retention data; (6) teacher performance assessment data; (7) annual Survey of First-Year CSU Teaching Graduates results; and (7) annual Survey of School Principals and Supervisors of First-Year CSU Teaching Graduates results. We will use CTQ data to verify survey data, while relying on survey data to provide timely findings to LAUTR-TI.

LOS ANGELES URBAN TEACHER RESIDENCY PROGRAM TRANSFORMATION INITIATIVE

CALIFORNIA STATE UNIVERSITY LOS ANGELES PARTNERSHIP

Teacher Quality Partnership Grant Program, CFDA Number 84.336S

Absolute Priority 2: Partnership Grants for Effective Teaching Residency Programs

Appendix: Research Citations

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